Tier 1 Detailed Site Investigation

Manly Civic Club JV

2 West Promenade

Manly NSW 2095

Lot 1 DP 859455

Prepared for:

Trevor Jolly of Eastview Australia

On behalf of Manly Civic Club JV

June 2016

(Report: C8823Q5Z10B39331 MCC DSI FA)

Executive Summary

SESL Australia (SESL) was engaged by Trevor Jolly of Eastview Australia, on behalf of Manly Civic Club JV (the client) to conduct a Tier 1 Detailed Site Investigation (Tier 1 DSI) for 2 West Promenade, Manly NSW 2095 (the site). The legal definition of the site is Lot 1 in Deposited Plan (DP) 859455. This investigation was required as part of the DA to redevelop the partially vacant site involving the construction of the new Manly Civic Club with upper levels of residential and two levels of basement parking. The heritage listed service station onsite is to be incorporated into the redevelopment. A previous Environmental Investigation was completed in February 2002 by Urban Environmental Consultants (UEC). Data gaps identified in UE's report has guided this investigation.

The objective of this DSI was to:

- *Prepare a DSI in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra;*
- *Assess the potential for soil and groundwater contamination to exist at the site;*
- *Identify the likelihood and/or extent of contamination occurring from current and previous activities undertaken at the site; and*
- *Recommend management strategies including any additional investigations (if required).*

The scope of works for this DSI included the following:

- *Review of existing environmental and geotechnical reports to identify data gaps;*
- *Comprehensive site history review of the site including a review of selected historical aerial photographs and Certificates of Title;*
- *Searches for information held by relevant State Authorities in relation to contaminated land;*
- *Obtaining information pertaining to the site's environmental setting including the proximity of the site to sensitive receptors an information on site geology;*
- *Inspection of the site and immediate surrounds to support results of the data review and to identify site characteristics that may be suggestive of land contamination;*
- *Detailed site walkover/inspection by SESL;*
- *Development of a Conceptual Site Model (CSM) to identify data gaps that require additional environmental information;*
- *Intrusive soil and groundwater sampling based on review of available information to address data gaps in the CSM;*
- *Laboratory chemical analysis by National Association of Testing Authorities (NATA) accredited laboratories, in accordance with a chain of custody prepared by SESL;*
- *Assessment of field and laboratory analytical results;*
- *Preparation of this DSI report detailing the findings in accordance with NSW EPA guidelines for contaminated lands assessment;*
- *Revision of the CSM based on findings of the field investigation; and*
- *Proposed additional assessments or suitable remedial and validation strategies for the site, if required.*

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

The DSI was based on a desktop review of available information, a search of the historical records, a preliminary site walkover carried out on 27/05/2016 and site assessments and sampling on 31/05/2016, 01/06/2016 and 08/06/2016.

The historical account and laboratory results for this site had identified the following areas of environmental concern:

- *AEC 1: PAH and heavy metal contamination of fill soils due to historical filling.*
- *AEC 2: Identified bonded asbestos-containing materials on the surface.*
- *AEC 3: Heavy metal contamination of groundwater from offsite uses.*

The results of the soil sampling undertaken at the site indicated that some contaminants of concern were found to exceed the adopted HIL B – Residential, with minimal opportunities for soil access, includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats. SESL believes that fill across the site is contaminated with lead and CPAHs exceeding threshold values. One area of fill beneath the slab of the former service station is to be redeveloped into a terrace garden area. Specific management of the soil within the vicinity of this location will be required. The ground surface and raised slab are considered to be contaminated with asbestos fragments. No asbestos fragments or friable asbestos was identified within the soil profile.

The results of the groundwater sampling undertaken at the site indicated that some contaminants were found to exceed the adopted GIL – Marine Waters criteria. Copper, Nickel and Zinc elevations above the threshold criteria were identified at all four monitoring wells during the low flow sampling event. Zinc was elevated above the threshold criteria at MW1 from the initial grab samples. Ultra trace PAHs present at three locations (MW1, MW2 and MW4) were below guideline values. Groundwater flow was determined to be travelling north to south across the site. As no monitoring wells are situated to capture the groundwater flow down-gradient of the USTs and groundwater interaction with fill was not observed, it is likely an offsite source north of the site, is contributing to the heavy metal contamination of groundwater onsite. It is also noted that groundwater flow direction may fluctuate due to the expected tidal nature of the aquifer.

Based on the findings of this site investigation, SESL concludes that the site can be made suitable for the proposed redevelopment, subject to the following:

A remedial action plan is to be developed for the management of contaminated fill material and asbestos containing materials on the surface. This may involve the offsite removal of asbestos impacted surface materials (top 100mm) with additional analysis to determine an appropriate waste

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

classification for surface and fill material. Removal of soil material within the identified CPAH hotspot would be separated from fill material and further characterised for waste disposal.

Further groundwater assessment is to be conducted to determine the potential offsite sources contributing to the heavy metal contamination of groundwater and determine if there are any offsite impacts from USTs.

SESL anticipates the remediation works required can be conducted concurrently during the development works onsite, and SESL do not consider it necessary to have remediation completed prior to DA approval.

Reference should be made to Section 12 of the report that sets out details of the limitations of the assessment.

SESL AUSTRALIA

Fiona Warden
Environmental Scientist

Ryan Jacka
Senior Environmental Scientist

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

TABLE OF CONTENTS

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au
POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

DOCUMENT TABLES

DOCUMENT FIGURES

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

APPENDICES

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

ABBREVIATIONS

AEC	Areas of Environmental Concern
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
BaP	Benzo(a)pyrene
BGL	Below ground level
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
CLM	Contaminated Land Management Act
COC	Chain of Custody
CPAHs	Carcinogenic Polycyclic Aromatic Hydrocarbons
CSM	Conceptual Site Model
DA	Development Application
DEC	Department of Environment and Conservation NSW
DECC	Department of Environment and Climate Change NSW
DECCW	Department of Environment, Climate Change and Water NSW
DP	Deposited Plan
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EILs	Ecological Investigation Levels.
EIS	Environmental Investigation Services
EPA	Environmental Protection Authority
ESLs	Ecological Screening Levels
GIL	Groundwater Investigation Levels
GPR	Ground Penetrating Radar
HILs	Health Investigation Levels
HSLs	Health Screening Levels
J&K	Jeffery and Katauskas
NATA	The National Association of Testing Authorities
NEHF	National Environment and Health Forum
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage NSW
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PID	Photo Ionisation Detector
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance / Quality Control

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

RAC	Remediation Acceptance Criteria
RAP	Remedial Action Plan
SAC	Soil Assessment Criteria
SESL	SESL Australia
SMP	Site Management Plan
SVR	Site Validation Report
SWL	Standing Water Level
TEQ	Toxic Equivalence Quotient
TPH	Total Petroleum Hydrocarbon
TRH	Total Recoverable Hydrocarbon
UCL	Upper confidence Limit
UEC	Urban Environmental Consultants
UST	Underground Storage Tanks
VOC	Volatile Organic Compounds

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

1 INTRODUCTION

SESL Australia (SESL) was engaged by Trevor Jolly of Eastview Australia, on behalf of Manly Civic Club JV (the client) to conduct a Tier 1 Detailed Site Investigation (Tier 1 DSI) for 2 West Promenade, Manly NSW 2095 (the site). The legal definition of the site is Lot 1 in Deposited Plan (DP) 859455. This investigation was required as part of the DA to redevelop the partially vacant site involving the construction of the new Manly Civic Club with upper levels of residential and two levels of basement parking. The heritage listed service station onsite is to be incorporated into the redevelopment. A previous Environmental Investigation was completed in February 2002 by Urban Environmental Consultants (UEC). Data gaps identified in UE's report has guided this investigation.

This DSI was prepared in June 2016 with the site inspection undertaken by SESL on 27/05/2016 as well as intrusive soil and groundwater sampling conducted over three days; 31/05/2016, 01/06/2016 and 08/06/2016.

1.1 Background

SESL was advised that previously the site had been occupied by the Manly Civic Club which had been demolished with a new club to be redeveloped. The redevelopment of the site involves the construction of the new Manly Civic Club on the ground floor, five levels of residential housing above the club and two levels of basement parking. The site is currently hardstand and grassed with a heritage listed service station and workshop occupying the south eastern corner. Anecdotal evidence and public records indicate the service station dates back to the 1930's with former use as a maintenance workshop, pushbike repair shop and art gallery since that time. It is understood that the service station will be refurbished and incorporated into the Civic Club.

A former DA for the development of the site involved the preparation of environmental and geotechnical reports. SESL has subsequently been engaged to review and update the previous Acid Sulfate Investigation and Management Plan produced by Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd in 2007 (see report: *Preliminary Acid Sulfate Soil Assessment and Acid Sulfate Management Plan, Proposed redevelopment of Manly Civic Club, EIS 14 September 2007, Ref: E21496FK-Let*) and the Contamination Assessment completed in 2002 by Urban Environmental Consultants (see report: *Environmental Site Assessment Service Station, 2 West Promenade Manly, Urban Environmental Consultants, February 2002, Ref: SJ067.R01*). The Acid Sulfate Soil Investigation was conducted concurrently with this DSI in SESL Report: *C8823.Q5585.B39013 ASSMP Manly CC FA*.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

The scope of works for this assessment was agreed to by the client prior to the commencement of site works. The investigation has been performed in accordance with the scope of works in SESL proposal Q5710, based on the approach outlined below in Section 1.3.

1.2 Objectives

The objective of this Tier 1 DSI was to:

- Prepare a DSI in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra;
- Assess the potential for soil and groundwater contamination to exist at the site;
- Identify the likelihood and/or extent of contamination occurring from current and previous activities undertaken at the site; and
- Recommend management strategies including any additional investigations (if required).

1.3 Approach

The preparation of the PSI was undertaken in accordance with:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), (NEPC 2013, Canberra).*
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites – NSW Office of Environment and Heritage (2011).*
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition), DEC 2006.*
- *Contaminated Sites: Sampling Design Guidelines, NSW EPA 1995.*
- *Managing Contaminated Land: Planning Guidelines SEPP 55 – Remediation of Land, EPA 1998;*
- *Environmental Planning and Assessment Act, 1979;*
- *Contaminated Land Management Act 1997;*
- *Manly Local Environmental Plan 2013*

1.4 Scope of Works

The scope of works for this PSI included the following:

- Review of existing environmental and geotechnical reports to identify data gaps;
- Comprehensive site history review of the site including a review of selected historical aerial photographs and Certificates of Title;
- Searches for information held by relevant State Authorities in relation to contaminated land;
- Obtaining information pertaining to the site's environmental setting including the proximity of the site to sensitive receptors an information on site geology;
- Inspection of the site and immediate surrounds to support results of the data review and to identify site characteristics that may be suggestive of land contamination;

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

- Detailed site walkover/inspection by SESL;
- Development of a Conceptual Site Model (CSM) to identify data gaps that require additional environmental information;
- Intrusive soil and groundwater sampling based on review of available information to address data gaps in the CSM;
- Laboratory chemical analysis by National Association of Testing Authorities (NATA) accredited laboratories, in accordance with a chain of custody prepared by SESL;
- Assessment of field and laboratory analytical results;
- Preparation of this DSI report detailing the findings in accordance with NSW EPA guidelines for contaminated lands assessment;
- Revision of the CSM based on findings of the field investigation; and
- Proposed additional assessments or suitable remedial and validation strategies for the site, if required.

1.5 Personnel

SESL's Environmental Scientists conducted the site visits on 27/05/2016, 31/05/2016, 01/06/2016 and 08/05/2016. The personnel involved for this project is shown in Table 1.

Table 1 – Project Personnel

Personnel	Position	Project Task
Ryan Jacka B Env Sc, M Env Sc, MEIANZ, ASSSI	Senior Environmental Scientist	• Review previous reports for the site; • Devise sampling methodologies; • Conduct site inspection, interview with stakeholders and sampling; and • Report review and authorisation
Andrew Jacovides B Nat Sc (Env Mgt)	Environmental Scientist	• Conduct site inspection and sampling.
Fiona Warden B Env Sc & Mgt	Environmental Scientist	• Review of previous reports for the site; • Conduct site inspection, interview with stakeholders and sampling; and • Conduct historical data review and report drafting.
Adam Reid	Field Scientist	• Conduct historical data review and report drafting; and • Conduct site inspection and sampling.
Marie-France Courtois	Field Scientist	• Conduct historical data review and report drafting.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

2 SITE DESCRIPTION

2.1 Site Location and Ownership

The site is located on the end block of West Promenade, with Gilbert Street and Eustace Street bordering it. Manly Cove is approximately 150m south, and Manly Beach is approximately 500m east of the site. Access to the site is currently from Gilbert Street. The investigation area where the proposed works are located is approximately 1,500m^2 and comprises Lot 1 in DP859455.

2.2 Site Identification

The following details describe the portion of land subject to this DSI.

Table 2 – Site Identification

Site Owner	Manly Civic Club Joint Venture
Site Address	2 West Promenade, Manly NSW 2095
Lot and DP Number	Lot 1 DP 859455
Local Government Area	Northern Beaches Council (Formerly Manly Council)
Current Zoning	B2 Local Centre
Distance from Sydney CBD	Approximately 14.4km north east of the CBD
Geographical Coordinates	33°47'52.72"S 151°17'01.32"E
Site Area	Approximately 1,500m^2 (Figure 2)
Site Elevation	Approximately 4m AHD
Locality Map	Figure 1
Site Layout	Figure 2 and Appendix A: Site Layout

2.3 Site Layout and Infrastructure

The site layout can be viewed in Figure 2 and Appendix A. The site is predominately vacant with hardstand coverings. The south eastern corner of the site has a single building. The buildings interior is concrete hardstand with gyprock walls dividing internal rooms. The buildings exterior is in poor condition. The building layout has been included in Appendix A. The client has advised this building is heritage listed as a former service station and workshop and will be incorporated into the new development.

Mains supply of electricity is connected to the building and water is accessible from a single outdoor tap. Water and sewer are connected to the internal of the building, however water was off at the time of assessment.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

2.4 Surrounding Land Use

The site itself and its immediate surrounds are zoned B2 Local Centre within the Northern Beaches Council local government area, formerly Manly Council. Medium density residential dwellings border the north of the site. Gilbert Street forms the sites southern boundary with high rise apartments opposite. East of the site is Gilbert Park with West Promenade forming the sites eastern boundary. Eustace Street borders the site to the west. Manly Cove is located approximately 150m south of the site.

Figure 1 – Locality Map: 2 West Promenade, Manly NSW 2095

(Courtesy of Land and Property Information 2016)

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Figure 2 – Site Layout: 2 West Promenade, Manly NSW 2095

(Courtesy of Land and Property Information 2016)

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

3 Environmental Setting

3.1 Topography and Drainage

The site has approximately 1m of fill with surface coverings of hardstand and grass. Topography was observed to be relatively flat across the site. The elevation across the investigation area is approximately 4 meters (m) Australian Height Datum (AHD). Stormwater was seen to be flowing off the site in most areas into local stormwater drainage.

3.2 Geology

The *Soil Landscapes of the Sydney 1:100,000 Sheet* (Chapman et al. 1989) indicates the site to be within the Woy Woy soil landscape group with dark brown loose loamy sand topsoils overlying grey bleached loose sand and brown loose sand subsoils. Underlying geology is Holocene sediments of predominately coarse to fine quartz sand with shell fragments and silt. Limitations of this soil landscape include permanently high water tables, localised flooding, periodic water logging in depressions, very low to low soil fertility, localised areas of high soil erosion hazard. The soils in this landscape group are noted to be strongly to slightly acidic.

The above description is consistent with the findings of the site investigation. Brown loose loamy sand topsoils were not observed but expected to have been mixed with the overlying fill layer or removed from site.

The J&K 2016 Geotechnical investigation's findings were consistent with the above description describing concrete from surface to between 0.06 and 0.17m, fill between 1 and 2m depth and natural sandstone at depths ranging from 16m and 27.5m. The sandstone was of varied quality with clayey bands and low and high strength zones.

3.3 Hydrogeology

From review of previous reports and site conditions, the aquifer appears to be a highly permeable sand aquifer. J&K 2016 noted that the permeability of sands was approximately 1 x 10^{-4} m/sec. Due to the nature of the site and proximity to coastal waterways, the aquifer is likely tidal in nature.

Site observations made during this investigation identified natural sands with groundwater at approximately 3m. During purging and establishment of monitoring wells, it was noted that the aquifer was fast flowing.

A groundwater bore search was undertaken using the groundwater database under Office of Water, Department of Primary Industries (www.allwaterdata.water.nsw.gov.au). Five (5) groundwater bores were located within a 500m radius of the site (see Appendix C). Five (5) groundwater bore were licensed for

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

recreation purpose namely (GW110294), (GW109245), (GW109304), (GW106341) and (GW102856). Standing water levels at these bores are listed as 4m, 4.8m, 4.83m, 18.3m and 4.3m respectively.

3.4 Surface Water

No surface water bodies were present onsite at the time of site assessment. Manly Cove is located approximately 150m south of the site. Manly beach is located approximately 500m north east of the site.

3.5 Acid Sulfate Soil

The Manly Local Environmental Plan (LEP) 2013 Acid Sulfate Soil Risk Map indicates the site to be a Class 4 Risk. In this area, works more than 2 metres below the natural ground surface and works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface require development consent. Based on previous report findings (Jeffery & Katauskas 2007), acid sulfate soils are expected to be present with the proposed works area and expected to impact soils and groundwater below 2 metres. SESL has completed a separate acid sulfate soil investigation and management plan. See SESL report: *C8823.Q5585.B39013 ASSMP Manly CC FA* for report findings. The acid sulfate soil map is available in Appendix C.

3.6 Proximity to Local Sensitive Environments

The site is located in an environmentally sensitive zone due to its proximity to North Sydney Harbour, feeding into the Pacific Ocean. No other sensitive cultural or other environmental receptors are identified in close proximity to the site.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

4 Site History

A review of the site history was undertaken to assess the historical use of the site, and in particular to identify activities with potential to contaminate soil, groundwater and surface water at the site. The historical review included:

- Current and historical certificates of title;
- Current and historical aerial photographs;
- Council planning documentation; and
- The NSW EPA Contaminated Lands database.

4.1 Historical Title Search

The current and historical Certificates of Title was obtained from the Department of Lands and reviewed to assess the history of ownership and therefore possible landuse of the site.

The site is currently described as Lot 1 in DP 859455. The registered owner of the site is listed as Manly Civic Club Limited. The history of ownership based on the Certificates of Titles is summarised below.

The current site was previously comprised of six lots prior to 29.06.1978. Between 1953 and 1978, Manly Civic Club Limited purchased all lots. Former site owners and/or leasers include a Motor Garage Proprietor (1938-1951), The Shell Company of Australia (1953-1978), The Council of the Municipality of Manly (1946 – 1957), Mackellar County Council (1957-1964), Taxi Cab Proprietor, North Shore Appliance Parts and numerous private owners. A copy of all titles are provided in Appendix B.

4.2 Historical Aerial Photographs

Aerial photographs from 1930, 1951, 1961, 1972, 1982, 1996 and 2006 were obtained from Land and Property Information Division for review to assess the history of the development of the site, copies of the aerial photographs can be in Appendix B.

1930 The site appears to have multiple, up to four structures present, with a cleared section in the centre. The site is within a well developed suburb with surrounds similar to present day including the already established Gilbert Park, Manly Oval and Manly Wharf. The broader area appears to consist of residential dwellings and commercial properties. Aerial photography from this year is of relatively poor quality.

1951 The site appears relatively unchanged from the 1930 photograph. The heritage listed service station present in 2016 is in existence in a similar condition to present day. Smaller buildings are present in the north western and north eastern corners of the site. A cleared area of

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

concrete is present on the south western corner, likely for vehicle parking. Surrounding areas have continued development particularly on the northern banks of Manly Lagoon.

1961 The site has undergone some redevelopment. A single structure has replaced the former structure in the north western corner of the site, running along the northern boundary, adjoining the small building in the north eastern corner. This is structure is the former Manly Civic Club. The south western corner continues to be used for parking. There appear to have been no changes to the service station. The surrounding area remains relatively unchanged.

1972 The site and surrounding area remains relatively unchanged from the 1961 photograph. Photograph from this year is of relatively poor quality.

1982 The site and surrounding area remains relatively unchanged from the 1972 photograph.

1996 The site remains relatively unchanged from the 1982 photograph. A large block of high rise apartments has been constructed opposite the sites southern boundary. Land use in the broader area remains unchanged.

2006 The site and surrounding area remain relatively unchanged from the 1996 photograph. The Civic Club's roof has been refurbished.

2016 The site has undergone redevelopment. The former Manly Civic Club has been demolished. Exposed soil, asphalt and grass is present in the former buildings footprint.

4.3 Site Zoning and Council Records

Manly Local Environmental Plan 2013 is the principle-planning instrument regulating landuse and development in the area. The site is currently zoned B2 Local Centre.

The Section 149 (2) & (5) planning certificate for the property was obtained from Manly Council and a copy is provided in Appendix B. The following information has been noted following a review of the certificate:

- The site does not include or comprise critical habitat;
- The site is not located within a heritage conservation area under the provisions of Manly Local Environmental Plan 2013;
- The site is identified as containing an item of environmental heritage significance listed in Schedule 5, Part 1 of the Manly Local Environmental Plan 2013;
- The site is not affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979*;

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

- The site is not subject to mine subsidence under section 15 of the *Mine Subsidence Compensation Act 1961*;
- The site is not affected by a flood control lot under the Manly Local Environmental Plan 2013;
- The site is not identified as biodiversity certified under part 7A of the *Threatened Species Conservation Act 1995*;
- The site is not affected by a Bio-banking agreement under part 7A of the *Threatened Species Conservation Act 1995;*
- The site is not identified as bushfire prone land under the *Environmental Planning and Assessment Act 1979*;
- The site is not affected by a Property Vegetation Plan under the *Native Vegetation Act 2003*;
- The site is not affected by an order issued under the *Trees (Disputes between Neighbours) Act 2006*; and
- The site is affected by relevant acid sulfate soil classes under Manly Local Environmental Plan 2013 (see Section 3.5).

The Section 149 Certificate identified the following matters prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997* and noted that the site:

- Is **not** identified as significantly contaminated land within the meaning of the Act;
- Is **not** subject to a management order within the meaning of the Act;
- Is **not** the subject of an approved voluntary management order within the meaning of the Act;
- Is **not** subject to an ongoing maintenance order within the meaning of the Act; and
- Is **not** the subject of a site audit statement within the meaning of the Act.

4.4 EPA Contaminated Sites Database

A search of the NSW Environmental Protection Authority (EPA) contaminated land public record was performed to assess if the site or surrounding sites have been declared as contaminated sites. It should be noted that this database is not a comprehensive list of all contaminated land in NSW, this record only lists sites regulated under Part 3 of the *Contaminated Land Management Act 1997.*

A search undertaken on the 06/06/2016 for the Manly Local Government Area, returned eight notices relating to one site listed under the *Contaminated Land Management Act 1997* within the suburb of Manly (see Appendix C). A summary of information related to this site is shown in Table 3.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Table 3 – Summary of EPA Contaminated Lands notices issued to the suburb of Manly

Location	Date	Description	Distance to site
Little Manly Point, Stuart Street, Manly 2095	08/05/1989	Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985 The Department of Planning and the Environment was issued a Section 35 notice for the former Gasworks site, describing the nature of contamination on the site from prescribed activities (keeping of chemical wastes- coal tar sludges and spent catalysts) and directed to inform the commission of any works occurring at the site.	Approximately 1.2km south east of the site.
	31.07.1990	Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985 The Department of Planning and the Environment was issued a Section 35 notice for the former Gasworks site listing a number of remedial actions required to treated onsite contamination.	
	28.03.1991	Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985 The Department of Planning and the Environment was issued a Section 35 notice for the former Gasworks site detailing further remedial actions to stop seepage entering the sea.	
	12.05.1992	Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985 The Department of Planning and the Environment was issued a Section 35 notice for the former Gasworks site detailing further remedial actions to stop seepage entering Spring Cove.	
	29.09.1992	Notice of Compliance Under Section 35 Environmentally Hazardous Chemicals Act 1985 The EPA revoked all remedial directions issued previously as they had been complied with.	
	06.03.1998	Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985 The Department of Planning and the Environment was issued a Section 35 notice for the former Gasworks site, requiring that	

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

		site soils not be disturbed below 0.5m and cease work and notify the EPA if gasworks waste material is intercepted above 0.5m depths. Contaminants of concern include hydrocarbons, PAHs, heavy metals, phenols and cyanide compounds.	
	26.08.1998	<u>Notice Under Section 35 Environmentally Hazardous Chemicals Act 1985</u> The EPA revoked all Section 35 notices associated with the site.	
	26.08.1998	<u>Maintenance of Remediation Notice</u> The Department of Planning and the Environment was issued with a notice to maintain remediation at the site, requiring that site soils not be disturbed below 0.5m and cease work and notify the EPA if gasworks waste material is intercepted above 0.5m depths.	

4.5 Dangerous Goods License Search

A search of the Storage of Hazardous Chemical records held by SafeWork NSW was conducted. No records were located pertaining to the site.

4.6 Previous Environmental Investigations

SESL was advised of previous environmental investigations conducted as part of a former DA to redevelop the club. These documents were required to be updated as part of the new DA for the site. SESL has reviewed the following investigations as part of this DSI.

- Environmental Site Assessment Service Station 2 West Promenade Manly, Urban Environmental Consultants, February 2002, *Ref: SJ067.R01*

The investigation involved soil sampling around the former service station site. Five (5) boreholes were drilled around the perimeter of the workshop and one in the vacant hardstand adjacent. Sampling was only conducted on the southern half of the site as the former Civic Club was yet to be demolished. Five (5) samples were analysed, four (4) for TPH's and BTEX and one (1) for TPHs, BTEX and lead. All results were within the appropriate guidelines at the time of assessment, Netherlands (1994) Intervention Values for commercial landuse. 1 sample at 0.5m, within fill in the vacant hardstand area has TPH C15-C36 fraction exceeding the *NSW EPA*

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Guidelines for Assessing Service Station 1994 sites sensitive landuse. The report concluded that the site was suitable for continued commercial used and recommended removal and validation of underground storage tanks, classification of fill material if they were to be removed and if dewatering was required, groundwater would need to be assessed.

This limited report identified a number of data gaps that needed to be addressed including meeting current sampling density guidelines, characterisation of the whole site, quality assurance and control, current reporting standards for contaminated sites and an assessment of groundwater.

- Preliminary Acid Sulfate Soil Assessment and Acid Sulfate Management Plan, Proposed Redevelopment of Manly Civic Club, 2 West Promenade Manly, Environmental Investigation Services (EIS), 14 September 2007, *Ref: E21496FK-Let.*

An acid sulfate soil investigation and management plan was prepared for the site by EIS, a division of Jeffery and Katauskas Pty Ltd, as excavations were to extend to approximately 6m below existing ground levels. One borehole was drilled and two samples were collected at 3-3.45m and 7-7.5m. Laboratory results indicated that soils were Potentially Acid Sulfate Soils (PASS) with approximately 2kg of lime per tonne of soil required to neutralise.

SESL was engaged to review and provide an updated investigation and management plan for the site. The investigation occurred concurrently with this DSI. See SESL report: *C8823.Q5585.B39013 ASSMP Manly CC FA.*

- Preliminary Geotechnical Investigation for Proposed Redevelopment of Manly Civic Club, 2 West Promenade Manly NSW, Jeffery and Katauskas Pty Ltd, 14 September 2007, *Ref: 21496SBrpt.*
- Geotechnical Investigation for Proposed Redevelopment of Manly Civic Club, 2 West Promenade Manly NSW, Jeffery and Katauskas Pty Ltd, 24 May 2016, *Ref: 21496LBrpt.*

SESL reviewed the previous and updated the geotechnical reports to identify soil profiles and groundwater levels present onsite. Groundwater wells were installed onsite during the updated investigation. At one well (BH3) was screened below the standing height of groundwater and was therefore deemed unusable.

SESL is unaware of any other environmental investigations conducted for the site.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

4.7 Current Landuse and Associated Practices

The site is currently vacant awaiting development approval for the construction of a new Manly Civic Club. The former service station and maintenance onsite is currently unoccupied. SESL understands that the site was used as a service station and vehicle maintenance workshop between the 1930's and 1970's. Underground storage tanks, waste oil tanks and sumps would have been in use as part of its operation. SESL notes that all UST fill points and air vents have been filled with concrete and therefore it is likely USTs have also been filled with concrete. Sample locations for soil and groundwater sampling were chosen based on the proximity to these features.

4.8 Integrity Assessment

The integrity of information provided in the DSI was considered reliable. The DSI followed appropriate methods of investigation with the desktop survey being consistent with previous investigations, field observations and anecdotal evidence presented. Details regarding the site history and present status of the site have been largely obtained from official records sourced from Northern Beaches Council, NSW EPA, SafeWork NSW, NSW Land and Property Information Division and previous assessment reports. These documents are considered accurate and credible. All information provided, as part of this report was believed to be true, accurate and representative of the past and present status of the site at the time of this investigation.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

5 SITE RECONNAISSANCE

A walkover of the site was undertaken by SESL on 27/05/2016 to support the findings of the previous report review and identify any site characteristics that would guide further investigation. Intrusive soil and groundwater sampling was undertaken on 31/05/2016, 01/06/2016 and 08/06/2016. All of the site, including the interior of the former service station was accessible during sampling.

5.1 Stormwater

Based on the site topography, stormwater is unlikely to flow onto the site from surrounding land due to existing stormwater infrastructure and elevated areas of the site (due to fill). During a rainfall event, stormwater was observed to pool onsite or run offsite to stormwater infrastructure. No significant issues were identified with respect to stormwater management on this property.

5.2 Chemical Use & Storage

The site was predominately vacant, including the interior of the former maintenance workshop. Chemical storage was limited to household bleach for the buildings bathroom. Historical storage of chemicals is suspected. SESL was advised that the premises had been thoroughly cleaned prior to refurbishment. Potential hydrocarbon staining was noted in some areas of the hardstand.

Underground Storage Tanks (USTs) were confirmed using Ground Penetrating Radar (GPR). The GPR also identified a possible oil separator pit adjacent the UST on West Promenade.

5.3 Vegetation Stress

No vegetation is present onsite. No stressed vegetation was observed nearby at the time of the site inspection.

5.4 Hazardous Building Materials

A limited number of asbestos fragments were observed within the foot print of the former Civic Club. These fragments are likely associated with the demolition of the club. Bonded fragments were also observed within the fill of a raised slab behind the former workshop.

Due to the age of the heritage maintenance workshop, no asbestos containing materials were observed in the former service station, however a hazardous materials assessment is recommended prior to any refurbishment works, which will also include the risk of PCB and Lead paint.

No PCB containing capacitors or SMF materials were identified at the time of the site assessment.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

5.5 Cut and Fill

Based on the review of previous reports and intrusive soil sampling, the whole site has a fill layer approximately 1m deep, with some areas beneath the workshop as deep as 2.5m. It is expected that the deeper fill was placed beneath the workshop footprint to provide a higher level of geotechnical stability to the underlying sands.

5.6 Waste Management

As the site is not currently in use, no waste collection facilities are in place. All waste generated onsite during sampling was removed.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

6 RELEVANT GUIDELINES FOR CONTAMINATION ASSESSMENT AND MANAGEMENT

6.1 Relevant Guidelines

Assessment criteria will be based on guidelines made or approved by the NSW EPA under Section 105 of the *Contaminated Land Management Act 1997*. These include EPA's Contaminated Sites series of guidelines, and fundamental guideline documents such as the Australian and New Zealand Guidelines for the *Assessment and Management of Contaminated Sites* (ANZECC/NHMRC 1992) and *National Environmental Protection (Assessment of Site Contamination) Measure 1999*, published by the NEPC (henceforth referred to as the NEPM).

The NEPM incorporates a recommended general process for the assessment of site contamination and a set of 9 specific guidelines. The process and guidelines are closely based on previous documentation widely used for assessing site contamination (such as ANZECC/NHRMC 1992 and the various National Environmental Health Forum monographs and proceedings). Assessment criteria have been drawn from other guidelines and information sources, if not available in the above guidelines.

6.2 Proposed Development

SESL was advised that the site is to be redeveloped, with the construction of a new civic club on the ground floor, five levels of residential housing above the club and two levels of basement parking. The site is currently hardstand and grassed with a heritage listed service station and workshop occupying the south eastern corner. Anecdotal evidence and public records indicate the service station dates back to the 1930's with former use as a maintenance workshop, pushbike repair shop and art gallery since that time. It is understood that the service station will be refurbished and incorporated into the Civic Club.

6.3 National Environmental Protection Measure (Contaminated Sites) 1999

National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013) (NEPC 2013, Canberra) (hereafter NEPM) provides a national framework for conducting assessments of contaminated sites in Australia.

The purpose of the NEPM is to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry.

The NEPM addresses assessment of contamination, and does not provide specific guidance on prevention of site contamination. The desired environmental outcome for the NEPM is to provide

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

Schedule A in the NEPM outlines the general process for assessment of site contamination, with reference to Schedules B (1) to B (9) for guidance on each step of the process.

In broad terms, the assessment process as provided in Schedule A can be described as:

Tier 1 PSI — Preliminary investigation, laboratory analysis and interpretation, and assessment of results with reference to investigations levels;

Tier 1 DSI — Where required, detailed investigation, laboratory analysis and interpretation is completed, and the need for risk assessment to derive response levels and/or the need for remediation is evaluated; and

Tier 2 or 3 — Site-specific risk assessment to confirm/define appropriate health and ecological investigation levels.

Overarching guidance is provided on community consultation and risk communication, protection of health and safety during assessment of site contamination, and expected competencies of environmental auditors and related professionals.

NEPM provides a framework for the use of investigation and screening levels for the protection of human health, ecosystems, groundwater resources and aesthetics. Investigations levels and screening levels are applicable to the Tier 1 site assessment. The adopted investigation and screening levels for this assessment is as follow:

i) Health Investigation Levels (HILs);
ii) Health Screening Levels (HSLs);
iii) Ecological Investigation Levels (EILs); and
iv) Ecological Screening Levels (ESLs).

6.3.1 *Health Investigation Levels (HILs)*

HILs are scientifically based, generic assessment criteria designed to be used in the Tier 1 assessment for assessing human health risk via all relevant pathways of exposure. HILs are designed to be intentionally conservative and based on a reasonable worst-case scenario for the following generic land use settings:

A — Residential with garden/accessible soil (home grown produce contributing less than 10% of vegetable and fruit intake; no poultry) this category includes children's day-care centres, preschools and primary schools.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

B **Residential with minimal opportunities for soil access, including dwellings with fully and permanently paved yard space such as high-rise apartments and flats.**

C Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves), which should be subject to a site-specific assessment where appropriate.

D Commercial/industrial includes shops and offices as well as factories and industrial sites.

The site is to be used for commercial purposes on the ground floor and residential apartments on the upper levels. Due to the residential use of the site with limited soil access, HIL B- Residential has been adopted for this site.

NEPM Schedule B7 defined the HILs as the concentration of a contaminant above, which further appropriate investigation and evaluation will be required. It is also stated “levels in excess of the HILs do not imply unacceptability or that a significant health risk is likely to be present”.

The NEPM Schedule B7 states at the very least, the maximum and the 95% UCL of the arithmetic mean contaminant as well as localised elevated values must be compared to the HILs. Two additional (secondary) criteria should also be met, namely that the standard deviation of the results must be <50% of the relevant investigation level and that no single value exceeds 250% of the relevant investigation level.

NEPM also states that the HILs are not intended to be used as clean-up levels for contaminated sites. The requirement of clean-up should be based on site-specific assessment and risk management options.

The adopted HIL is shown in Table 4.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Table 4 – Health Investigation Levels for Soil Contaminants

Chemical	Health-based investigation levels (mg/kg)			
	Residential[1] A	Residential[1] B	Recreational[1] C	Commercial/ Industrial[1] D
Metals and Inorganics				
Arsenic[2]	*100*	**500**	300	3,000
Beryllium	*60*	**90**	90	500
Boron	*4,500*	**40,000**	20,000	300,000
Cadmium	*20*	**150**	90	900
Chromium (VI)	*100*	**500**	300	3,600
Cobalt	*100*	**600**	300	4,000
Copper	*6,000*	**30,000**	17,000	240,000
Lead[3]	*300*	**1,200**	600	1,500
Manganese	*3800*	**14,000**	19,000	60,000
Mercury (Inorganic) [5]	*40*	**120**	80	730
Methyl Mercury[4]	*10*	**30**	13	180
Nickel	*400*	**1,200**	1,200	6,000
Selenium	*200*	**1,400**	700	10,000
Zinc	*7,400*	**60,000**	30,000	400,000
Cyanide	*250*	**300**	240	1,500
Polycyclic Aromatic Hydrocarbons (PAHs)				
Carcinogenic PAHs (as BaP TEQ)[6]	*3*	**4**	3	40
Total PAHs[7]	*300*	**400**	300	4000
Phenols				
Phenol	*3,000*	**45,000**	40,000	240,000
Pentachlorophenol	*100*	**130**	120	660
Cresols	*400*	**4,700**	4,000	25,000
Organochlorine Pesticides				
DDT+DDE+DDD	*240*	**600**	400	3,600
Aldrin and Dieldrin	*6*	**10**	10	45
Chlordane	*50*	**90**	70	530
Endosulfan	*270*	**400**	340	2,000
Endrin	*10*	**20**	20	100
Heptachlor	*6*	**10**	10	50
HCB	*10*	**15**	10	80
Methoxychlor	*300*	**500**	400	2,500
Mirex	*10*	**20**	20	100
Toxaphene	*20*	**30**	30	160
Herbicides				
2,4,5-T	*600*	**900**	800	5,000
2,4-D	*900*	**1,600**	1,300	9,000
MCPA	*600*	**900**	800	5,000
MCPB	*600*	**900**	800	5,000
Mecoprop	*600*	**900**	800	5,000
Picloram	*4,500*	**6,600**	5,700	35,000
Other Pesticides				
Atrazine	*320*	**470**	400	2,500
Chlorpyrifos	*160*	**340**	250	2,000
Bifenthrin	*600*	**840**	730	4,500
Other Organics				
PCBs[8]	*1*	**1**	1	7
PBDE Flame Retardants (Br1-Br9)	*1*	**2**	2	10

Notes: This table is adapted from Table 2 in Schedule B7: Derivation of Health-Based Investigation Levels, *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013* (NEPC 2013).

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

HIL A: Residential with garden/accessible soil (home-grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.
HIL B: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
[1] HIL C: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include areas of undeveloped open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.
HIL D: Commercial/industrial includes premises such as shops, offices, factories and industrial sites.

[2] Arsenic: HIL for arsenic assumes 70% oral bioavailability. Site-specific bioavailability may be important and should be considered where appropriate

[3] Lead: HIL for lead is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HILD D) where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate

[4] Methyl mercury: Assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition, the reliability and quality of sampling/analysis should be considered.

[5] Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present.

[6] Carcinogenic PAHs: HIL for carcinogenic PAHs is based on the 8 carcinogenic PAHs and their respective TEFs (potency relative to BaP) adopted by CCME 2008. The BaP TEQ is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its BaP TEF, given below, and summing these products.

PAH Species	TEF	PAH Species	TEF
Benzo(a)anthracene	0.1	Benzo(g,h,i)perylene	0.01
Benzo(a)pyrene	1	Chrysene	0.01
Benzo(b+j)fluoranthene	0.1	Dibenz(a,h)anthracene	1
Benzo(k)fluoranthene	0.1	Indeno(1,2,3-c,d)pyrene	0.1

Where the BaP occurs in bitumen fragments it is relatively immobile and does not represent a significant health risk.

[7] Total PAHs: HIL for total PAH is based on the sum of the 16 PAHs most commonly reported for contaminated sites (WHO 1998). The application of the total PAH HIL should consider the presence of carcinogenic PAHs and naphthalene (the most volatile PAH). Carcinogenic PAHs reported in the total PAHs should meet the BaP TEQ HIL. Naphthalene reported in the total PAHs should meet the relevant HSL.

[8] PCBs: HIL for PCBs relates to non-dioxin-like PCBs only. Where a PCB source is known, or suspected, to be present at a site a site-specific assessment of exposure to all PCBs (including dioxin-like PCBs) should be undertaken.

6.3.2 *Health Screening Levels (HSLs)*

6.3.2.1 Petroleum Hydrocarbon Compounds

NEPM 2013 adopts the Health Screening Levels for various petroleum hydrocarbon compounds developed by the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE). Friebel and Nadebaum 2011 provide the methodology for assessing human health risk via the inhalation and direct contact pathways of selected petroleum compounds and fractions.

The HSLs apply to the same landuse scenarios with additional consideration of soil texture and depth to determine the appropriate soil, groundwater and soil vapour criteria.

The NEPM 2013 provides HSL fractions and corresponding equivalent carbon range for petroleum hydrocarbon compounds (see Table 5). HSLs are given only for F1, F2 and BTEX as the heavier petroleum compounds of F3 and F4 are non-volatile and do not pose a concern for vapour intrusion. However exposure can be via direct contact pathways (dermal contact, incidental oral ingestion and dust in halation). Friebel and Nadebuam 2011 provides the HSLs for direct contact, however for most

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

site assessments, these levels are unlikely to trigger further investigation or site management as the values are substantially higher than most soil screening levels.

Table 5 – HSL Fractions and Corresponding Equivalent Carbon Range

Fraction Number	Equivalent Carbon Number Range
F1	$C_6 – C_{10}$
F2	$>C_{10} – C_{16}$
F3	$>C_{16} – C_{34}$
F4	$>C_{34} – C_{40}$

As aforementioned, HSLs for soil, groundwater and soil vapour haven been developed based on soil texture. The HSLs assume a uniform soil profile and the highest proportion of the soil texture from the soil profile should be used selecting the appropriate HSLs. For Tier 1 soil assessment, the HSL classifications of sand, silt and clay may be broadly applied to soil texture classification in Table A1 of Australian Standard 1726 as follow:

i) Coarse grained soil: >50% of particles (by weight) <63mm and >0.075mm
- Sand: >50% of particles (by weight) <2.36mm; or
- Gravel: >50% of particles (by weight) >2.36mm.

ii) Fine-grained soil: >50% of particles (by weight) <0.075mm
- Silts and clays (liquid limit >50%);
- Silts and clays (liquid limit <50%); or
- Highly organic soils.

6.3.2.2 Asbestos

NEPM 2013 adopted the HSLs from the Western Australia Department of Health (WA DoH) *Guidelines of Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia 2009.* The HSLs are based on scenario-specific likely exposure levels, that includes bonded and friable asbestos levels (see Table 6).

Asbestos only poses human health risk when asbestos fibres are made airborne and inhaled. Bonded asbestos is not readily made airborne except through substantial physical damage. NEPM 2013 states “the assessment and management of asbestos contamination should take into account the condition of the asbestos materials and the potential for damage and resulting release of asbestos fibres”.

The HSLs are to be used for Tier 1 assessment, in the event of an exceedance that triggers the need for a Tier 2 site-specific assessment. Site-specific assessments of asbestos contaminated sites should

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

be designed to describe the nature and quantity of asbestos present in the soil that can sufficiently develop a risk management plan for the current and proposed landuse of the site.

Table 6 – Health Screening Levels for Asbestos Contamination in Soil

	Health Screening Level (w/w)			
Form of asbestos	Residential A[1]	**Residential B[2]**	Recreational C[3]	Commercial/ Industrial D[4]
Bonded ACM	0.01%	**0.04%**	0.02%	0.05%
Fibrous Asbestos (FA) and Asbestos Fines (AF) [5] (Friable Asbestos)	**0.001%**			
All forms of asbestos	**No visible asbestos for surface soil**			

Note: This table is adapted from Table 7 in Schedule B1: Health Screening Levels of Asbestos Contamination in Soil, *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013* (NEPC 2013).
1 Residential A with garden/accessible soil also includes childcare 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. This screening level is not applicable to free fibres.

6.3.3 *Ecological Investigation Levels (EILs)*

Ecological Investigation Levels (EILs) have been developed for assessing risk to terrestrial ecosystem for common contaminants in soil. The EILs are derived for specified levels of species protection depending on land use and are principally applied to the top 2m of the soil.

Table 7 – EILs Landuse Criteria and Protection Levels

Land Use	Levels of Protection
Areas of ecological significance	99%
Urban residential areas and public open space (HIL A, B and C)	80%
Commercial and industrial	60%

Schedule B5 of NEPM 2013 provides the EILs for Arsenic, Copper, Trivalent Chromium, DDT, Naphthalene, Nickel, Lead and Zinc. The methodology to derive the EILs considers the physicochemical properties of soil and contaminants and the capacity of the local ecosystem to accommodate increases in contaminant levels above ambient background.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

EILs are obtained by summing added ambient background concentration (ABC) and contaminant limit (ACL). ABC is the soil concentration in a specified locality that is the total of naturally occurring background level and the contaminant levels that have been introduced by general anthropogenic sources. ACL is the added concentration above the ACB of a contaminant which requires further investigation on the impact on ecological values.

The derivation of EILs takes into consideration the ageing of contamination (>2 years) and soil properties as the toxicity of soil contaminants will reduce over time. Values for ACL based on pH, CEC and exposure scenario are provided for Lead, Zinc, Copper, Nickel and Trivalent Chromium. This method of deriving EILs only applies to metals and metalloids, with the exception of Arsenic. Generic EILs for Arsenic, DDT and Naphthalene are shown in Appendix F.

Methodology for Tier 2 site-specific assessments to determine site-specific EILs is provided in Schedule B5(b).

6.3.4 *Ecological Screening Levels (ESLs)*

Ecological Screening Levels (ESLs) haven been developed for selected petroleum hydrocarbon compounds to assess risk to terrestrial ecosystem. The ESLs adopts the same four fractions from the HSLs (see Table 5), however the soil texture standards are only divided into two; coarse or fine.

ESLs were adopted based on a review of Canadian guidance, a risk based TPH standards for human health and ecological aspects for various land uses in the *Canada-wide standard for petroleum hydrocarbons in soil* (CCME 2008).

6.3.5 *Groundwater Investigation Levels (GILs)*

Schedule B(6) provides a framework for a risk-based assessment of groundwater contamination that has been affected, or may have been affected by site contamination. The Groundwater Investigation Levels (GILs) in Table 1C of NEPM Schedule B7 provides values the concentration of a contaminant in groundwater above, which further investigations, or a response is required.

The GILs are derived from the following guidelines:

- Australian Water Quality Guidelines for Fresh and Marine Water (ANZECC & ARMCANZ 2000);
- Australian Drinking Water Guidelines (ADWG) (NHRMC & NRMMC 2011); and
- Guidelines for Managing Risk in Recreational Water (GMRRW) (NHRMC 2008).

The guidelines provide values that defines acceptable water quality for various contaminants at the point of use and apply to the following settings identified in the framework for groundwater assessment:

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

- Drinking water;
- Ecosystem protection;
- Aquaculture and human consumers of food;
- Agricultural water (irrigation and stock water);
- Recreation and aesthetics; and
- Industrial water.

When assessing groundwater contamination, the values in Table 1C of Schedule B7 are applied as investigation levels at the point of extraction and as response levels at the point of use, or where there is the likelihood of an adverse environmental effect at the point of discharge.

When groundwater from a monitoring well contains levels of contaminants above the appropriate investigation levels, then further investigation should be carried out to determine sources of contamination and to determine the lateral and vertical extent of contaminated groundwater.

Table 1C of Schedule B7 of NEPM 2013 provides three criteria as GILs; freshwater, marine water and drinking water. For this assessment, the criterion selected from the GILs is marine water, where the closest receiving water body in the vicinity of the site is Manly Cove, a coastal marine ecosystem. Therefore the marine water trigger values have been adopted for this assessment.

In summary, the Investigation and Screening Levels adopted for this assessment is as follow:

- NEPC 2013, NEPM Schedule B7, Table 1(A)1 – Health Investigation Levels for Soil Contaminants, Exposure Setting **Residential B**;
- NEPC 2013, NEPM Schedule B7, Table 7 – Health Screening Levels for Asbestos Contamination in Soil, Exposure Setting **Residential B;**
- NEPC 2013, NEPM Schedule B7, Table 1(A)3 – Soil Health Screening Levels for Vapour Intrusion;
- NEPC 2013, NEPM Schedule B5b & B5c, Ecological Investigations Levels
- NEPC 2013, NEPM Schedule B7, Table 1(B)5 – Generic EILS for Aged As, Fresh DDT and Fresh Naphthalene in Soils; and
- NEPC 2013, NEPM Schedule B7, Table 1(B)6 – ESLs for TPH Fractions F1-F4, BTEX and Benzo(a)pyrene in Soil.
- NEPC 2013, NEPM Schedule B7, Table 1(C) Groundwater Investigation Levels – **Marine Waters**

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

6.4 Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC/NHMRC, 1992)

The *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites* (ANZECC/NHMRC, 1992) provide a risk management approach consistent with the attainment of environmental outcomes described in the NEPM.

Contamination of land is defined as the presence in, on or under the land of a substance at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment[1]

The objectives of contaminated site remediation (ANZECC/NHMRC, 1992) are:

1. To render a site acceptable and safe for the long term continuation of its existing/proposed use;
2. To minimise environmental and health risks both on and offsite to acceptable levels; and
3. To maximise to the extent practicable, the potential future uses of the site.

The ANZECC/NHRMC 1992 Guidelines provides two basic approaches in dealing with contaminated sites.

i) A strict adherence to a set of preferred soil criteria used to define a condition of contamination and to serve as the standard which sites must meet in order to be considered to have been decontaminated; or

ii) A more flexible use of pre-determined soil criteria use chiefly to provide guidance as to whether a detailed investigation is required, confirm no further action is needed or provide guidance for clean-up in appropriate circumstances. This approach relies on careful consideration of site-specific data to derive acceptable criteria, which will ensure that public health, local amenity and soil, air water and quality are protected.

The ANZECC/NHRMC 1992 Guidelines concluded that the most appropriate approach for Australia is to adopt the combination of both approaches that incorporates, at a national level a general set of management principles and soil quality guidelines which guide site assessment and may guide site clean-up action, eliminating where appropriate, the need to develop costly site specify criteria. This approach also recognises that every site is different and that in many cases site specific acceptable criteria and clean-up technologies will need to be developed which reflect local conditions.

[1] Contaminated Land Management Act (CLM Act) 1997

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

6.5 The Managing Land Contamination: Planning Guidelines – Remediation of Land, NSW EPA 1997 (SEPP55 Guidelines)

The Managing Land Contamination: Planning Guidelines – Remediation of Land, NSW EPA 1997 (SEPP55 Guidelines) establishes the best practice for managing land contamination through the planning and development control process. The planning and development control process as provided for in the Environmental Planning and Assessment Act 1979 plays an important role in the management of land contamination. The integration of land contamination management into the planning and development control process will:

- Ensure that changes of land use will not increase the risk to health or the environment;
- Avoid inappropriate restrictions on land use; and
- Provide information to support decision-making and to inform the community.

The SEPP55 Guidelines include:

a) Information to assist in the investigation of contamination possibilities;
b) A decision making process that responds to the information obtained from an investigation;
c) Information on how planning and development control can cover the issues of contamination and remediation;
d) A suggested policy approach for planning authorities;
e) Discussion of information management systems and notification and notation schemes, including the use of Section 149 planning certificates notations; and
f) Approaches to prevent contamination and reduce the environmental impact from remediation activities.

SEPP 55 Guidelines provides consistent statewide planning and development controls for the remediation of contaminated land and ensures the following:

- Landuse changes do not occur until planning authorities consider whether the land is contaminated and whether it needs to be remediated to make it suitable for the proposed use;
- Remediation of contaminated land is permissible throughout the State;
- Remediation requires consent only where it has the potential for significant environmental impacts or does not comply with a council's policy for contaminated land;
- Most remediation proposal which require consent are advertised for public comment;
- All remediation is carried out in accordance with appropriate standards and guidelines;
- Applications for remediation are not refused without substantial justification; and
- Councils are notified at commencement and completion of remediation.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

6.6 Australian Water Quality Guidelines for Fresh and Marine Water (ANZECC & ARMCANZ 2000)

The Australian Water Quality Guidelines for Fresh and Marine Water (ANZECC & ARMCANZ 2000) (here after ANZECC) Guidelines recognises three ecosystem conditions that are used to determine the level of protection of species to use for water quality monitoring programs. The GILs are applicable to 'slightly – moderately disturbed' ecosystems, for the protection of disturbed or pristine ecosystem, the ANZECC guidelines should be applied.

1. *High conservation/ecological value systems (>95%)* - effectively unmodified or other highly-valued ecosystems, typically (but not always) occurring in national parks, conservation reserves or in remote and/or inaccessible locations. While there are no aquatic ecosystems in Australia and New Zealand that are entirely without some human influence, the ecological integrity of high conservation/ecological value systems is regarded as intact.

2. *Slightly to moderately disturbed systems* (95%) - ecosystems in which aquatic biological diversity may have been adversely affected to a relatively small but measurable degree by human activity. The biological communities remain in a healthy condition and ecosystem integrity is largely retained. Typically, freshwater systems would have slightly to moderately cleared catchments and/or reasonably intact riparian vegetation; marine systems would have largely intact habitats and associated biological communities. Slightly-moderately disturbed systems could include rural streams receiving runoff from land disturbed to varying degrees by grazing or pastoralism, or marine ecosystems lying immediately adjacent to metropolitan areas.

3. *Highly disturbed systems* (80%-95%) - These are measurably degraded ecosystems of lower ecological value. Examples of highly disturbed systems would be some shipping ports and sections of harbours serving coastal cities, urban streams receiving road and stormwater runoff, or rural streams receiving runoff from intensive horticulture.

For ecosystems that can be classified as highly disturbed (i.e. urban environments), the 95% protection trigger values can still apply. However, depending on the state of the ecosystem and the management goals it can be appropriate to apply a less stringent guideline trigger value, say protection of 90% of species, or perhaps even 80%. These values are provided as *intermediate targets* for water quality improvement.

For this assessment, the slightly to moderately disturbed system (95%) protection are adopted for the groundwater on site.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

6.7 Relevant Legislation

NSW has a comprehensive suite of guidelines relating to assessment and management of contamination, administered under the *Contaminated Land Management Act (CLM Act) 1997* and the *Environmental Planning and Assessment Act 1997*. These include the following:

- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, NSW OEH, 2011;*
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, NSW DEC, April 2006;*
- *Contaminated Sites: Sampling Design Guidelines, NSW EPA, 1995;*
- *Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land, NSW EPA 1998; and*
- *Waste Classification Guidelines Part 1: Classifying Waste, NSW EPA 2014.*

Guidelines approved under the CLM Act also include ADWG (2011) *Australian Drinking Water Guidelines,* ANZECC/ARMCANZ (2000) *Water Quality Guidelines* and GMRRW (2008) *Guidelines for Managing Risk in Recreational Waters.*

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

7 SOIL SAMPLING, ANALYSIS PLAN AND SAMPLING METHODOLOGY

7.1 Sampling Team

The details of the sampling team and duties were as follows

a) Soil sample collector:
- Soil sample collection according to sampling regime.
- Described soil horizon features.
- Responsible for decontamination between sampling.

b) Soil sample logger:
- Identified testing location and depth of profiles.
- Labeled sample containers.
- Recorded field conditions current at sampling into the sample log.
- Recorded soil profile information.
- Nominated field duplicates at the nominated ratio.
- Recorded analytes to be tested for each sample.

c) Groundwater sample collectors:
- Set up of Micropurge sampling equipment.
- Collection of samples in appropriate containers.
- Logging of SWL and water quality parameters.
- Filtering of water for metals.

Table 8 – Sampling Team Personnel

Personnel	Position	Qualifications	Project Task
Ryan Jacka	Senior Environmental Scientist	Bachelor of Environmental Science Master of Environmental Science MEIANZ SSA Workcover Construction Work in NSW (White Card)	Project Coordination Conduct site visual assessment Identify sampling location Conduct soil sampling
Andrew Jacovides	Environmental Scientist	Bachelor of Natural Science in Environmental Management Workcover Construction Work in NSW (White Card)	Conduct site visual assessment Conduct soil sampling and logging Conduct groundwater Sampling
Fiona Warden	Environmental Scientist	Bachelor of Environmental Science and Management Workcover Construction Work in NSW (White Card)	Conduct site visual assessment Identify sampling location

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

			Conduct soil sampling Conduct groundwater sampling
Adam Reid	Field Scientist	Workcover Construction Work in NSW (White Card)	Conduct site visual assessment Conduct soil sampling and logging

7.2 Sampling Regime – Soil

The fieldwork for the assessment was devised to address the issues identified as potential for contamination. The sampling objective was to address data gaps from the previous contamination sampling conducted by Urban Environmental Consultants in February 2002 and gather information with regard to the type, location, level and extent of potential contamination due to the historical landuses for this site within the investigation area. This process is devised to provided sufficient supporting data (according the DQO's) to allow recommendations to be made on whether the possible site contamination is compliant with the proposed landuse and the environmental concerns.

For this Tier 1 DSI, the selection of the sampling locations were formed based on a judgemental sampling pattern to address data gaps from review of previous reports. Samples were collected in selected locations around the former service station and broadly across the two Lots. As a minimum, seven (7) sample locations are recommended to be sampled on the 0.15ha assessment site according to *Contaminated Sites Sampling Design Guidelines from the NSW EPA (1995)*, giving an equivalent sampling density of 35.0 sampling points per hectare. Twelve (12) locations external to the former garage were investigated with three (3) locations within the garage cited judgmentally following inspection. A total of thirty-two (32) primary soil samples were chemically analysed in order to determine contaminant concentrations.

Samples were collected from boreholes constructed using a push-tube drill rig, and hand auger as required. Hand augering was required in areas of restricted access for the rig but was limited to assessing to the groundwater table as structural collapse was encountered beyond this depth. Samples were collected from the soil profile on a judgemental basis, with each sample selected to characterise potential sources of contamination (fill and USTs). Sample selection was determined based on the inspection of soil, including any observed indicators of contamination such as discolouration or odour. The limit of assessment was 1m below the water table, approximately 4.5m below current ground level. In one location (HA4) due to auger refusal, the limit of assessment was 0.8m.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

7.3 Sample Collection – Soil

Sampling locations were selected based on the following process:

- Visual inspection for surface contamination during the site walkover;
- Evidence of fill materials;
- Indicators of contamination such as odour and discolouration; and
- Elevated VOC readings from the Photo Ionisation Detector (PID).

Soil samples were recovered from each sample location using a drill rig or hand auger depending on site access. Samples were collected directly from the push tube recovery tubes or auger head using disposable gloves and placed into laboratory prepared jars.

The jars were then placed in a chilled container and forwarded to a NATA registered laboratory for analysis under Chain of Custody (COC) conditions.

Table 9 – Sampling locations selection

Sampling Location	Justification
BH1	Within the area of known fill and uncharacterised materials
BH2	Within the area of known fill and uncharacterised materials
BH3	Within the area of known fill and uncharacterised materials
BH4	Within the area of known fill and uncharacterised materials
BH5	Within the area of known fill and uncharacterised materials
BH6	Within the area of known fill and uncharacterised materials
BH7	Within the area of known fill and uncharacterised materials
BH8	Within the area of known fill and near UST's
BH9	Within the area of known fill, near UST's and within workshop footprint.
BH10	Within the area of known fill and near UST's
HA1	Within the area of known fill, near UST's and within workshop footprint.
HA2	Within the area of known fill, near UST's and within workshop footprint.
HA3	Within the area of known fill and near UST's
HA4	Within the area of known fill and near UST's
HA5	Within the area of known fill and near UST's

BH – Denotes bore holes constructed by drill rig.
HA – Denotes holes constructed by hand auger.

7.4 Composite Sample Procedure

No composite samples were taken during this assessment.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

7.5 Sampling Regime – Groundwater

Four (4) groundwater wells were previously installed on the site, with the screened depth of one well (BH3) at the standing water level, while the remaining three are screened across the standing water level. As such BH3 will only be used for gauging purposes. Two additional wells were installed as part of this assessment, BH8/MW1 and BH10/MW2.

Due to time limitations for the assessment, groundwater was assessed in two stages. Stage 1 was conducted on 01/06/2016 as a preliminary grab assessment, with samples obtained from the two newly installed wells in closest proximity to the former UST's and two existing wells, characterising four areas of the site. Grab samples were observed for indications of free phase hydrocarbons and collected using bailers. No free phase hydrocarbons were visually identified. A subsequent Stage 2 low-flow sampling event was conducted on 08/06/2016 on the same four (4) selected wells.

7.6 Sample Collection – Groundwater

Sampling was conducted on wells that were purged (existing wells) and established (new wells) on 01/06/2016 and sampled 7 days later on 08/06/2016.

Groundwater was sampled using low-flow sampling techniques. Water was initially pumped through a flow-through cell until the baseline water quality indicators reached stabilisation. Following stabilisation, the flow-through cell was disconnected and samples directly transferred into laboratory prepared bottles, proceeding from most volatile through to non-volatile.

Bottles were immediately transferred into a chilled container and forwarded to a NATA registered laboratory for analysis under Chain of Custody (COC) conditions.

Table 10 – Sampling locations selection

Sampling Location	Justification
MW1/BH8	Adjacent to USTs
MW2/BH10	Adjacent to USTs
MW3	Characterise four corners of site and allow flow determination
MW4	Characterise four corners of site and allow flow determination

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

8 QUALITY ASSURANCE & QUALITY CONTROL PLAN

8.1 Data Quality Objectives

The purpose of establishing data quality objectives is to ensure the field investigations and analyses are undertaken in a way that enables the collection and reporting of reliable data on which to base the site validation. The data quality objectives (DQOs) and the procedures designed to achieve these objectives are listed below.

Table 11 – Data Quality Objectives

Process	Response
Step 1. Define the problem	Historical activities at the site have included: • Former site use – Historical service station/ workshop • Historical land-filling
Step 2. Identify the goal of the study.	The objective of the investigation is to assess the degree of contamination in areas identified within the investigation in Appendix A: Sample Locations Map.
Step 3. Identify information inputs	Data inputs for the project: - Review of data from previous contamination report. - Results of soil and groundwater sampling and analysis to be gained by the assessment process. - Historical photographs. - Government records.
Step 4. Define the boundaries of the Study	The area subject to the intrusive investigation (see Appendix A: Sample Locations Map). The investigation area is limited to the site boundary. The vertical boundary of the assessment is the maximum depth of boreholes, 1m below the groundwater level (approximately 4.5m BGL).
Step 5. Develop the analytical approach	Review of previous reports used to identify the main contaminants of concern. Analysis includes the following: General Fill: TRH/BTEX, VOC, PAH, OCP, PCB, Metals, Asbestos UST Contaminants: TRH/BTEX, VOC, PAH, Metals. Groundwater: TRH/BTEX, VOC, PAH (ultra trace), Metals.
Step 6. Specify performance or acceptance criteria.	Concentrations of contaminants will be compared to the appropriate ASC NEPM criteria to assess the potential impacts to soil and to assess any need for further investigation or remediation. Soils: ASC NEPM (2013) Health Investigation Levels – High Density Residential (HIL-B) Groundwater: ASC NEPM (2013) Groundwater Investigation Levels - Marine
Step 7.	Samples be collected in accordance with the sampling plan as per Section 7.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

Develop the Plan for obtaining data	Environmental Professionals undertook sampling.

8.2 Data Quality Indicators and Data Evaluation

SESL has selected the following Data Quality Indicators (DQIs) to ensure that the data obtained from the assessment are of sufficient quality to be used to draw reliable and representative conclusion in an assessment of the environmental conditions of the investigation area.

8.2.1 *Documentation and Data Completeness*

The completeness of data is defined as the percentage of analytical results that are considered valid. Valid chemical data values that have been identified as acceptable or acceptable as qualified during the data validation process. The completeness is a comparison of the total number of samples accepted against the total number of samples, calculated as a percentage. The project goal for completeness is greater than 90%. QA/QC for completeness includes the following:

g) All critical locations sampled;
h) All required samples collected (i.e. surface and in depth samples);
i) Sampling team are well informed, qualified and experienced;
j) Correct and complete documentation;
k) Appropriate analysis methods and PQLs;
l) Compliance of sample holding times; and
m) All data entries in the database are correct, properly entered, checked and that any typographical errors in the database are corrected and the data re-entered properly.

8.2.2 *Data Comparability*

Comparability expresses the confidence that the data may be considered to be equivalent for each sampling and analytical event and deemed suitable for comparison. In order to assess comparability, field procedures, laboratory sample preparation procedures, analytical procedures and reporting units must be known and similar to establish protocols (Standard Operating Procedures). Qualitatively, data subject to strict QA/QC procedures will be deemed more reliable, therefore more comparable, than other data.

8.2.3 *Data Representativeness*

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of parameter variations at sample points or environmental conditions and obtaining suitable samples from these sites.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Sample selection and analysis will be conducted in order to meet the specific objectives of the particular phase of work. Analysis for the contaminants of concern will be selectively conducted based on the identified contaminants of concern, and the field observations.

8.2.4 *Precision and Accuracy for Sampling and Analysis*

Precision and accuracy for sampling and analysis expresses the quantitative measure of the variability and closeness of the data. This DQI is crucial to provide information to data users of the reliability, unreliability or qualitative value of the data representing each analyte in each environmental matrix. QA/QC includes:

- Correct and appropriate Standard Operating Procedures applied and complied with;
- Assessment of RPDs are satisfactory; and
- Independent review of QA/QC data satisfactory.

8.3 Field and Laboratory Quality Assurance Program

Quality Assurance (QA) and Quality Control (QC) practices were applied to all stages of data gathering and subsequent sample handling procedures. These are designed to provide control over both field and laboratory operations. Additionally, the analytical laboratories will complete their own internal QA procedures (as required by NATA registration) during the analysis of samples. Details of the QA/QC program are described below.

8.3.1 *Quality Assurance*

All fieldwork followed the SESL procedure to ensure that all environmental samples are collected by a set of uniform and systematic methods as required by the QA system.
The SESL field procedure describes the following:

- Decontamination procedures;
- Sample identification procedures;
- Information requirements for soil bore logs;
- Chain of custody information requirements; and
- Field calibration requirements (if necessary).

8.3.2 *Quality Control Results*

The results of the field and laboratory quality control samples were assessed to determine:

- The quality of the data generated;
- If the data meets the objectives of the study; and
- If the data is acceptable for the intended use.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

8.3.3 *Field QC*

The following data quality indicators will be used for the investigation:

- All samples analysed were conducted using NATA registered methods in accordance with ANZECC (1996) and NEPC (1999) guidelines;
- Maximum acceptable sample holding times was 14 days for organic and 6 months for metal analyses. Mercury (Hg) to be analysed within 28 days of sample collection;
- Samples were appropriately preserved and handled;
- Laboratory method blank analyses were required to be below the limits of reporting PQL;
- All compound concentrations were (if required) spiked at similar concentration to sample results;
- All PQLs must be less than the assessment criteria;
- The relative percent difference of duplicates was determined and compared to the following criteria for acceptability. The acceptance criteria are:
    i. Less than 50% for field duplicates;
    ii. Less than 30% for inter laboratory duplicates;
    iii. 30% for laboratory duplicates where the detection is less than 10 times the PQL; and
    iv. Less than 20% for laboratory duplicates where the detection is greater than 10 the PQL.
- RPDs for control spike duplicates to be compared to an acceptable limit of 20%;
- RPDs for Matrix Spike Duplicates to be compared to an acceptable limit of 20%; and
- Percent recoveries of control spikes and matrix spikes to be compared to an acceptable range of 70-130%. In addition, percent recoveries of surrogates were also compared to the USEPA surrogate recovery limits.

8.3.4 *Laboratory Quality Control*

Chemical analysis for soil and water samples to be undertaken by an environmental laboratory under COC procedures.

8.3.5 *Laboratory Blanks*

Laboratory or control blanks consist of reagents specific to each individual method and are prepared and analysed by laboratories in the same manner as regular samples. The preparation and analysis of laboratory blanks enable the measurement of contamination within the laboratory.

Ideally, no contamination should be present in blanks. However, in the event that contamination is detected, the following actions are taken:

- The organic test results are not to be corrected by subtracting any blank value;
- If any analyte is found in blank but not a sample, no action is taken;

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

- No absolute results are reported unless the analyte concentration within a sample exceeds 10 times the amount in any blank for common contaminates, or five times the amount for any other analyte; and
- Professional judgment is used where little or not contamination is present in the associated blanks, but contamination is suspected in actual samples.

Laboratory blanks will be analysed 1 per media for the investigation. For this investigation that included soil and water.

8.4 Reporting

On completion of the assessment, SESL Environmental Scientist will prepare a factual report summarising the works performed and assessed the results and findings in order to demonstrate compliance with the objectives of the DSI.

Based on the identified contaminants of concern and field observations and screening, soil and water samples will be submitted for analysis.

Table 12 provides a summary of the sampling regime for the investigation.

Table 12 – Summary of Sample Analysis

Analyte	Fill Soil Samples	Natural Soils	Groundwater
Heavy metals (As, Cd, Cr, Cu, Ni, Pb, Zn, Hg)	15 (1)	14 (1)	4 (1)
PAH	15 (1)	14 (1)	4 (1) – ultra trace
VOC (including BTEX)	15 (1)	14 (1)	4 (1)
TRH	15 (1)	14 (1)	4 (1)
OCP	15 (1)		
PCB	15 (1)		

Note: Numbers in () indicate duplicate samples for the corresponding media (Column) and analyte (Row)

Summary of QA samples:

- 1x soil blank
- 1x water blank
- 1x soil spike
- 1x water spike
- 1 x rinsate blank
- 1x interlab duplicate
- 1x intralab duplicate
- 1x groundwater duplicate
- 2 x soil duplicates

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

9 SUMMARY OF RESULTS

9.1 Site Stratigraphic Conditions

The assessment area was all covered by hardstand or grass with one structure present in the south eastern corner of the site. Previous site uses and historic filling guided the scope of this investigation. Fill depth ranged from 1 to 2.5m's deep. Fill materials across the site were fairly uniform and consisted mainly of various coloured sands, ash, gravel and sandstone inclusions. Fill beneath the maintenance workshop/service station and its outer footprint was slightly deeper and contained mostly brown sand, clay and gravel. Brick was identified in two sample locations in this area.

Beneath fill layers at all sampling locations, natural soil profiles were identified consisting of grey to brown medium sands, gradually darker at depth.

9.2 Soil Analytical Results Summary

Laboratory analysis of soil samples collected during the site assessment on 31/05/2016 and 01/06/2016, indicates that the concentration of Lead and CPAHs exceeds the adopted Health Investigation Levels (HIL) for residential land use (HIL-B – Residential). These elevations were identified in fill materially specifically in BH1, BH2, BH4 and HA3. Lead and TRH were elevated within fill across the site but were below threshold criteria. No contaminant elevations were detected in natural soil samples. A summary of soil results is presented in Table 13.

Asbestos fragments were present on the surface of the grassed area, within the demolition footprint. One fragment was also observed within the raised slab behind the former service station. No asbestos fibres were detected in soil samples. The site can therefore be managed with the removal of surface asbestos and validation.

NATA certificates and chain of custody (CoC) documentation are available in Appendix E.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Table 13 – Soil Analytical Elevations

Location	Chemical	Results	HIL B
BH 1 400-600	CPAHs (mg/kg)	**24.56**	4
HA3 200-500	CPAHs (mg/kg)	**4.84**	4
BH2 300-800	Lead (mg/kg)	**2478**	1200
BH4 500-1000	Lead (mg/kg)	**1302**	1200

Exceeds adopted HIL

9.3 Groundwater Analytical Results Summary

Laboratory analysis of groundwater grab samples collected during the site assessment on 01/06/2016 indicates that the concentration of Zinc exceeds the adopted Groundwater Investigation Level (GIL) for marine aquifers (GIL- Marine Waters) at one location (MW1). Groundwater samples from the low flow sampling event on 08/06/2016 indicates that Copper, Nickel and Zinc exceeds the threshold criteria at all four monitoring wells. Ultra trace PAH's were detected at three locations (MW1, MW2 and MW4) and were below guideline values.

NATA certificates and chain of custody (CoC) documentation are available in Appendix E.

A level survey of the site was provided by the client and was used to determine groundwater head levels of monitoring wells from the standing water level data collected during the sampling event on 08/06/2016. Diagrams and calculations are included in Appendix C.

From this data, it was determined that groundwater was flowing in a north to south direction across the site. As no monitoring wells are situated to capture groundwater flow down-gradient of the USTs and groundwater interaction with fill was not observed, it is likely an offsite source north of the site, is contributing to the heavy metal contamination of groundwater. It is also noted that groundwater flow direction may fluctuate due to the expected tidal nature of the aquifer. Further groundwater studies would be required to characterise flow and determine if there is an offsite impact from USTs.

No UCL was conducted on groundwater samples as some values were above 250% of the GIL and therefore data was not normally distributed. However, heavy metal contamination above threshold values was identified at all four wells.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

Table 14 – Groundwater Analytical Elevations

Location	Copper (µg/L)	Nickel (µg/L)	Zinc (µg/L)
MW1 (grab 01/06/2016)	<1	<1	52
MW2 (grab 01/06/2016)	1	<1	9
MW1 (08/06/2016)	7	9	84
MW2 (08/06/2016)	4	8	46
MW3 (08/06/2016)	30	24	140
MW4 (08/06/2016)	4	13	38
GIL	**1.3**	**7**	**15**

Exceeds adopted GIL

9.4 QA/QC Results

Quality assurance/quality control (QA/QC) procedures conducted within the DSI included standard laboratory procedures (see Section 8: Quality Assurance & Quality Control Plan). All laboratory replicate samples were found to be within the acceptable range.

Trip Blanks and Spikes

One blank and one spike per medium (soil and water) and one rinsate blank was prepared into glass vials and taken to the site, stored with samples during the sampling event and analysed through the sample chain of custody. During laboratory analysis of soil spike and soil blank, SESL was advised that vials were broken before volatile concentrations could be analysed. No results have been determined for these QA samples. During sample collection, the water spike stored as glass vial shattered. No sample was analysed for this QA sample. As no volatiles were detected in analysed soil samples, blanks and spikes are therefore of less significance with their loss resulting in no consequence for QA procedures. The use of push tube techniques for the majority of samples, Teflon liners on soil jars and immediate transfer to chilled eskies provide best practice to reduce the loss of volatiles.

Results for the remaining QA/QC sample rinsate blank showed no elevations in contaminants (TRH's, BTEXN, ultra trace PAHs and metals). The results indicate that the decontamination procedure for the auger head was sufficient and did not lead to cross contamination of samples.

The water blank was analysed for volatiles (BTEXN, TRH C_6-C_9 volatile fraction). Results for this QA sample recorded no elevations in contaminants.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

Soil and Water Duplicates

One field QA/QC sample was taken for every twenty samples collected. In total, 2 soil duplicates and 1 groundwater duplicate were collected during the DSI. The results of the QA/QC samples found that almost all analytes across both samples were within the acceptable range. Arsenic and Cadmium in one set of samples (QA1 and HA4 300-500) was outside of the acceptable range (See QA results in Appendix E). As both samples had low readings, less than 2mg/kg, there is therefore a large percentage difference. As the sample consisted of heterogeneous fill material, variation is expected, even within a single sample. Due to the low results and sample heterogeneity, no ongoing issue related to QA/QC has been identified.

One duplicate for groundwater was collected during the low flow sampling event. All analytes were within the acceptable range.

Based on the QA/QC results, the data is considered suitable for use in assessing the site. Results for soil duplicates and their corresponding sample are included in Appendix E.

A copy of the calibration records for the low flow sampling equipment is included in Appendix C.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

9.5 Calculation of 95% Upper Confidence Limit (UCL)

The 95% UCL demonstrates with 95% confidence that the average contaminant concentration of the soil represented by the data set is at or below the concentration stated.

EPA recommends a minimum of ten samples for 95% UCL calculation. For large soil volumes (i.e. >2,500m^3) the minimum sampling rate should not be less than 1 sample per 250m^3.

In accordance with Procedure D of the *NSW EPA Sampling Design Guidelines (1995)* each domain or stockpile should be categorized separately. Non-detect samples need to be included in calculations of 95% UCL. Non-detect values are substituted with a value of half of the detection limit of the laboratory apparatus.

The 95% UCL can be calculated using the following formula:

$$\text{UCL average} = X + t_{\alpha,\, n-1}\,(s/\sqrt{n})$$

Where:

UCL upper confidence limit of the arithmetic average concentration of the sampling are at the 1-α confidence level

X arithmetic average of all samples

$t_{\alpha,\, n-1}$ A test statistic (student's t at an α level of significance and n-1 degrees of freedom)

s standard deviation of the sample measurements

n number of sample measurements

α the probability that the 'true' average concentration of the sampling area might exceed the UCL average determined by the above equation

Natural soil samples did not contain elevations above threshold values, therefore the UCL was only determined across fill and groundwater samples. Results of UCL analysis for the contaminants of concern are presented in Table 15.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

Table 15 – 95% Upper Confidence Limit of the Average Contaminant Concentration Compared Against Health Investigation Level (Residential – B) within fill

Chemical	95% UCL	HIL B
CPAHs (mg/kg)	5.14	**4**
CPAHs (mg/kg) (excluding BH1 400-600)	1.8	**4**
Lead (mg/kg)	745	**1200**

Exceeds adopted HIL

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of CPAHs across fill material exceeds HIL B. However, when the hotspot (BH1) is removed due to its value of >250% above the adopted HIL B, UCL for the fill across the site is within HIL B criteria. The 95% UCL of all other contaminants, including lead, is within threshold values. See Appendix E for UCL calculations.

From these results, a hotspot in the vicinity of BH1 has been identified. To keep hotspot materials separated from other soils, selected management and further analysis to delineate the extent of significant CPAHs should be conducted during excavations.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

10 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) was developed based on the information obtained during the investigation process to allow assessment of potential sources of impact, chemicals of concern, transport mechanism and receptors.

10.1 Sources of Impact

In summary, the sources of impact (areas of environmental concern – AEC) identified in the assessment area include:

- AEC 1: PAH and heavy metal contamination of fill soils due to historical filling.
- AEC 2: Identified bonded asbestos containing materials on the surface.
- AEC 3: Heavy metal contamination of groundwater from offsite uses.

10.2 Contaminants of Concern

Based on the potential sources and the findings of the current investigation, the contaminants of concerns include the following:

- Polycyclic Aromatic Hydrocarbon (Carcinogenic and Total);
- Heavy metals; and
- Asbestos

10.3 Fate and Transport

10.3.1 *Transport Medium and Control*

The anticipated primary transport media for the migration of contaminants of concern are:

- Migration of contaminated material through erosion and dust during construction works:
  - Any identified contaminated soil materials can be managed during remediation process during future construction.
- Migration of contaminated material through erosion and dust from future use of the site:
  - Any identified contaminated soil materials that will remain onsite to be managed to remove the transport pathway from receptors.
- Groundwater migration through permeable soils.
  - Contaminated groundwater be may encountered during future development. Assessment and control measures will depend on the location and extent of such contamination.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Certified System Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

10.3.2 *Potential Migration Pathways*

There are a number of mechanisms by which identified receptors may come into contact with contaminated sources, including the following:

- Incidental dermal contact or ingestion of impacted soils;
- Generation of impacted dusts, aerosols or sediments from impacted soils; and
- Inadvertent use of contaminated groundwater.

10.4 Potential Surrounding Receptors

The potential human receptors are as follow:

- Construction workers during construction being exposed to contaminated soil or vapour;
- Future users of the site being exposed to contaminated vapour or soil;
- Community members living within vicinity of the site;
- Visitors to the site; and
- Future occupants of the developed site.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

11 CONCLUSION

11.1 Site Characterisation

The site is located at 2 West Promenade, Manly NSW 2095 and encompasses Lot 1 in DP 859455. The site is currently vacant hardstand with a former historic service station present in the south eastern corner. The proposed development involves the construction of a new Manly Civic Club with 5 levels of residential housing, 2 levels of basement parking and the refurbishment of the former service station onsite.

From the review of previous environmental reports for the site, historical account and visual inspections, it is known that the site has historically been used as a service station and workshop. The former Manly Club onsite, was demolished prior to this investigation. The site has been historically filled to achieve the current landscape. These activities may potentially contribute to onsite soil contamination. The following areas of concern were identified:

- AEC 1: PAH and heavy metal contamination of fill soils due to historical filling.
- AEC 2: Identified bonded asbestos containing materials on the surface.
- AEC 3: Heavy metal contamination of groundwater from offsite uses.

Soil and groundwater sampling procedures were devised to address data gaps from UEC's 2002 Environmental Assessment, to characterise the quality of fill and investigate any potential contamination surrounding USTs and workshop facilities.

Sampling was undertaken on a judgmental basis based on the proximity to USTs and areas of fill previously uncharacterised, which included sampling of fill and natural materials to 1m below the water table (approximately 4.5m). Fifteen (15) locations across site were sampled by drill rig with push tube or from the head of hand augers in areas of restricted access.

Groundwater well installation and sampling was undertaken to characterise groundwater across the site and observe any influence from potential UST contaminant sources. Four (4) wells were sampled, with two (2) samples collected using a bailer and following establishment, 4 samples were collected using low flow sampling techniques.

Elevations in soil samples above the adopted threshold (HIL - Residential B) were observed at a 4 locations within fill materials (BH1, BH2, BH4 and HA3). All 4 groundwater wells had Copper, Nickel and Zinc elevations above the adopted Groundwater Investigation Level (GIL Marine Waters).

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

11.2 Summary

The objective of this DSI report was to determine the extent of potential soil and groundwater contamination prior to the redevelopment of the site located at 2 West Promenade, Manly NSW 2095. Environmental scientists from SESL undertook intrusive soil and groundwater sampling on 31/05/2016, 01/06/2016 and 08/06/2016.

A total of fifteen (15) boreholes were inspected across the site. Soil samples were collected from the soil profile with samples chosen from the fill and natural materials at each location.

The laboratory results were compared against the Health Investigation Levels (Residential HIL-B) for all sample locations across the area of investigation. CPAHs and lead were found to be elevated above the adopted threshold at four (4) locations (BH1, BH2, BH4 and HA3). Asbestos was identified on the surface and within the raised slab behind the former service station.

The results of the soil sampling undertaken at the site indicated that some contaminants of concern were found to exceed the adopted HIL B – Residential. SESL believes that fill across the site is contaminated with Lead and CPAHs exceeding threshold values. One area of fill beneath the slab of the former service station is to be redeveloped into a terrace garden area. Soil within the vicinity of this location as well as CPAHs hotpsot identified in the vicinity of BH1, will required specific management. The ground surface and raised slab are also considered contaminated with asbestos fragments. No asbestos fragments or fibres were identified within the soil profile. Removal of surface materials impacted with asbestos will also require management and additional chemical analysis.

The results of the groundwater sampling undertaken at the site indicated that some contaminants were found to exceed the adopted GIL – Marine Waters criteria. Copper, Nickel and Zinc elevations above the threshold criteria were identified at all four monitoring wells during the low flow sampling event. Zinc was elevated above the threshold criteria at MW1 from the initial grab samples. Ultra trace levels of PAHs were present at three locations (MW1, MW2 and MW4) but were below guideline values. Groundwater flow was determined to be travelling north to south across the site. As no monitoring wells are situated to capture groundwater flow down-gradient of the USTs and groundwater interaction with fill was not observed, it is likely an offsite source north of the site, is contributing to the heavy metal contamination of groundwater onsite. It is also noted that groundwater flow direction may fluctuate due to the expected tidal nature of the aquifer.

Based on the findings of this site investigation, SESL concludes that the site can be made suitable for the proposed redevelopment, subject to the following:

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001

A member of the Australasian Soil and Plant Analysis Council

A remedial action plan is to be developed for the management of contaminated fill material and asbestos containing materials on the surface. This may involve the offsite removal of asbestos impacted surface materials (top 100mm) with additional analysis to determine an appropriate waste classification for surface and fill material. Removal of soil material within the identified CPAH hotspot would be separated from fill material and further characterised for waste disposal.

Further groundwater assessment is to be conducted to determine the potential offsite sources contributing to the heavy metal contamination of groundwater and determine if there are any offsite impacts from USTs.

SESL anticipates the remediation works can be conducted concurrently during the development works onsite, and SESL do not consider it necessary to have remediation completed prior to DA approval.

WATER ■ MINING ■ SPORTS & RECREATION ■ HORTICULTURE & AGRICULTURE ■ ENVIRONMENTAL ■ ENGINEERING & GEOTECH ■ URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

12 LIMITATIONS

This report only covers the site conditions at the time of inspection on 27/05/2016, 31/05/2016, 01/06/2016 and 08/06/2016. Should there be any variation in the site conditions beyond this date, such as imported fill, chemical spillage, illegal dumping, further assessment will be required.

This report is for the use of the client and any relevant authorities that rely on the information for development applications and approval processes. Any reliance on this report by third parties shall be at such parties' sole risk. This report shall only be presented in full and may not be used to support any other objective other than those set out in the report.

SESL's assessment is necessarily based on the result of limited site investigations and upon the restricted program of visual assessment of the surface and consultation of available records. Neither SESL, nor any other reputable consultant, can provide unqualified warranties nor does SESL assume any liabilities for site conditions not observed, or accessible during the time of investigations.

No site investigations can be thorough enough to provide absolute confirmation of the presence or absence of substances, which may be considered contaminating, hazardous or polluting. Similarly, the level of testing undertaken cannot be considered to unequivocally characterise the degree or extent of contamination onsite. In addition, regulatory or guideline criteria for the evaluation of environmental soil and groundwater quality are frequently being reviewed and concentrations of contaminants which are considered acceptable at present may in the future be considered to exceed acceptance criteria. Similar conditions may prevail in regard to site remediation standards as different regulatory mechanisms are developed and implemented.

COPYRIGHT: The concepts, information and design ideas contained in this document are the property of SESL Australia Pty Ltd (ABN 70106 810 708). Use or copying of this document in whole or in part without the written permission of Sydney Environmental & Soil Laboratory constitutes an infringement of copyright.

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001

A member of the Australasian Soil and Plant Analysis Council

13 REFERENCES

ANZECC (1996) *Guidelines for the Laboratory Analysis of Contaminated Soils* – Australian and New Zealand Environment and Conservation Council

Australian Standard AS1726:1994 *Geotechnical Site Investigations*

Australian Standards AS4482.1:2005 *Guide to the Sampling and Investigation of Potentially Contaminated Soil (Part 1 & 2)*

Chapman, G.A and Murphy, C.L. (1989), *Soil Landscapes of Sydney 1:100 000 Sheet.* Soil Conservation Service of NSW, Sydney

enHealth 2012, Australian exposure factor guidance. Environmental Health Subcommittee (enHealth) of the Australian Health Protection Principal Committee, Canberra, Australia.

Hazelton, P.A, Bannerman, S. M. and Tille, P. J. (1989), *Soil Series Sheet 9030.* Soil Conservation Service of NSW, Sydney

National Environmental Protection (Assessment of Site Contamination) Measures, NEPC 1999;

National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013) (NEPC 2013, Canberra
NSW DEC (2006) *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme*

NSW EPA (Revised 2014) *Waste Classification Guidelines Part 1: Classifying Waste*

NSW EPA (1995) *Contaminated Sites: Sampling Design Guidelines*

NSW EPA (1999) *Contaminated Sites: Guidelines of Significant Risk of Harm from Contaminated Land and the Duty to Report*

NSW OEH (2011) *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites*

Manly Local Environment Plan 2013

Soil Series No. 1, 2nd Edition, 1998 and 3rd Edition, (1999) *Health-Based Soil Investigation Levels, National Environmental Health Forum monographs*

WA DoH (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009)

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST PO Box 357 Pennant Hills NSW 1715
LAB 16 Chilvers Rd Thornleigh NSW 2120
ACT Level 5 7 London Cct Canberra ACT 2601
VIC Level 1 88 Mt Alexander Rd Flemington VIC 3031
QLD Level 10 15 Green Square Cl Fortitude Valley QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

SESL AUSTRALIA
Environment & Soil Sciences

Appendix A

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System
Quality
ISO 9001
NATA
ASPAC
A member of the
Australasian Soil and
Plant Analysis Council

Courtesy of NSW Land and Property Information 2016

SESL AUSTRALIA
Environment & Soil Sciences

Title: Site Layout Map
Location: 2 West Promenade,Manly NSW
Project: C8823.Q5710.B39331 Manly Civic Club
Date: 14/06/2016

Legend

N

Note: Approximate Sampling Locations

SESL AUSTRALIA
Environment & Soil Sciences

Title: Sample Locations

Location: 2 West Promenade, Manly NSW 2095

Project: C8823Q5710B39331 MCC DSI

Date: 12/06/2016

Courtesy of NSW Land and Property Information 2016

Legend

- Borehole/Hand Auger/Groundwater Sampling Locations
- Former Sampling Sites (UEC Report 2002)
- Existing Monitoring Wells

Title: Refurbished Workshop Layout and Sample Locations

Location: 2 West Promenade Manly NSW

Project: C8823Q5710B39331 MCC DSI

Date: 12/06/2016

NOT TO SCALE

Note: Approximate Locations

Legend

Sample Locations

UST Locations

SESL AUSTRALIA

Environment & Soil Sciences

Site Photographs

Photo 1. Fill

Photo 2. Natural soils

Photo 3. Asbestos fragment within slab

Photo 4. Fill beneath workshop

ABN 70 106 810 708
T 1300 30 40 80 E info@sesl.com.au PO Box 357 16 Chilvers Rd
F 1300 64 46 89 W sesl.com.au Pennant Hills NSW 1715 Thornleigh NSW 2120

Quality ISO 9001
NATA
ASPAC A member of the Australasian Soil and Plant Analysis Council

			
Photo 5.	Groundwater grab sample	**Photo 6.**	Asbestos fragment on surface

ABN 70 106 810 708
T 1300 30 40 80 E info@sesl.com.au PO Box 357 16 Chilvers Rd
F 1300 64 46 89 W sesl.com.au Pennant Hills NSW 1715 Thornleigh NSW 2120

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

SESL AUSTRALIA
Environment & Soil Sciences

Appendix B

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System
Quality
ISO 9001
NATA
ASPAC
A member of the
Australasian Soil and
Plant Analysis Council

MAP 3418 SYDNEY 20-1-1930


472-27
SYDNEY RUN 8 MAY 51 12" 12200'
LANDSPHOTO


NSW
1051
5129


UAg 1002 152.36
NSW
2010
9133


NSW
3242
51

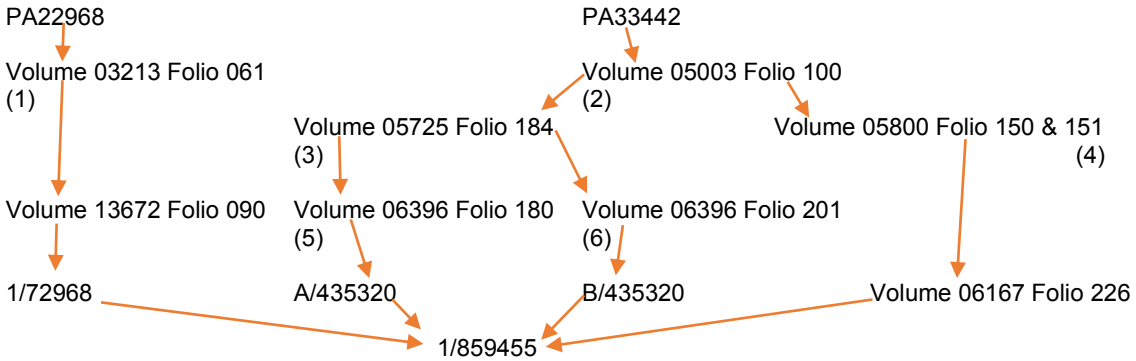

MANLY-LONG REEF M2031 Approx 1:8000 1230m asl 152.76mm 31/05/96 NSW4311 176-191
FS100 1/ 550 f/4.0 FF--+ EC---- SP- v/h.06274 00% dt010.2 ds016 26.1V -61mb ER00 CAM5202


10:42:59 22/04 0608460 NSW4961 R10 M2514 WYBUNGHD_PTHACK 1:8000 GDA S33.8020 E151.2879 1256m <-189
FS100 1/ 400 f/4.0 FF--- EC---- SP- v/h,06693 00% dt009.6 ds024 27.6V -69mb ER00 CAM5202

SEARCH REPORT

SUBJECT LAND: 2 West Promenade Street, Manly NSW 2095
Lot 1 Deposited Plan 859455

TITLES:



OWNERSHIP: 1

from 6.7.1920 to 19.1.1923	Robert James Douglas Sellar, Grazier and Walter Patrick Sellar, Grazier
from 19.1.1923 to 20.10.1937	Robert James Douglas Sellar, Grazier
from 20.10.1937 to 22.9.1938	Perpetual Trustee Company (Limited)
from 22.9.1938 to 14.12.1951	Stanley Gillingham, Motor Garage Propertier
from 14.12.1951 to 19.2.1953	Peggy Escott Sutton, Married Woman
from 19.2.1953 to 29.6.1978	The Shell Company of Australia Limited
from 29.6.1978 to Date	Manly Civic Club Limited

OWNERSHIP: 2

from 22.4.1908 to 19.11.1946 to 20.11.1947	Mary Gertrude McEvoy, Spinster

OWNERSHIP: 3

from 19.11.1946 to 1.8.1951	The Council of the Municipality of Manly

Disclaimer
While all due skill and care has been taken in the preparation of this report, SAI Global Property Division Pty Ltd does not warrant that its contents (that have been obtained from publicly available resources at a particular point in time) are accurate, complete, up to date or fit for any particular purpose

SEARCH REPORT

OWNERSHIP: 5

from 1.8.1951 to 3.3.1957	The Council of the Municipality of Manly
from 3.3.1957 to 4.9.1964	Mackellar County Council
from 4.9.1964 to Date	Manly Civic Club Limited

OWNERSHIP: 6

from 1.8.1951 to 25.8.1953	Ernest Albert Wall, Hairdresser and Clarence Burt, Milk Bar Proprietor and Philip Rippin Hotson, Hardware Merchant
from 25.8.1953 to date	Manly Civic Club Limited

OWNERSHIP: 4

from 20.11.1947 to 26.4.1950	Isobel May Murray, Married Woman and Edgar Charles Frecklington, Grazier
from 26.4.1950 to 25.8.1953	Clarence Burt, Milk Bar Proprietor and Cowley Grosvenor, Tobacconist and Ernest Albert Wall, Hairdresser
from 25.8.1953 to date	Manly Civic Club Limited

LEASES: 1

C163392 Reg'd; 14.2.1933	Stanley Gillingham, Taxi-cab Proprietor
Z332070 Reg'd; 28.11.1990	North Shore Appliance Parts Pty Limited

LEASES: 5

J756909 Reg'd; 4.9.1964	Mackellar County Council

27th May 2016

SAI GLOBAL PROPERTY

Disclaimer
While all due skill and care has been taken in the preparation of this report, SAI Global Property Division Pty Ltd does not warrant that its contents (that have been obtained from publicly available resources at a particular point in time) are accurate, complete, up to date or fit for any particular purpose

Order number: 36659433
Your Reference: 36658393
18/05/2016

© State of New South Wales through Land and Property Information (2016)

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
18/5/2016 9:11AM

FOLIO: B/435320

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 6396 FOL 201

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
17/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
22/5/1996	2165032	DISCHARGE OF MORTGAGE	
3/6/1996	DP859455	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

PRINTED ON 18/5/2016

SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

Order number: 36659433
Your Reference: 36658393
18/05/2016

© State of New South Wales through Land and Property Information (2016)

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
18/5/2016 9:11AM

FOLIO: A/435320

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 6396 FOL 180

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
24/11/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
22/5/1996	2165033	DISCHARGE OF MORTGAGE	
3/6/1996	DP859455	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

PRINTED ON 18/5/2016

SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

Order number: 36659273
Your Reference: 36658393
18/05/2016

© State of New South Wales through Land and Property Information (2016)

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
18/5/2016 9:09AM

FOLIO: 1/859455

First Title(s): OLD SYSTEM
Prior Title(s): 1/72968 A-B/435320
VOL 6167 FOL 226

Recorded	Number	Type of Instrument	C.T. Issue
3/6/1996	DP859455	DEPOSITED PLAN	FOLIO CREATED EDITION 1
11/9/1996	2451827	SURRENDER OF LEASE	EDITION 2
16/12/2008	AE393746	MORTGAGE	EDITION 3
18/6/2010	AF564697	DISCHARGE OF MORTGAGE	
18/6/2010	AF564698	MORTGAGE	EDITION 4
28/7/2011	AG396730	VARIATION OF MORTGAGE	EDITION 5
23/8/2012	AH194294	DISCHARGE OF MORTGAGE	
23/8/2012	AH194295	MORTGAGE	EDITION 6
4/4/2013	AH641632	DEPARTMENTAL DEALING	
16/5/2013	AH735169	VARIATION OF MORTGAGE	EDITION 7
11/9/2014	AI880296	DISCHARGE OF MORTGAGE	
11/9/2014	AI880297	MORTGAGE	EDITION 8
11/8/2015	AJ687010	DISCHARGE OF MORTGAGE	
11/8/2015	AJ687011	MORTGAGE	EDITION 9

*** END OF SEARCH ***

PRINTED ON 18/5/2016

SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

Order number: 36659433
Your Reference: 36658393
18/05/2016

© State of New South Wales through Land and Property Information (2016)

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
18/5/2016 9:11AM

FOLIO: 1/72968

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 13672 FOL 90

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
25/11/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
28/11/1990	Z332070	LEASE	EDITION 1
3/6/1996	DP859455	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

PRINTED ON 18/5/2016

SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

Req:R722421 /Doc:PA 033442 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:1 of 4

Ref: /Src:U

No. 33442

New South Wales. R.P. 2.

FEES :— £ s. d.

Assurance ... 5 : 3 8

Lodgment ... 1 : —

Certificate ... 1 : 5

Advertising... 1 : 10

Office Copy ... : 5 :

Plan ... : :

Total £ 9 : 3 : 8

1 MAR 1938

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900.

FEE SIMPLE.[a]

a This form may be modified to suit the case of a leasehold title.

CAUTION.—Applicants are reminded that by virtue of the provisions of the Crimes Act, 1900, the penalties attached to a false declaration concerning any matter or procedure under the Act, and that the utmost care is therefore necessary in signing (or reading over, if the form be filled up by an Attorney) every particular statement herein.

It is further provided by Section 126 of the Real Property Act, 1900, that any applicant procuring a Certificate through any fraud, error, omission, misrepresentation, or misdescription will, notwithstanding the issue of such Certificate, remain liable for damages to any person thereby prejudiced. And any person who fraudulently procures, assists in procuring, or is privy to the fraudulent procurement of any Certificate of Title, is declared guilty of a misdemeanor, and liable to not exceeding £100, or imprisonment not exceeding three years; and any Certificate thereby [illegible] between all parties or privies to the fraud.

b Here state Christian and surname (or names) in full with residence and occupation.

I[b] / WE MARY GERTRUDE McEVOY of Bellevue Hill in the State of New South Wales, Spinster

c "I am" or if the declaration is made by an attorney "C.D. of is" (as the case may be).

d Here give description of the property in full. If the land is shown on a plan lodged with the application or is fully described in a deed, it will be sufficient to insert a reference to the area, town, parish, and county and words indicating that the land is shown on the plan or described in the deed in question. Unless the Registrar-General has previously dispensed with a plan of survey, an accurate plan, prepared and certified by a surveyor specially licensed under the Act, must accompany the application. If there be any rights of way or other rights or easements affecting the premises the particulars should be stated. If the space for description be insufficient, it may be completed by annexure, which must however be identified as part of the declaration, by memorandum signed by the declarant and attesting officer.

do solemnly and sincerely declare, that[c] I am seized for an Estate in fee simple of ALL THAT piece or parcel of land containing by admeasurement 27¼ perches or thereabouts being lot 52 and part of lot 51 of Section E of the Brighton Estate situated in the Municipality of Manly Parish of Manly Cove County of Cumberland and State of New South Wales be the hereinafter stated several dimensions all a little more or less COMMENCING at a point on the south easterly alignment of Eustace Street bearing 1 degree 25 minutes 50 feet from the intersection of the said alignment with the north easterly alignment of Gilbert Street and bounded thence towards the north west by part of that alignment of Eustace Street bearing 1 degree 25 minutes 40 feet 6 inches thence towards the north east by the south westerly boundary of the land comprised in Certificate of Title Volume 4595 Folio 109 bearing 91 degrees 161 feet 1½ inches to the north westerly alignment of West Promenade thence towards the south east by part of that alignment of West Promenade bearing 181 degrees 9 minutes 40 seconds 50 feet 2¾ inches thence towards the South west by part of the north easterly boundary of the land comprised in Certificate of Title Volume 3213 Folio 61 bearing 270 degrees 27 minutes 90 feet 11½ inches thence towards the north west by a line bearing 2 degrees 56 minutes 10 feet thence again towards the north east by a line partly fenced bearing 271 degrees 29 minutes 30 seconds 70 feet 8 inches to the point of commencement.

e The full improved value should be stated.

f State whether "the whole" or "part."

g Insert allotment with reference to number and section on plan, if any, or if not, number of acres granted.

h Name of Grantee.

which land (including all improvements) is of the value of[e] Two thousand four hundred and eighty eight Pounds and no more, and is[f] part of[g] one hundred acres originally granted to[h] JOHN THOMPSON by Crown grant, under the hand of the Governor of the Colony, dated the thirteenth day of April 18 42.

And I further declare, that I verily believe there does not exist any lease or agreement for lease of the said land, for any term exceeding a tenancy for one year, or from year to year,[k] —

k If there be any Lease, add the words "except as follows" and insert particulars thereof.

Also, that there does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than myself[l] —

l If there be any mortgage, lien, etc., add the words "except as follows" and insert particulars thereof.

m Insert "unoccupied," or "in the occupation of," adding name and address of tenants in full. State also nature of tenancy, if not under some lease before mentioned. When the applicant is not in actual occupation, but has a caretaker or manager in occupation, the name of such caretaker or manager should be stated, together with the nature of his occupancy.

and I further declare, that there is no person in possession or occupation of the said land or any part thereof adversely to my Estate or Interest therein, and that the said land is now[m] in the occupation of Isabel Wilson Park as my weekly tenant of the residence erected on part of the said land. The remaining part of the said land is unoccupied.

n Here insert names and residence of adjacent owners and occupiers on all sides.

and that the owners and occupiers of adjacent lands are as follows[n] :—

State whether on North, South, East, or West.	Name.	State whether owner or occupier.	Address.
North	Ambrose Paul Russ	Owner (various flat tenants)	Trangie N.S.W. Grazier.
South	Estate R.J.D. Sellar deceased	Owner (Occupier) E. Gillingham Auckland - Service Station Gilbert Street, Manly.	C/O Perpetual Trustee Company (Limited) 33-39 Hunter Street, Sydney.
East and West	Public Streets - West Promenade and Eustace Street, respectively.		

Certificate issued Vol 5003 Fol 100

22791 6.30 M 380

Req:R722421 /Doc:PA 033442 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:2 of 4
Ref: /Src:U

And I further declare, that the annexed Schedule, to which my signature is affixed, and which is to be taken as part of this Declaration, contains a full and correct list [o] of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as I have any means of ascertaining the same, distinguishing such as being in my possession or under my control, are herewith lodged and indicating where or with whom, so far as known to me any others thereof are deposited; Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of my knowledge, information, and belief; and that there is not, to my knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed [p]

And I make this solemn Declaration, conscientiously believing the same to be true.

DATED at SYDNEY this twenty-second day of February 1938.

(RULE UP ALL BLANKS BEFORE SIGNING.)

Made and subscribed by the abovenamed MARY GERTRUDE McEVOY this twenty-second day of February 1938. in the presence of [r]

Signature of Applicant M. G. McEvoy.

To the Registrar General,—

I MARY GERTRUDE McEVOY the above declarant, do hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title to the name of [s] myself.

DATED at SYDNEY this 22nd day of February 1938.

Witness to Signature—

(Signature of Applicant) M. G. McEvoy.

* N.B.—The Schedule below and Certificate indorsed on fourth page should be also signed.

In no case can any alterations, however trifling, be allowed to be made after the application has been once declared, unless all the parties re-sign and re-declare the same. If it is discovered that any alterations are necessary, the applicant may make a statutory declaration setting out in what manner he desires the application to be altered, which declaration will then (unless the Registrar General considers that a fresh application ought to be made) be read as one with the application.

(RULE UP ALL BLANKS BEFORE SIGNING.)

[o] The Declaration may be qualified to the extent to which Applicant's title has been previously passed by the Registrar General by inserting the words "Commencing with Conveyance dated ..... registered ..... or as the case may be. Otherwise all documents from the Crown Grant onwards must be entered in the Schedule.

[p] If there be any exception add the words "except as follows" and insert necessary particulars.

[r] If made in New South Wales this declaration must be attested by the Registrar-General or Deputy, or by a Notary Public, or by a Justice of the Peace, or Commissioner for Affidavits. If made outside the State it should be made according to the law of the State where made, before a person authorised by that law to take declarations.

If the signature be by mark, the attestation must state that the document was read over to the declarant, and that he appeared fully to understand the contents. This applies also to the subjoined direction, particularly if a different person be nominated to receive certificate.

[s] If to Applicant, say "myself"; if to other person, write name at full length, with address and occupation.
If to two or more, state whether as joint tenants or tenants in common; if as tenants in common state shares. If to an infant, the age should be stated, and verified by Certificate of Birth, or by Statutory Declaration.
If to a married woman, the name of the husband, together with his residence and occupation, should be stated.

SCHEDULE REFERRED TO.*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.

To include not only Title Deeds, Probates, Letters of Administration, &c., but also the Surveyor's Plan or Statement in lieu thereof.

* For the particulars which this Schedule must comprise, see concluding part of Declaration, to which particular attention is directed, as any omission or misstatement will render applicant liable to the penalties of false Declaration.

No.	Date.	Nature of Instrument.	Parties. First Chain of Title (Documents 1 to 17)	Registration. Book.	Registration. No.	When and by whom Lodged.
1	13/4/1842	Crown Grant	To John Thompson.			
2	9/3/1853	Conveyance.	John Thompson and Anne Mary Thompson to Henry Gilbert Smith	25	609	
3.	21/12/1869	Power of Attorney	Henry Gilbert Smith to John Rendell Street and Thomas Thomas jointly.	-	-	
4.	18/12/1873	Conveyance.	Henry Gilbert Smith and John Rendell Street to Charles Harrison	140	325	By Arthur Fuddle and Stephenson.
5.	10/2/1884	Conveyance.	Charles Harrison to Frederick Kingston Olliver.	304	522	By Arthur Fuddle and Stephenson.

Should any transaction affecting the land in this application be entered into or any alterations in the buildings or fences be made subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

SCHEDULE REFERRED TO—(*continued*).*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.

No.	Date.	Nature of Instrument.	Parties.	Registration. Book.	Registration. No.	When and by whom Lodged.
6.	12/12/1891	Settlement.	Frederick Kingston Olliver (1st part), Mary Ann Emma Spalding (2nd part) and Arthur Ellis Forbes, the Reverend C.T. Forscutt and George Manley (Trustees) (3rd part) David Forbes (4th part) and Florence Grace Forbes (5th part).	480	373	Lodged herewith
7.	10/4/1933	Contract for Sale.	Trustee of Oliver settlement to Murdoch Campbell	-	-	Lodged herewith
8.	24/4/1933	Appointment of New Trustees.	The Public Trustee to Grace Mary Ann Spalding and Oliver Hills.	1662	598	Lodged herewith.
9.	24/5/1933	Abstract of Title.	Grace Mary Ann Spalding and Oliver Hills.	-	-	Lodged herewith.
10.	24/5/1933	Supplemental Abstract of Title.	Grace Mary Ann Spalding and Oliver Hills.	-	-	Lodged herewith.
11. (11A)	31/7/1933	Equity Order and Copy	Grace Mary Ann Spalding and Oliver Hills.	1670	999	Lodged herewith.
12.	19/9/1933	Declaration.	By Grace Mary Ann Spalding. (Words 27 & 31)	-	-	Lodged herewith
13.	21/9/1933	Conveyance.	Grace Mary Ann Spalding and Anor. to Murdoch John Campbell.	1671	971	Lodged herewith
14.	22/9/1933	Abstract of Title.	Murdoch John Campbell	-	-	Lodged herewith
15.	4/10/1933	Conveyance.	Murdoch John Campbell to Mary Gertrude McEvoy.	1673	58	Lodged herewith
16.	4/10/1933	Mortgage	Mary Gertrude McEvoy to Gertrude Ellen Nickson and Thomas Page Nickson.	1673	57	Lodged herewith
17.	22/10/1936	Discharge of Mortgage	Gertrude Ellen Nickson and Thomas Page Nickson to Mary Gertrude McEvoy.	1764	281	Lodged herewith
			Second Chain of Title (Documents 1 to 5 and 18 to 25)			
18.	28/7/1899	Mortgage	Frederick Kingston Olliver to Perpetual Trustee Company (Limited)	646	864	By Arthur Muddle and Stephenson. (Later)
19.	17/6/1907	Probate	Of Will of Frederick Kingston Olliver (to Grace Mary Ann Spalding) (2) b/c will with T.A. 19927	-	-	By Arthur Muddle and Stephenson.
20.	5/3/1908	Discharge of Mortgage	Perpetual Trustee Company (Limited) to Grace Mary Ann Spalding.	850	59	By Arthur Muddle and Stephenson.
21.	28/2/1908	Copy Contract of Sale.	Grace Mary Ann Spalding to Margaret T. Anderson.	-	-	Lodged herewith.
22.	22/4/1908	Conveyance.	Grace Mary Ann Spalding to Mary Gertrude McEvoy.	853	573	Lodged herewith
23.	10/3/1909	Abstract of Title	Grace Mary Ann Spalding.	-	-	Lodged herewith
24.	7/9/1920	Mortgage	Mary Gertrude McEvoy to the Australian Bank of Commerce Limited.	1612	121	Lodged herewith.
25. (24 11 30)	21/10/1933	Discharge of Mortgage.	The Australian Bank of Commerce Limited to Mary Gertrude McEvoy.	1673	56	Lodged herewith
26.	12/2/1938	Surveyor's Plan.	By Mr. Surveyor S.W. Stokes.	-	-	Lodged herewith

M. G. McEvoy

Rec'd 6 to 14
21 to 25
Dm 21/2/38.

☞ See Indorsement overleaf.

Req:R722421 /Doc:PA 033442 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:3 of 4
Ref: /Src:U

Req:R722421 /Doc:PA 033442 PA /Rev:23-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:4 of 4
Ref: /Src:U

Clayton Utz 136 Liv St Sydney

I certify that the within application is correct for the purposes of the Real Property Act, 1900†.

† Section 117 requires that this Certificate be signed by Applicant or his Solicitor and renders liable any person falsely or negligently certifying, to a penalty of £50; also, to damages recoverable by parties injured.
If by Solicitor, he should insert:—"And that I am the Solicitor of the within-named Applicant," and should add his own address to his signature. The signature should be that of the Solicitor himself, and not of his firm.

(*Signature*) [redacted]

(RULE UP ALL BLANKS BEFORE SIGNING, EXCEPT SPACE IN SCHEDULE BELOW APPLICANT'S SIGNATURE.)

Recd Plan 274 P Smash 1/3/38

FEES.

PAYMENT OF THESE MUST ACCOMPANY THE APPLICATION.

	£	s.	d.
Certificate of Title	1	5	0
Office Copy of Plan (when a Plan is furnished) ...	0	5	0
Preparation of Plan (when a Plan is not furnished) ...	0	7	6
Advertisement	1	10	0
Assurance, ½d. in the £ on declared value	.....		
Lodgment fees as set out hereunder	.....		

LODGMENT FEES.

	£	s.	d.
[redacted] the value does not exceed £150 ...	2	0	0
[redacted] the value exceeds £150, but not £300 ...	3	0	0
[redacted] the value exceeds £300, but not £450 ...	4	0	0
[redacted] the value exceeds £450, but not £600 ...	5	0	0
[redacted] the value exceeds £600, but not £750 ...	6	0	0
[redacted] the value exceeds £750, but not £1,000	7	0	0
And for every additional £1,000 or fractional part of £1,000	1	0	0

Provided that if before the issue of a Certificate of Title the value of the land is ascertained to be greater than that stated in the application, any additional fee which would have been payable under this paragraph at the time of lodgment of the application shall be paid.

☞ State to whom all correspondence relating to this Application should be sent, with address, as under, viz.:—

Name CLAYTON, UTZ & COMPANY,
Solicitors,
136 Liverpool Street,
SYDNEY.

Occupation

Post Town

Sydney: Alfred James Kent, I.S.O., Government Printer—1900.

Req:R722422 /Doc:PA 022968 PA /Rev:24-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:1 of 4
Ref: /Src:U

No. 22968

61151 M1811

New South Wales.

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900.

FEE SIMPLE.[a]

[a] This form may be modified to suit the case of a lease-hold title.

FEES :— £ s. d.
Assurance ... 1 14 0
Certificate ... 1 0 0
Advertising ... 1 10 0
Office Copy ... 0 5 0
Plan 0 10 0
4 19 0

CAUTION.—Applicants are reminded that by virtue of the provisions of the Crimes Act, 1900, the penalties attached to a false declaration concerning any matter or procedure under the Act, and that the utmost care is therefore necessary for reading over, if the form be filled up by an Attorney) every particular statement herein.

It is further provided by Section 126 of the Real Property Act, 1900, that any applicant procuring a Certificate through any fraud, error, omission, misrepresentation, or misdescription will, notwithstanding the issue of such Certificate, remain liable for damages to any person thereby prejudiced. And any person who fraudulently procures, assists in fraudulently procuring, or is privy to the fraudulent procurement of any Certificate of Title, is declared guilty of a misdemeanor, and liable to a penalty not exceeding £500, or imprisonment not exceding three years; and any Certificate thereby procured is rendered void as between all parties or privies to the fraud.

[b] Here insert Christian and surname (or names) in full, with residence and occupation.

[b] ROBERT JAMES DOUGLAS SELLAR and WALTER PATRICK SELLAR both of Manly near Sydney in the State of New South Wales, Graziers

[c] "I" or "We" or if the declaration is made by an attorney "C.D. of is" (as the case may be).

do solemnly and sincerely declare, that [c] we are seized for an Estate in fee simple of [d]

[d] Here give description of the property in full. If the land is shown on a plan lodged with the application, or is fully described in a deed, it will be sufficient to insert a reference to the area, town, parish, and county and words indicating that the land is shown on the plan or described in the deed in question. Unless the Registrar General has previously dispensed with a plan of survey, an accurate plan, prepared and certified by a surveyor specially licensed under the Act, must accompany the application. If there be any rights of way or other rights or easements affecting the premises, the particulars should be stated. If the space for description be insufficient, it may be completed by annexure, which must however be identified as part of the declaration, by memorandum signed by the declarant and attesting officer.

All that parcel of land containing by admeasurement Thirty four and one half perches situate in the Municipality of Manly, Parish of Manly Cove, County of Cumberland as shown on the Plan of Mr. Licensed Surveyor Oswald H. Little dated the twelfth day of July, 1920 and numbered 22 in the Schedule hereto.

Situated at the intersection of Gilbert Street & the Eastern portion of Lot 6 Section 1 of Lot F Borough Estate

[e] If this valuation be inadequate or doubtful, the applicant will be subjected to the expense of an official valuation, under Section 119 (3).

which land (including all improvements) is of the value of [e] Three thousand seven hundred pounds and no more, and is [f] part of [g] One hundred acres originally granted to [h] John Thompson by Crown grant, under the hand of the Governor of the Colony, dated the Thirteenth day of April 1842

[f] State whether "the whole" or "part."

[g] Insert allotment with reference to number and section on plan, if any, or if not, number of acres granted. Name of Grantee.

[h] If there be any Lease, here state particulars; if none, strike out the words within brackets. Witness should initial.

And we further declare, that we verily believe there does not exist any lease or agreement for lease of the said land, for any term exceeding a tenancy for one year, or from year to year, [except as follows —] [h]

Also, that there does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than myself ourselves [except as follows —] [i]

[i] If any exception, here state particulars; if none, strike out the words of exception within brackets. Witness should initial.

[j] Insert "unoccupied" or "in the occupation of" adding names and address of tenants in full. State also nature of tenancy, if not under some lease before mentioned. Witness should initial.

and we further declare, that there is no person in possession or occupation of the said land or any part thereof adversely to my our Estate or Interest therein, and that the said land is now [j] in the occupation of the following persons:— "Auckland House" No. 1 West Promenade, Mr. L.J. Danslow. "Moorgiel" No. 1a West Promenade, Mrs. Mary Leslie. "Rothdale" No. 4 Eustace St. Mrs. Marie E. Homburg.

[k] Here insert names and residences of adjacent owners and occupiers on all sides.

and that the owners and occupiers of adjacent lands are as follows [k] :—

State whether on North, South, East, or West.	Name.	State whether owner or occupier.	Address.
North	Mrs. Williams	Owner	Ocean Beach, Manly
	Mrs. Taylor	Occupier	No. 3 West Promenade, Manly
North	Mrs. McEvoy	Owner	No.14 Toxteth Road, Glebe
	Mr. B. Barry	Occupier	No. 6 Eustace Street, Manly
South	Gilbert Street		
East	West Promenade		
West	Eustace Street		

Certificate of Title issued Vol 3213 Fol 61

12/50

over

And ~~I~~ we further declare, that the annexed Schedule, to which ~~my~~ our signature ~~is~~ are affixed, and which is to be taken as part of this Declaration contains a full and correct list of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as ~~I~~ we have any means of ascertaining the same, distinguishing such as being in ~~my~~ our possession or under ~~my~~ our control, are herewith lodged and indicating where or with whom, so far as known to ~~me~~ us any others thereof are deposited; Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of ~~my~~ our knowledge, information, and belief; and that there is not, to ~~my~~ our knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed ~~(except as follows:)~~

[b] If any exceptions, state particulars. If none, strike out the words within brackets.

And ~~I~~ we make this solemn Declaration, conscientiously believing the same to be true.

DATED at Sydney this 28th day of August 19 20.

(RULE UP ALL BLANKS BEFORE SIGNING.)

Made and subscribed by the abovenamed ROBERT JAMES DOUGLAS SELLAR and WALTER PATRICK SELLAR this 28th day of August 1920. in the presence of [c] D. Thomas J.P.

Signature of Applicant R. J. D. Sellar W. P. Sellar

[c] The declaration must be attested by the Registrar-General or Deputy, or by a Notary Public, or by a Justice of the Peace, or Commissioner for Affidavits. If the signature be by mark, the attestation must state that it was read over to the declarant, and that he appeared fully to understand the contents. This applies also to the subjoined direction, particularly if a different person be nominated to receive certificate.

To the Registrar General,—

I/We ROBERT JAMES DOUGLAS SELLAR and WALTER PATRICK SELLAR the above declarant, do hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title in the name of [a] ourselves as joint tenants

DATED at Sydney this 28th day of August 1920.

Witness to Signature— D. Thomas J.P.

(Signature of Applicant) R. J. D. Sellar W. P. Sellar

[a] If to Applicant, say "myself"; if to other person write name at full length with address and occupation. If to two or more, state whether as joint tenants or tenants in common. If to an infant, the age should be stated, and verified by Certificate of Birth, or by Statutory Declaration. If to a married woman, the name of the husband, together with his residence and occupation, should be stated.

*N.B.—The Schedule below and Certificate indorsed on fourth page should be also signed.

In no case can any alteration, however trifling, be allowed to be made after the application has been once declared, unless all the parties re-sign and re-declare the same. If it is discovered that any alterations are necessary, the applicant may make a statutory declaration setting out in what manner he desires the application to be altered, which declaration will then (unless the Registrar General considers that a fresh application ought to be made) be read as one with the application.

(RULE UP ALL BLANKS BEFORE SIGNING.)

SCHEDULE REFERRED TO.*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

To include not only Title Deeds, &c., but also Plan, if any, and Surveyor's Declaration verifying same.

The prior title has been accepted by the Examiners in Primary Applications Nos. 12115 and 17627.

1. 13th April 1842 — Crown Grant to John Thompson of One hundred acres entered in register of purchases of land No. 76 Page 37.
2. 9th March 1855 — Indenture made between John Thompson and Ann M. Thompson his wife of one part and Henry Gilbert Smith of other part regd. No. 609 Book 25.
3. 21st Decr. 1869 — (Attested copy Power of Attorney) H.G. Smith to John R. Street and Thomas Thomas.
4. 13th Novr. 1873 — Conveyance Henry Gilbert Smith and Anor to Mrs. Clarissa Cassaly regd. as No. 983 Book 138.

* For the particulars which this Schedule must comprise, see concluding part of Declaration, to which particular attention is directed, as any omission or misstatement will render applicant liable to the penalties of false Declaration. Such of the Deeds and Documents as are in applicant's possession or control, must be deposited with the application. Counterpart leases must be included, but these will be returned, if required.

After issue of the Certificate of Title, should delivery be desired of any of the documents to which the person lodging them is entitled, attested copies of such documents may be required. This does not apply to partially cancelled registered documents.

Should any transaction affecting the land in this application be entered into subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

SCHEDULE REFERRED TO—(*continued*).*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

*See marginal notes under asterisk on page 1.

5.	13th Novr. 1873	Statutory Declaration of John R. Street as to non-revocation of Power of Attorney.
6.	28th Novr. 1873	Statutory Declaration of Thomas Thomas.
7.	1st Jany. 1874	Mortgage Clarissa Cazaly to the Trustees of the Permanent Mutual Benefit Building and Investment Society regd. No. 775 Book 139.
8.	30th June 1874	Statutory Discharge of Mortgage dated 1st January. 1874 regd. No. 314 Book 143.
9.	1st July 1874	Mortgage Clarissa Cazaly to Antilla Roxburgh regd. No. 315 Book 143.
10.	4th July 1882	Statutory Discharge of Mortgage dated 1st July 1874 regd. No. 560 Book 248.
11.	15th Jany. 1885	Mortgage Clarissa Cazaly to Lawrence Myles regd. No. 278 Book 305.
12.	15th Jany. 1890	Re-Conveyance Lawrence Myles to Clarissa Cazaly regd. No. 976 Book 439.
13.	1st June 1899	Mortgage Clarissa Cazaly to Thomas Hill regd. No. 526 Book 643.
14.	1st June 1908	Statutory Discharge of Mortgage dated 1st June 1899 regd. No. 496 Book 858.
15.	4th Jany. 1910	Probate of the Will and two codicils of Clarissa Cazaly granted by Supreme Court of New South Wales to Clarissa Harrison Cazaly and Silas Kemball Cook.
16.	4th Feby. 1915	Probate of the Will and codicil of Clarissa Harrison Cazaly granted by Supreme Court of New South Wales to Clarissa May Schuette and Emily Dora Jenkins.
17.	4th Aug. 1915	Conveyance made between Silas Kemball Cook 1st part Clarissa May Schuette and Emily Dora Jenkins of 2nd part William Hamilton of 3rd part and Clarissa May Schuette, Emily Dora Jenkins and Marian Ray Jenkins 4th part regd. No. 881 Book 1062.
18.	31st Jany. 1918.	Conveyance Clarissa May Schuette to Emily Dora Jenkins & Anor regd. No. 829 Book 1121.
19.	28th June 1920	Statutory Declaration of Emily Dora Jenkins.
20.	6th July 1920	Conveyance made between Emily Dora Jenkins and Marian Ray Jenkins 1st part Walter Proctor Lister 2nd part and Robert James Douglas Sellar and Walter Patrick Sellar 3rd part regd. No. 43 Book 1192.
21.	12th July 1920	Statutory Declaration of Thomas Rawlinson.
22.	12th July 1920	Surveyors Plan of Mr. Licensed Surveyor Oswald H. Little.

2 Rent Plans
Plan Amt Cover
Jobs not to D.P. no

Documents 5 to 14 inclusive and 17 to 22 inclusive are lodged herewith.

The prior title documents have already been produced in the Primary Applications above referred to.

Received (Docs 3 to 4 + 15 to 21 inclus.) Supp. 3/9/20.

A. Thomas M.P.

Rec'd 3 to 4
15 to 21
W.E.L.

R. J. D. Sellar
W. P. Sellar
M. P. Sellar

☞ See indorsement overleaf.

Req:R722422 /Doc:PA 022968 PA /Rev:24-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:3 of 4
Ref: /Src:U

Req:R722422 /Doc:PA 022968 PA /Rev:24-Jun-2015 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:41 /Seq:4 of 4
Ref: /Src:U

I certify that the within application is correct for the purposes of the Real Property Act, 1900†.

R. J. D. Sellar
W. P. Sellar

† Section 117 requires that this Certificate is signed by Applicant or his Solicitor and renders liable any person falsely or negligently certifying, to a penalty of £50; also, to damages recoverable by parties injured.
If by Solicitor, he should insert:—"And that I am the Solicitor of the within-named Applicant," and should add his own address to his signature. The signature should be that of the Solicitor himself, and not of his firm.

(RULE UP ALL BLANKS BEFORE SIGNING, EXCEPT SPACE IN SCHEDULE BELOW APPLICANT'S SIGNATURE.)

FEES.

PAYMENT OF THESE MUST ACCOMPANY THE APPLICATION.

1st.—Where the Applicant is the Original Grantee from the Crown, and no transactions have been registered.

New Certificate	£1 0 0
Add Assurance, ½d. in the £ on declared value	
Office Copy of Plan	0 5 0

2nd.—Where the Applicant is not the Grantee from the Crown, or being the Grantee, the property has been dealt with by any Registered Instrument.

FEES:—

Advertisement	£1 10 0
New Certificate	1 0 0
Office Copy of Plan	0 5 0
TOTAL	£2 15 0

In addition to the Assurance Fee of ½d. in the £ on the value.

☞ State to whom all correspondence relating to this Application should be sent, with address, as under, viz.:—

Name

Occupation

IOETON, FAITHFULL & MADDOCK,
SOLICITORS,
Permanent Trustee Building,
35 O'CONNELL STREET,
SYDNEY.

Post Town

PLAN FORM 2

Plan Drawing only to appear in this space

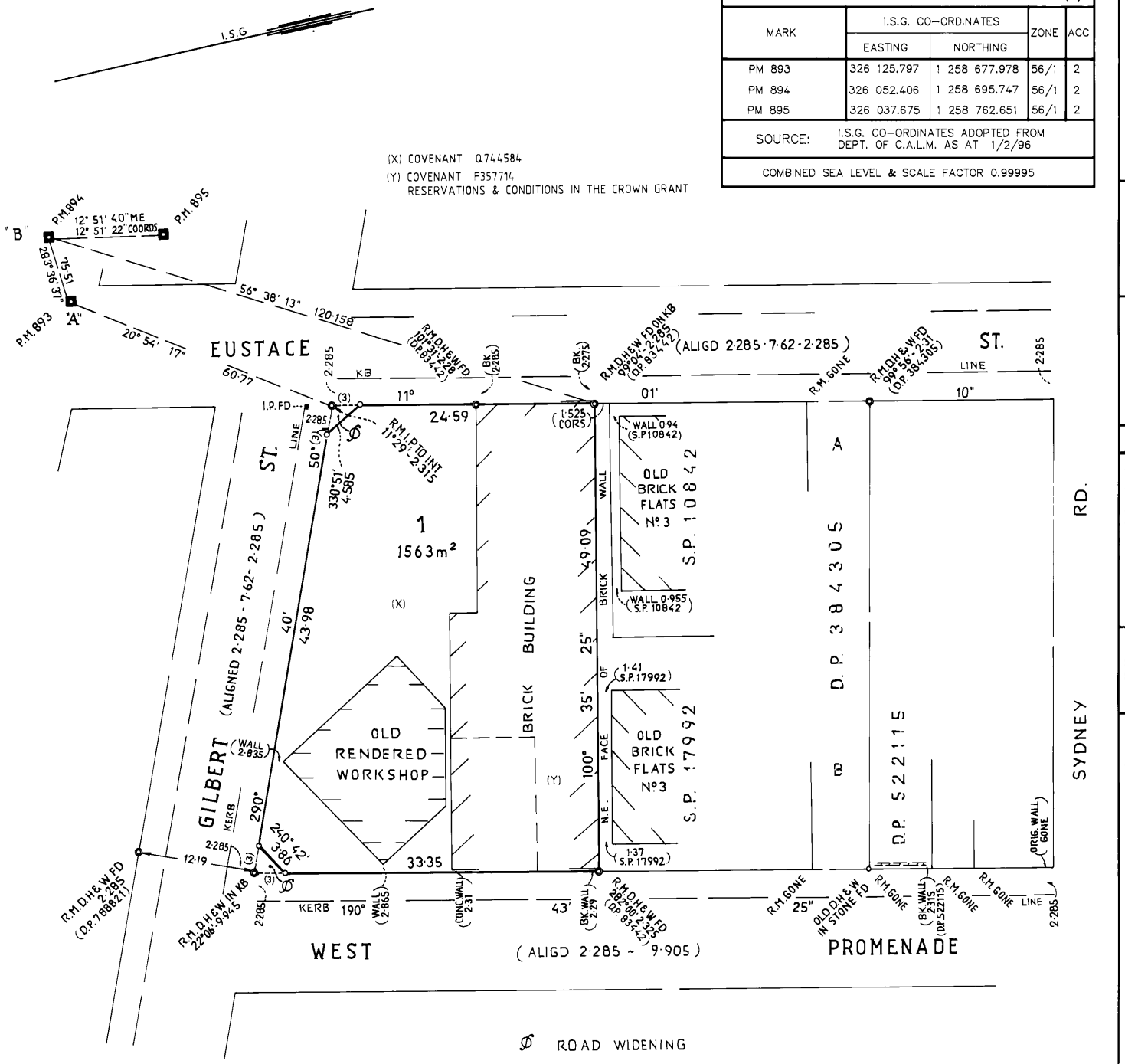
*OFFICE USE ONLY

DP 859455

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

SURVEY PRACTICE REGULATION 1990: CLAUSE 32(2)				
MARK	I.S.G. CO-ORDINATES		ZONE	ACC
	EASTING	NORTHING		
PM 893	326 125.797	1 258 677.978	56/1	2
PM 894	326 052.406	1 258 695.747	56/1	2
PM 895	326 037.675	1 258 762.651	56/1	2
SOURCE:	I.S.G. CO-ORDINATES ADOPTED FROM DEPT. OF C.A.L.M. AS AT 1/2/96			
COMBINED SEA LEVEL & SCALE FACTOR 0.99995				

(X) COVENANT Q744584
(Y) COVENANT F357714
RESERVATIONS & CONDITIONS IN THE CROWN GRANT



Registered: 3·6·1996

C.A: Nº 3989/L OF 9.4.1996

Title System: TORRENS

Purpose: CONSOLIDATION

Ref. Map: U1852-323 U1852-341

Last Plan: DP72968, DP435320 DP83442

PLAN
OF CONSOLIDATION OF LOT 1 D.P.72968 LOTS A & B D.P. 435320 & PT LOT 52 D.P. 83442

Lengths are in metres. Reduction Ratio 1: 300

LGA: MANLY

Locality: MANLY

Parish: MANLY COVE

County: CUMBERLAND

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

I, PAUL A CECHELLERO

of HILL & BLUME PTY LTD (A.C.N 000721004) 102 CROWN ST WOOLLOOMOOLOO

a surveyor registered under the Surveyors Act 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Survey Practice Regulation 1990 and was completed on 4.3.96

(Signature) P. Cechellero

Surveyor registered under the Surveyors Act 1929

Datum Line Of Azimuth "A"-"B"

Plans used in preparation of survey/~~compilation~~.

S.P. 10842	D.P. 384305
S.P. 17992	D.P. 522115
D.P. 850989	D.P 72968
D.P. 435320	D.P. 83442
D.P. 788821	

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

IT IS INTENDED TO DEDICATE THE LAND SHOWN AS "ROAD WIDENING" TO THE PUBLIC AS ROAD.

P MANLEY PRESIDENT
K MANN DIRECTOR
M.D NUSKE SECRETARY

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

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

Council's Certificate

I hereby certify that –

(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and

*(b) ~~the requirements of s1 Part 3 Division 2 of the Water Board Act 1987, or s1 Part 5 Division 7 of the Hunter Water Board (Corporatisation) Act 1991.~~

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

Subdivision No. 3989/L

Date 9th APRIL, 1996

(Signature) ..... General Manager/Authorised Person

Council File No. 3989/L

*This part of the certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Water Board and the Hunter Water Corporation Ltd.

† Delete if inapplicable

SURVEYOR'S REFERENCE: 43671

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

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

Req:R723150 /Doc:DP 0859455 P /Rev:03-Jun-1996 /Sts:OK.OK /Pgs:ALL /Prt:18-May-2016 10:26 /Seq:1 of 1
Ref: /Src:U

Req:R722297 /Doc:DP 0435320 P /Rev:19-Nov-1992 /Sts:OK.OK /Pgs:ALL /Prt:18-May-2016 09:31 /Seq:1 of 1
Ref: /Src:U

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

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 17th day of June, 1980

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 435320

FEET	INCHES	METRES
-	2 3/4	0.070
-	3 1/8	0.079
-	3 1/4	0.083
1	6	0.457
2	4	0.711
2	9 3/4	0.857
2	10 3/8	0.873
3	3 1/2	1.003
3	8	1.118
3	9	1.143
5	5	1.651
5	5 1/2	1.664
7	4 1/2	2.248
7	5	2.261
7	6 3/4	2.305
7	7 1/2	2.324
7	7 3/4	2.330
21	2 3/4	6.471
27	-	8.230
29	-	8.839
33	-	10.058
40	-	12.192
47	-	14.326
50	11 1/2	15.532
66	-	20.117
80	-	24.384
800	-	243.840

AC	RD	P	Su M
-	-	5	126.5
-	-	9 3/4	246.6

F357714 "A" F.P. 435320

Plan Form No.6 (for transfers, leases, etc.)

Municipality of Manly. / Shire of

M. M.

PLAN

Subdivision of the land comprised in Cert. of Title Vol. 5725 Fo. 184 /

Parish of Manly ~ County of Cumberland.

Scale : 20 Feet to an Inch.

BY VIRTUE OF A RESOLUTION OF THE COUNCIL OF THE MUNICIPALITY OF MANLY PASSED ON THE 24TH OCTOBER, 1950, THE SEAL OF THE COUNCIL WAS AFFIXED HERETO ON THE TWENTY-FIFTH DAY OF OCTOBER, 1950

Mayor.

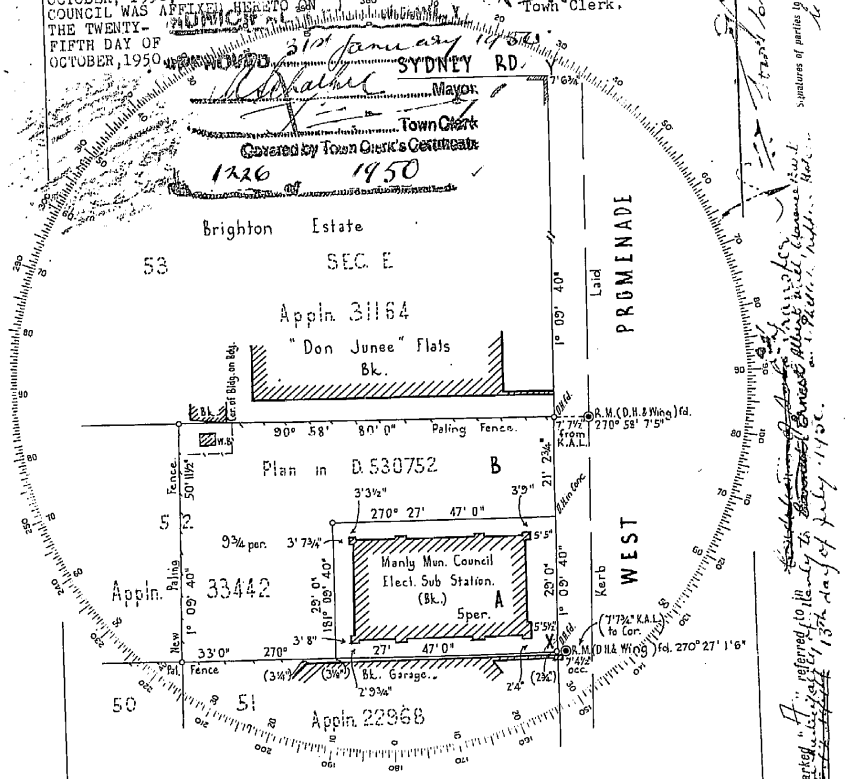
Town Clerk.

Approved by Council this 31st January 1951

Mayor.

Town Clerk

Covered by Town Clerk's Certificate No. 1226 of 1950 /



Approved by Council and covered by Council Clerks Certificate

No.... ....of.....

Council Clerk

Subscribed and declared before me at this 12th day of October A.D. 1949 /

Justice of Peace

I, Thomas William Hamilton Dee of 133 Pitt Street Sydney. a Surveyor registered under the Surveyor's Act, 1929, do hereby solemnly and sincerely declare (a) that all boundaries and measurements shown on this plan are correct, (b) that all survey marks found and relevant physical objects on or adjacent to the boundaries are correctly represented, (c) that all physical objects indicated actually exist in the positions shown, (d) that the whole of the material facts in relation to the land are correctly represented, (e) that the survey represented in this plan has been made in accordance with the Survey Practice Regulations, 1933 *(1) by me ~~(2) under my supervision, the character and extent of which was as required by the Survey Practice Regulations, 1933~~, and was completed on 1...8th...October...1949...and the reference marks have been placed as shown hereon.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act, 1900

(Signature)..... Surveyor registered under the Surveyors Act, 1929.

Azimuth X-Y.

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

This is the plan marked "A" referred to in my Certificate No. 1226 of 1950 dated 13th day of July 1950.

Signatures of parties to be noted in this margin.

PX M 156

Req:R723542 /Doc:DP 0083442 P /Rev:02-Aug-1992 /Sts:OK.OK /Pgs:ALL /Prt:18-May-2016 10:47 /Seq:1 of 1
Ref: /Src:U

CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT

DP 83442

FEET	INCHES	METRES
-	0 1/2	0.013
-	2 1/2	0.064
-	3	0.076
-	4	0.102
-	4 1/2	0.114
-	6 3/4	0.171
-	7 1/2	0.191
1		0.330
1	6	1.372
4	7 1/2	1.410
5	-	1.524
7	4 1/2	2.248
7	5 3/4	2.280
7	6	2.286
7	7 1/2	2.324
7	7 3/4	2.330
25	-	7.620
32	6	9.906
35	-	10.668
39	10 3/4	12.160
40	6	12.344
50	-	15.240
50	2 3/4	15.310
68	10 1/2	20.993
70	8	21.539
90	11 1/2	27.724
161	1 1/4	49.105
163	11 1/4	49.568

AC	RD	P	
-	-	27 1/4	689.2 SQ M

Datum line of Azimuth A-B

Subscribed and declared before me at Sydney
this 12th day of February 1938
[illegible] J.P

Surveyor registered under the Surveyors Act 1923

I, Sydney William Stokes of 88 King St Sydney a surveyor registered under the Surveyors Act 1923 do hereby solemnly and sincerely declare (a) that all boundaries and measurements shown on this plan are correctly (b) that all survey marks found and relevant physical objects on or adjacent to the boundaries are correctly represented (c) that all physical objects indicated actually as at the boundaries shown thus (c) hide the material facts in relation to the land are correctly represented (d) that the survey represented in this plan has been made in accordance with the Survey Practice Regulations 1933 by me, was completed on 30 — 11 — 37 and reference marks have been placed as shown hereon And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900

[illegible]

Municipality of Manly
P.A. 33442

PLAN
of lot 52 and part of lot 51 Sec E Brighton Estate
PARISH OF MANLY COVE | COUNTY OF CUMBERLAND
SCALE: 20 feet to an inch.

EUSTACE ST
ALIG^P 76"-25'-76"
AUCKLAND GARAGE AND SERVICE STATION
GILBERT ST
ALIG^P 76"-25'-76"
WEST PROMENADE
ALIG^P 76"-32'6"
App^D 31640
"RADFORD HOUSE" No 4
No. 4573 Rd 41
53
App^D 31164 No. 4595 Fo 169
DON JUNEE FLATS
Various Occupiers
Brick
A.B. Russ ow.
No 2 W.B. Two Storey
52
27¼per
51
App^D 22968
Estate of R.J.D. Sellar ow
No. 3213 Fo 61
S. Gillingham occ
Bk
Bn Flats
Iron Paling on Kerb
Kerb
Line
Gutter
Concrete Path
Brick Wall
Iron Paling on Kerb
Telephone Pole
Gas Lamp
Fire Plug
Manhole
Sewer Ventilator
Trees
Bk
Brick
Stone
Iron
Wood
Fence
Boundary
Building
Footway
Roadway
Kerb
Gutter
Line
Concrete Path
Iron Paling on Kerb
Telephone Pole
Gas Lamp
Fire Plug
Manhole
Sewer Ventilator
Trees
Bk
Brick
Stone
Iron
Wood
Fence
Boundary
Building
Footway
Roadway

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

I, Bruce Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

23rd April, 1982

DP 83442

9

DP 72968

F P 72968

R.P.A. 22968

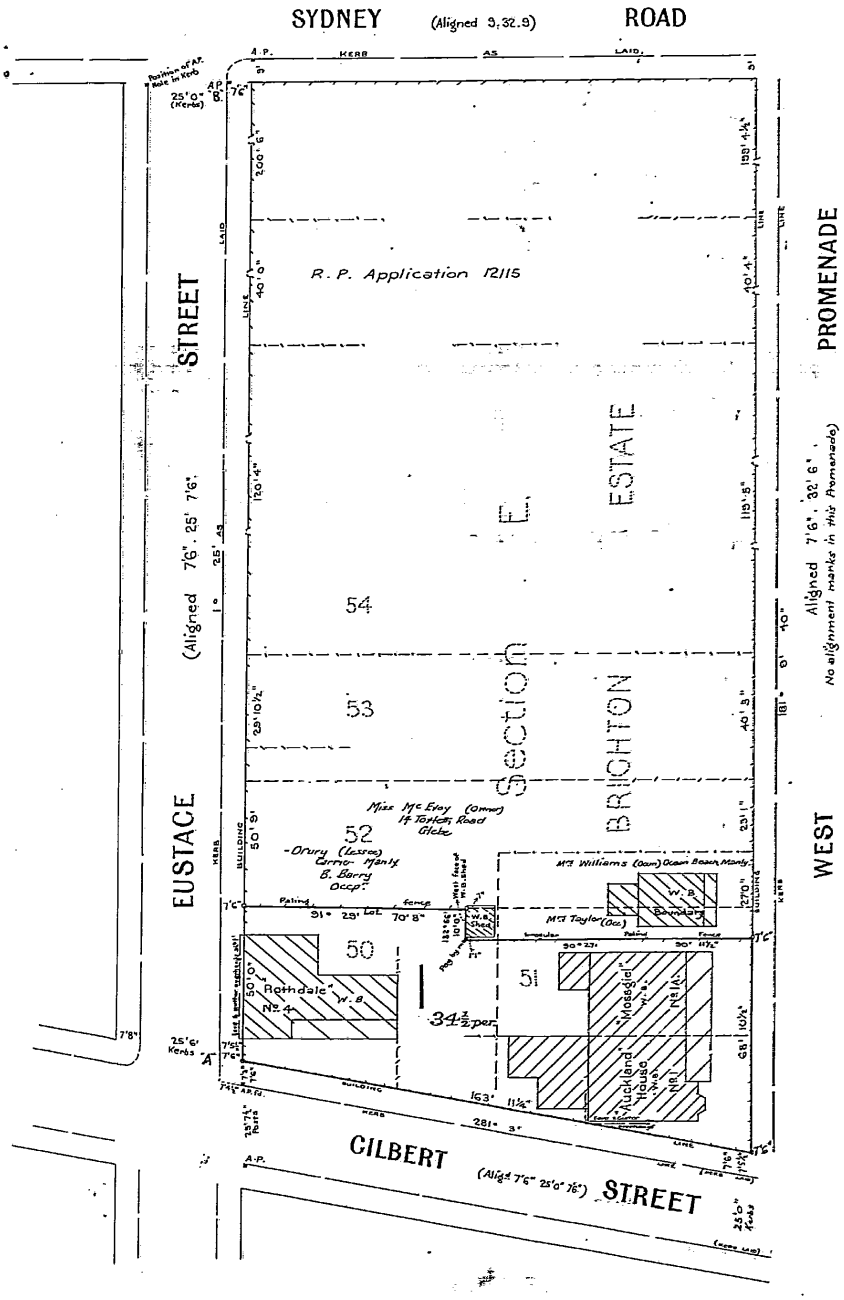
PLAN

of part of Lots 50 and 51 of Section E. Brighton Estate

Parish of Manly Cove — County of Cumberland

Municipality of Manly

Scale: 30 Feet to an Inch



I, Oswald Henry Little, of Dobbie and Ewealt, Castlereagh St, Sydney, licensed Surveyor, specially licensed under the Real Property Act, do hereby solemnly and sincerely declare that the boundaries and measurements shewn on this plan are correct for the purposes of the said Act, and that the survey of the land to which the plan relates, has been made by me and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900.

Subscribed and declared before me at Sydney
this 12th day of July A.D. 1920

O.H. Little
Licensed Surveyor

J Martin J.P.

Date of Survey 1st July 1920.

Azimuth taken from A.B.

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 72968

FEET	INCHES	METRES
-	7	0.178
-	11	0.279
1	1	0.330
7	3	2.210
7	4 1/2	2.248
7	5 1/2	2.273
7	6	2.286
7	6 3/4	2.305
7	8	2.337
9	-	2.743
10	-	3.048
23	1	7.036
25	-	7.620
25	6	7.772
25	7 1/2	7.811
27	-	8.230
29	10 1/2	9.106
32	-	9.754
32	6	9.906
40	-	12.192
40	3	12.268
40	4	12.294
50	-	15.240
50	9	15.469
68	10 1/2	20.993
70	8	21.539
90	11 1/2	27.724
119	5	36.398
120	4	36.678
163	11 1/4	49.968
199	4 1/2	50.770
200	6	51.112

AC	RD	P	SQ M
-	-	34 1/2	872.6

I, Bruce Richard Davies, Under Secretary for Lands and Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this day.

21st December, 1981

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

DP 72968

DP 72968

Req:R723148 /Doc:DP 0072968 P /Rev:03-Aug-1992 /Sts:OK.OK /Pgs:ALL /Prt:18-May-2016 10:26 /Seq:1 of 1
Ref: /Src:U

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:1 of 16
Ref: /Src:U

RP 1

STAMP DUTY

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1990/91 P37 STAMP DUTY CHIEF COMMISSIONER

OF

Z 332070

LEASE

REAL PROPERTY ACT, 1900

(To be lodged in duplicate)

(See instructions for Completion issued as Form RP IB)

L | CA | 1 of 2 | X | $ 94 | R 1/1

LAND of which LESSOR is registered proprietor		
Torrens Title Reference	If Part or premises, see note (a) (ii)	Location
DESCRIPTION OF LAND Note (a) CERTIFICATE OF TITLE VOLUME 13672 FOLIO 90 NOW BEING part OF LAND COMPRISED IN FOLIO 1/72968	~~WHOLE~~ PART - AS PER PLAN ANNEXED HERETO AND DELINEATED "A" THEREON KNOWN AS "ACKLAND GARAGE"	MANLY

LESSOR Note (b)

MANLY CIVIC CLUB LIMITED a company incorporated in New South Wales and having its registered office situate at 2 West Promenade, Gilbert Park, Manly

(the abovenamed LESSOR) hereby leases to the LESSEE

LESSEE Note (b)

NORTH SHORE APPLIANCE PARTS PTY LIMITED a company incorporated in New South Wales and having its registered office situate at 15 Mitchell Road, Mosman

OFFICE USE ONLY

Over

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. ..... 2. ..... 3. .....

TERM Note (e) for a TERM of TWO YEARS commencing on 1 / 2 /1990 and TERMINATING on 31/1 /1992

Note (f) (with ~~an OPTION TO PURCHASE and/or~~ an OPTION OF RENEWAL as set forth in clause(s) 17 of SCHEDULE TWO hereto.

Note (g) together with and reserving the rights and liberties set forth in SCHEDULE ONE hereto), and

Note (h) SUBJECT TO THE covenants and provisions

(i) implied by sections 84 and 85 of the Conveyancing Act, 1919 as are not expressly negatived or modified herein;

(ii) set forth in the Memorandum filed in the Land Titles Office as Number ; and

(iii) set forth in SCHEDULE TWO hereto, which covenants and provisons shall be deemed to be incorporated herein.

OFFICE USE ONLY

31-1-92

Purchase / Renewal 2 yrs

DATE 17-4-90

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

EXECUTION Note (i)

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

MANLY CIVIC CLUB Common Seal

Signature of Witness

Andrew James Mason

Name of Witness (BLOCK LETTERS)

17 Albert st Harbord Business Proprietor

Address and occupation of Witness

SEE ANNEXURE 'D' FOR EXECUTION

Signature of Lessee

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

Signature of Witness

Norman Graham Waters

Name of Witness (BLOCK LETTERS)

8 Badajoz Place Cromer Business Proprietor

Address and occupation of Witness

COMMON SEAL NORTH SHORE APPLIANCE PARTS PTY. LIMITED

DIRECTOR

Secretary

Signature of Lessee

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

LODGED BY V.A. Bizanues

0364

Ref.

Delivery Box Number 8629

$147 S.

OFFICE USE ONLY

364

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

Checked	Passed	REGISTERED - -19	Secondary Directions
Signed	Extra Fee	28 NOV 1990	Delivery Directions OVER

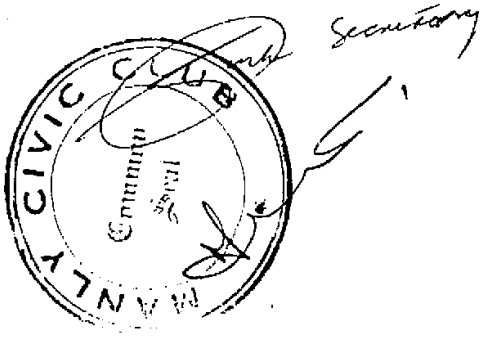
1098657

RP 1

SCHEDULE ONE HEREINBEFORE REFERRED TO

Notes (l) and (m)

The Lessee shall have the benefit of the following right and liberties:



Notes (l) and (m)

The Lessor reserves unto himself the following right and liberties:

Reserving unto the Lessor and persons claiming through or authorised by it the use of exterior walls the roof and the right to instal maintain use repair alter and replace pipes ducts conduits and wires leading through the demised premises and to pass and run water air electricity sewerage drainage gas and other services through such pipes ducts conduits and wires and to enter upon the demised premises for such purpose provided that in exercising such rights as aforesaid the Lessor shall not interfere with the Lessee in its use and occupation of the demised premises more than is reasonably necessary.

Notes (m) and (n)

SCHEDULE TWO HEREINBEFORE REFERRED TO

1. The provisions of Sections 84 and 85(1)(a)(b) and (d) of the Conveyancing Act, 1919 as amended are hereby negatived.

sSEE ANNEXURE

DIRECTOR

Secretary

WITNESS
S Butcher

Note (g)

(For continuation of SCHEDULE TWO, see annexure(s) hereto)

OFFICE USE ONLY

FIRST SCHEDULE DIRECTIONS				
(A) FOLIO IDENTIFIER	(B) DIRECTION	(C) NAME		
		SECOND SCHEDULE AND OTHER DIRECTIONS		
(D) FOLIO IDENTIFIER (OR REGD DEALING AND FOLIO IDENTIFIER)	(E) DIRECTION	(F) NOTEN TYPE	(G) DEALING NUMBER	(H) DETAILS
	ON	L		NORTH SHORE APPLIANCE PARTS PTY. LIMITED of premises known as "Auckland Garage" as shown in plan with AZ332070 reserving rights. Expires 31-1-1992. Option of renewal 2 years.
	Dup C.T.			

AUSDOC. Commercial & Law Stationers Pty. Ltd. 1988

8620

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:2 of 16
Ref: /Src:U

2. To the full effect of the covenants next hereinafter shortly noted as the same are set forth in words at length in the second column of Part 2 of the Fourth Schedule to the Conveyancing Act 1919 as amended.

1. That the Lessee covenants with the Lessor to pay rent.

2. Provided that in the event of war damage or damage by fire, lightning, flood or tempest rent shall abate until the demised premises are restored.

4. And to maintain and leave the demised premises in good repair (having regard to their condition at the commencement of the lease) reasonable wear and tear war damage and damage by fire lightning flood and tempest excepted.

6. And that the Lessor may when and so often as the Lessor requires without notice at all reasonable times of the day enter and view state of repair and/or cleanliness, and that the Lessee will repair and/or clean according to notice in writing and that in default the Lessor may repair and/or clean at the Lessee's expense.

7. And that the Lessor may enter and carry out requirements of public authorities and repair under the lease.

10. And to paint and/or paper inside the demised premises every three (3) years.

15. That the Lessee will not without consent use the demised premises otherwise than as a retail appliance outlet, motor trimmer and dry cleaning agency.

16. And will not assign or sublet.

17. That the Lessee will not carry on any offensive trade.

21. That the Lessor subject as herein provided covenants with the Lessee for quiet enjoyment.

22. And that the Lessee may remove his fixtures.

3. To the following special additional provisions which however shall not (except in so far as the provisions hereinafter contained shall expressly negative or modify the same) be held to in anywise limit or abridge any of the provisions of the Conveyancing Act 1919-1958 or the Real Property Act 1900 namely:-

(a) Notwithstanding the provisions hereinbefore contained the Lessee will at his own expense at all times during the said term hereby granted well and sufficiently repair maintain cleanse empty and amend the demised premises the fixtures therein and all drains sewers closets sanitary arrangements cistern yards pavements gutters walls and erections and keep both the outside and inside of the demised premises in clean and attractive order repair and condition excepting only such repairs as are rendered necessary by reason of structural failures or defects fire lightning flood and tempest.

(b) That the Lessee will at the expiration or sooner determination of the said term surrender and yield up to the Lessor and subject to its obligations under Clause 2.6 hereof leave undisturbed all water gas electric light and other fixtures and fittings which are or may hereafter be put into and upon the demised premises by the Lessor in good order and condition.

(c) That the Lessee will not without the consent in writing of the Lessor use or occupy the demised premises otherwise than for the purposes referred to in clause 2.15 hereof and will ensure that

Common
NORTH SHORE
APPLIANCE
PARTS
PTY. LIMITED
Seal

Director

SRC

WITNESS

the conduct and management of the demised premises shall at all times be of such standard as to enhance the status of and preserve the demised premises for the purposes aforesaid and the Lessee will during all proper business hours keep the demised premises open.

(d) That the Lessee will comply with and relieve the Lessor from all liability in respect of the requirements of any notice issued by the Board of Health the Water Board and/or any other statutory or Municipal authority in relation to all alterations conveniences and/or repairs to the demised premises whether or not of a structural nature or for use in connection therewith occasioned by reason of the nature of the business carried on by the Lessee in the demised premises, or the number of persons employed by the Lessee therein or using or occupying the same, or, by reason of the nature of the Lessee's occupation of the premises AND so far as the same are applicable to the demised premises and the business carried on therein by the Lessee will observe and conform to the rules and regulations of the Factories and Shops Act or any other Act or Regulations or by-law which may be in force during the said term PROVIDED that all notices received by the Lessor from any of the abovenamed authorities shall within a reasonable time after receipt thereof by the Lessor be served on the Lessee.

(e) That the Lessee will keep on foot all licences and permits required for the carrying on of any business conducted by the Lessee in or upon the demised premises.

(f) That the Lessee will not make or permit to be made any alterations or additions of any kind in or to the demised premises or any part thereof (or drive nails or screws into) or in any way damage or deface ceilings walls partitions floors wood stone concrete or iron work thereof during the said term without the consent in writing of the Lessor being first obtained but such consent shall not be unreasonably withheld.

(g) The Lessee shall not without having first obtained the written consent of the Lessor place construct or erect on the demised premises or post paint or otherwise affix thereto any displays advertising hoardings posters signs devices or other advertising media. Such advertising media shall strictly relate to the Lessee's said business upon the demised premises but the Lessor's consent shall not be unreasonably withheld.

(h) The Lessee will from time to time pay and at all times during the said term as and when the same shall respectively fall due for payment:

(i) All excess water sewerage and drainage rates.

(ii) All trade waste and garbage rates and charges.

(iii) All charges for gas and/or electricity used or consumed in the demised premises.

(iv) Fifty per centum (50%) of any increases over the amount payable by the Lessor as at 1st February, 1990 in the amount of the outgoings as hereinafter defined.

(i) The Lessee will effect public risk insurances indemnifying the Lessor against all liability in so far as public risk attaches to the demised premises or the operations of the Lessee thereon. The Lessee will also effect burglary insurance against theft or robbery from the demised premises and for all damage resulting therefrom and for all expenses and repairs relating thereto.

WITNESS

Reg:R785412 /Doc:DL 2332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:4 of 16
Ref: /Src:U

(j) That the Lessee will effect plate glass insurance in the name of the Lessor as owner and the Lessee as occupier for the full replacement value and at his own expense will be responsible for the replacement of all plate glass in the demised premises caused by breakages and not otherwise and agrees to indemnify and at all times thereafter keep indemnified the Lessor in respect thereof.

(k) That if at any time during the currency of the term hereby granted the fire insurance premium or any of them payable in respect of the demised premises shall be increased beyond the annual amount rated at the commencement of the said term by reason of the nature of the business carried on or proposed to be carried on by the Lessee on the demised premises the Lessee will upon demand pay to the Lessor from the time the whole amount by which such increased premiums shall exceed the annual amount so rated as aforesaid AND FURTHER that the Lessee will in no way whatever invalidate any policy or policies of insurance on the demised premises. Provided that if the Lessee invalidates any such policy he will be responsible for any loss to the Lessor as a result.

(l) That the Lessee shall not wilfully or knowingly do or permit anything to be done which may conflict with the laws relating to fires or with the by-laws or regulations of the Board of Fire Commissioners of New South Wales or such like authority or with any Acts or Regulations affecting the Water supply or sewerage or the Board of Health or with the Factories Act or present or future laws or ordinances or regulations affecting the Shire within which the demised premises are or may be situated PROVIDED HOWEVER that nothing herein contained shall impose upon the Lessee any responsibility or liability to effect or carry out any work of a structural nature.

(m) That the Lessee shall not use such methods of heating the demised premises which shall conflict with the requirements of the Underwriters of the Fire Association of New South Wales.

(n) That the Lessee will indemnify and save harmless the Lessor from all loss and damage to the demised premises or any merchandise or any other property which may be in the demised premises during the said term caused by the negligent use or misuse waste or abuse of water gas petrol or electricity supplies to the demised premises and/or to the Lessee in connection therewith or by faulty water gas or electric light or power or petrol fittings or fixtures whether fixed or installed by the Lessor the Lessee or any other person or persons or from or by the overflow of water sewerage or other matter which may leak into or issue from any part of the demised premises or from any adjoining or neighbouring land or building or the building of which the demised premises form part (including the roof or any part attached or connected with or appurtenant to the demised premises or the building of which the same forms part or any adjoining or neighbouring building) or by or through any other means neglect or default happening in the demised premises or in any portion thereof or the premises or building of which the demised premises form part or in any adjoining or neighbouring land or building. The Lessee will give to the Lessor prompt written notice of any accident or defects in the water pipes electrical light wiring fittings or fixtures.

(o) That the Lessee will not mortgage lien or in any way charge or encumber his interest in this lease without the written consent of the Lessor first had and obtained.

(p) That the Lessee will not carry on or permit or cause to be carried on or be party or privy to any sale or sale by auction on the demised premises or any part thereof.

Witness S Butcher

4. IT IS HEREBY AGREED AND DECLARED by and between the said Lessor and the said Lessee that in the event of any buildings or building being erected on any property adjoining the demised premises in such manner that the light now obtained from any window or windows in the demised premises be shut off then the Lessor will not be held responsible to the Lessee nor will the matter be a subject for compensation or reduction of rent.

5. That this lease is upon the conditions that:

(a) if the rent hereby reserved or any part thereof shall be unpaid for the space of fourteen (14) days after any of the days on which the same ought to have been paid although no formal or other demand shall have been made therefor, or

(b) if any Lessee being a company shall pass an effective resolution to wind up (other than for the purpose of reconstruction) or shall be ordered by the Court to be wound up or if any steps whatever be taken for the winding up whether compulsorily or otherwise, or

if the Lessee or any future assignee of the Lessee being a person or persons if his her or their estate shall be declared bankrupt or if he she or they shall compound with or assign his her or their estate or estates for the benefit of his her or their creditors or if he she or they shall suffer execution to be levied upon the demised premises or the term hereby created, or

(d) in case of the breach of non-observance or non-performance of any of the covenants conditions provisos or agreements herein contained or implied and by the Lessee to be performed and observed,

THEN and in any such case it shall be lawful for the Lessor at any time thereafter and whilst such neglect or default continues and without further notice or demand to enter (forcibly if necessary) into and upon the demised premises or any part thereof in the name of the whole and to repossess the same as of his former estate and expel the Lessee and those claiming under him and remove his effects from off the demised premises without being taken or deemed guilty of any manner of trespass or wrong but without prejudice to any action or right of action or other remedy of the Lessor in respect of any breach of the Lessee's covenants herein contained or implied and that thereupon this lease shall if the Lessor so elects determine cease and be at an end and the Lessee shall be and remain liable for the rent to the date of such entry at the rate hereinbefore reserved.

That immediately upon the happening of any of the events in paragraphs (a), (b), (c) and (d) of the last clause hereof contained it shall be lawful for the Lessor without prejudice to the power of re-entry therein contained and notwithstanding any previous exercise or attempted exercise thereof to give notice that the term is converted to a tenancy from week to week determinable by a week's notice to quit expiring at any time and immediately upon the expiration of any notice to quit given pursuant to this clause all and any right to possession of the Lessee or any person claiming under him shall forthwith cease and determine and the Lessor or his agent shall be landlord only for the purpose of recovering and may proceed forthwith for the recovery of possession of the demised premises in any Court of competent jurisdiction including a Local Court under the provisions of the Landlord and Tenant Act 1899 or any existing Statutory modifications thereof or any other Act any rule of Law or Equity to the contrary notwithstanding.

7. That the covenants powers and provisions implied in leases by Sections 133 and 133A of the Conveyancing Act 1919 as amended shall not apply to and are hereby excluded from this lease.

WITNESS

Common Seal NORTH SHORE APPLIANCE PARTS PTY. LIMITED

Ref:/Src:U
Req:R785412/Doc:DL Z332070/Rev:26-Jul-2010/Sts:OK.SC/Pgs:ALL/Prt:27-May-2016 16:03/Seq:6 of 16

8. Where the context so admits in the construction of any covenant or proviso or other provision contained or implied in this lease words importing the singular or plural number or the masculine gender shall be read as also importing and including the plural or singular number and the feminine gender as the case may require and a covenant proviso or provision in which more persons than one are by the context deemed to covenant agree or appoint shall be deemed to bind and extend to such persons and any two or greater number of them jointly and each of them severally and (whenever a corporation shall be a party hereto either as Lessor or Lessee the words "Lessor", "Lessee" or "person" whenever herein used shall be deemed to mean and include such corporation its successors assigns and transferees), and the word "Guarantor" shall include the executors, administrators and permitted assigns of the Guarantors and each of them if more than one, and the word "Lessor" shall include his executors administrators and permitted assigns.

9. That this document shall be deemed an agreement under seal for the granting of such a lease as is hereby purported to be granted and the covenants and conditions herein contained shall be deemed to bind the parties in the same manner as if this document were registered notwithstanding that it may be held that no estate passed hereunder PROVIDED that should the Lessee require registration the Lessor will effect the same but any necessary survey and the registration of such lease and the obtaining of all necessary consent thereto shall be without cost or expense to the Lessor.

10. Should the Lessee continue to occupy the demised premises beyond the expiration of the said term with the consent of the Lessor he shall do so as a monthly tenant only, at a monthly rental equal to one month's proportion or One hundred and ten percentum (110%) of the annual rental payable by the Lessee to the Lessor for the last year of the term of this lease and payable monthly in advance and subject to the conditions of this lease such tenancy being determined at the will of either the Lessor or Lessee by one month's notice in writing expiring at any time.

11. No act matter or thing whatsoever shall at any time during the term be done in or upon the demised premises which shall or may be or grow to the annoyance nuisance grievance damage or disturbance of the occupiers or owners of premises adjoining the demised premises.

12. Notwithstanding any implication or rule of law to the contrary the Lessor shall not be liable for any damage or loss the Lessee may suffer by the act default or neglect of any other person or by reason of the Lessor neglecting to do something to the demised premises and which as between the Lessor and Lessee he might be legally liable to do.

13. Any notice or request hereunder may be served in manner mentioned in Section 170 of the Conveyancing Act 1919 as amended.

14. The Lessee will pay the Lessor's legal costs and all duties fees charges and expenses of or incidental to the preparation completion stamping and registration of this Lease and renewal hereof and any application for the consent of the Lessor hereunder and of or incidental to any and every breach or default by the Lessee hereunder and in or incidental to the exercise or attempted exercise of any right power privilege authority or remedy of the Lessor under or by virtue of this Lease and all legal fees and the fees of all professional consultants actually incurred by the Lessor in consequence of or in connection with breach or default by the Lessee hereunder.

15. Notwithstanding anything in this Lease, in the event that the Water Board commence levying water rates according to literage consumed, the Lessee shall pay all water rates in respect of water separately

WITNESS

metered on the demised premises. In the event that no separate meter is connected to the demised premises, the Lessee covenants to pay his proportion thereof pursuant to the provisions of clause 3(h)(iii) hereof on the basis that all water rates are part of the outgoings as hereinafter defined.

16. The Lessee covenants with the Lessor to pay rental by bank cheque or cash as follows:-

(a) for the period 1st February, 1990 to 31st January, 1991 the sum of Twenty four thousand dollars ($24,000.00) payable by equal monthly instalments in advance of Two thousand dollars ($2,000.00).

(b) for the period 1st Feburary, 1991 to 31st January, 1992 the greater of the two amounts calculated in the following manner:-

(i) the sum of Twenty four thousand dollars ($24,000.00) multiplied by the Index Number current at the date of commencement of the second year of the lease and divided by the Index Number current at the commencement of the lease. The first of such payments is to be made on the commencement date hereof and thereafter on the day of each and every succeeding month during the currency of this lease; or

(ii) the sum of Twenty four thousand dollars ($24,000.00) increased by ten per centum (10%)

(c) in this lease the words "Index Number" shall mean; the All Groups Consumer Price Index for Sydney published from time to time in the Commonwealth Statistician's summary of Australian Statistics. In the event that the Commonwealth Statistician shall update the reference base of such Index Number due conversion shall be made to preserve the intended continuity of calculation by using the appropriate arithmetical factor determined by the said Statistician;

(d) in the event that there is any suspension or discontinuance of the All Groups Consumer Index by commonwealth Authorities, the Male Basic Wage applicable in the City of Sydney and where the words "Index Number" appear the same shall be read and construed as if the words "Male Basic Wage" were inserted in lieu thereof.

(e) in the event of the discontinuance or suspension of the Consumer Price Index as aforesaid and also in the event that there is any change in the basis of assessment of or suspension or discontinuance of the Male Basic Wage applicable in the City of Sydney then the method of adjustment of rental hereunder in relation to Index Number as defined shall cease and thereafter the basis of any variation in lieu of the said Index Number shall be as decided by a Valuer agreed to by the parties or in default of agreement as nominated on the application of the Lessor by the President for the time being of the New South Wales division of the Australian Institute of Valuers and such Valuer shall be acting as an expert whose decision as to such basis shall be final and binding on the Lessor and the Lessee.

If the Lessee shall throughout the whole of the said term duly and punctually pay the rent hereby agreed upon and otherwise perform and observe all the covenants, agreements and stipulations on the part of the Lessee herein contained or implied, the Lessee shall have an option for renewal of this lease for a further period of two (2) years from the expiration of the term of this lease at a rental computed in accordance with the provisions of Clause 18 hereof and otherwise upon the same terms and conditions as are herein contained except for this present clause for renewal.

WITNESS

Reg:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:8 of 16
Ref: /Src:U

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:9 of 16
Ref: /Src:U

This option for renewal shall be exercisable only by notice in writing delivered by the Lessee to the Lessor not less than three (3) calendar months and not more than six (6) calendar months prior to the expiration of the term hereby granted.

18. The annual rental in any lease granted pursuant to the provisions of Clause 17 hereof shall be such rental as agreed upon between the parties hereto being not less than 110% of the annual rental payable by the Lessee for the immediately preceding twelve (12) months of the term hereof.

If the parties hereto shall not be able to agree upon a rental, then such rental shall be the then market rental of the demised premises (being not less than 110% of the annual rental payble by the Lessee for the immediately preceding twelve (12) months) as determined at the cost of the Lessee by an independant valuer appointed by the President for the time being of the Real Estate Institute of New South Wales which determination shall be binding on the Lessor and the Lessee. The Lessor and the Lessee respectively covenant with each other that they will make the demised premises available for inspection by the valuer and produce to the valuer all books of account, agreements and the like and otherwise do all things as a valuer may reasonably require to make his determination.

19. In any renewal of this Lease granted pursuant to Clause 17 hereof the rental for the second year of the term of the Lease shall be the greater of the two amounts calculated in the following manner:-

(a) the annual rent for Year 1 of the lease multiplied by the Index Number (as hereinbefore defined) for the quarter ending immediately prior to the commencement of a particular year of the lease and divided by the Index Number for the quarter ending immediately prior to the commencement of Year 1 of the lease; or

(b) the rental for Year 1 of the Lease increased by ten per centum (10%).

20. The Lessee covenants with the Lessor that the Lessee will use his best endeavours to protect and keep safe the demised premises and any property contained therein from theft or robbery and shall keep all doors windows and other openings closed and securely fastened when neither the Lessee nor any responsible employee or agent of the Lessee is present in the demised premises or the demised premises are not open for business PROVIDED HOWEVER that in the event of a theft or robbery from the demised premises the Lessee shall be liable for all damage resulting therefrom and for all expenses and repairs relating thereto whether of a structural nature or otherwise AND FURTHER that any such repairs that may be necessary as a result of such theft or robbery shall be effected as expeditiously as possible to the satisfaction of the Lessor.

21. For the purposes of this Lease "the outgoings" shall mean and include all insurance premiums paid or payable, rates charges taxes and assessments levied in respect of the land comprised in Certificate of Title Volume 13672 Folio 90 by the Manly Municipal Council the Water Board and the Commissioner of Land Tax, the Sydney County Council, all costs associated with the pump out and maintenance of the grease traps, air-conditioning maintenance charges and cleaning charges PROVIDED HOWEVER that for the purposes of this clause the land tax shall be deemed to be such land tax as would be assessed or charged to the Lessor if the land comprised in Certificate of Title Volume 13672 Folio 90 were the only land owned by the Lessor on the date upon which such land tax was assessed or charged.

22. Notwithstanding the provisions of Clause 2.16 hereof, the Lessor agrees to consent to the Lessee assigning transferring demising underletting or parting with the possession of the demised premises on the following conditions:-

WITNESS

(a) The Lessee has not committed a default under this Lease which was not waived or excused;

(b) The Lessee has proved to the satisfaction of the Lessor that the proposed assignee transferee sub-lessee or licensee (hereinafter called the "Ingoing Tenant") is a respectable responsible and solvent person capable of adequately carrying on the business permitted under this Lease to be carried on in the demised premises;

(c) The Ingoing Tenant has entered into a covenant with the Lessor in the form required by the Lessor that he will duly perform and observe the covenants and agreements on the Lessee's part herein contained;

(d) The Ingoing Tenant has furnished the Lessor with the guarantee or guarantees of the performance of his obligations under this Lease as the Lessor shall require;

(e) The Lessee has entered into a deed in the form required by the Lessor under which the Lessee releases the Lessor from all claims against the Lessor in respect of, or in any way arising from, this Lease;

The Lessee pays to the Lessor the Lessor's legal costs and disbursements of and incidental to the giving of its consent;

(g) In the case of a sublease or licence the Lessee has established to the satisfaction of the Lessor that the Ingoing Tenant is obliged to pay a full market rental or licence fee;

(h) The Lessee pays to the Lessor a fee to cover administrative expenses and the Lessor and Lessee agree that such fee shall be equal to one-fifty-second (1/52) of the then current annual rent.

(i) ~~The Lessee has tendered or procured the tender to the Lessor of a~~ sum equal to five percentum (5%) of the sum apportioned and paid as to goodwill and for fixtures and fittings by the Ingoing Tenant.

23. For the purposes of clause 3(i) hereof, the amount of public risk insurance that the Lessee will affect will be for an amount being not less than Five million dollars ($5,000,000.00) or such higher amount as may be notified in writing by the Lessor to the Lessee from time to time. The Lessee covenants with the Lessor that the Lessee will if required by the Lessor notify the Lessor of details of such public risk insurance.

24. Notwithstanding anything expressed or implied in this Lease, the following provisions apply to all policies of insurance required to be effected by the Lessee pursuant to its obligations under this Lease:

(a) All policies are to be placed with an insurer acceptable to the Lessor (whose acceptance will not be unreasonably withheld) and shall be for such amounts and cover such risks and contain such conditions endorsements and exclusions as are reasonably acceptable to or reasonably required by the Lessor. No exclusions endorsements or alterations thereto are to be made unless first approved in writing by the Lessor.

(b) All policies are to be taken out in the names of the Lessor and the Lessee for their respective rights and interests.

(c) Duplicate or certified copies of the policies and all renewal certificates and endorsement slips are to be lodged by the Lessee with the Lessor immediately upon receipt by the Lessee.

WITNESS

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:10 of 16
Ref: /Src:U

(d) All premiums in respect of all such policies and renewals of policies are to be paid punctually by the Lessee and the receipt for each premium payable in respect of each policy (or other proof of payment to the Lessor's satisfaction) is to be produced by the Lessee to the Lessor at least fourteen (14) days before the due date for renewal thereof.

25. If the Lessee does not remove his fixtures in accordance with the provisions of Clause 2.22 hereof or does not remove his fixtures plant equipment and other articles or items at or immediately following the determination of this Lease, the Lessor may at the expense of the Lessee remove and dispose of the same and any of such fixtures fittings plant equipment and other articles of items not removed by the Lessee as aforesaid shall become and remain the property of the Lessor.

26. The Lessee will not without the written consent of the Lessor by any act matter or deed or by any failure or omission impair reduce or diminish indirectly the rent hereby reserved or impose or cause or permit to be imposed on the Lessor any liability of the Lessee under or by virtue of this Lease even though entitled so to do whether by statute ordinance proclamation order regulation and moratorium present or future) or otherwise.

27. In any case where pursuant to this Lease the doing or execution of any act matter or thing by the Lessee is dependant upon the consent or approval of the Lessor, such consent or approval may be given conditionally or unconditionally or withheld by the Lessor in its absolute uncontrolled discretion unless otherwise herein provided.

28. The Lessor shall be entitled for the purpose of the provision of public or private access to and egress from the demised premises, or support of structures hereafter erected on or from adjoining lands or of services (including water drainage gas and electricity supply and telephonic and electronic communication services) to grant easements or enter into any arrangement or agreement with any of the owners lessees, tenants or occupiers or others interested in any land adjacent or near to the demised premises or with any public authority as the Lessor thinks fit and it may likewise for such aforesaid purpose dedicate land or transfer, grant or create any easement privilege or other right in favour of such parties or in favour of any such adjoining or neighbouring land or any public authority over or affecting the demised premises and this Lease shall be deemed to be subject to any such agreement arrangement right easement or privilege. Notwithstanding the reservation contained in this clause, the Lessor in the exercise of the rights herein conferred shall not dedicate land or transfer, grant or create any easement privilege or other right to any other person which shall substantially and permanently derogate from the enjoyment of rights conferred on the Lessee by this Lease.

29. None of the terms or conditions of this Lease nor any act matter or thing done under or by virtue of or in connection with this Lease or any other agreement between the parties hereto shall operate as a merger of any of the rights and remedies of the parties in or under this Lease or in or under any such other agreement all of which shall continue in full force and effect.

The Lessor will not be under any liability for any loss injury or damage sustained by the Lessee or by any other person at any time as a result of or arising in any way out of the failure of the electricity or water supply or any other service or facilities provided by the Lessor or enjoyed by the Lessee in conjunction with the demised premises.

31. Whenever the Lessee is obliged or required hereunder to do or effect any act or matter or thing then the doing of such act matter or thing shall, unless this Lease otherwise provides, be at the sole risk and

WITNESS S Butcher

expense of the Lessee.

32. Unless application is mandatory by law no statute ordinance proclamation order regulation or moratorium present or future shall apply to this Lease so as to abrogate extinguish impair diminish fetter delay or otherwise prejudicially affect any rights powers remedies or discretions given or accruing to the Lessor.

33. To the extent permissible at law the Lessee will forthwith upon demand pay to the Lessor by way of additional rent an amount equivalent to any moneys paid by the Lessor in respect of any liability imposed on the Lessee under or by virtue of this lease notwithstanding that any statute ordinance proclamation order regulation or moratorium present or future directly or indirectly imposes such liability upon the Lessor.

34. The Lessor shall have the right from time to time to improve extend add or to reduce the building of which the demised premises forms part or in any manner whatsoever alter or deal with the said building (other than the demised premises) PROVIDED ALWAYS that in exercising such right the Lessor will endeavour to cause as little inconvenience to the Lessee as is practicable in the circumstances.

35. The Lessee will at all times during the Term permit the Lessor and any person having any estate or interest in the demised premises superior to or concurrent with the Lessor to exercise the Lessor's powers to enter and view the demised premises and to carry out repairs renovations maintenance and other work thereon and otherwise to exercise or perform their lawful rights or obligations in regard thereto.

36. Without prejudice to the rights powers and remedies of the Lessor otherwise under this Lease the Lessee will pay to the Lessor interest at the rate of twenty per cent (20%) per annum on each and every occasion on which the Lessee omits or neglects to pay any money whatsoever including the rent reserved by this Lease and which is due but unpaid for fourteen (14) days such interest to be computed from the date due for payment of the moneys in respect of which interest is chargeable until payment of such moneys in full and to be recoverable in like manner as rent in arrears.

37. IT IS HEREBY AGREED AND DECLARED by and between the Lessor and the Lessee that clauses 2.1, 3(h), 5, 6, 15, 16, 18, 33 and 36 hereof are essential terms of this Lease.

38. The Lessee shall be responsible for the repair service and maintenance of any air conditioning system installed in the premises by the Lessor and shall pay all costs and expenses of whatsoever nature occasioned thereby.

39. (a) In this Clause 39 a reference to Guarantor shall mean KENNETH WILLIAM ROCKS and DIANNE MARY ROCKS both of 15 Mitchell Road, Mosman, Company Directors.

(b) In this Clause 39 a reference to Obligations means all of the obligations of the Lessee to the Lessor pursuant to this Lease including the due payment of Rent and all other moneys payable to the Lessor and the due performance and observance of the covenants, terms, conditions and agreements on the part of the Lessee to be observed and performed.

(c) The Guarantor and the Lessee acknowledge that this Lease has been granted by the Lessor at the request of the Guarantor upon condition that the Guarantor should guarantee to the Lessor the Obligations.

WITNESS

S Butcher

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:12 of 16
Ref: /Src:U

(d) The Guarantor hereby guarantees to the Lessor that the Lessee will perform all the Obligations and in default of such performance by the Lessee of any of the Obligations the Guarantor hereby covenants with the Lessor to perform the Obligations or cause them to be performed as if the obligations wee primarily the responsibility of the Guarantor.

(e) The Guarantor hereby indemnifies and shall keep indemnified the Lessor from and against all losses, damage, costs, charges, liabilities and expenses of whatsoever kind which may at any time be suffered or incurred by the Lessor by reason or in consequence of default by the Lessee in the performance of the Obligations or in consequence of the Lessor attempting to enforce performance of any of the Obligations.

(f) The Guarantor acknowledges to and agrees with the Lessor that:-

(i) The preceding guarantee and indemnity shall be a continuing guarantee and indemnity and principal obligation between the Guarantor and the Lessor and shall not be affected by any claim or right which the Lessee or the Guarantor may have or purport to have against the Lessor on any account whatsoever.

(ii) The amount of any moneys from time to time due and payable by it and the performance of its obligations pursuant to the terms of this Clause 39 shall be paid and performed by the Guarantor in accordance with the specific provisions of this Lease and if not so specified then on demand by the Lessor.

(iii) The liability of the Guarantor pursuant to this Clause 39 shall not be avoided or impaired by:-

(a) the Lessor granting time or other indulgence to or making any composition with the Lessee or the Guarantor;

(b) the Lessee or the Guarantor being wound up or passing a resolution for their respective liquidation or by the appointment of a receiver or liquidator respectively thereof;

(c) the Lessee or the Guarantor becoming bankrupt or entering into any composition or arrangement with its respective creditors or becoming of unsound mind or dying;

(d) the Lessee or the Guarantor becoming bankrupt or entering into any composition or arrangement with its respective creditors or assigning its respective estates or any part thereof for the benefit of creditors;

(e) the Lessor having previously obtained or at any time hereafter obtaining any further or other covenant or security or guarantee in respect of the Obligations (or any party thereof) from the Lessee or from any other person;

(f) the Lessor forbearing, neglecting or failing to exercise any remedy or right it may have at any time in the future for the enforcement of its rights or powers under this Lease or any other security or guarantee or compromising or abandoning any of its rights and powers pursuant to their respective provisions;

Director Secretary

NORTH SHORE APPLIANCE PARTS PTY. LIMITED Common Seal

MANLY CIVIC CLUB Common Seal

WITNESS

(g) any one or more of the covenants of the Lessee or the Guarantor being or becoming illegal, invalid, void or unenforceable by reason of any past, present or future law, statute, act, omission, fact or circumstances whether known to the Lessor or not;

(h) the absence of any notice to the Guarantor of default by the Lessee or the Guarantor or any other person who may become a guarantor hereafter;

(i) the existence now or at any future time of any legal disability of the Lessee or the Guarantor;

(j) the Lessor waiving any breach or default by the Lessee or the Guarantor;

(k) the variation, alteration or renewal of the Lease whether or not such variation alteration or renewal was with the consent, knowledge or agreement of the Guarantor.

(v) The execution of this Lease by the Guarantor shall constitute a consent to and an awareness of any variation, compromise or release of the Obligations and the Guarantor shall for all purposes be deemed to have consented to and been aware of any and all such variations, compromises or releases.

(v) No payment by an person shall operate to discharge or reduce the Guarantor's liability to the Lessor under this Part 16 if such payment is or may be or may become voidable as a preference under any law relating to bankruptcy or the winding up of companies or other corporate entities and no grant of discharge or release consequent upon such a payment shall discharge such liability of the Guarantor.

(vi) The Guarantor's liability hereunder shall not be affected by any claim or right to set off or cross action which the Lessee or the Guarantor may respectively have or claim to have against the Lessor on any account nor shall the Guarantor be entitled to any set off against the Lessor.

(g) In order to give full effect to the provisions of this Lease the Guarantor hereby:-

(i) covenants that in the event of the bankruptcy or liquidation of the Lessee the Guarantor will not prove in any such bankruptcy or liquidation in competition with the lessor and the Guarantor hereby irrevocably appoints the Lessor the Attorney of the Guarantor and hereby authorises the Lessor to prove for all moneys which the Guarantor has paid on behalf of the Lessee or is entitled to receive from the Lessee or the estate of the Lessee and to retain and to carry to a suspense account and appropriate at the discretion of the Lessor any amount so received until the Lessor shall have been paid one hundred cents in the dollar in respect of the indebtedness of the Lessee or the Guarantor as the case may be;

(ii) waives all rights inconsistent with the provisions of this Part 16 including rights as to contribution and subrogation which the Guarantor might otherwise as surety be entitled to claim and enforce; and

WITNESS

Ref: /Src:U
Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:14 of 16

Req:R785412 /Doc:DL Z332070 /Rev:26-Jul-2010 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 16:03 /Seq:15 of 16
Ref: /Src:U

(iii) covenants with the Lessor that so far as is within its power and is permissible by law to do all things as may be reasonably required by the Lessor to give effect to the provisions of this Part 16.

(h) The Guarantor hereby covenants with and acknowledges to the Lessor that the guarantee and indemnity expressed in this Part 16 shall endure for the benefit of the Lessor and its successors and assigns and that the Guarantor will at the request of the lessor at any time enter into a Deed with any transferee of the Building from the Lessor confirming this guarantee and indemnity to such transferee.

THE COMMON SEAL of MANLY CIVIC LIMITED was hereunto affixed by authority of its Board of Directors in the presence of:

S Butcher

THE COMMON SEAL of NORTH SHORE APPLIANCE PARTS PTY. LIMITED was hereunto affixed by authority of its Board of Directors in the presence of:

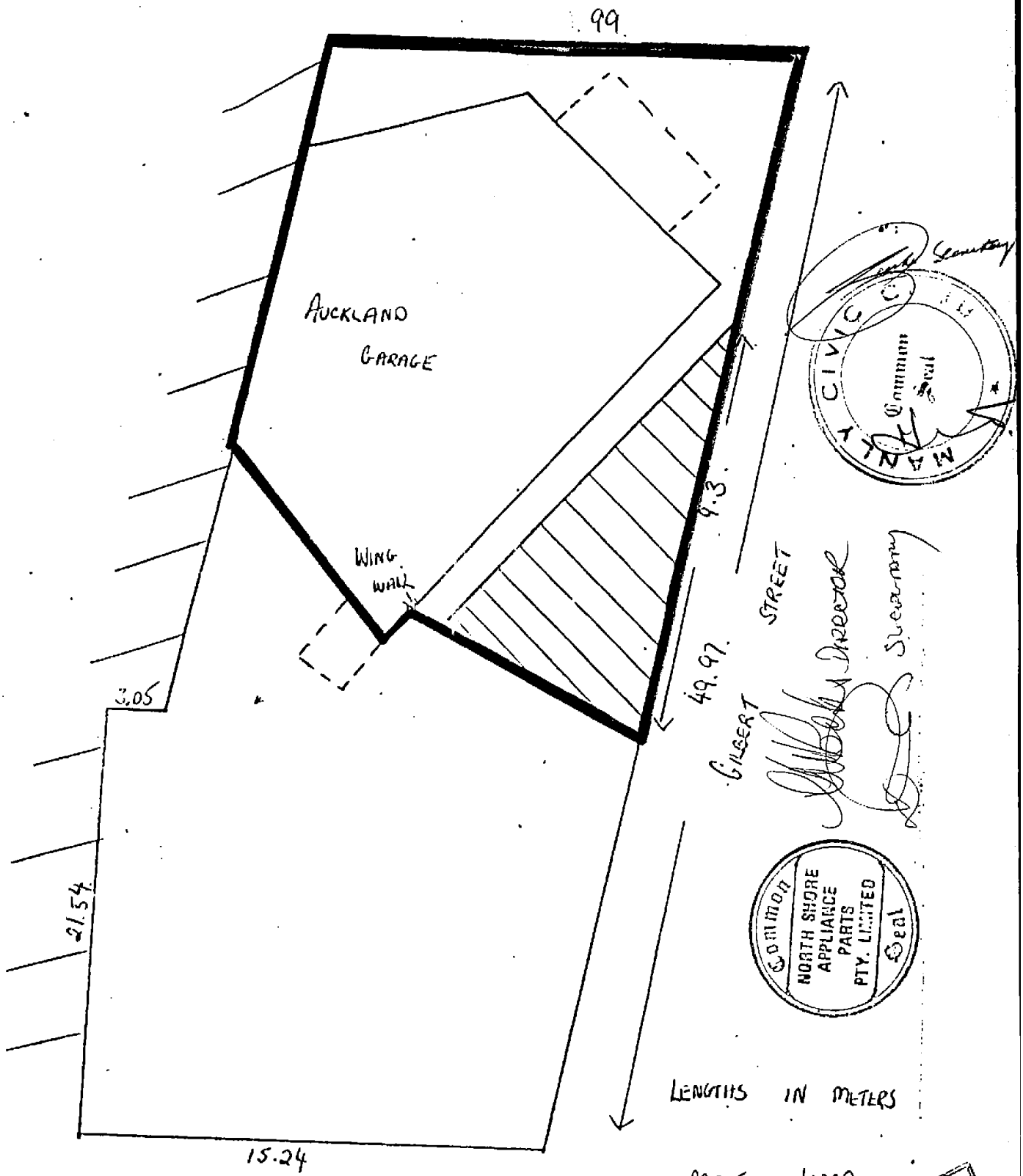
S Butcher

SIGNED SEALED AND DELIVERED by KENNETH WILLIAM ROCKS in the presence of:

S Butcher

SIGNED SEALED AND DELIVERED by DIANNE MARY ROCKS in the presence of:

S Butcher


99
AUCKLAND
GARAGE
WING WALL
9.3
49.97
3.05
21.54
15.24
GILBERT STREET
EUSTACE ST.
LENGTHS IN METERS
SCALE 1:200.
CIVIC
NORTH SHORE APPLIANCE PARTS PTY. LIMITED
Common Seal
LODGE WITH DEALING
WITNESS
S Butcher

Req:R785204 /Doc:DL C163392 /Rev:12-Jun-2014 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 15:43 /Seq:1 of 4
Ref: /Src:U

FEB 14 11 16 1933

New South Wales

MEMORANDUM OF LEASE.

REAL PROPERTY ACT, 1900.

[IN DUPLICATE.]

R.P. I. E.

FEES:—

Lodgment £ 19 6

Endorsements

TOTAL £

M 257

14-2-33

C/ C163392

I,[a] ROBERT JAMES DOUGLAS SELLAR of Manly Grazier

(hereinafter called or included in the expression Lessor)

being registered as the proprietor of an estate in *fee simple*[b] in the land hereinafter described, subject, however, to such encumbrances,[c] liens, and interests, as are notified by memorandum underwritten or endorsed hereon: Do hereby lease unto[d] STANLEY GILLINGHAM of Manly aforesaid Taxi-cab proprietor

(hereinafter called or included in the expression Lessee)

All that piece of land containing[e] 34½ perches

situated in the Municipality of Manly Parish of Manly Cove County of Cumberland

being[f] the whole of the land comprised in[g] Certificate of Title

dated 2nd August 1921 A.D. [h]

registered volume 3213 folio 61 / [h]

To be held by the said Lessee

as tenant for the term of five years computed from the thirtyfirst day of May One thousand nine hundred and thirty three or the date of the issue of a Certificate by Mr. S. R. Maisey of Sydney Architect that the Garage Service Station and Parking Area to be erected by the Lessor on the ~~pounds (£) payable as follows~~ said land as hereinafter mentioned are completed and ready for occupation by the Lessee whichever shall be the sooner, at the yearly rent of Fifty-two pounds (£52) payable as follows:- By equal monthly payments of Four pounds six shillings and eightpence (£4:6:8) each on the first day of each and every month during the said term and secondly at a further rent equivalent to and representing 20% of the net profits of the said Garage Service Station and Parking Area.

subject to the following covenants, conditions, and restrictions, viz.:—

1. To the covenants and powers implied[k] in every Memorandum of Lease by virtue of the Conveyancing Act, 1919-1930, secs. 84 and 85, or such of them, or so far, as not hereby expressly negatived or modified. PROVIDED that Section 84 of the said Act is hereby negatived and that sub-section 1 (a) of Section 85 of the said Act shall be varied by the omission therefrom of the words "twice in every year during the term at a reasonable time of the day upon giving to the Lessee two days previous notice" and the insertion in lieu thereof of the words "at any time during the said term" and also provided that subsection 1 (d) of Section 85 of the said Act shall be read and construed so that the power of re-entry therein contained shall arise and be exercisable in the event of the rent hereby reserved (including the percentage of profit hereinafter mentioned) or any part thereof being in arrear for fourteen days and immediately upon the breach of any of the covenants contained expressed or implied and on the part of the Lessee to be performed or observed AND ALSO immediately upon the Lessee or his permitted assigns becoming bankrupt or making any assignment for the benefit of his or their creditors or committing any Act of Bankruptcy or suffering judgment to be entered up against him or them in any Court of Law or Equity or compounding with his or their Creditors.

This form when filled in should be ruled up so that no alterations are possible. No alterations should be made by erasure. The words rejected should be scored through with the pen, and those substituted written over them, the alteration being verified by signature or initials in the margin, or noticed in the attestation.

[Rule up all blanks before signing.]

[Price 6d.]

[a] Name, residence, occupation or other designation of Lessor.

[b] If a less estate, strike out "in *fee simple*," and interline required alteration.

[c] All subsisting encumbrances must be noted on page 3 hereof.

[d] Name, residence, occupation or other designation of Lessee. If more than one, state whether they hold as tenants in common or joint tenants.

[e] Acres, roods, and perches.

[f] The whole, or part, as the case may be.

[g] Crown Grant, or Certificate of Title.

[h] These references will suffice alone, if the whole land in the Grant or Certificate be leased; but if the lease be of a part add "and being lot Sec. , D.P. No. , or Misc. Plan of Subdiv. No. ," or "being the land shown in the plan endorsed hereon or annexed hereto" or "being the residue of the land in C.T. (Cr. Gt.) Vol. , Fol. after Transfer No. ." If the term of the lease, including that in any option of renewal, exceeds 5 years, the provisions of Sec. 327 of the Local Govt. Act, 1919, relating to subdivision, should be complied with. Add also, if intended, any rights of way, or other easements, and any exceptions, if intended, of mines or minerals, timber, &c. If a plan or description be annexed, the annexure should be identified as part of this instrument by a memorandum thereon referring hereto, and signed by the parties and witnesses.

[i] State both in words and figures.

[j] Here insert times of payment.

[k] These relate on the part of the tenant to payment of rent and to repair; on the part of the lessor to right of entry to inspect and repair and of re-entry and forfeiture of lease subject to the Conveyancing Act, 1919-1930, Sec. 129, after default in payment of rent or fulfilment of covenants.

1 Here insert any of the following clauses suited to the case. To understand the full effect of each—*refer to the Act.*
"And to pay taxes except "for local improvements."
"And to insure from fire "in the joint names of the "lessor and the lessee."
"And to paint outside "every [ ] year."
"And to paint and paper "inside every [ ] year."
"And to fence."
"And to keep up fences."
"And to cultivate."
"That the lessee will not "cut timber."
"That the lessee will not "without consent use "premises otherwise than "as a private dwelling-"house."
"And will not assign or "sublet without leave; "no fine to be taken."
"That the lessee will not "carry on any offensive "trade."
"That the lessee will carry "on the business of a "hotelkeeper and conduct "the same in an orderly "manner."
"And will apply for renewal "of license."
"And will facilitate the "transfer of license."
"The said (lessor) covenants "with the said (lessee) "for quiet enjoyment."
"And the lessee may "remove his fixtures."

The clauses may be varied in the manner mentioned in Section 86 of the Conveyancing Act 1919-1930 and the Fourth Schedule thereto.

Any other terms of the intended lease may then be added.

2. To the full effect of the covenants next hereinafter shortly noted as the same are set forth in words at length in the second column of Part 2 of the Fourth Schedule to the Conveyancing Act, 1919-30.[1] except in so far as the same are added to or qualified hereby and such covenants shall be deemed to apply to this Lease.

(1) That the Lessee covenants with the Lessor to pay rent.
(2) Provided that in the event of damage by fire lightning flood or tempest rent shall abate until the premises are restored.
(3) And to pay taxes.
(4) And to repair reasonable wear and tear and damage by fire lightning flood and tempest only excepted.
(5) And to leave the premises in good repair reasonable wear and tear and damage by fire lightning flood and tempest only excepted.
(8) And to insure from fire in the joint names of the Lessor and the Lessee.
(9) And to paint outside during the third and last year.
(10) And to paint inside during the last year.
(15) That the Lessee will not without consent use premises otherwise than as a Garage Service Station and Parking Area.
(16) And will not assign or sublet without leave no fine to be taken.
(17) That the Lessee will not carry on any offensive trade.

3. TO the following additional covenants and provisions on the part of the Lessee:

(a) That the Lessee will during the said term conduct and manage the said Garage Service Station and Parking Area to the best advantage and will at all times use his utmost endeavours to extend the said business and will during the currency of this Lease strictly observe and conform to all Statutes Rules and Regulations relating to or affecting the conduct of a business of the nature referred to and the storage and sale of inflammable liquids.
(b) That all receipts and takings from the said business shall be daily banked by the Lessee and paid to the credit of a separate account in a Bank to be approved by the Lessor.
(c) That the Lessee will keep all proper and customary books of account and employ Messrs. James & Rush of No. 1 Bligh Street Sydney Chartered Accountants or such other Accountants or Accountant as may be nominated from time to time by the Lessor for the purpose of supervising the said business and auditing the books thereof.
(d) That the Lessee will at all times during the said term keep the demised premises in a clean and sanitary condition and free from any accumulation of rubbish or dirt and comply with all insurance regulations relating to or affecting the storage of Petrol and other inflammable liquids.
(e) That the Lessee will within seven days of the issue of a Certificate by Messrs. James & Rush or such other Accountants or Accountant as shall be nominated by the Lessor as aforesaid determining the net profit of the said business pay to the Lessor the beforementioned additional rent equivalent to or representing 20% of the net profit of such business.
(f) That the Lessee will at his own expense promptly comply with all notices that may during the said term be served either upon him or the Lessor by the Local Council the Health or other Authorities (other than requirements of a structural nature) by reason of the business carried on by the Lessee on the demised premises and in the event of the Lessor complying with the requirements of such notices the Lessee will on demand pay to the Lessor the cost of so carrying out the same.

4. THE Lessor covenants with the Lessee for quiet enjoyment AND that the Lessee may remove his fixtures provided always that the License so given shall not be effective or binding upon the Lessor in the event of any rent (including the beforementioned percentage of profit) being in arrear or on the non-observance or non-performance of any of the covenants and conditions on the part of the Lessee to be observed or performed under this Lease.

5. AND the Lessor further covenants with the Lessee to forthwith erect or cause to be erected upon the demised premises at a cost not exceeding the sum of One thousand two hundred pounds (£1200) a Garage Service Station and Parking Area in accordance with plans and specifications approved by the Lessee and signed by the parties hereto for identification.

6. AND it is hereby agreed and declared as follows:-

(1) During the currency of this Lease the Lessee shall be entitled to draw out of the takings of the said business a sum not exceeding Five pounds (£5) in any one week.
(2) For the purposes hereof the net profit of the said business shall be determined at the expiration of each quarter during the currency of this Lease by deducting from the gross receipts and/or takings all expenses outgoings and other charges properly incurred in and attributable to the conduct of the said business but any drawings by the Lessee to the extent aforesaid shall not be taken into consideration when calculating the additional rent payable to the Lessor hereunder on the basis of 20% of the net profit of the said business.
(3) The Certificate of Messrs. James & Rush or such other Accountants or Accountant as shall be nominated by the Lessor shall be final and conclusive as between the Lessor and the Lessee as to the amount of the net profit of the said business during each quarter of the said term or such other period as may be mutually agreed upon during the currency of this Lease.

7. NOTHING herein contained or implied nor the payment to or receipt by the Lessor of the beforementioned share of profits by way of additional rent for the demised premises shall constitute or be construed as constituting the Lessor a partner of the Lessee in the said business or create or be deemed to create a partnership between the Lessor and the Lessee of any nature or kind whatsoever.

8. THAT in the event of the Lessee or his permitted assigns remaining in occupation of the demised premises after the expiration of the term hereby granted he or they shall be deemed to be weekly tenants only at a weekly rental of One pound (

Req:R785204 /Doc:DL C163392 /Rev:12-Jun-2014 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 15:43 /Seq:2 of 4 /Src:U /Ref:

Req:R785204 /Doc:DL C163392 /Rev:12-Jun-2014 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 15:43 /Seq:3 of 4
Ref: /Src:U

cts subject to the same covenants provisions and conditions as are herein contained so far as the same are applicable to a weekly tenancy notwithstanding anything herein contained or implied by law to the contrary.

9. AND it is hereby lastly agreed and declared that in the event of the beforementioned share of profits payable to the Lessor by way of additional rent not exceeding the sum of One hundred pounds (£100) during the first year of the said term the Lessor shall be entitled at any time thereafter if he so thinks fit to cancel and determine this Lease upon giving to the Lessee a Notice in writing of his intention so to do and at the expiration of one month from the service of such Notice which may be effected by either leaving the same at the said premises or the posting thereof by registered post addressed to the Lessee this Lease shall be deemed to be cancelled and determined.

MEMORANDUM OF ENCUMBRANCES, &c., REFERRED TO. [m]

10. WHENEVER herein used the expression "Lessor" shall be deemed to extend to and include the said Robert James Douglas Sellar his executors administrators or assigns and similarly the expression "Lessee" shall be deemed to extend to and include the said Stanley Gillingham his executors administrators or permitted assigns.

MEMORANDUM OF ENCUMBRANCES &C. REFERRED TO.

Reservations of all mines of gold and silver.

Dated this 4th day of February one thousand nine hundred and thirty three.

Signed, in my presence, by the said ROBERT JAMES DOUGLAS SELLAR who is personally known to me

R. J. D. Sellar
Lessor.[n]

* [signature]

I,[o] STANLEY GILLINGHAM the within-named Lessee, do hereby accept this lease as tenant, subject to the conditions, restrictions, and covenants above set forth, and certify it to be correct for the purposes of the Real Property Act, 1900†

Signed, in my presence, by the said STANLEY GILLINGHAM who is personally known to me

S. Gillingham
Lessee.[p]

* [signature]

† CAUTION.—Section 117, which requires the above to be signed by the Lessee or his Solicitor, renders persons certifying falsely or negligently subject to a penalty of £50, besides damages to any parties injured.

FORM A.

DECLARATION BY ATTESTING WITNESS.

Appeared before me[q] at , the day of one thousand nine hundred and

the attesting witness to this instrument, and declared that he personally knew[s] the person signing the same, and whose signature thereto he has attested; and that the name purporting to be such signature of the said[t] is his own handwriting, and that he was of sound mind, and freely and voluntarily signed the same.

m A very short note of the particulars will suffice.

n Unless the signature be made or acknowledged before the Registrar General or his Deputy, or a Notary Public, J.P., or Commissioner for Affidavits, the witness must appear before one of the above functionaries to make a Declaration in the form A hereon.

This applies to instruments signed within the State. As to those signed elsewhere, see section 107 of the Real Property Act, 1900, and section 168 of the Conveyancing Act, 1919-1930. If a signature be by a mark, the attestation must state that the instrument was read over and fully explained to the party, and that he appeared fully to understand the same.

o Name of Lessee.

p For the signature of the Lessee hereto an ordinary attestation is sufficient. Unless the Lease contains some special covenants by the Lessee it may be signed on his behalf by his Solicitor or Conveyancer in cases where it is established that his signature cannot be obtained without difficulty and delay. It is, however, always desirable that his signature should be obtained if possible.

* Repeat attestation for additional parties, if required.

q May be made in N.S.W. before either Registrar General, his Deputy, a Notary, a J.P., or a Commissioner for affidavits. Not required if the instrument itself be signed or acknowledged before one of these—see note "n."

r Name of witness and residence.

s Name of Lessor.

t Name of Lessor.

* N.B.—If by the signing of two or more Lessors before different witnesses it becomes necessary to make more than one declaration additional declarations can be entered on back hereof. For signature of the Lessee an ordinary attestation is sufficient.

No. C163392 *Memorandum of Lease of*

34½ perch
pt Lots 50 & 51 Sec 6
of Brighton Estate
(West Promenade, Eustace and
Gillett sts)
manly
R.J.D. Sutcliffe *Lessor.*

Lessee.
Stanley Fillingham

Lodged by

(*Name*) E. S. DUNHILL SOLICITOR 1 BLIGH ST., SYDNEY

(*Address*)

(This space should be left blank for the entry of memorials.)

Particulars entered in the Register Book, Vol. 3213
Fol. 61

the 14th day of February 19 33
at 16 mts past 11 o'clock in the
forenoon.

Registrar General.

EXPIRED under C703151
Dated 22nd September 1938
REGISTRAR GENERAL.

REGISTRAR GENERAL NEW SOUTH WALES

REGISTERED
1 FEB 1933
BY

FORM OF SURRENDER.

I,
registered proprietor of the Lease created by the within instrument, do hereby, in consideration of

hereby surrender all my estate or interest therein to the Lessor or other the present owner of the reversion thereon expectant. In witness whereof I have hereto subscribed my name this day of 19 .

†Signed, in my presence, by the said
who is personally known to me

Lessee.

Accepted, and I certify this surrender to be correct for the purposes of the Real Property Act, 1900.

†Signed, in my presence, by the said
who is personally known to me

Lessor.

† *Mutatis mutandis* the rules of authentication which apply to a Lease or Transfer apply to a Surrender.

Note.—A separate form of Transfer of Lease can be obtained at the Land Titles Office, Sydney.

Req:R785204 /Doc:DL C163392 /Rev:12-Jun-2014 /Sts:OK.SC /Pgs:ALL /Prt:27-May-2016 15:43 /Seq:4 of 4
Ref: /Src:U

Req:R722114 /Doc:CT 13672-090 CT /Rev:27-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:19 /Seq:1 of 2
Ref: /Src:U

[redacted]FICATE OF TITLE

NEW SOUTH WALES

[redacted]L PROPERTY ACT, 1900

Vol. [redacted] Fol. 90

13672 Fol. 90

(Page 1) Vol. .....

Appln No 22968

Prior Title Vol. 3213 Fol. 61

EDITION ISSUED

15 8 1978

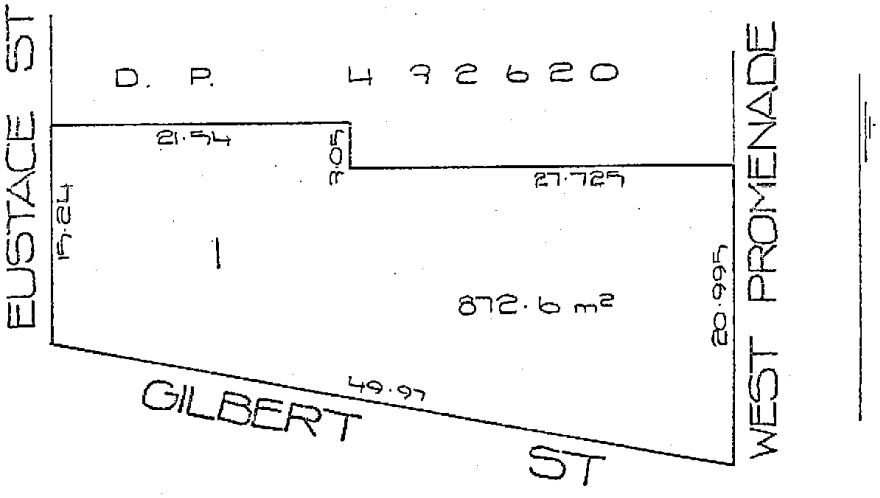
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

CANCELLED

Registrar General.

PLAN SHOWING LOCATION OF LAND SEE AUTO FOLIO

LENGTHS ARE IN METRES



Q744584 U/U

REDUCTION RATIO 1 : 400

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 72968 in the Municipality of Manly Parish of Manly Cove and County of Cumberland being part of 40.47 hectares granted to John Thompson on 13-4-1842.

FIRST SCHEDULE

MANLY CIVIC CLUB LIMITED.

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Q744584 Covenant.

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

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

RG 2/64

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

Vol. 13672 Fol. 90

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
CANCELLED				
SEE AUTO FOLIO				

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	

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

Req:R722114 /Doc:CT 13672-090 CT /Rev:27-Jan-2011 /Sts:OK.SC /Pgs:ALL /Prt:18-May-2016 09:19 /Seq:2 of 2
Ref: /Src:U

Req:R722116 /Doc:CT 06396-201 CT /Rev:09-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:19 /Seq:1 of 2
Ref: /Src:U

66

35227—2 2.50

Appn. No. 33442

Reference to Last Certificate

Vol. 5725 Fol. 184

New South Wales

[CERTIFICATE OF TITLE.]

JOINT TENANCY

Register Book.

Vol. 6396 Fol. 201

S
GRN

CANCELLED W
ON ISSUE OF NEW FOLIO B/435320

ERNEST ALBERT WALL of Manly, Hairdresser, CLARENCE BURT of Manly, Milk Bar Proprietor and PHILLIP RIPPIN HOTSON of Manly, Hardware Merchant, Transferees under Instrument of Transfer No.F357714 are now the proprietors of an Estate in Fee Simple as Joint Tenants, subject nevertheless to such encumbrances, liens and interests as are notified hereon in That piece of land situated in the Municipality of Manly, Parish of Manly Cove and County of Cumberland, containing Nine and three quarters perches or thereabouts as shown in the plan hereon and therein edged red being Lot B in plan annexed to the said Instrument of Transfer No.F357714 and being part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842. Excepting out of the said land all mines of gold and of silver excepted out of the said Grant and also excepting all such mines and deposits as are excepted from Notice of Resumption No.D530752P by virtue of Section 141 of the Public Works Act 1912.

435320

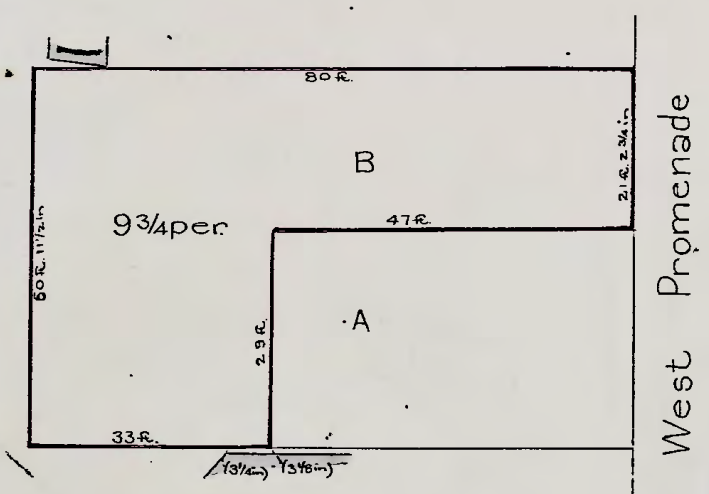
XC

In witness whereof I have hereunto signed my name and affixed my Seal, this Twenty-second day of October , 1951

Signed in the presence of Lg. McKern

J. Wells
Registrar-General.

REGISTRAR GENERAL * NEW SOUTH WALES *



Scale:-20 feet to one inch.

F357714

NOTIFICATION REFERRED TO

Covenant contained in Instrument of Transfer No.F357714. P

CV

J. Wells
Registrar General.

REGISTRAR GENERAL * NEW SOUTH WALES *

No. 915722 TRANSFER dated 18th March 1953
from the said Ernest Albert Wall, Clarence Burt and Phillip Rippin Hotson to Manly Civic Club.
of the land within described
Produced and entered 25th August 1953
at 56 min past 11 o'clock in the fore noon.

J. Wells
REGISTRAR GENERAL.

REGISTRAR GENERAL * NEW SOUTH WALES *

Persons are cautioned against altering or adding to this Certificate or any notification thereon.

No. F923864 MORTGAGE dated 24th March 1953
from the said Manly Civic Club to Australia
and New Zealand Bank Limited

Produced 2nd September 1953 and entered 2nd September 1953
at 25 minutes past 12 o'clock in the afternoon.

J. H. Wells
REGISTRAR GENERAL.

MORTGAGE No. 1 F923864 has been discharged.
See H155122 Entered 6th March 1959.

REGISTRAR GENERAL.

No. H155133 MORTGAGE dated 12th February 1959
from the said Manly Civic Club to Commonwealth
Trading Bank of Australia

Entered 5th March 1959

REGISTRAR GENERAL.

COMPUTER FOLIO NO FURTHER
DEALINGS TO BE REGISTERED.

48m6170

CT 31/8/64

Req:R721979 /Doc:CT 06167-226 CT /Rev:09-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:11 /Seq:1 of 2
Ref: /Src:U

201.

Appn. No. 33442

Reference to Last Certificates

Vol. 5800 Fols. 150 and 151

New South Wales

[CERTIFICATE OF TITLE.]

JOINT TENANCY

4

REGISTER BOOK.

Vol. 6167 Fol. 226

CANCELLED W

CLARENCE BURT, Milkbar Proprietor, COWLEY GROSVENOR, Tobacconist and ERNEST ALBERT WALL, Hairdresser, all of Manly, Transferees under Instrument of Transfer No. F197283 are now the proprietors of an Estate in Fee Simple as Joint Tenants, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Manly Parish of Manly Cove, and County of Cumberland containing Twelve and one half perches or thereabouts as shown in the plan hereon and therein edged red being part of Lots 50 and 52 of Section E Brighton Estate and being also part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842.

Together with by way of inclusion such mines and dsposits under the 14¾ perches edged blue in the plan hereon (being part of Lot 51 and the said Lot 52 of Section E) as were comprised in the said Grant and ars excepted from Notice of Resumption No. D530752 by the operation of Section 141 of the Public Works Act 1912.

In witness whereof I have hereunto signed my name and affixed my Seal, this Twenty-seventh day of July, 1950

Signed in the presence of R.R. FitzGerald

J. Wells

Registrar-General.

F 197283.

Scale:- 20 feet to one inch.

NOTIFICATION REFERRED TO

Amongst the reservations and conditions contained in the Grant above referred to are reservations of all mines of gold and of silver.

J. Wells

Registrar General.

No. F 923864 MORTGAGE dated 24th March 1953 from the said Manly Civic Club to Australia and New Zealand Bank Limited

Produced 2nd September 1953 and entered 2nd September 1953 at 2 mins/ 12 o'clock in the afternoon.

J. Wells

REGISTRAR GENERAL.

No. F 918721 TRANSFER dated 18th March 1953 from the said Clarence Burt, Cowley Grosvenor and Ernest Albert Wall to Manly Civic Club of the land within described

Produced and entered 25th August 1953 at 9 mins/ pt 12 o'clock in the afternoon.

J. Wells

REGISTRAR GENERAL.

MORTGAGE No. F 923864 has been discharged.

See H155132 Entered 5th March 1959.

REGISTRAR GENERAL.

Req:R721979 /Doc:CT 06167-226 CT /Rev:09-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:11 /Seq:2 of 2
Ref: /Src:U

No. H155133 MORTGAGE dated 12th February 1959.
from the said Manly Cruising Club to Commonwealth Trading Bank of Australia

Entered 5th March 1959

2165032
22.5.1996

REGISTRAR GENERAL

REGISTRAR GENERAL NEW SOUTH WALES

No. J448996 CAVEAT. Produced: 13th September, 1963
Entered: 23rd September, 1963.

Registrar General

REGISTRAR GENERAL NEW SOUTH WALES

Pt 1
J448996

DP/ 859455 Registered 3.6.1996
This folio is cancelled as to whole/~~part~~ upon creation of computer folios for lots 1 in the abovementioned plan.

REGISTRAR GENERAL NEW SOUTH WALES

2165032 DP859455

Req:R722113 /Doc:CT 05800-151 CT /Rev:08-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:19 /Seq:1 of 2
Ref: /Src:U

201

Appn. No. 33442

Reference to last certificate

Vol. 5003 Fol. 100

New South Wales.

[CERTIFICATE OF TITLE.]

TENANCY IN COMMON.

REGISTER BOOK.

Vol. 5800 Fol. 151

CANCELLED

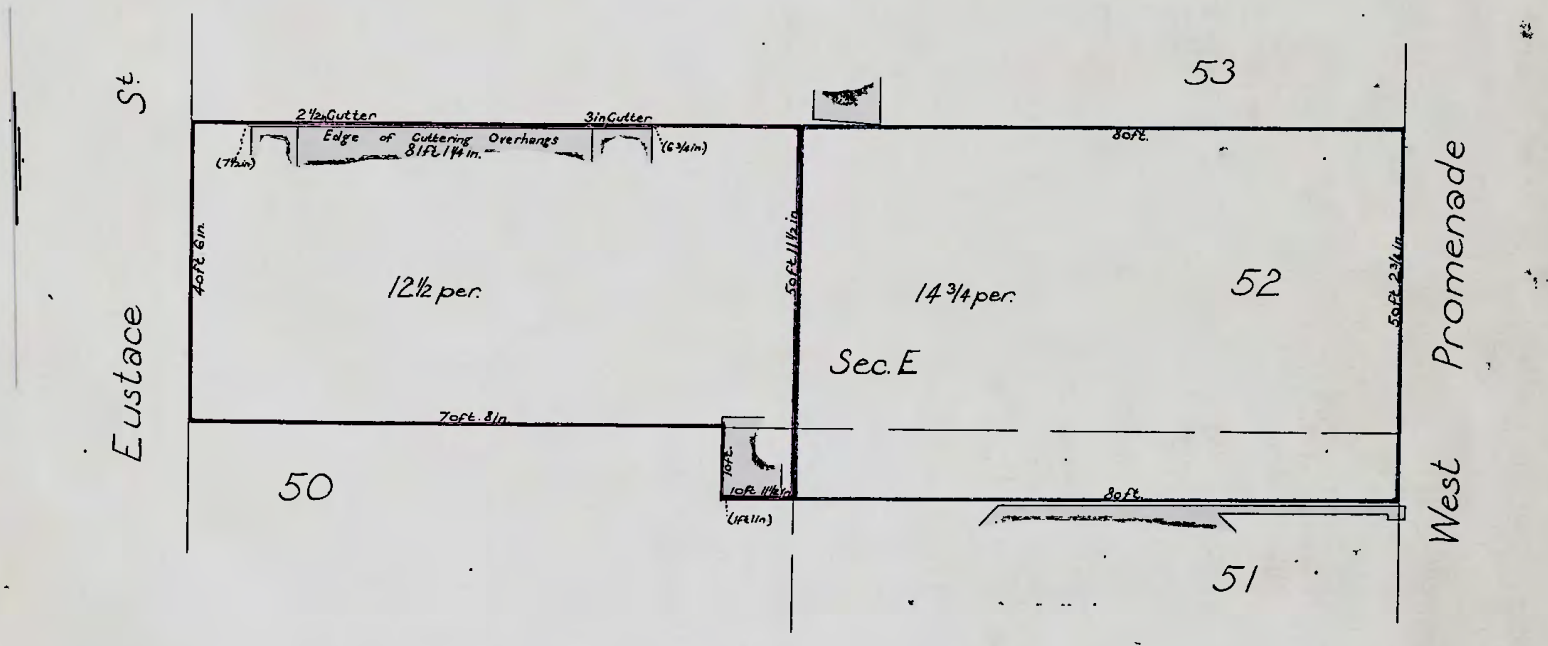
EDGAR CHARLES FRECKLINGTON of Wellington, Grazier, Transferee under Instrument of Transfer No. D691165 is now the proprietor of an Estate in Fee Simple in an undivided one half share,

subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Manly Parish of Manly Cove, and County of Cumberland containing Twelve and one half perches or thereabouts as shown in the plan hereon and therein edged red being part of lots 50 and 52 of Section E Brighton Estate ~~of Section E Brighton Estate~~ and being also part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842 Together with by way of inclusion such mines and deposits under the 14¾ perches edged blue in plan hereon (part of lot 51 and the said lot 52 of Section E) as were comprised in the said Grant and are excepted from Notice of Resumption No. D530752 by the operation of Section 141 of the Public Works Act 1912.

In witness whereof I have hereunto signed my name and affixed my Seal, this Sixteenth day of March, 1948.

Signed in the presence of

J. Wells
Registrar General.



Scale:-20 feet to one inch.

DG911652

NOTIFICATION REFERRED TO.

Amongst the reservations and conditions contained in the Grant above referred to are reservations of all mines of gold and of silver.

J. Wells
Registrar General.

No. F197283 TRANSFER dated 6th March 1950
from the said Edgar Charles Frecklington and Alec Isobel May Murray to Clarence Burt Cowley ~~Executor~~ and Ernest Albert Wall as joint tenants of the land within described
Produced 12th April 1950 and entered 26th April 1950
at 12 o'clock ~~in the~~ noon.
As to land in this transfer this certificate is cancelled and new Certificate issued Vol. 6167 Fol. 226

J. Wells
REGISTRAR GENERAL

Req:R722113 /Doc:CT 05800-151 CT /Rev:08-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:19 /Seq:2 of 2
Ref: /Src:U

Req:R722115 /Doc:CT 05800-150 CT /Rev:08-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:19 /Seq:1 of 2
Ref: /Src:U

201

Appn. No. 33442
Reference to last certificate
Vol. 5003 Fol. 100

New South Wales.

62923 12.47

[CERTIFICATE OF TITLE.]

TENANCY IN COMMON.

REGISTER BOOK.
Vol. 5800 Fol. 150

CANCELLED W

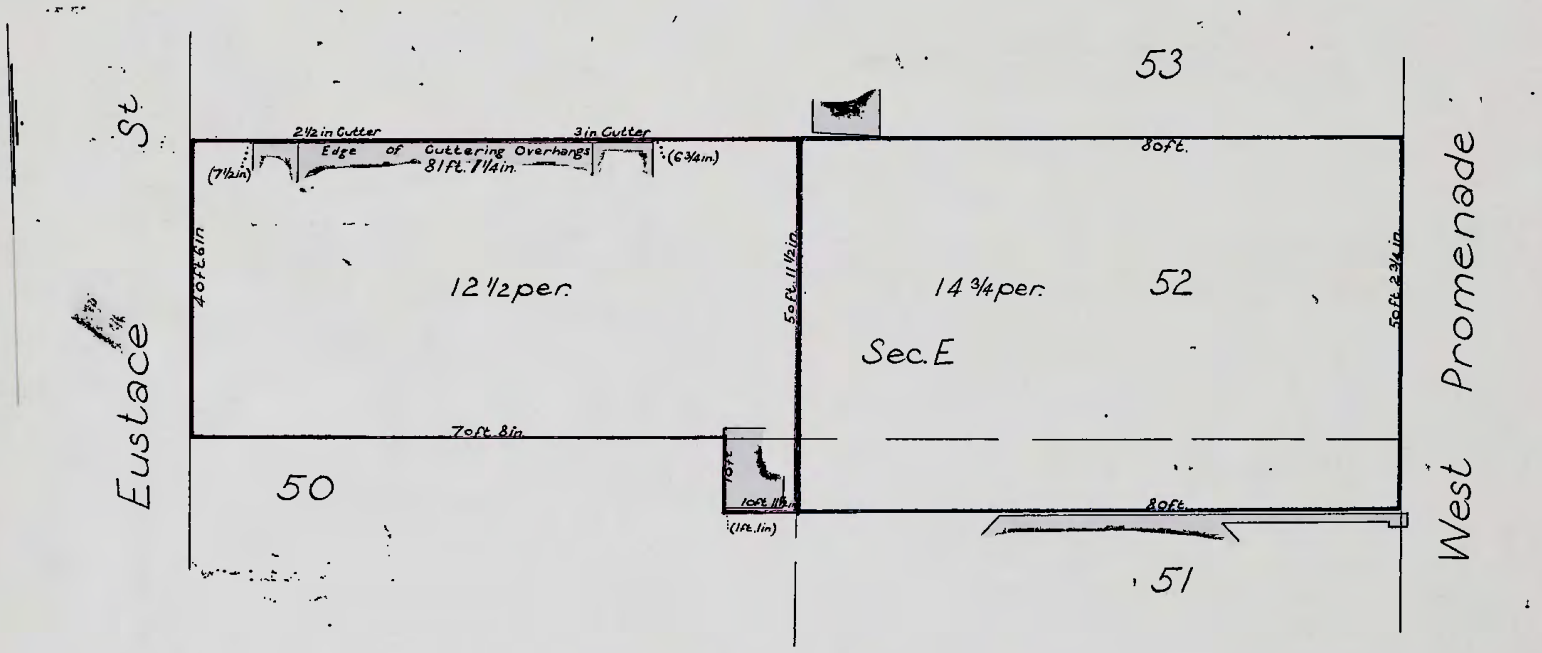
ISOBEL MAY MURRAY of Bathurst, Married Woman, Transferee under Instrument of Transfer No. D691165 is now the proprietor of an Estate in Fee Simple in an undivided one half share, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Manly Parish of Manly Cove, and County of Cumberland containing Twelve and one half perches or thereabouts as shown in the plan hereon and therein edged red being part of lots 50 and 52 of Section E Brighton Estate and being also part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842. Together with by way of inclusion such mines and deposits under the 14¾ perches edged blue in plan hereon (part of lot 51 and the said lot 52 of Section E) as were comprised in the said Grant and are excepted from Notice of Resumption No. D530752 by the operation of Section 141 of the Public Works Act 1912.

In witness whereof I have hereunto signed my name and affixed my Seal, this Sixteenth day of March, 1948.

Signed in the presence of Connelly

J Wells
Registrar General.

REGISTRAR GENERAL * NEW SOUTH WALES *



Scale:-20 feet to one inch.

D691165(1)

NOTIFICATION REFERRED TO.

Amongst the reservations and conditions contained in the Grant above referred to are reservations of all mines of gold and of silver.

J Wells
Registrar General.

No. F197283 TRANSFER dated 6th March 1950 from the said Isobel May Murray and also Edgar Charles Fieldington to Clarence Bert Cowley Grosvenor and Ernest Albert Wallas-joint Grants of the land within described
Produced 12th April 1950 and entered 26th April 1950 at 12 o'clock in the noon.
As to land in this transfer this certificate cancelled and new Certificate issued Vol. 6167 Fol. 226

J. Wells
REGISTRAR GENERAL

Req:R722242 /Doc:CT 05725-184 CT /Rev:08-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:26 /Seq:1 of 2
Ref: /Src:U

183

Appn. No. 33442

Reference to last certificate

Vol. 5003 Fol. 100

New South Wales.

87173—1 5.47

[CERTIFICATE OF TITLE.]

Register Book.

Vol. 5725 Fol. 184

CANCELLED W

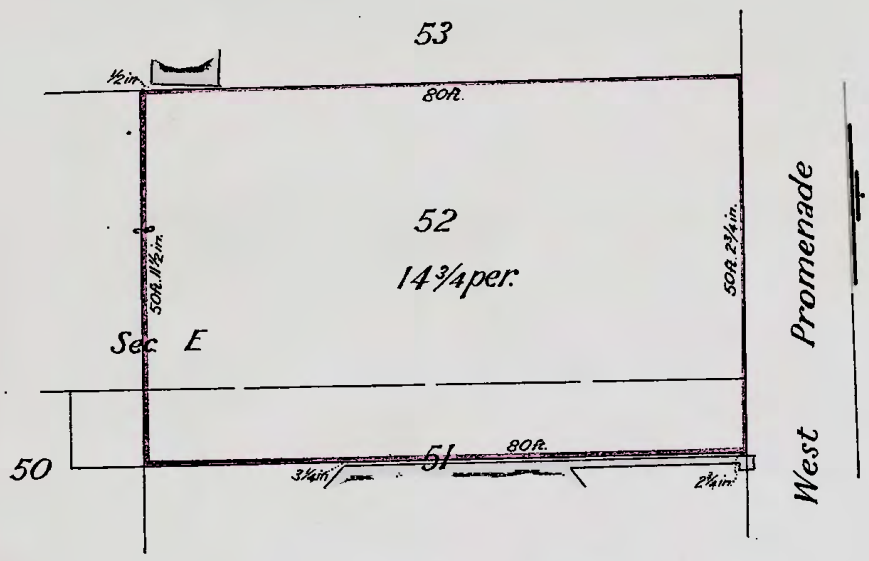
THE COUNCIL OF THE MUNICIPALITY OF MANLY, by virtue of Notice of Resumption No. D530752, is now the proprietor of an Estate in Fee Simple, subject to such encumbrances, liens and interests as are notified hereon in That piece of land situated in the Municipality of Manly Parish of Manly Cove and County of Cumberland containing Fourteen and three quarters perches or thereabouts as shown in the plan hereon and therein edged red and also shown in plan annexed to the said Notice of Resumption No. D530752 being part of Lots 51 and 52 of Section E of the Brighton Estate and being also part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842 Excepting out of the said land all mines of gold and of silver which are excepted from the Crown Grant above referred to and also excepting thereout all such mines and deposits under such land as are excepted by virtue of Section 141 of the Public Works Act 1912.

In witness whereof I have hereunto signed my name and affixed my Seal, this Nineteenth day of September 19 47

Signed in the presence of W.P. Friend

J. Wells

Registrar General.



This Deed is Cancelled and Certificate of Title issued Vol. 6396 Fol. 180 for the residue.
J. Wells
F357715. REGISTRAR GENERAL.

D530752.

Scale: 20 feet to one inch.

DECLARATION REFERRED TO

No. F357714 TRANSFER dated 13th July 1950 from the said The Council of the Municipality of Manly to Ernest Albert Wall of Manly Hardresser Clarence Brust of Manly Milk Bar Proprietor and Phillip Upton Watson of Manly Hardware Merchant as joint tenants of the land within described Produced 6th December 1950 and entered 1st August 1951 at 12 o'clock in the noon.

As to land in this transfer the Certificate is cancelled and new Certificate issued Vol. 6396 Fol. 201

J. Wells
REGISTRAR GENERAL.

The above Transfer No F 357714 contains a covenant by the Transferee
Dated 1st August 1951
Vide Mpo F357714

J. Wells
REGISTRAR-GENERAL

F357714 Lot B 5 DP

Req:R722242 /Doc:CT 05725-184 CT /Rev:08-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:26 /Seq:2 of 2
Ref: /Src:U

Req:R722240 /Doc:CT 05003-100 CT /Rev:07-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:26 /Seq:1 of 2
Ref: /Src:U

Appn. No: 33442

New South Wales.

[CERTIFICATE OF TITLE.]

REGISTER BOOK.
VOL. 5003 FOL. 100

CANCELLED

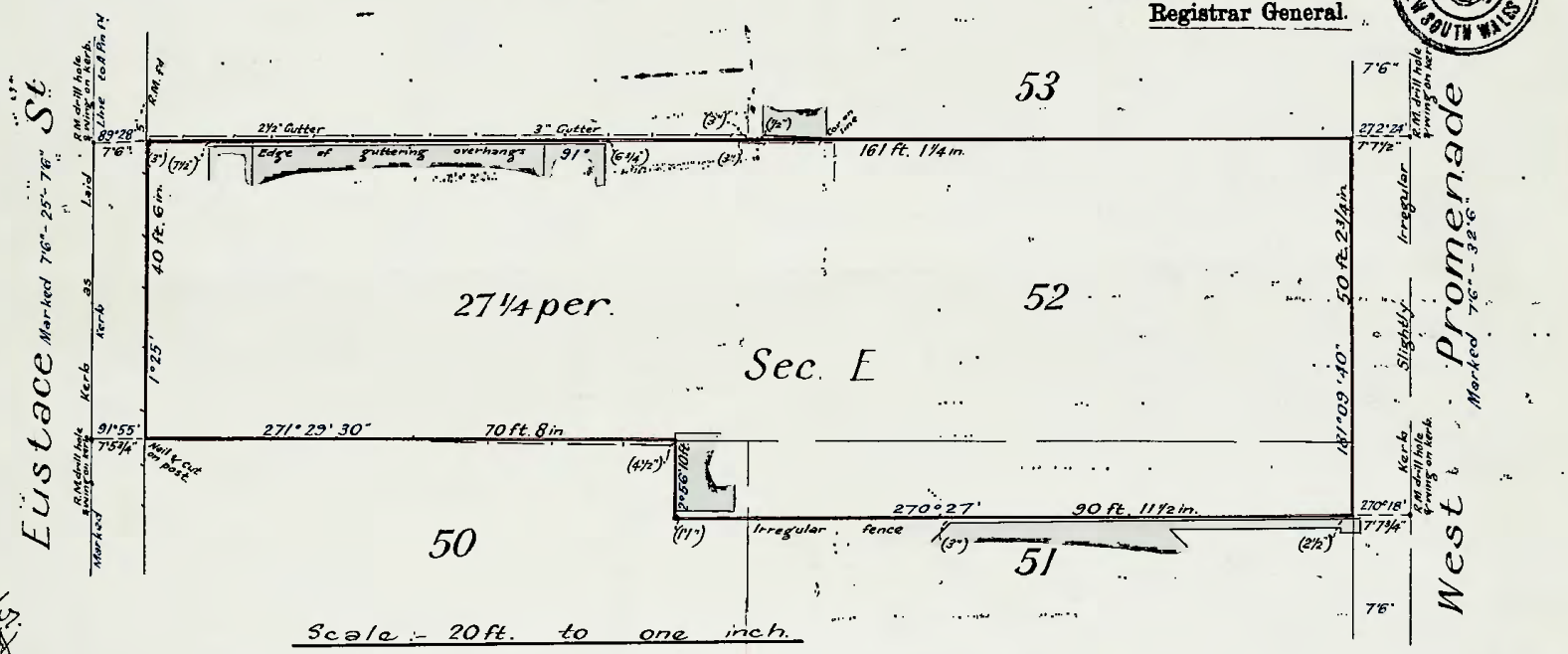
MARY GERTRUDE McEVOY, of Bellevue Hill, Spinster, Applicant in Primary Application No.33442 is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions if any contained in the Grant hereinafter referred to and also subject to such encumbrances liens and interests as are notified hereon in that piece of land situated in the Municipality of Manly Parish of Manly Cove and County of Cumberland containing Twenty seven and one quarter perches or thereabouts as shown in the plan hereon and therein edged red and also shown in the plan lodged with said Application No.33442 being Lot 52 and part of Lots 50 and 51 of Section E Brighton Estate and being also part of 100 acres originally granted to John Thompson by Crown Grant dated the 13th day of April 1842.

In witness whereof I have hereunto signed my name and affixed my Seal, this Twenty-eighth day of December 1938.

Signed in the presence of J.H. Ledgard

Registrar General.

REGISTRAR GENERAL * NEW SOUTH WALES *



P.A.33442.

NOTIFICATION REFERRED TO

Amongst the reservations and conditions contained in the Grant above referred to are reservations of all mines of gold and of silver.

Registrar General.

NOTIFICATION REFERRED TO.

No. D691165 TRANSFER dated 12th June 1947 from the said Mary Gertrude McEvoy to Isobel May Murray and Edgar Charles Frechlington as tenants in common of the residue of the land within described

Produced 8th July 1947 and entered 20th November 1947 at 12 o'clock ~~in the~~ noon.

As to land in this transfer this Certificate cancelled and new Certificate issued Vol. 5800 Fol. 150-151

J. Wells
REGISTRAR GENERAL.

re D530752 NOTICE OF RESUMPTION under the Local Government Act 1919 Part of the land within described (excluding mines and deposits as provided by Section 141 of the Public Works Act 1912) has become vested in the Council of the Municipality of Manly freed and discharged from all trusts obligations estates interests contracts charges rates rights-of-way or other easements whatsoever

Produced 8th August 1946 and entered 19th November 1946 at 12 o'clock ~~in the~~ noon.

As to land in Resumption this Certificate cancelled and new Certificate issued Vol. 5736 Fol. 184

J. Wells
Registrar General.

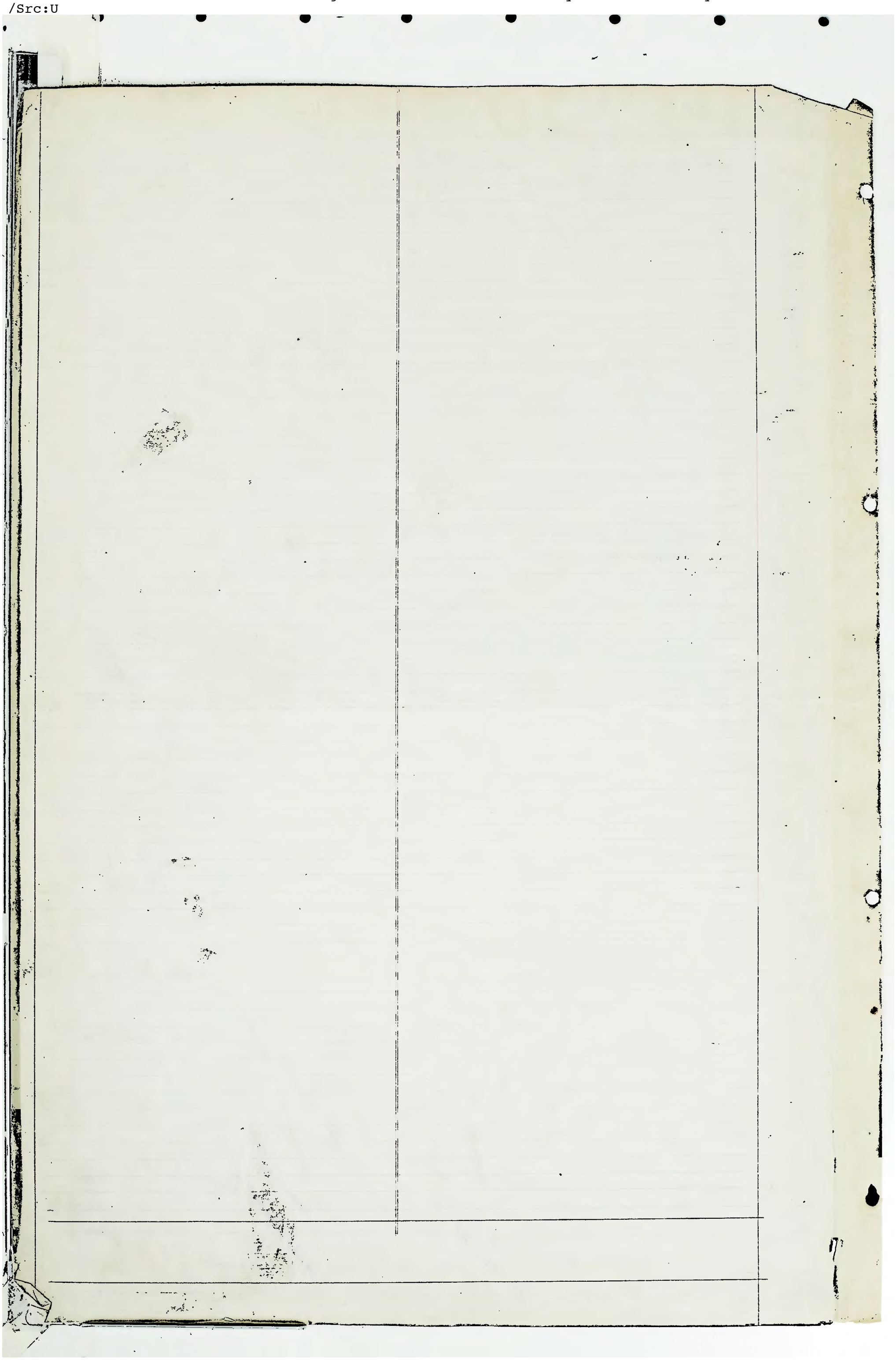
D530752 N.K.

D530752 N.K.

B.O. D691165 W.H. Chambers Commissioner S.T.O. 30/11/47

D691165 received R

Req:R722240 /Doc:CT 05003-100 CT /Rev:07-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:26 /Seq:2 of 2
Ref: /Src:U



Req:R722241 /Doc:CT 03213-061 CT /Rev:03-Aug-2012 /Sts:OK.OK /Prt:18-May-2016 09:26 /Seq:1 of 2
Ref: /Src:U

New South Wales.

Appn. No. 22968

CANCELLED W 22553

[CERTIFICATE OF TITLE.]

Joint Tenancy

REGISTER BOOK,

VOL. 3213 FOL. 61

Robert James Douglas Sellar and Walter Patrick Sellar both of Manly Graziers Applicants in primary application No 22968 are now the proprietors of an estate in fee simple as Joint Tenants subject nevertheless to the reservations and conditions if any contained in the grant hereinafter referred to and also subject to such encumbrances liens and interests as are notified hereon in That piece of land situated in the Municipality of Manly Parish of Manly Cove and County of Cumberland containing Thirty four and one half perches or thereabouts as shown in the plan hereon and therein edged red and also shown in the plan lodged with said application No 22968 being part of Lots 50 and 51 of Section E of Brighton Estate and being also part of One hundred acres delineated in the public map of the said parish in the Department of Lands originally granted to John Thompson by Crown Grant dated the thirteenth day of April one thousand eight hundred and forty two.

In witness whereof, I have hereunto signed my name and affixed my Seal, this 2nd day of August 1921

Signed in the presence of A. Mackay

Registrar General

Notification referred to

Amongst the reservations and conditions contained in the grant above referred to are reservations of all mines of gold and of silver

Registrar General.

No. A. 900,589. NOTICE OF DEATH. Proof having been furnished to me of the death of the said WALTER PATRICK SELLAR, the surviving joint tenant ROBERT JAMES-DOUGLAS SELLAR is now registered sole proprietor of the land within described. Produced and entered 19th. January 1923 at 20 minutes past 3 o'clock in the afternoon.

Registrar General.

No. C 163392 Lease dated 8th February 1933 from the said Robert James Douglas Sellar to Stanley Gillingham of Manly Tasmanian Proprietor

Produced and entered 14th February 1933 at 16 mins past 11 o'clock in the fore noon.

REGISTRAR GENERAL.

A. 900,589

Planning Certificate
Under Section 149

Of the Environmental Planning & Assessment Act 1979

Reference: manly cc review

Date: 18/05/2016

Certificate No: 101286

149(2) & 149(5) Certificate

F Warden SESL Australia

Address: 2 West Prm, Manly NSW

Legal Description: LOT: 1 DP: 859455

The following certificate is issued under the provisions of Section 149(2) of the Environmental Planning and Assessment Act 1979 (as amended). The information applicable to the land is accurate as at the above date.

Note: This Planning Certificate refers to the former Manly Council area that has been incorporated into the Northern Beaches Council area as per the Proclamation dated 12th May 2016.

1. Names of relevant planning instruments and Development Control Plans

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

Manly Local Environmental Plan 2013 (as amended)

State Environmental Planning Policy 19 – Bushland in Urban Areas
State Environmental Planning Policy 21 – Caravan Parks
State Environmental Planning Policy 30 – Intensive Agriculture
State Environmental Planning Policy 32 – Urban Consolidation (Redevelopment of Urban Land)
State Environmental Planning Policy 33 – Hazardous and Offensive Development
State Environmental Planning Policy 50 – Canal Estate Development
State Environmental Planning Policy 55 – Remediation of Land
State Environmental Planning Policy 64 – Advertising and Signage
State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development
State Environmental Planning Policy 70 – Affordable Housing (Revised Schemes)
State Environmental Planning Policy 71 – Coastal Protection
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy (Major Development) 2005
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Deemed State Environmental Planning Policy)

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

NIL

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

Manly Development Control Plan 2013 Amendment 7

2. Zoning and land use under relevant Local Environmental Plans

For each environmental planning instrument or proposed instrument referred to in Clause 1 (other than a SEPP or proposed SEPP) that includes the land in any zone (however described):

(a) According to **Manly Local Environmental Plan 2013**, this property lies within:

ZONE B2 LOCAL CENTRE

and FORESHORE SCENIC PROTECTION AREA

(b) Land uses for land within Zone B2 that may be carried out without development consent:

Home based child care; Home occupations.

(c) Land uses for land within Zone B2 that may be carried out only with development consent:

Amusement centres; Boarding houses; Boat sheds; Car parks; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Environmental protection works; Flood mitigation works; Function centres; Group homes; Health consulting rooms; Home businesses; Home industries; Hostels; Information and education facilities; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Signage; Tourist and visitor accommodation; Veterinary hospitals; Water recycling facilities; Water supply systems.

(d) Land uses for land within Zone B2 that are prohibited:

Water treatment facilities; Any development not specified in items (b) and (c)

(e) Minimum Land Dimensions

Manly Local Environmental Plan 2013 contains no development standard applying to the land which fix minimum land dimensions for the erection of a dwelling house on the land.

(f) Critical Habitat

The land does not include or comprise Critical Habitat.

(g) Conservation Areas

The land is not in a conservation area.

(h) Environmental Heritage Provisions according to Manly Local Environmental Plan 2013

The land contains a Heritage Item as listed in Schedule 5 Part 1 of the Manly Local Environmental Plan 2013

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

The State Environmental Planning Policy (Sydney Region Growth Centres) 2006 does not apply to the land.

3. Complying Development

General Housing Code

Complying Development under the General Housing Code may not be carried out. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

Rural Housing Code

The Rural Housing Code does not apply to the land.

Housing Alterations Code

Complying Development under the Housing Alterations Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

General Development Code

Complying Development under General Development Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

Demolition Code

Complying Development under Demolition Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

Commercial and Industrial Alterations Code

Complying Development under Commercial and Industrial Alterations Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

Commercial and Industrial (New Buildings and Additions) Code

Complying Development under Commercial and Industrial (New Buildings and Additions) Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

The Subdivisions Code

Complying Development under Subdivisions Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

Fire Safety Code

Complying Development under Fire Safety Code may not be carried out on the land. The land is affected by specific land exemptions:

Land comprises, or is on land on which there is, a heritage item.

4. Coastal Protection

The land is not affected by the operation of Section 38 or 39 of the Coastal Protection Act 1979, to the extent that Council has been so notified by the Department of Services, Technology and Administration.

4A

(1) There is no order made under Part 4D of the Coastal Protection Act 1979 in relation to temporary coastal protection works on the land (or on public land adjacent to that land).

(2) The Council has not been notified under Section 55X of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land).

4B

No owner of the land (or any previous owner) has consented in writing to the land being subject to annual charges under Section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of Section 553B of that Act).

5. Mine Subsidence

The land has not been proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act, 1961.

6. Road Widening and Road Realignment

(1) The land is not affected by any corner splay under Division 2 of Part 3 of the Roads Act 1993 or any environmental planning instrument or any resolution of Council.

(2) The land is not affected by any road widening or re-alignment proposal under Division 2 of Part 3 of the Roads Act 1993 or any environmental planning instrument or any resolution of Council.

7. Council and other Public Authority Policies on Hazard Risk Restrictions

(1) All of the land is affected by a policy regarding landslip. (See Manly Development Control Plan 2013 and Clause 6.8 – Manly Local Environmental Plan 2013)

(2) All of the Land is affected by a policy regarding Acid Sulfate Soils. (See Clause 6.1 - Manly Local Environmental Plan 2013).

(3) Council has adopted a contaminated land policy which may restrict the development of land.
This policy is expressed to apply when zoning or land use changes are proposed on lands which are considered to be contaminated, or on lands which have been remediated for a specific use.
However, from an administrative point of view the policy is currently no longer applied or implemented (and is treated by Council staff as being redundant).
A new draft policy with respect to the same subject-matter is currently being prepared by Council staff but is yet to be presented to or adopted by Council.

7A. Flood Related Development Control Information

(1) No development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

(2) No development on the land or part of the land for any other purpose is subject to flood related development controls.

8. Land Reserved for Acquisition

No environmental planning instrument referred to in Clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

9. Contribution Plans

Manly Section 94 Contributions Plan 2004 applies to the land.

10. Biobanking Agreements

The Council has not been notified if the land is land to which a biobanking agreement relates under Part 7A of the Threatened Species Conservation Act 1995.

11. Bush Fire Prone Land

None of the land is bush fire prone land.

12. Property Vegetation Plans

Not Applicable

13. Orders under Trees (Disputes Between Neighbours) Act 2006

The Council has not been notified of the existence of an order made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

14. Directions under Part 3A

There is no direction by the Minister in force under section 75P(2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.

15. Site compatibility certificates and conditions for seniors housing

There is no valid site compatibility certificate (senior housing), of which the Council is aware, in respect of proposed development on the land.

16. Site compatibility certificates for infrastructure

There is no valid site compatibility certificate (infrastructure), of which the Council is aware, in respect of proposed development on the land.

17. Site compatibility certificate and conditions for affordable rental housing

There is no valid site compatibility certificate (affordable rental housing), of which the Council is aware, in respect of proposed development on the land.

18. Paper subdivision information

There is no current paper subdivision, of which council is aware of, in respect of this land according to Part 16C of the Environmental Planning and Assessment Regulation 2000.

19. Site verification certificates

There is no current site verification certificate, of which council is aware, in respect of the land according to Part 4AA of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

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

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

No part of the land is declared to be significantly contaminated land as at the date of issue of this certificate.

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

The land to which this certificate relates is not subject to a management order as at the date of issue of this certificate.

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

The land to which this certificate relates is not the subject of an approved voluntary management proposal as at the date of issue of this certificate.

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

The land to which this certificate relates is not subject to an ongoing maintenance order as at the date of issue of this certificate.

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

A copy of a site audit statement for the land to which the certificate relates has been provided to Manly Council.

SECTION 149(5) INFORMATION

The following is information provided under the provisions of Section 149 (5) of the Environmental Planning and Assessment Act 1979 (as amended) and lists relevant matters affecting the land of which Council is aware. You should note that Section 149 (6) of the Act provides that Council shall not incur any liability in respect of any advice provided in good faith pursuant to Section 149 (5) of the Act.

According to the Manly Local Environmental Plan 2013 the Foreshore Building Line is not applicable to the subject site. Refer to Foreshore Building Line Map

You are advised that Australian Standard 3660.1 – Protection of Buildings Against Subterranean Termites, recommends that buildings are inspected and maintained in order to achieve total termite control. In the regard, you should contact a licensed pest control contractor to ensure all necessary termite controls are achieved.

NSW Fisheries has adopted Fisheries NSW (1988) Policy and Guidelines Aquatic Habitat Management and Fish Conservation. Any development within or adjacent to coastal or river waters will be assessed by Council against these guidelines. Refer to Council for details.

As part of ongoing NSW Planning Reforms, the Greater Sydney Commission is preparing six District plans for Sydney in consultation with local Councils. Northern Beaches LGA is part of the North District Plan. More information about the NSW Planning Reforms is available at the NSW Department of Planning (website: www.planning.nsw.gov.au) and the Greater Sydney Commission (website www.gsc.nsw.gov.au).

Recent evidence indicates that climate change as a result of global warming is occurring much more rapidly than previously expected. Climate change will vary in its effects across Australia. As well as affecting homes, climate change may affect infrastructure, commercial and industrial buildings and other physical assets. Climate change may affect coastal areas, in particular, through sea-level rise, increased temperatures, and changed storm events. The effects of climate change may impact on the future use and development potential of the land that is the subject of this certificate.

Henry T Wong
DEPUTY GENERAL MANAGER

18/05/2016

SESL AUSTRALIA
Environment & Soil Sciences

Appendix C

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

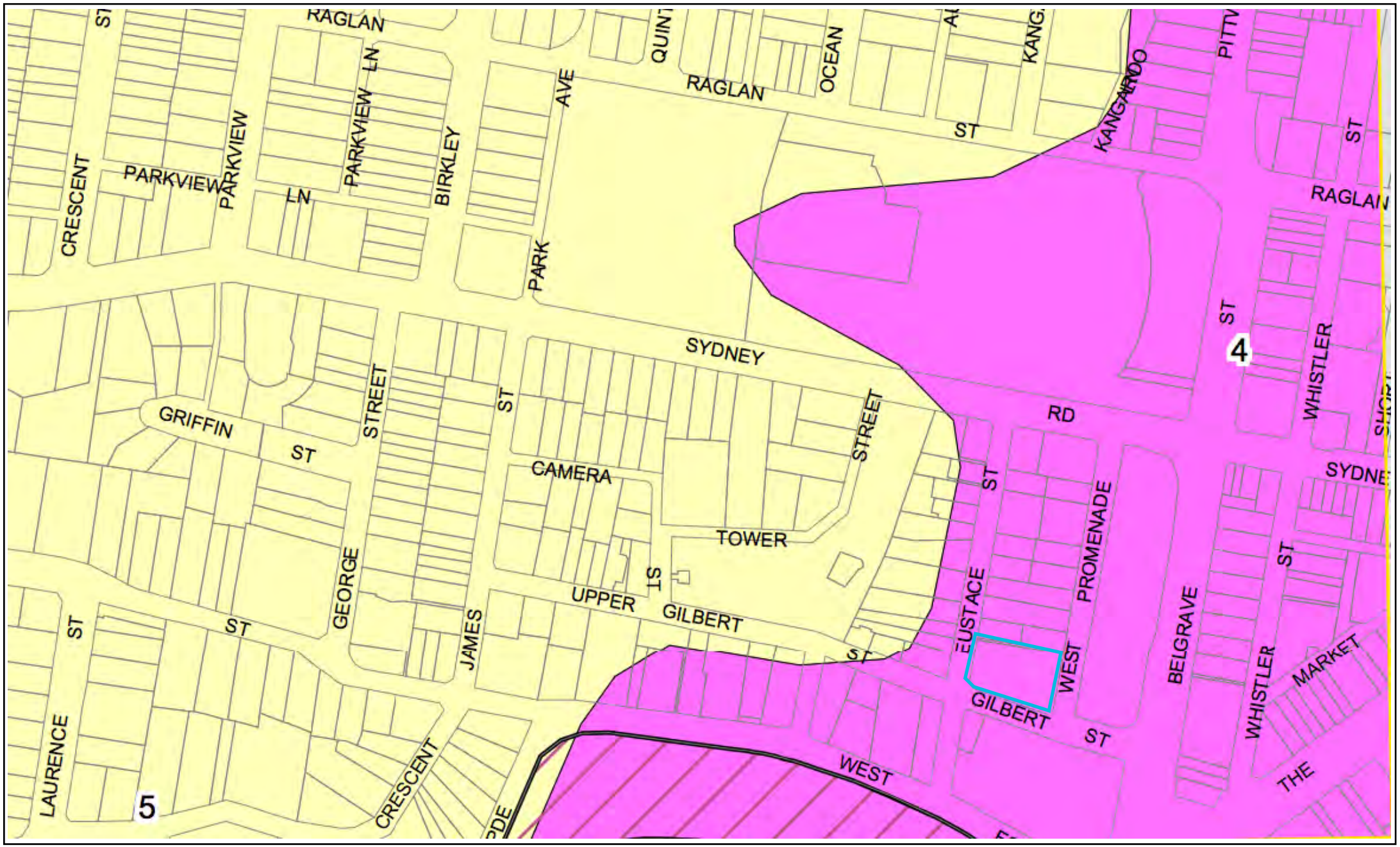
LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System
Quality
ISO 9001
NATA
ASPAC
A member of the Australasian Soil and Plant Analysis Council



Title: Acid Sulfate Risk Map

Location: 2 West Promenade Road, Manly NSW 2095

Project: C8823 Q5710 B39331

Date: 14/06/2016

Courtesy of Northern Beaches Council Local Environment Plan

Legend

Site Location

Class 4

Class 5

N

SESL AUSTRALIA
Environment & Soil Sciences


GW106341
Satellite
Terrain
Map
Hybrid
Groundwater Works
Monitoring Bores
Telemetered Bores
Coal Basin Bores
Discontinued Bores
GW110294
GW109304
GW109245
GW102856

NSW Office of Water
Work Summary

GW102856

Licence: 10BL156555 **Licence Status:** LAPSED

Authorised Purpose(s): INDUSTRIAL
Intended Purpose(s): INDUSTRIAL

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

Commenced Date: **Final Depth:** 28.70 m
Completion Date: 01/01/1994 **Drilled Depth:** 28.70 m

Contractor Name:
Driller:
Assistant Driller:

Property: N/A **Standing Water Level:** 4.300
GWMA: - **Salinity:**
GW Zone: - **Yield:** 0.180

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.29	8//77172
Licensed:	CUMBERLAND	MANLY COVE	Whole Lot 8//77172

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

Elevation: 0.00 m (A.H.D.) **Northing:** 6258798.0 **Latitude:** 33°47'56.9"S
Elevation Source: Unknown **Easting:** 341557.0 **Longitude:** 151°17'18.2"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	28.70	0			Unknown
1	1	Casing		0.00	27.00	100			
1	1	Opening	Screen	8.50	25.00			1	

Water Bearing Zones

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

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	4.20	4.20	SAND	Sand	
4.20	4.30	0.10	ROCK COFFEE	Rock	
4.30	8.40	4.10	SAND	Sand	
8.40	8.60	0.20	ROCK	Rock	
8.60	12.80	4.20	SAND	Sand	
12.80	12.90	0.10	SILT	Silt	
12.90	13.90	1.00	ROCK	Rock	
13.90	28.60	14.70	SAND	Sand	
28.60	28.70	0.10	ROCK	Rock	

Remarks

30/05/2000: PREVIOUS LIC No: 10BL154772

***** End of GW102856 *****

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

NSW Office of Water
Work Summary

GW106341

Licence: 10BL162907 **Licence Status:** CONVERTED

Authorised Purpose(s): RECREATION (GROUNDWATER)
Intended Purpose(s): RECREATION (GROUNDWATER)

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

Commenced Date: **Final Depth:** 42.50 m
Completion Date: 14/04/2004 **Drilled Depth:** 42.50 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: William Crump
Assistant Driller:

Property: IVANHOE PARK CNR SYDNEY RD& BELGRAVE ST MANLY 2095 NSW **Standing Water Level:** 18.300
GWMA: - **Salinity:**
GW Zone: - **Yield:** 3.100

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.29	2502 752038
Licensed:	CUMBERLAND	MANLY COVE	Whole Lot 2502//752038

Region: 10 - Sydney South Coast **CMA Map:** 9130-2N
River Basin: 213 - SYDNEY COAST - GEORGES RIVER **Grid Zone:** **Scale:**
Area/District:

Elevation: 0.00 m (A.H.D.) **Northing:** 6259217.0 **Latitude:** 33°47'43.0"S
Elevation Source: (Unknown) **Easting:** 340934.0 **Longitude:** 151°16'54.3"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	5.50	208			Down Hole Hammer
1		Hole	Hole	5.50	42.50	158			Down Hole Hammer
1	1	Casing	Pvc Class 9	-0.50	35.50	140			Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.50	5.50	168	158		Driven into Hole

Water Bearing Zones

From	To	Thickness	WBZ Type	S.W.L.	D.D.L.	Yield	Hole	Duration	Salinity

(m)	(m)	(m)		(m)	(m)	(L/s)	Depth (m)	(hr)	(mg/L)
25.00	28.50	3.50	Unknown			0.50	30.50		355.00
36.60	36.70	0.10	Unknown	18.30		3.10	42.50		374.00

Geologists Log

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	2.50	2.50	FILL AND ROCKS	Fill	
2.50	25.00	22.50	SANDSTONE L/BROWN,SOFT BANDS	Sandstone	
25.00	26.50	1.50	SANDSTONE FINE QUARTZ	Sandstone	
26.50	28.50	2.00	SANDSTONE QUARTZ	Sandstone	
28.50	29.00	0.50	SANDSTONE GREY	Sandstone	
29.00	29.50	0.50	QUARTZ	Invalid Code	
29.50	36.00	6.50	SANDSTONE GREY	Sandstone	
36.00	36.20	0.20	SANDSTONE QUARTZ	Sandstone	
36.20	36.60	0.40	SANDSTONE GREY	Sandstone	
36.60	36.70	0.10	SANDSTONE FRACTURED	Sandstone	
36.70	40.00	3.30	SANDSTONE GREY	Sandstone	
40.00	42.50	2.50	SANDSTONE DARK GREY	Sandstone	

Remarks

***** End of GW106341 *****

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

NSW Office of Water
Work Summary

GW109245

Licence: 10BL602449 **Licence Status:** CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Bore
Work Status: Test Hole
Construct.Method: Auger
Owner Type: Other Govt

Commenced Date:
Completion Date: 20/08/2008
Final Depth: 11.00 m
Drilled Depth: 11.00 m

Contractor Name:
Driller: Michael Peter Sprouster
Assistant Driller:

Property: MANLY COUNCIL TOWN HALL BELGRAVE ST MANLY 2095 NSW
GWMA:
GW Zone:
Standing Water Level: 4.800
Salinity:
Yield: 1.000

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.29	2317 1121139
Licensed:			

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

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6258847.0
Easting: 341223.0
Latitude: 33°47'55.1"S
Longitude: 151°17'05.3"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	11.00	110			Auger
1	1	Casing	Pvc Class 9	0.00	9.00	110			Driven into Hole, Glued
1	1	Casing	Pvc Class 9	0.00	10.00	110			Driven into small hole, Glued
1	1	Opening	Screen	8.10	9.00	50		1	Stainless Steel, Screwed, SL: 60.0mm
1	1	Opening	Screen	10.00	11.00	50		1	Screwed, SL: 60.0mm

Water Bearing Zones

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

4.80	9.00	4.20	Unknown	4.80		1.00		02:00:00	140.00
5.00	11.00	6.00	Unknown	5.00		1.00		01:00:00	300.00

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.20	0.20	TOPSOIL	Unknown	
0.20	1.50	1.30	SANDSTONE,RUBBLE	Unknown	
1.50	3.00	1.50	SAND GREY	Unknown	
3.00	9.00	6.00	SAND YELLOW	Unknown	
9.00	11.00	2.00	SAND GREY	Unknown	

Remarks

10/03/2009: Previous Lic No:10BL602449
21/09/2009: Previous Lic No:10BL602761
23/09/2011: Slot Length and Width adjusted due to data entry errors with advice from Madhwan Keshwan. GDS Data Cleanup project 2011.Slot Length and Width adjusted due to data entry errors with advice from Madhwan Keshwan. GDS Data Cleanup project 2011.

***** End of GW109245 *****

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

NSW Office of Water
Work Summary

GW109304

Licence: 10BL602565 **Licence Status:** CONVERTED

Authorised Purpose(s): RECREATION (GROUNDWATER)
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Spear
Work Status:
Construct.Method: Jetted - Water
Owner Type: Other Govt

Commenced Date: **Final Depth:** 8.54 m
Completion Date: 08/09/2008 **Drilled Depth:** 8.54 m

Contractor Name:
Driller: Arthur Korkidas
Assistant Driller:

Property: CORSO GARDENS THE CORSO - WEST END MANLY 2095 NSW **Standing Water Level:** 4.830
GWMA: **Salinity:** Good
GW Zone: **Yield:** 1.000

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.29	//1//91759
Licensed:			

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

Elevation: 0.00 m (A.H.D.) **Northing:** 6258857.0 **Latitude:** 33°47'54.8"S
Elevation Source: Unknown **Easting:** 341291.0 **Longitude:** 151°17'07.9"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.54	100			Jetted - Water
1	1	Opening	Screen	0.00	0.00	50		1	Stainless Steel 304, Screwed
1	1	Casing	Pvc Class 9	0.00	7.63	100			Glued

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
4.88	8.54	3.66	Unknown	4.83		1.00			

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	8.54	8.54	UNCONSOLIDATED ALL SANDS	Ultramafic Rock	

Remarks

***** End of GW109304 *****

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

NSW Office of Water
Work Summary

GW110294

Licence: 10BL603048 **Licence Status:** CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Spear
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date: **Final Depth:** 8.00 m
Completion Date: 22/05/2009 **Drilled Depth:** 8.00 m

Contractor Name:
Driller: Michael Peter Sprouster
Assistant Driller:

Property: GILBERT PARK 1 BELGRAVE STREET MANLY 2095 NSW **Standing Water Level:** 4.000
GWMA: **Salinity:**
GW Zone: **Yield:** 1.000

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBE	CUMBE.29	7143 1023242
Licensed:			

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

Elevation: 0.00 m (A.H.D.) **Northing:** 6258919.0 **Latitude:** 33°47'52.8"S
Elevation Source: Unknown **Easting:** 341175.0 **Longitude:** 151°17'03.5"E

GS Map: - **MGA Zone:** 0 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	110			Auger
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded
1	1	Casing	Pvc Class 9	0.00	6.88	110			Driven into Hole, Glued
1	1	Opening	Screen - Gauze/Mesh	7.00	8.00	50		1	Stainless Steel, Screwed, SL: 60.0mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
4.00	8.00	4.00	Unknown	4.00		1.00		01:00:00	

Geologists Log
Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.30	0.30	TOPSOIL	Topsoil	
0.30	0.60	0.30	RUBBLE	Regolith	
0.60	0.70	0.10	DARK SOIL	Soil	
0.70	0.80	0.10	SANDSTONE/RUBBLE	Sandstone	
0.80	1.80	1.00	SAND GREY	Sand Grains (Lithic)	
1.80	2.90	1.10	SAND WHITE	Sand Grains (Lithic)	
2.90	3.60	0.70	SOIL DARK	Soil	
3.60	3.80	0.20	SAND BROWN	Sand Grains (Lithic)	
3.80	4.00	0.20	SAND YELLOW	Sand Grains (Lithic)	
4.00	8.00	4.00	SAND WHITE	Sand Grains (Lithic)	

Remarks

21/09/2009: Previous Lic No:10BL603048
23/09/2011: Slot Length and Width adjusted due to data entry errors with advice from Madhwan Keshwan. GDS Data Cleanup project 2011.

***** End of GW110294 *****

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

Contaminated land

+ Management of contaminated land
+ Consultants and site auditor scheme
+ Underground petroleum storage systems

Guidelines under the CLM Act

NEPM amendment

+ Further guidance
– Record of notices

About the record

Home Contaminated land Record of notices

Search results

Your search for: Suburb: MANLY

Matched 8 notices relating to 1 site.

Search Again Refine Search

Suburb	Address	Site Name	Notices related to this site
MANLY	Stuart STREET	Little Manly Point	1 current and 7 former

Page 1 of 1

14 June 2016

SafeWork NSW
92-100 Donnison Street, Gosford, NSW, 2250
Locked Bag 2906, Lisarow, NSW, 2252 |
Customer Service Centre **13 10 50**
licensing@safework.nsw.gov.au | www.safework.nsw.gov.au

Our Ref: D16/587492
Your ref: Ryan Jacka

20 May 2016

Attention: Ryan Jacka
SESL Australia
16 Chilvers Rd
Thornleigh NSW 2120

Dear Mr Jacka,

RE SITE: 2 West Promenade Manly NSW

I refer to your site search request received by SafeWork NSW on 16 May 2016 requesting information on Storage of Hazardous Chemicals for the above site.

A search of the records held by SafeWork NSW has not located any records pertaining to the above mentioned premises.

For further information or if you have any questions, please call our Customer Service Centre on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely,

Brent Jones
Customer Service Officer
Customer Service Centre - Operations
SafeWork NSW

BOREHOLE LEGEND

ODOUR DESCRIPTION

Key	Odour description	Contaminant indicated
N	Nil	Not detected
C	Characteristic sharp, pungent	Ammonia
P	Petroleum products	Petrol, diesel, oil
Co	Compost	Decayed organic matter
P	Putrefied	Putrescible waste
R	Rotten egg smell (sulfurous)	Anaerobic or acid sulfate soil
A	Acidic	Respective mineral or organic acid
Ca	Caustic	Caustic material
S	Septic	Decaying organic matter
Sw	Sweet, solvent type	Ketones
Ar	Aromatic	Benzene

AS 4482.1 - 1997

ODOUR STRENGTH

Key	Strength	Description
N	Nil	Nothing detected at or around source
W	Weak	Just detectible at source; location difficult to determine
D	Distinct	Detectable immediately adjacent to source; bearable at source
S	Strong	Detectable 20m from source; bearable at source
VS	Very strong	Detectable >20m from source; pungent at source

AS 4482.1 - 1997

COLOUR KEY

G	Grey
D	Dark
Bl	Black
B	Brown
P	Pink
O	Orange
R	Red
L	Light
Y	Yellow
W	White

MOISTURE CONTENT

VD	Very Dry
D	Dry
MM	Medium Moist
M	Moist
VM	Very Moist
W	Wet

LITHOLOGY

Ba	Basaltic
Qz	Quartz
An	Anthropic
Ss	Sandstone

GRAPHIC LOG

	A horizon
	Interface layer
	B horizon
	Fill

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH1	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	3.3m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
	Dark brown sand	1.4				DB					x							N		0
		1.5									x									
		1.6									x									
	Gradually lighter	1.7				LB					x									0
		1.8									x									
		1.9									x									
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
	Gradually darker	2.7				DB					x									0
		2.8									x									
		2.9									x									
	Gradually lighter	3				LB					x									0
	Dark brown sand with gravel	3.1				DB					x							N		0
		3.2									x									
	Light brown sand, moist	3.3				LB					x							N		0
		3.4									x									
		3.5									x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									
	Gradually darker	4				B					x									0
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH2	Job No.		Client	Manly Civic Club JV
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16		Logged by: FW
Slope Position		Slope %		Project	
Groundwater depth	3.5m			AHD (m)	
Land Surface Observation / Surface Hydrology					

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
		1.4		x							x									
	Brown and orange sand	1.5				B/0					x							N		0
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
	Light grey sand	2				LG					x							N		0
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
	Gradually lighter	2.6				LG/W					x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
	Dark brown sand with gravel	3.2				DB					x							N		0
	Light grey sand, moist	3.3				LG					x							N		0
		3.4									x									
	Graually darker	3.5				B					x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									
		4									x									
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH3	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	3.2m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
	Grey sand with gravel	1.4				G					x							N		0
		1.5									x									
		1.6									x									
		1.7									x									
	Grey sand	1.8				G					x							N		0
		1.9									x									
	Gradually lighter	2				LG					x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
	Black, organic sand	3.2				B					x							N		0
		3.3									x									
	Light grey sand, moist	3.4				LG					x							N		0
		3.5									x									
		3.6									x									
	Graually darker	3.7				B					x									
		3.8									x									
		3.9									x									
		4									x									
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH4	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	3.7m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown,	0.2		x							x							N		0
	grey and orange sad, ash, gravel	0.3		x							x									
	and sandstone inclusions.	0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
	Grey sand	1.2				G					x							N		0
		1.3									x									
		1.4									x									
		1.5									x									
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
		3.2									x									
		3.3									x									
		3.4									x									
	Gradually darker, moist	3.5				DB					x							N		0
		3.6									x									
	Very dark brown sand, wet	3.7				VDB					x							N		0
		3.8									x									
		3.9									x									
		4									x									
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH5	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	3.2m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
		1.4		x							x									
	Grey sand	1.5				G					x							N		0
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
	Gradually darker, moist	3.2				DB					x									
		3.3									x							N		0
		3.4									x									
		3.5									x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									0
	Very dark brown sand, wet	4				VDB					x							N		0
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH6	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth				AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
	Grey sand	1.2				G					x							N		0
		1.3									x									
		1.4									x									
		1.5									x									
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
	Gradually lighter	2.8				LG					x							N		0
		2.9									x									
		3									x									
		3.1									x									
		3.2									x									
		3.3									x									
		3.4									x									
		3.5									x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									0
	Very dark brown sand, wet	4				VDB					x							N		0
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH7	Job No.		Client	Manly Civic Club JV
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16		Logged by FW
Slope Position		Slope %		Project	
Groundwater depth	3.4m			AHD (m)	
Land Surface Observation / Surface Hydrology					

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
	Mixed Fill with light and dark brown, grey and orange sad, ash, gravel and sandstone inclusions.	0.2		x							x							N		0
		0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
	Grey sand	1.2				G					x							N		0
		1.3									x									
		1.4									x									
		1.5									x									
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
	Gradually lighter	2				LG					x							N		0
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
	Dark brown, organic, gravelly sand	3.2				DB					x							N		0
		3.3									x									
	Light grey sand, moist	3.4									x							N		0
		3.5									x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									
	Dark brown sand, wet	4				VDB					x							N		0
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

Location	BH8/MW1	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth				AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile				Mottle		Field Texture		Coarse Fragments			Unfilled soil classification	Hydrology		Odour		Field Monitoring PID (ppm)
				Fill	Natural horizons	Colour(s)	Field pH	Abundance	Colour(s)	Fine grain	Coarse grain	Abundance	Size	Lithology		Moisture content %	Interface drainage	Type	Strength	
	Asphalt	<0.1		X														N		0
	Void under slab.	0.2																N		0
		0.3																		
		0.4																		
		0.5																		
	Mixed Fill with light and dark brown grey and orange sand, gravel and sandstone inclusions.	0.6		X							X									
		0.7		X							X									
		0.8		X							X									
		0.9		X							X									
		1		X							X									
		1.1		X							X									
		1.2		X							X									
		1.3		X							X									
		1.4		X							X									
		1.5		X							X									
		1.6		X							X									
		1.7		X							X									
		1.8		X							X									
		1.9		X							X									
		2		X							X									
		2.1		X							X									
		2.2		X							X									
		2.3		X							X									
		2.4		X							X							N		0
	Grey sand, moist	2.5				G					X									
		2.6									X									
		2.7									X									
		2.8									X									
	Limit of Assessment	2.9									X									

BOREHOLE LOG

SESL AUSTRALIA
Environment & Soil Sciences

Location	BH9	Job No.		Client	Manly Civic Club JV
Drill Type / Method	Drill Rig with Pushtube	Date	31/05/16		Logged by: FW
Slope Position		Slope %		Project	
Groundwater depth	3.2m			AHD (m)	
Land Surface Observation / Surface Hydrology					

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt (2 slabs)	<0.1		x														N		0
		0.2		x																
	Mixed Fill with light and dark brown, sand, gravel and sandstone inclusions.	0.3		x							x							N		0
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
		1		x							x									
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
		1.4		x							x									
		1.5		x							x									
		1.6		x							x									
		1.7		x							x									
		1.8		x							x									
		1.9		x							x									
	Grey sand	2				G					x							N		0
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
		3.1									x									
		3.2									x									
		3.3									x									
		3.4									x									
		3.5									x									
		3.6									x									
		3.7									x									
		3.8									x									
		3.9									x									
	Gradually darker, wet	4			DB						x							N		0
		4.1									x									
		4.2									x									
		4.3									x									
		4.4									x									
	Limit of Assessment	4.5									x									0

BOREHOLE LOG

Location: BH10/MW2	Job No.	Client: Manly Civic Club JV	Logged by: FW
Drill Type / Method: Drill Rig with Pushtube	Date: 31/05/16		
Slope Position	Slope %	Project	
Groundwater depth		AHD (m)	
Land Surface Observation / Surface Hydrology			

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
		0.2		x																
	Mixed Fill with light and dark brown, grey and orange sand, gravel and sandstone inclusions.	0.3		x							x							N		0
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
	Dark grey sand	1			DG						x									
		1.1									x									
		1.2									x									
		1.3									x									
		1.4									x									
	Gradually lighter	1.5			LG						x									
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
		2									x							N		0
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
	Limit of Assessment	2.9									x									

BOREHOLE LOG

Location	HA1	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Hand Auger	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	3.5m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile				Mottle		Field Texture		Coarse Fragments			Unfilled soil classification	Hydrology		Odour		Field Monitoring PID (ppm)
				Fill	Natural horizons	Colour(s)	Field pH	Abundance	Colour(s)	Fine grain	Coarse grain	Abundance	Size	Lithology		Moisture content %	Interface drainage	Type	Strength	
	Asphalt	<0.1		X														N		0
	Mixed sandy fill with brown sand gravel, sandstone inclusions, road base and tree roots	0.2		X														N		0
		0.3		X							X									
		0.4		X							X									
		0.5		X							X									
		0.6		X							X									
		0.7		X							X									
		0.8		X							X									
		0.9		X							X									
		1		X							X									
		1.1		X							X									
		1.2		X							X									
		1.3		X							X									
		1.4		X							X									
		1.5		X							X									
		1.6		X							X									
		1.7		X							X									
		1.8		X							X									
		1.9		X							X									
	Light grey sand, black organic inclusions	2				LG				X								N		0
		2.1								X										
		2.2								X										
		2.3								X										
		2.4								X										
		2.5								X										
		2.6								X										
		2.7								X										
		2.8								X										
		2.9								X										
	Gradually lighter	3								X										
		3.1								X										
		3.2								X										
		3.3								X										
		3.4								X										
		3.5								X										
	Limit of Assessment	3.6								X										

BOREHOLE LOG

Location	HA2	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Hand Auger	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	1.7m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile				Mottle		Field Texture		Coarse Fragments			Unfilled soil classification	Hydrology		Odour		Field Monitoring PID (ppm)
				Fill	Natural horizons	Colour(s)	Field pH	Abundance	Colour(s)	Fine grain	Coarse grain	Abundance	Size	Lithology		Moisture content %	Interface drainage	Type	Strength	
	Asphalt	<0.1		x														N		0
	Brick	0.2		x														N		0
	Mixed Fill with brown sand and sandstone inclusions	0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
	Mixed Fill with brown clay and orange sand	1		x							x							N		0
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
	Dark grey sand with gravel	1.4				DG					x							N		0
		1.5									x									
		1.6									x									
	Gradually lighter, moist	1.7									x							N		0
		1.8									x									
	Limit of Assessment	1.9									x									

BOREHOLE LOG

Location	HA2	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Hand Auger	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth	1.7m			AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile				Mottle		Field Texture		Coarse Fragments			Unfilled soil classification	Hydrology		Odour		Field Monitoring PID (ppm)
				Fill	Natural horizons	Colour(s)	Field pH	Abundance	Colour(s)	Fine grain	Coarse grain	Abundance	Size	Lithology		Moisture content %	Interface drainage	Type	Strength	
	Asphalt	<0.1		x														N		0
	Brick	0.2		x														N		0
	Mixed Fill with brown sand and sandstone inclusions	0.3		x							x									
		0.4		x							x									
		0.5		x							x									
		0.6		x							x									
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
	Mixed Fill with brown clay and orange sand	1		x							x							N		0
		1.1		x							x									
		1.2		x							x									
		1.3		x							x									
	Dark grey sand with gravel	1.4				DG					x							N		0
		1.5									x									
		1.6									x									
	Gradually lighter, moist	1.7									x							N		0
		1.8									x									
	Limit of Assessment	1.9									x									

BOREHOLE LOG

Location	HA3	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Hand Auger	Date	31/05/16				
Slope Position		Slope %		Project			
Groundwater depth				AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
		0.2		x																
	Mixed Fill with light brown sand	0.3		x		LB					x							N		0
		0.4		x		DB					x									
		0.5		x							x									
	Orange sand with dark orange mottles and red sandstone inclusions	0.6		x		O			DO		x							N		0
		0.7		x							x									
		0.8		x							x									
		0.9		x							x									
	Orange and black clay inclusions	1		x		O/B				x										
		1.1		x						x										
	Light brown sand, moist	1.2				LB					x							N		0
		1.3									x									
	Grey sand with orangle mottles, moist.	1.4			G						x							N		0
		1.5									x									
		1.6									x									
		1.7									x									
		1.8									x									
	Gradually lighter, moist	1.9			LG						x							N		0
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
	Limit of Assessment	3.1									x									

BOREHOLE LOG

Location	HA4	Job No.		Client	Manly Civic Club JV	Logged by	FW
Drill Type / Method	Hand Auger	Date	1/06/16				
Slope Position		Slope %		Project			
Groundwater depth				AHD (m)			
Land Surface Observation / Surface Hydrology							

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
		0.2		x																
	Mixed Fill with light brown sand and gravel	0.3		x		LB					x							N		0
	Mixed fill with dark orange and yellow sand with gravel	0.4		x		DO/Y					x							N		0
		0.5		x							x									
	Mixed fill with light brown and grey sand with gravel	0.6		x		LB/G					x							N		0
		0.7		x							x									

Limit of Assessment (auger refusal)

BOREHOLE LOG

Location	HA5	Job No.		Client	Manly Civic Club JV
Drill Type / Method	Hand Auger	Date	1/06/16		Logged by: FW
Slope Position		Slope %		Project	
Groundwater depth	3.2m			AHD (m)	
Land Surface Observation / Surface Hydrology					

Sample intervals	Stratigraphic Description	Depth (m)	Graphic log	Soil Profile: Fill	Soil Profile: Natural horizons	Soil Profile: Colour(s)	Soil Profile: Field pH	Mottle: Abundance	Mottle: Colour(s)	Field Texture: Fine grain	Field Texture: Coarse grain	Coarse Fragments: Abundance	Coarse Fragments: Size	Coarse Fragments: Lithology	Unfilled soil classification	Hydrology: Moisture content %	Hydrology: Interface drainage	Odour: Type	Odour: Strength	Field Monitoring PID (ppm)
	Asphalt	<0.1		x														N		0
		0.2		x																
	Mixed Fill with brown sand and gravel	0.3		x		B					x							N		0
		0.4		x							x									
		0.5		x							x									
	Mixed fill with orange clayey sand	0.6		x		O				x	x							N		0
		0.7		x						x	x									
	Mixed fill with brown sand	0.8		x		B					x							N		0
		0.9		x							x									
	Grey sand with orange mottles	1				G			O		x							N		0
		1.1									x									
	Light grey sand, moist	1.2				G					x							N		0
		1.3									x									
		1.4									x									
		1.5									x									
		1.6									x									
		1.7									x									
		1.8									x									
		1.9									x									
		2									x									
		2.1									x									
		2.2									x									
		2.3									x									
		2.4									x									
		2.5									x									
		2.6									x									
		2.7									x									
		2.8									x									
		2.9									x									
		3									x									
	Limit of Assessment	3.1									x									

L.G.A. MANLY

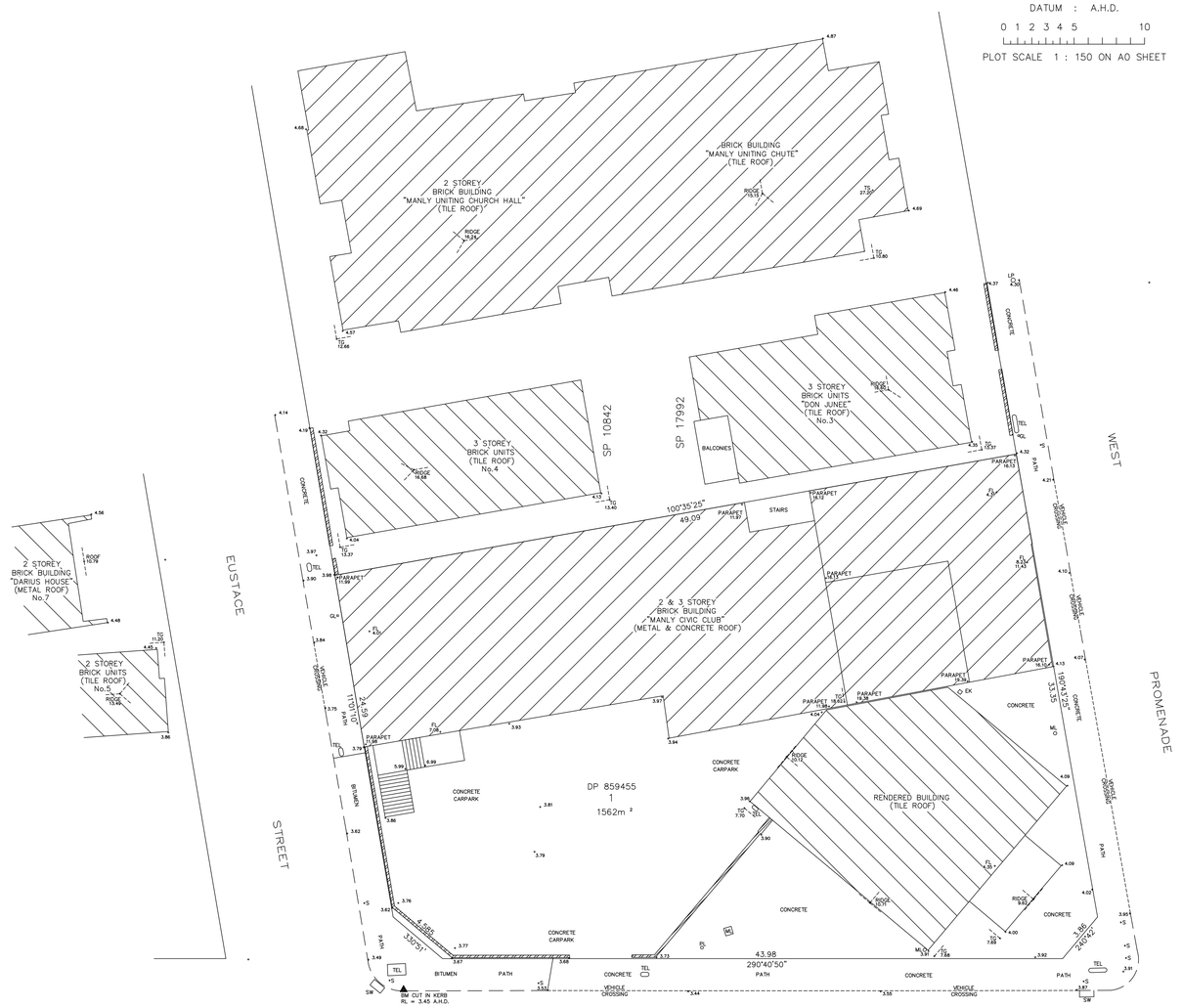
SKETCH

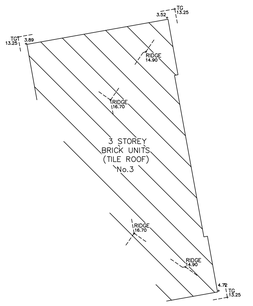
SHOWING SELECTED LEVELS AND DETAIL OVER
LOT 1 IN DP 859455 BEING No.2 WEST PROMENADE, MANLY.

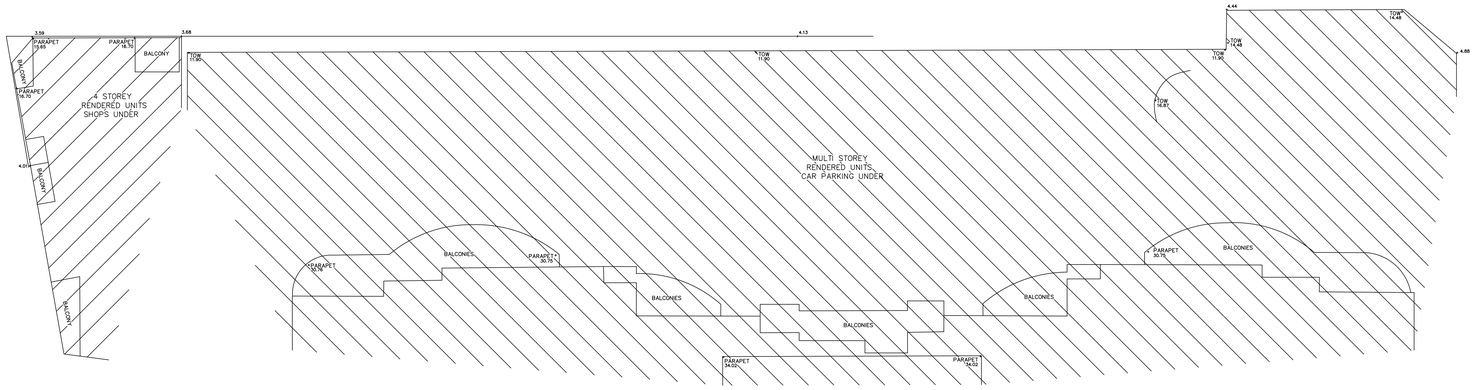
DATUM : A.H.D.

0 1 2 3 4 5 10

PLOT SCALE 1 : 150 ON A0 SHEET







LEGEND

EK	ELECTRICITY KIOSK
FL	FLOOR LEVEL
GL	GAS LID
LP	LIGHT POLE
ML	METAL LID
PL	PLASTIC LID
S	STREET SIGN
SW	STORMWATER PIT
TEL	TELSTRA LID
TG	TOP OF GUTTER
TOW	TOP OF WALL
TS	TOP OF SPIRE
— —	DENOTES TOP OF CONCRETE KERB

NOTES.

1) NO BOUNDARY SURVEY HAS BEEN CARRIED OUT.
2) ORIGIN OF LEVELS PM 893, RL=5.010 A.H.D.
3) BOUNDARY DIMENSIONS AND AREA OBTAINED FROM DP 859455.
4) POSITION OF BUILDINGS IN RELATION TO BOUNDARY ARE DIAGRAMMATIC ONLY.
5) NO UNDERGROUND SERVICES SEARCH MADE, ONLY PITS ETC. VISIBLE AT TIME OF SURVEY PLOTTED.
6) THE INFORMATION ON THIS SURVEY IS TO BE USED FOR DESIGN AND DA PURPOSES ONLY. SURVEY MARKS MUST BE PLACED PRIOR TO ANY CONSTRUCTION.

ISSUE	DATE	AMENDMENTS
'C'	16/05/08	NEIGHBOURING PROPERTY INFORMATION ADDED
'B'	21/02/08	TRUE NORTH ADDED
'A'	06/08/07	FIRST ISSUE

DIAL 1100 BEFORE YOU DIG

COPYRIGHT WARNING
THE INFORMATION SHOWN/CONTAINED IN THIS DRAWING/FILE IS COPYRIGHT. THE INFORMATION MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS PRODUCED. NO PART OF THIS DRAWING/FILE MAY BE USED OR REPRODUCED, IN PART OR WHOLE, FOR ANY OTHER CLIENT, PERSON OR COMPANY WITHOUT THE PRIOR WRITTEN PERMISSION OF HILL & BLUME PTY. LTD.

Hill & Blume
CONSULTING SURVEYORS
ACN 000 721 004

Hill & Blume Pty Ltd
102 Crown Street
Wooloomooloo
NSW 2011
Tel (02) 9332 4888
Fax (02) 9331 6422
DX545 Sydney

DATE OF SURVEY: 06/08/07 REF No. 50188

CAD FILE: 50188001C.DWG ISSUE "C"

1 Groundwater Flow Direction

1.1 Relative Groundwater Levels

A level survey of the site, as provided by the client shows surface levels relative to 0 AHD. Surface height data was only available near three wells (MW2, MW3 and MW4). Standing water levels (SWL)for these wells were recorded during site sampling on 08/06/2016. SWL were deducted from surface heights to determine relative groundwater levels.

	MW2	MW3	MW4
Ground Level (m)	3.91	4.01	3.76
SWL (m)	2.99	2.89	2.69
Groundwater Level (AHD)	**0.92**	**1.12**	**1.07**

See level survey with well locations for further interpretations.

1.2 Determining Flow direction

Distance between highest and lowest hydraulic head = 8.8cm on A3 scaled map.
Intersection of equal hydraulic head of the intermediate well:
((1.07 m – 0.92m) ÷ (1.12m – 0.92m)) × 8.8cm
= 6.6 cm on A3 scaled map (from lowest well)

Flow direction indicated on map by green arrows (at right angles to line of equipotential)

WATER MINING SPORTS & RECREATION HORTICULTURE & AGRICULTURE ENVIRONMENTAL ENGINEERING & GEOTECH URBAN HORTICULTURE & LANDSCAPING

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Quality ISO 9001
A member of the Australasian Soil and Plant Analysis Council

L.G.A. MANLY

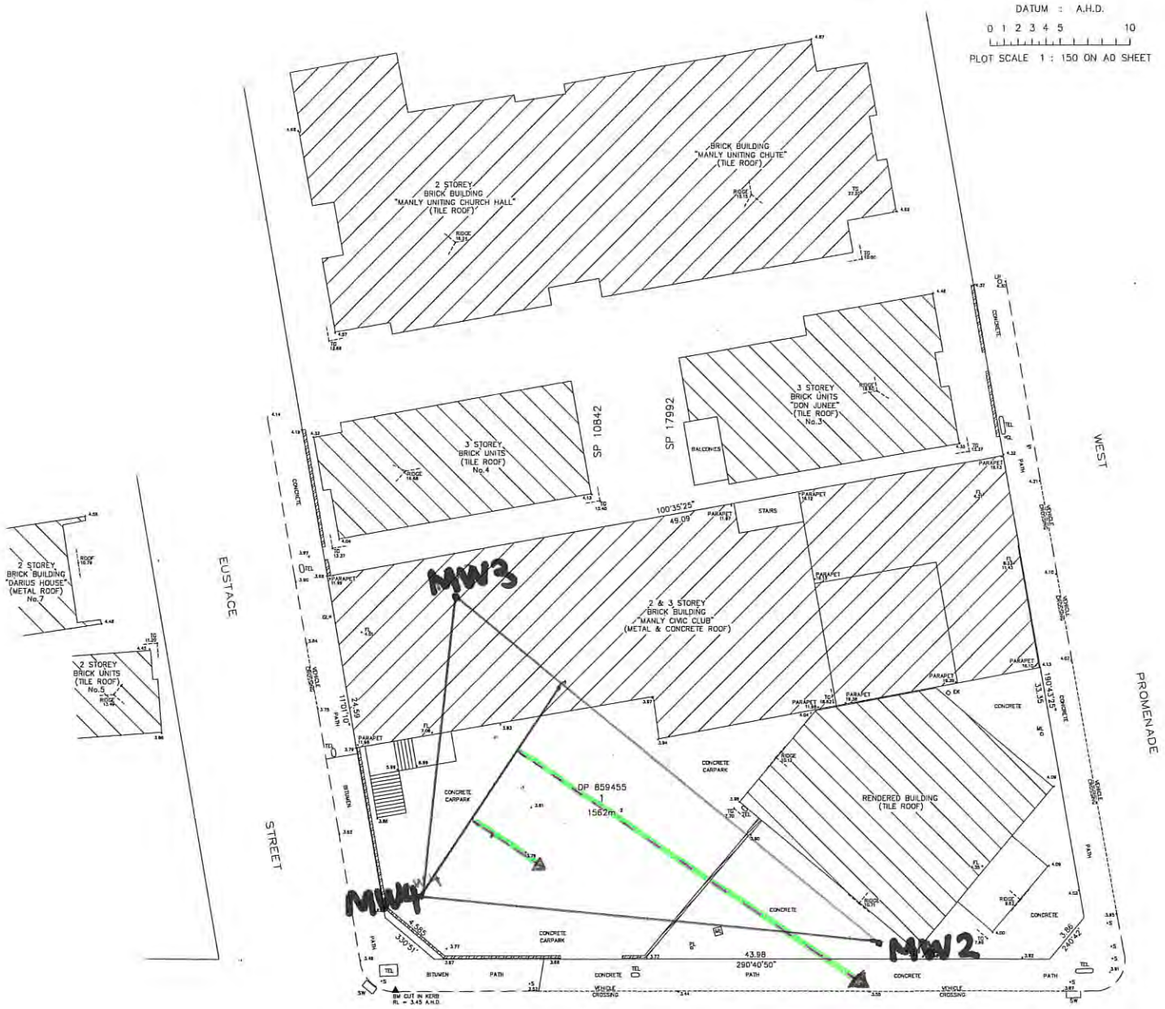
SKETCH

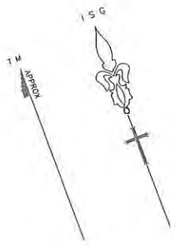
SHOWING SELECTED LEVELS AND DETAIL OVER
LOT 1 IN DP 859455 BEING No.2 WEST PROMENADE, MANLY.

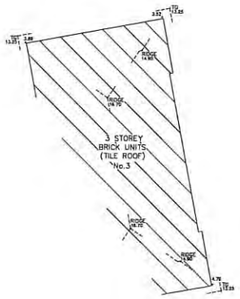
DATUM : A.H.D.

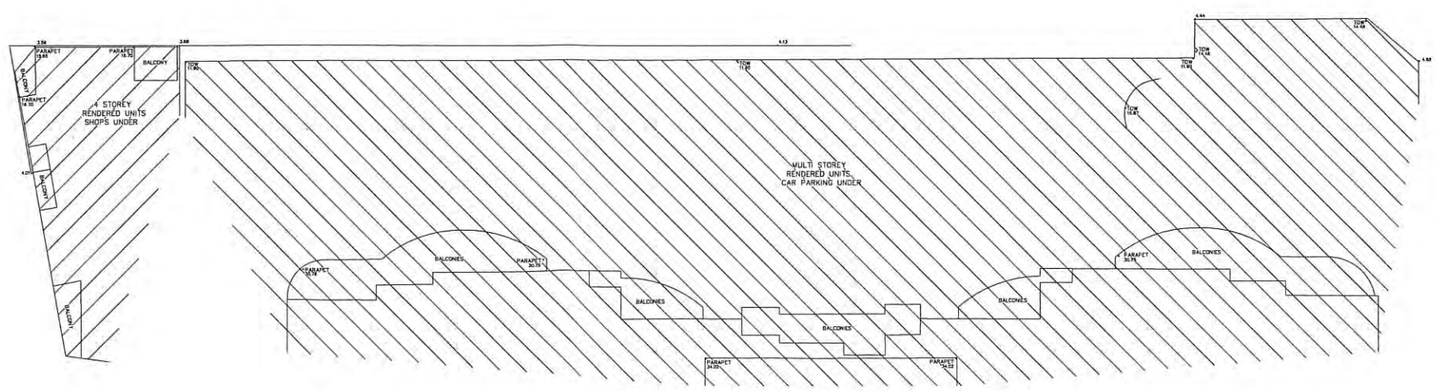
0 1 2 3 4 5 10

PLOT SCALE 1 : 150 ON A0 SHEET









LEGEND

EK	ELECTRICITY KIOSK
FL	FLOOR LEVEL
GL	GAS LID
LP	LIGHT POLE
ML	METAL LID
PL	PLASTIC LID
S	STREET SIGN
SW	STORMWATER PIT
TEL	TELSTRA LID
TG	TOP OF GUTTER
TOW	TOP OF WALL
TS	TOP OF SPIRE
— —	DENOTES TOP OF CONCRETE KERB

NOTES.

1) NO BOUNDARY SURVEY HAS BEEN CARRIED OUT.
2) ORIGIN OF LEVELS PM 893, RL=5.010 A.H.D.
3) BOUNDARY DIMENSIONS AND AREA OBTAINED FROM DP 859455.
4) POSITION OF BUILDINGS IN RELATION TO BOUNDARY ARE DIAGRAMMATIC ONLY.
5) NO UNDERGROUND SERVICES SEARCH MADE, ONLY PITS ETC. VISIBLE AT TIME OF SURVEY PLOTTED.
6) THE INFORMATION ON THIS SURVEY IS TO BE USED FOR DESIGN AND DA PURPOSES ONLY. SURVEY MARKS MUST BE PLACED PRIOR TO ANY CONSTRUCTION.

'C'	16/05/08	NEIGHBOURING PROPERTY INFORMATION ADDED
'B'	21/02/08	TRUE NORTH ADDED
'A'	06/08/07	FIRST ISSUE
ISSUE	DATE	AMENDMENTS

DIAL 1100 BEFORE YOU DIG

COPYRIGHT WARNING
THE INFORMATION SHOWN/CONTAINED IN THIS DRAWING/FILE IS COPYRIGHT. THE INFORMATION MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS PRODUCED. NO PART OF THIS DRAWING/FILE MAY BE USED OR REPRODUCED, IN PART OR WHOLE, FOR ANY OTHER CLIENT, PERSON OR COMPANY WITHOUT THE PRIOR WRITTEN PERMISSION OF HILL & BLUME PTY. LTD.

Hill & Blume
CONSULTING SURVEYORS
ACN 000 721 004

Hill & Blume Pty Ltd
102 Crown Street
Woolloomooloo
NSW 2011
Tel (02) 9332 4688
Fax (02) 9331 6422
DX545 Sydney

DATE OF SURVEY: 06/08/07 REF No. 50188

CAD FILE: 50188001C.DWG ISSUE "C"

Fisher
NTIFIC

Equipment Report – Micropurge Kit (MP15)

s system has been performance checked as follows:

mple Pro Pump		
Components Cleaned / checked	Ops check	
MP15 Controller	Included in kit	Not included in kit
Components Cleaned / checked	Ops check	
Battery check – On/Off	Flow response	

e: 07/06/2016 Checked by: MILENKO

ned:

ase check that the following items are received and that all items are cleaned and decontaminated before rn. A minimum $20 cleaning / service / repair charge may be applied to any unclean or damaged items. ns not returned will be billed for at the full replacement cost.

ent	Received	Returned	Item
			MP15 Control & Power Pack
			CO2 cylinder (installed in MP15 backpack)
			2 Stage gas regulator
			Spanner or shifter
			Quick Start Guide
			MP15 Users Guide + Pump operating instructions
			Sample Pro Stainless Steel Pump ID: QSP6 P-10
			2 Bladder
			Flow cell ID: EFC5006
			Stainless Steel Hanger Cable 50 m
			Spare CO2 Cylinders, quantity: 1
			Gas Cylinder CO2 - D Size ID: CO2 ; CO2
			Maintenance kit (O rings, fittings, SS check ball, collett & screen if applicable)

Processors Signature/ Initials MS

Quote Reference	CS004897	Condition on return	
Customer Ref			
Equipment ID	QMP15SD		
uipment serial no.			
Return Date	/ /		
Return Time			

ThermoFisher SCIENTIFIC

The world leader in serving science

RENTALS

Equipment Certification Report – TPS 90FLMV Water Quality Meter

This Water Quality Meter has been performance checked and calibrated as follows:

Sensor	Concentration	Span 1	Span 2	Traceability Lot #	Pass?
pH	pH 7.00 / pH 4.00	7.00 pH	4.00 pH	/	☐
Conductivity	12.88mS/cm	0.00 mS/cm	12.88 mS/cm		☐
TDS	36 ppk	N/A ppk	N/A ppk	check only	☑
Dissolved Oxygen	Sodium Sulphite / Air	0.00 ppm in Sodium Sulphite	8.67 ppm Saturation in Air		☑

Check only

Redox (ORP) *	Electrode operability test	240mV +/- 10%	238 mV		☑

* This meter uses an Ag/AgCl ORP electrode. To convert readings to SHE (Standard Hydrogen Electrode), add 199mV to the mV reading.

☑ Battery Status 7.3 (min 7.2V)
☑ Electrical Safety Tag attached (AS/NZS 3760)

Tag No: 000492

Valid to: 17/06/2016

☑ Temperature 21.3 °C
☑ Electrodes Cleaned and checked

Date: 07/06/2016

Signed:

Please check that the following items are received and that all items are cleaned and decontaminated before return. A minimum $30 cleaning / service / repair charge may be applied to any unclean or damaged items. Items not returned will be billed for at the full replacement cost.

Sent	Returned	Item
☑	☐	90FLMV Unit. Ops check/Battery status: 80
☑	☐	pH sensor with wetting cap, 5m
☑	☐	Conductivity/TDS/Temperature K=10 sensor, 5m
☑	☐	Dissolved oxygen YSI5739 sensor with wetting cap, 5m
☑	☐	Redox (ORP) sensor with wetting cap, 5m
☑	☐	Power supply 240V to 12V DC 200mA
☑	☐	Instruction Manual
☑	☐	Quick Guide
☑	☐	Syringe with storage solution for pH and ORP sensors
☑	☐	Carry Case
☑	☐	Check to confirm electrical safety (tag must be valid)

Date: 07/06/2016

Signed:

TFS Reference	CS004897	Return Date:	/ /
Customer Reference		Return Time:	
Equipment ID	90FLMV-3	Condition on return:	
Serial No.	WL4484		

SESL AUSTRALIA
Environment & Soil Sciences

Appendix D

ABN 70 106 810 708
T 1300 30 40 80
F 1300 64 46 89
E info@sesl.com.au
W sesl.com.au

POST
PO Box 357
Pennant Hills
NSW 1715

LAB
16 Chilvers Rd
Thornleigh
NSW 2120

ACT
Level 5
7 London Cct
Canberra
ACT 2601

VIC
Level 1
88 Mt Alexander Rd
Flemington
VIC 3031

QLD
Level 10
15 Green Square Cl
Fortitude Valley
QLD 4006

Certified System
Quality
ISO 9001
NATA
ASPAC
A member of the
Australasian Soil and
Plant Analysis Council

08 MAY 2008

URBAN ENVIRONMENTAL

ENVIRONMENTAL SITE ASSESSMENT
SERVICE STATION
2 WEST PROMENADE
MANLY

Prepared for:

Cracknell & Lonergan Architects

February, 2002

Project Ref: SJ067.R01

URBAN ENVIRONMENTAL CONSULTANTS PTY LTD
SUITE 7, 4 HYAM STREET, BALMAIN, 2041 NSW
PO BOX 1070, ROZELLE, 2039 NSW
PHONE: 02 9555 7570
FAX: 02 9555 6313
MOB: 0413 584 110
EMAIL:urban.environmental@bigpond.com

0 8 MAY 2003

DISTRIBUTION LIST

No. of Copies	Reference	Status	Date Issued	Prepared for:	Initials
2	SJ067.R01	Final	19/02/02	Cracknell & Lonergan	
1	SJ067.R01	Final	19/02/02	Urban Environmental	

PREPARED BY

Franco Fuccenecco BSc (Hons) MAppSc
Principal Consultant - Director

08 MAY 2008

TABLE OF CONTENTS

08 MAY 2002

LIST OF APPENDICES

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

Urban Environmental Consultants Pty Ltd were commissioned by Cracknell & Lonergan Architexts to undertake an environmental site assessment (ESA) of a former service station, located at 2 West Promenade, Manly. The ESA is required to facilitate the redevelopment of the property.

The investigation comprised the drilling of 5 boreholes (BH1-BH5) and collection of representative soil samples from locations around and down gradient of the underground storage tanks and pump islands on site.

A minimum of one soil sample from each borehole was submitted to the NATA registered Gribbles analytical laboratories for analysis of total petroleum hydrocarbons (TPH), including constituent hydrocarbon chainlength groups (C_6 - C_9, C_{10} - C_{14}, C_{15} - C_{28}, and C_{29} - C_{36}), BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Due to the presence of fill material one sample was selected for additional metal, hydrocarbon and pesticide analysis.

The investigation showed the site to be underlain by a 1m thick fill layer, overlying a residual sandy soil profile. Groundwater was detected in boreholes drilled on site at depths ranging between 3.1 – 3.6m.

The laboratory results indicate that petroleum hydrocarbons, TPH & BTEX compounds were not detected in the soil samples submitted for analysis, downgradient and in the immediate vicinity of the main underground storage fuel tanks (USTs) with the exception of TPH in BH1 – 0.5m. This result is above the NSW EPA Guidelines for Assessing Service Station sites sensitive landuse for the TPH $C_{15} – C_{36}$ fraction. All results are below the Netherlands (1994) Intervention Values for commercial landuse. Due to the lack of hydrocarbon impact near the USTs no groundwater assessment was warranted.

Lead concentrations in the samples submitted for laboratory analysis were below the NSW EPA Guidelines for Assessing Service Station sites. Screening analysis of the fill material for PAHs, metals and pesticides indicated that the material meets the landuse criteria.

Urban Environmental Consultants Pty Ltd concludes that the site is suitable for continued commercial use. The fuel systems and underground tanks should be removed upon site redevelopment and validation of tankpits undertaken. Should redevelopment require excavation and removal of fill off site, assessment of material against the NSW EPA Environmental Guidelines: Assessment, Classification & Management of Liquid & Non Liquid Wastes (1999) should be undertaken to determine disposal options. Should dewatering be required as part of excavation works, assessment of groundwater conditions and disposal would be required. Contamination issues do not preclude redevelopment of the site.

1 INTRODUCTION

1.1 Background

Urban Environmental Consultants Pty Ltd were commissioned by Cracknell & Lonergan Architects to undertake an environmental site assessment (ESA) of the former service station, located at 2 West Promenade, Manly. It is understood that the property is to be redeveloped and that the ESA is required to determine if contamination issues are associated with the former use of the site as a service station.

1.2 Objectives

The objective of the assessment was to characterise the nature and extent of possible soil impacts at the site resulting from service station operations.

1.3 Scope of Works

To achieve the objective, the following work scope was undertaken:

- Review of background geological and hydrogeological information;
- A review of readily available background records;
- Site inspection and discussions with site personnel;
- Drilling of 5 boreholes across the site (BH1-BH5);
- Collection of representative soil samples from each borehole;
- Laboratory analysis of one soil sample from each of the 5 boreholes for total petroleum hydrocarbons (TPH), including constituent hydrocarbon chainlength groups (C_6 - C_9, C_{10} - C_{14}, C_{15} - C_{28}, and C_{29} - C_{36}), BTEX compounds (benzene, toluene, ethylbenzene and xylenes) and lead (Pb).
- Additional analysis of a fill sample for Metals, Polyaromatic Hydrocarbons (PAHs) and Pesticides (OCPs).
- Preparation of a report detailing the findings of the site investigation.

2 BACKGROUND INFORMATION

2.1 Site Identification

The property is located at 2 West Promenade, Manly. No title documents were cited as part of this investigation.

2.2 Site History

Discussions with the site occupants indicated that the site has been an operational service station since the 1930's and ceased operation in 1978. Following this period the site was converted into a mechanical workshop. The site is currently heritage listed. A detailed site history is being prepared by Cracknell & Lonergan Architects as part of the heritage study.

2.3 Regional Geology

The Geological Map of the area (Sheet 9130 1:100,000 scale) indicates that the site is underlain by Quaternary quartz sands with varying amounts of shell fragments

2.4 Regional Hydrology and Hydrogeology

Shallow groundwater conditions were noted on site.

2.5 Site Condition and Surrounding Environment

The property is relatively flat. The reminants of the service station consists of a concrete drive through with a dispensing area. Buildings on site comprise a workshop with car parking over the remainder of the site.

The surrounding environment of the Service Station includes the following:

- Manly Civic Club to the north;
- Residential to the south;
- Park to the east; and
- Residential to the west.

Site features are shown in Figure 1. Site storage facilities are tabulated in Table 1. Three underground storage tanks (USTs) of unknown size, appear present on site from dip and fill points.

3 ENVIRONMENTAL ASSESSMENT METHODOLOGY

3.1 Sampling Rationale and Assessment Criteria

The boreholes were located around and downgradient from USTs and fuel dispensing areas on site.

Petroleum hydrocarbons (TPH), BTEX and lead concentrations in soils have been assessed with primary reference to the Environmental Quality Objectives in the Netherlands (1994) Intervention Values (see below). These values are generally used for industrial or similar land uses and are considered to be appropriate for this assessment, as the site will continue to be operated as a service station. Secondary reference has been made to the NSW EPA Guidelines for Assessing Service Station Sites (1994), which are generally used where sites are proposed for more sensitive landuse ie: residential.

Site Assessment Criteria

	Primary Soil Assessment Criteria* (mg/kg)	Secondary Soil Assessment Criteria** (mg/kg)
TPH C_6-C_9	-	65
TPH C_{10}-C_{36}	5000	1000
Benzene	1	1
Toluene	130	1.4
Ethyl Benzene	50	3.1
Xylenes	25	14
Lead	530	300
PAHs	40	20
Phenols	40	NE

Note: * Netherlands (1994) Environmental Quality Objectives in the Netherlands – Intervention Values
**NSW EPA (1994) Guidelines for Assessing Service Station Sites - threshold concentrations for sensitive land use
TPH = Total Petroleum Hydrocarbons

The results of the laboratory analyses of soil are given in Appendix C.

3.2 Drilling and Soil Sampling

The investigation area was inspected and checked for underground utilities and services prior to the final location of each borehole.

At each selected drilling point, the hole was drilled by hand auger to below any fill material to confirm that there were no obstructions from utilities or services. Drilling was completed to 4.5m depth using a trailer mounted rotary rig equipped with solid stem augers. Soil samples were collected at 1.0m intervals by driving forward of the auger flights. Samples were collected from the auger flights for description of the soil profile and collection of soil samples for laboratory analysis. The description of soil profile of each borehole was noted in a field drilling log.

Soil samples were retained for laboratory analysis according to visual and olfactory observations. Retained samples were each placed into a new 250mL glass jar and sealed with a screw cap lid incorporating a teflon insert. The sealed sample jars were placed immediately into a cooler containing ice.

Five boreholes were drilled across the site at locations shown in Figure 1. All boreholes were drilled to 4.5m depth. The soil profile of each borehole is described on drilling logs included in Appendix A.

A total of five soil samples were selected for laboratory analysis.

3.3 Field QA/QC

Soil descriptions were recorded on field log sheets.

Field duplicate soil samples are collected at a ratio of 1 duplicate per 10 primary samples. As four primary samples were analysed, no field duplicate was submitted for analysis. Augers were decontaminated by high pressure water spray between boreholes.

New neoprene gloves were worn during soil sampling, and were replaced between sample collection. New sample bottles were used for each soil sample. Sample bottles were labelled and identified with the project number, unique sample number, and date of collection. Decontamination of equipment between sampling events consisted of washing in phosphate free detergent followed by rinsing with deionised water.

Collected samples were placed immediately on ice and dispatched in an ice filled cooler (esky) to the laboratory for analysis. Samples were recorded on a chain of custody form. The chain of custody form accompanied samples upon dispatch to the laboratory for analysis.

3.4 Laboratory Analysis

Soil samples from each of the boreholes drilled during this investigation were forwarded to the NATA registered Gribbles analytical laboratories for analysis of total petroleum hydrocarbons (TPH) including constituent chainlengths, BTEX compounds (benzene, toluene, ethylbenzene and xylenes) and lead (Pb). An additional sample of fill material BH3 0.5m was analysed for metals (Cu, Pb, Zn, Cr, Cd, As), polyaromatic hydrocarbons (PAHs) and pesticides (OCPs).

4 RESULTS

4.1 Soil Analytical Results

Laboratory analytical certificates are contained in Appendix C.

4.1.1 Hydrocarbons

Laboratory results of soil analyses for BTEX and TPH compounds are compared in Table 2 with the Site Assessment Criteria.

The results show that TPH and BTEX compounds were not detected in any of the boreholes above the Netherlands (1994) Intervention Values. The analysis result in BH1 – 0.5m is above the NSW EPA Guidelines for Assessing Service Station sites – sensitive landuse for the TPH $C_{15} - C_{36}$ fraction.

4.1.2 Fill

Laboratory results for polyaromatic hydrocarbons (PAHs), metals and pesticides from BH3 0.5m indicate results were within landuse criteria. No pesticides were detected, low levels of PAHs and metals were present.

4.2 Laboratory QA/QC Results

A total of 5 samples, were submitted to the NATA registered Gribbles Laboratories. Standard laboratory QA/QC procedures are contained in Appendix B. The laboratory QA/QC procedure to determine the accuracy and precision of hydrocarbon and lead analyses comprised the following:

- Analysis of a Analysis Blank (AB) to determine any contamination from the analytical process;
- Analysis of a spike or laboratory control standard (LCS) and laboratory duplicate sample (LD) to determine the overall efficiency of the method, the effect of the sample matrix on the analytical results, and the accuracy of the duplicate analysis; and

- Calculation of percentage recoveries for these analyses (a measure of precision) and relative percent differences (a measure of accuracy) between the LCS and LD results.

The following data quality objectives represent current industry best practice and form the basis for the review of data quality:

- Accuracy, or average recovery, should be in the range 75 - 125% based on laboratory spike data;
- Precision should be an average of +/- 50% Relative Percentage Difference (RPD) for field duplicates and +/- 20 - 50 % for laboratory duplicates;
- Field splits and duplicates should be collected at a frequency of at least 1 in 10; and
- Overall completeness should be a minimum of 95%.

Review of laboratory quality data against data quality objectives indicates that the accuracy of the laboratory analyses is satisfactory.

The laboratory analytical data presented in Appendix C demonstrate that appropriate QA/QC procedures were adhered to by the analytical laboratory and results are reliable.

4.3 Site Characterisation

4.3.1 Site Geology

The site is underlain by a 1m thick layer of fill that overlies a residual sandy soil profile.

A detailed description of the lithology logged in each investigation borehole is given in Appendix A.

4.3.2 Site Hydrogeology

Groundwater was intercepted across the site during site investigation works at depths ranging between 3.1 – 3.6m depth. As no hydrocarbon impact was noted adjacent to the USTs at depth and no odours were noted during drilling at the water table, an assessment of groundwater was not warranted.

4.3.3 Site Impacts

The following points summarise the results of the assessment conducted on the former Service Station, 2 West Promenade, Manly:

- A layer of fill over a residual sandy clay soil profile underlies the site.
- Groundwater was encountered in boreholes drilled on site at depths ranging between 3.1 – 3.6m.
- The only significant environmental receptor present in the immediate vicinity of the site is Sydney Harbour.
- No hydrocarbon concentrations exceeded the Netherlands (1994) Intervention Values.
- The TPH C_{15} – C_{36} fraction in BH1 – 0.5m was above the NSW EPA (1994) Guidelines for Assessing Service Station Sites.
- Screening analysis of the fill material for PAHs, metals and pesticides indicate the material is within the landuse criteria.

5 CONCLUSIONS

Based on the results of the environmental site assessment, Urban Environmental Consultants Pty Ltd conclude the following:

- Based on the limited vertical and lateral extent of adsorbed hydrocarbons across the site and minimal risk of exposure to human health, the site is suitable for continued commercial use.
- Should material be excavated from site as part of redevelopment, the layer of fill material should be assessed against the NSW EPA (1999) Environmental Guidelines: Assessment, Classification & Management of Liquid & Non Liquid Wastes to determine disposal options.
- Upon redevelopment the underground fuel tanks and fuel system should be removed and disposed off site and excavations validated as per the NSW EPA (1994) Guidelines for Assessing Service Station Sites.
- Should dewatering of the site be required as part of any redevelopment, an assessment of groundwater conditions is warranted to determine disposal options.

6 REFERENCES

Netherlands (1994). Environmental Quality Objectives in the Netherlands. Ministry of Housing, Spatial Planning and the Environment, Netherlands Government.

NSW EPA (1994). Guidelines for Assessing Service Station Sites.

NSW EPA (1999). Environmental Guidelines: Assessment, Classification & Management of Liquid & Non Liquid Wastes

DISCLAIMER

Urban Environmental Consultants Pty Ltd have conducted work concerning the environmental status of the property which is the subject of this report, and has prepared this report on the basis of that assessment.

The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to Urban Environmental Consultants Pty Ltd. The analyses, evaluations, opinions and conclusions presented in this report are based on that information, and they could change if the information is in fact inaccurate or incomplete.

Urban Environmental Consultants Pty Ltd will not update the report and has not taken into account events occurring after the time its assessment was conducted.

This report is intended for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only to the client. Any third party who relies on the report or on any representation contained in it does so at their own risk.

FIGURES

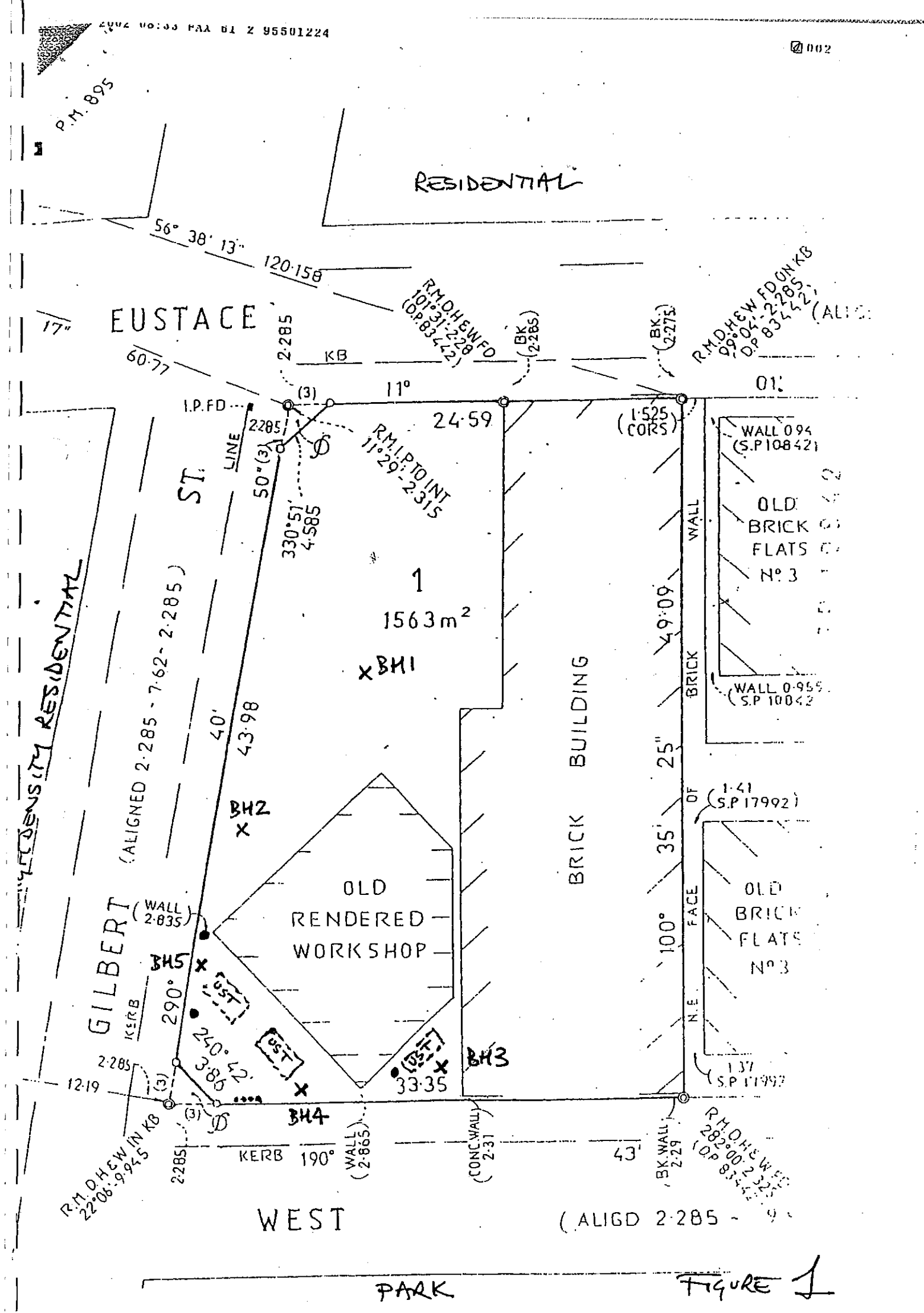

P.M. 895
RESIDENTIAL
56° 38' 13"
120.158
EUSTACE
17"
60.77
2.285
KB
R.M.O.H.E.W.F.D. ON KB
101° 31' 2.28
(O.P. 83442)
(BK. 2.285)
(BK. 2.275)
R.M.O.H.E.W.F.D. ON KB
99° 04' 2.285
O.P. 83442
11°
24.59
I.P.F.D.
(3)
2.285
RM.I.P. TO INT
11° 29' 2.315
50° (3)
330° 51'
4.585
ST. LINE
1.525
(CORS)
WALL 0.94
(S.P. 108421)
OLD
BRICK
FLATS
Nº 3
WALL
BRICK
49.09
25"
1
1563 m²
BH1
BRICK BUILDING
40'
43.98
(ALIGNED 2.285 - 7.62 - 2.285)
RESIDENTIAL
BH2
1.41
(S.P. 17992)
OF
35'
FACE
N.E.
OLD
RENDERED
WORKSHOP
OLD
BRICK
FLATS
Nº 3
100°
(WALL 2.835)
GILBERT
BH5
290°
KERB
UST
UST
UST
240° 3.85 12"
33.35
BH3
2.285
12.19
(3)
BH4
R.M.O.H.E.W. IN KB
22° 08' 9.945
KERB
190°
(WALL 2.865)
(CONC. WALL 2.31)
43'
BK. WALL 2.29
R.M.O.H.E.W.
282° 00' 2.32
(O.P. 83442)
WEST
(ALIGD 2.285 -
PARK

FIGURE 1

TABLES

TABLE 1
Site Storage Facilities
Project: Former Service Station, Manly (SJ067)

Tank Number	Volume (litres)	Status	Location	Product Stored
1	Unknown	Disused	(U)	Unknown
2	Unknown	Disused	(U)	Unknown
3	Unknown	Disused	(U)	Unknown

Notes:
U = Underground; A = Aboveground; ULP = Unleaded Motor Spirit; LP= Leaded Motor Spirit
LPG = Liquid Petroleum Gas
Tank locations are shown in Figure 1.
Information as supplied by the site occupant

TABLE 2
Soil Sample Analytical Results
Petroleum Hydrocarbons, BTEX Compounds and Lead
Project: Former Service Station, Manly (SJ067)

Sample No.	Depth	TPH	Hydrocarbon Fractions				B	T	E	X	Lead
			C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}					
PQL	-	-	20	20	50	50	0.5	0.5	0.5	1.5	5
Units	metres	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1	0.5	nd	nd	29	360	740	nd	nd	nd	nd	na
BH2	3.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
BH3	0.5	nd	nd	nd	60	40	nd	nd	nd	nd	250
BH4	3.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
BH5	3.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
NSW EPA (1994)		-	65	1000			1	1.4	3.1	14	300
Netherlands (1994)			-	5000			1	130	50	25	530

's: All results in mg/kg (ppm) dry weight
TPH = Total Petroleum Hydrocarbons
B = benzene; T = toluene; E = ethylbenzene; X = xylenes
PQL = Practical Quantitation Limit of analytical method
nd = not detected (nd=<PQL)
nr = not requested
dup = duplicate sample;
NSW EPA (1994) Guidelines for Assessing Service Station Sites
Netherlands (1994) Environmental Quality Objectives in the Netherlands – Intervention Values
Shading indicates concentrations exceeding Netherlands (1994) Intervention Values

APPENDIX A
DRILLING LOGS

Urban Environmental Consultants Pty Ltd

BORELOG REPORT

Site Name: Manly Service Station
Site Location: 2 West Promenade, Manly
Job Description: Environmental Site Assessment

LOCATION ID: BH1

Sample Date: 1/31/02 Borehole depth: 4.5m Sampling Method: SFA
Logged by: V.Cambridge Checked by: V.Cambridge Surface Condition: Sealed

Depth (m)	Graphic Log	USCS Class.	Sample Description	Sample Analysed	PID (ppm)	Comments
			Concrete-150mm			
			Fill - Gravel, sand, trace clay, dk brown to black, loose, well sorted, sub angular, moist	BH1-0.5	0.0	No odour
1.0			Crushed Sandstone rock		0.0	No odour
			Sand - dk brown grey, fine grained, sub angular, damp, well sorted			
2.0			-as above light brown	BH1-2m	0.0	No odour
3.0			-wet		0.0	G/W 3.2m
4.0			Sand - silty, dk brown, saturated, fine grained, well sorted	BH1-3m	0.0	
5.0			EOH@4.5			
6.0						
7.0						
8.0						

Note:

Urban Environmental Consultants Pty Ltd

BORELOG REPORT

Site Name: Manly Service Station
Site Location: 2 West Promenade, Manly
Job Description: Environmental Site Assessment

LOCATION ID: BH2

Sample Date: 1/31/02 Borehole depth: 4.5m Sampling Method: SFA
Logged by: V.Cambridge Checked by: V.Cambridge Surface Condition: Sealed

Depth (m)	Graphic Log	USCS Class.	Sample Description	Sample Analysed	PID (ppm)	Comments
			Concrete-140mm			
			Fill - Gravel, sand, trace clay, dk brown to black, loose, well sorted, sub angular, moist	BH2-0.5	0.0	No odour
1.0			Sand - light brown grey, fine grained, sub angular, damp, well sorted		0.0	No odour
2.0			-as above light yellow brown		0.0	No odour
3.0			-wet		0.0	G/W 3.2m
4.0			Sand - silty, dk brown, saturated, fine grained, well sorted	BH2-3m	0.0	
5.0			EOH@4.5			
6.0						
7.0						
8.0						

Note:

Urban Environmental Consultants Pty Ltd

BORELOG REPORT

Site Name: Manly Service Station
Site Location: 2 West Promenade, Manly
Job Description: Environmental Site Assessment

Page 1 of 1

LOCATION ID: BH3

Sample Date: 1/31/02 Borehole depth: 4.5m Sampling Method: SFA
Logged by: V.Cambridge Checked by: V.Cambridge Surface Condition: Sealed

Depth (m)	Graphic Log	USCS Class.	Sample Description	Sample Analysed	PID (ppm)	Comments
			Concrete-130mm			
			Fill - Crushed sandstone	BH3-0.5	0.0	No odour
1.0			Sand - light brown grey, fine grained, sub angular, damp, well sorted		0.0	No odour
2.0			-as above light yellow brown		0.0	No odour
3.0				BH3-3m	0.0	
4.0			Sand - silty, dk brown, saturated, fine grained, well sorted		0.0	GW @ 3.6
5.0			EOH@4.5			
6.0						
7.0						
8.0						

Note:

Urban Environmental Consultants Pty Ltd

BORELOG REPORT

Site Name: Manly Service Station
Site Location: 2 West Promenade, Manly
Job Description: Environmental Site Assessment

Page 1 of 1

LOCATION ID: BH4

Sample Date: 1/31/02 Borehole depth: 4.5m Sampling Method: SFA
Logged by: V.Cambridge Checked by: V.Cambridge Surface Condition: Sealed

Depth (m)	Graphic Log	USCS Class.	Sample Description	Sample Analysed	PID (ppm)	Comments
			Concrete-120mm			
			Fill - Gravel, sand, trace clay, dk brown to black, loose, well sorted, sub angular, moist	BH4-0.5	0.0	No odour
1.0			Sand - light brown grey, fine grained, sub angular, damp, well sorted		0.0	No odour
2.0			-as above light yellow brown		0.0	No odour
3.0				BH4-3m	0.0	GW@3.4
4.0			Sand - silty, dk brown, saturated, fine grained, well sorted		0.0	
5.0			EOH@4.5			
6.0						
7.0						
8.0						

Note:

Urban Environmental Consultants Pty Ltd

BORELOG REPORT

Site Name: Manly Service Station
Site Location: 2 West Promenade, Manly
Job Description: Environmental Site Assessment

LOCATION ID: BH5

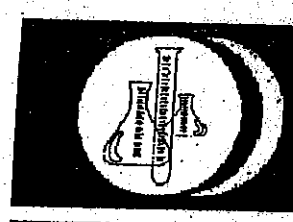
Sample Date: 1/31/02 Borehole depth: 4.5m Sampling Method: SFA
Logged by: V.Cambridge Checked by: V.Cambridge Surface Condition: Sealed

Depth (m)	Graphic Log	USCS Class.	Sample Description	Sample Analysed	PID (ppm)	Comments
			Concrete-50mm			
			Fill - Gravel, sand, trace clay, dk brown to black, loose, well sorted, sub angular, moist	BH5-0.5	0.0	No odour
1.0			Sand - light brown grey, fine grained, sub angular, damp, well sorted		0.0	No odour
2.0			-as above white		0.0	No odour
3.0				BH5-3m	0.0	No Odour GW@3.1
4.0			Sand - silty, dk brown, saturated, fine grained, well sorted		0.0	
5.0			EOH@4.5			
6.0						
7.0						
8.0						

Note:

APPENDIX B
BACKGROUND RECORDS

APPENDIX C
LABORATORY METHODS AND CERTIFICATES – SOIL



Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 313 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5999
Fax (03) 9562 0335

Replacement Analytical Report

Replacement for Report no: 55680, issued on: 08 Feb 2002

URBAN ENVIRONMENTAL
PO BOX 1070
ROZELLE

NSW 2039

Contact : FRANCO FUCCENECC
Batch Number : 0202071
Job Ref : MANLY
Sample(s) Received : 04/02/2002

Replacement Report No : 55859

Methods:

100 Moisture Content
404FIMS Mercury by Vapour AAS, Dry Weight
406-MS Elements by ICP-MS, Dry Weight
501-FID Total Petroleum Hydrocarbons, Dry Weight
504P&T BTEX/MAH (Purge & Trap), Dry Weight
504P&T C6-C9 (Purge & Trap), Dry Weight
504P&T MAH/TPH, Surrogate
505-MS Polyaromatic Hydrocarbons, Dry Weight
505-MS Polyaromatic Hydrocarbons, Surrogates
505-MS Total Polyaromatic Hydrocarbons, Dry Weight
506-ECD Organochlorine Analysis, Surrogates
506-ECD Organochlorine Pesticides, Dry Weight

Attached Results Approved by:

George Michaloudis
B.Sci. (Hons)
Senior Analyst - Volatiles

John Levvey
Dip.App.Sci (Chemistry)
Senior Analyst - Metals

Anthony Crane
B.App.Sci. (Environmental)
Laboratory Manager

Daniel Dam
B.App.Sci (Chemistry)
Senior Analyst - Semi-Volatiles

This Laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herin have been performed in accordance with its terms of accreditation.

NATA ENDORSED DOCUMENT

Document may not be reproduced except in full.

NATA Accreditation No. 1645 (Chemical Testing) NATA Accreditation No. 14278 (Biological Testing)

* This is the Final Report which supersedes any reports previously issued relating to the sample(s) included.
All samples tested as submitted by client.
# Denotes methods not covered by NATA terms of accreditation

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 008 813 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 9999
Fax (03) 9562 9336

Results

Replacement Report No: 55859

	0202071/001 SOIL 31/01/02 B1-0.5	0202071/004 SOIL 31/01/02 B2-3.0	0202071/005 SOIL 31/01/02 B3-0.5	0202071/008 SOIL 31/01/02 B4-3.4	0202071/010 SOIL 31/01/02 B5-3.0
BTEX/MAH (PURGE & TRAP), DRY WEIGHT					
Method: 504P&T Units: mg/kg					
Benzene	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes	<0.1	<0.1	<0.1	<0.1	<0.1
ELEMENTS by ICP-MS, DRY WEIGHT					
Method: 406-MS Units: mg/kg					
Arsenic	-	-	<2.0	-	-
Cadmium	-	-	<1.0	-	-
Chromium	-	-	12	-	-
Copper	-	-	7.3	-	-
Lead	-	-	250	-	-
Zinc	-	-	56	-	-
HYDROCARBONS (C6-C9), DRY WEIGHT					
Method: 504P&T Units: mg/kg					
TPH C6 - C9	<20	<20	<20	<20	<20
HYDROCARBONS (TPH), DRY WEIGHT					
Method: 501-FID Units: mg/kg					
TPH C10 - C14	29	<20	<20	<20	<20
TPH C15 - C28	360	<20	60	<20	<20
TPH C29 - C36	740	<20	40	<20	<20
MERCURY by VAPOUR AAS, DRY WEIGHT					
Method: 404FIMS Units: mg/kg					
Mercury	-	-	0.09	-	-
ORGANOCHLORINE PESTICIDES, DRY WEIGHT					
Method: 506-ECD Units: mg/kg					
Aldrin	-	-	<0.1	-	-
alpha - BHC	-	-	<0.1	-	-
alpha - Endosulphan	-	-	<0.1	-	-
beta - BHC	-	-	<0.1	-	-
beta - Endosulphan	-	-	<0.1	-	-
Chlordane	-	-	<0.1	-	-
DDD	-	-	<0.1	-	-
DDE	-	-	<0.1	-	-
DDT	-	-	<0.1	-	-
delta - BHC	-	-	<0.1	-	-
Dieldrin	-	-	<0.1	-	-
Endosulphan sulphate	-	-	<0.1	-	-
Endrin	-	-	<0.1	-	-
Endrin Aldehyde	-	-	<0.1	-	-
Heptachlor	-	-	<0.1	-	-

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 833 099
685 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5999
Fax (03) 9562 9336

Results

Replacement Report No: 55859

	0202071/001 SOIL 31/01/02 B1-0.5	0202071/004 SOIL 31/01/02 B2-3.0	0202071/005 SOIL 31/01/02 B3-0.5	0202071/008 SOIL 31/01/02 B4-3.4	0202071/010 SOIL 31/01/02 B5-3.0
Heptachlorepoxide	-	-	<0.1	-	-
Hexachlorobenzene	-	-	<0.1	-	-
Lindane	-	-	<0.1	-	-
Methoxychlor	-	-	<0.1	-	-
ORGANOCHLORINE PESTICIDES, SURROGATE RECOVERIES					
Method: 506-ECD Units: % Recovered					
OC Surrogate Recovery	-	-	118	-	-
OVEN MOISTURE CONTENT					
Method: 100 Units: % w/w					
Moisture	16.1	6.0	8.6	18.5	5.1
POLYAROMATIC HYDROCARBONS, DRY WEIGHT					
Method: 505-MS Units: mg/kg					
Acenaphthene	-	-	<0.1	-	-
Acenaphthylene	-	-	<0.1	-	-
Anthracene	-	-	0.2	-	-
Benz(a)anthracene	-	-	0.9	-	-
Benzo(a)pyrene	-	-	0.85	-	-
Benzo(b)fluoranthene	-	-	0.8	-	-
Benzo(g,h,i)perylene	-	-	0.7	-	-
Benzo(k)fluoranthene	-	-	0.6	-	-
Chrysene	-	-	1.0	-	-
Dibenz(a,h)anthracene	-	-	<0.1	-	-
Fluoranthene	-	-	2.4	-	-
Fluorene	-	-	<0.1	-	-
Indeno(1,2,3-c,d)pyrene	-	-	0.5	-	-
Naphthalene	-	-	<0.1	-	-
Phenanthrene	-	-	0.5	-	-
Pyrene	-	-	2.8	-	-
Total PAH's	-	-	12	-	-
POLYAROMATIC HYDROCARBONS, SURROGATE RECOVERIES					
Method: 505-MS Units: % Recovered					
Pyrene-d10, Surrogate Rec.	-	-	128	-	-
VOLATILES (PURGE & TRAP), SURROGATE RECOVERIES					
Method: 504P&T Units: % Recovered					
Toluene-d8, Surrogate Rec.	95.0	90.5	78.0	98.0	97.5

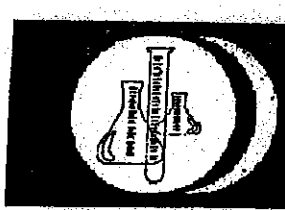
Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 823 089
655 Blackburn Road
Notting Hill, Victoria, Australia, 3168
Telephone (03) 9562 5899
Fax (03) 9562 0336

Quality Results

Replacement Report No: 55859

	0202071Q012	0202071Q013	0202071Q014	0202071Q015	0202071Q016
	07/02/02 Spike Recovery Lab Control	07/02/02 Duplicate 0202071/005	06/02/02 Spike Recovery 0202071/005	06/02/02 QCBlank METHOD BLK	06/02/02 Spike Recovery LAB CONTROL
POLYAROMATIC HYDROCARBONS, AS RECEIVED					
Method: 505-MS Units: mg/kg					
Acenaphthene	-	-	-	<0.05	-
Acenaphthylene	-	-	-	<0.05	-
Anthracene	-	-	-	<0.05	-
Benz(a)anthracene	-	-	-	<0.05	-
Benzo(a)pyrene	-	-	-	<0.05	-
Benzo(b)fluoranthene	-	-	-	<0.05	-
Benzo(g,h,i)perylene	-	-	-	<0.05	-
Benzo(k)fluoranthene	-	-	-	<0.05	-
Chrysene	-	-	-	<0.05	-
Dibenz(a,h)anthracene	-	-	-	<0.05	-
Fluoranthene	-	-	-	<0.05	-
Fluorene	-	-	-	<0.05	-
Indeno(1,2,3-c,d)pyrene	-	-	-	<0.05	-
Naphthalene	-	-	-	<0.05	-
Phenanthrene	-	-	-	<0.05	-
Pyrene	-	-	-	<0.05	-
QC RESULTS - DUPLICATES					
Relative Percent Difference, %					
Arsenic	-	22.1	-	-	-
Cadmium	-	<1.0	-	-	-
Chromium	-	4.4	-	-	-
QC RESULTS - SPIKED SAMPLES					
Percent Recovery, %					
Arsenic	104	-	119	-	-
Cadmium	100	-	112	-	-
Chromium	113	-	103	-	-
Copper	107	-	101	-	-
Lead	86.4	-	106	-	-
Zinc	96.0	-	95.4	-	-
Aldrin	-	-	-	-	100
alpha - BHC	-	-	-	-	99.0
alpha - Endosulphan	-	-	-	-	105
beta - BHC	-	-	-	-	92.0
beta - Endosulphan	-	-	-	-	101
Chlordane	-	-	-	-	99.3
DDD	-	-	-	-	102
DDE	-	-	-	-	109
DDT	-	-	-	-	98.0
delta - BHC	-	-	-	-	95.0
Dieldrin	-	-	-	-	107
Endosulphan sulphate	-	-	-	-	96.0



Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES
Analytical Laboratories
A.C.N. 006 313 089
655 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5999
Fax (03) 9562 0316

Quality Results

Replacement Report No. 55859

	0202071Q012 07/02/02 Spike Recovery Lab Control	0202071Q013 07/02/02 Duplicate 0202071/005	0202071Q014 06/02/02 Spike Recovery 0202071/005	0202071Q015 06/02/02 QC Blank METHOD BLK	0202071Q016 06/02/02 Spike Recovery LAB CONTROL
Endrin	-	-	-	-	95.0
Endrin Aldehyde	-	-	-	-	99.0
Heptachlor	-	-	-	-	99.0
Heptachlorepoxide	-	-	-	-	110
Hexachlorobenzene	-	-	-	-	102
Lindane	-	-	-	-	101
Methoxychlor	-	-	-	-	91.0
Acenaphthene	-	-	-	-	109
Acenaphthylene	-	-	-	-	112
Anthracene	-	-	-	-	106
Benz(a)anthracene	-	-	-	-	97.0
Benzo(a)pyrene	-	-	-	-	89.0
Benzo(b)fluoranthene	-	-	-	-	89.0
Benzo(g,h,i)perylene	-	-	-	-	89.0
Benzo(k)fluoranthene	-	-	-	-	100
Chrysene	-	-	-	-	100
Dibenz(a,h)anthracene	-	-	-	-	90.0
Fluoranthene	-	-	-	-	112
Fluorene	-	-	-	-	104
Indeno(1,2,3-c,d)pyrene	-	-	-	-	103
Naphthalene	-	-	-	-	110
Phenanthrene	-	-	-	-	104
Pyrene	-	-	-	-	111

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 313 089
365 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5800
Fax (03) 9562 0335

Quality Results

Replacement Report No. 55859

	0202071Q017	0202071Q018	0202071Q019	0202071Q020	0202071Q021
	06/02/02 QCBlank METHOD BLK	06/02/02 Spike Recovery SOIL	06/02/02 QCBlank METHOD BLANK	06/02/02 Spike Recovery LAB CONTROL	06/02/02 Spike Recovery SOIL
Endrin	-	92.5	-	-	-
Endrin Aldehyde	-	75.0	-	-	-
Heptachlor	-	100	-	-	-
Heptachlorepoxide	-	95.0	-	-	-
Hexachlorobenzene	-	105	-	-	-
Lindane	-	120	-	-	-
Methoxychlor	-	95.0	-	-	-
Acenaphthene	-	115	-	-	-
Acenaphthylene	-	110	-	-	-
Anthracene	-	112	-	-	-
Benz(a)anthracene	-	87.5	-	-	-
Benzo(a)pyrene	-	80.0	-	-	-
Benzo(b)fluoranthene	-	90.0	-	-	-
Benzo(g,h,i)perylene	-	128	-	-	-
Benzo(k)fluoranthene	-	102	-	-	-
Chrysene	-	105	-	-	-
Dibenz(a,h)anthracene	-	77.5	-	-	-
Fluoranthene	-	105	-	-	-
Fluorene	-	108	-	-	-
Indeno(1,2,3-c,d)pyrene	-	122	-	-	-
Naphthalene	-	112	-	-	-
Phenanthrene	-	108	-	-	-
Pyrene	-	112	-	-	-

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 913 059
565 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5999
Fax (03) 9562 0335

Quality Results

Replacement Report No: 55859

	0202071Q022	0202071Q023	0202071Q024	0202071Q025	0202071Q026
	06/02/02 Duplicate 0202071/005	06/02/02 Spike Recovery 0202071/005	10/02/02 QCBlank METHOD BLANK	10/02/02 QCBlank METHOD BLANK	10/02/02 Spike Recovery SOIL
HYDROCARBONS (C6-C9), AS RECEIVED					
Method: 504P&T Units: mg/kg					
TPH C6 - C9	-	-	<20	<20	-
QC RESULTS - DUPLICATES					
Relative Percent Difference, %					
TPH C10 - C14	<1.0	-	-	-	-
TPH C15 - C28	16.5	-	-	-	-
TPH C29 - C36	27.0	-	-	-	-
QC RESULTS - SPIKED SAMPLES					
Percent Recovery, %					
TPH C6 - C9	-	-	-	-	90.0
TPH C10 - C14	-	116	-	-	-
TPH C15 - C28	-	96.0	-	-	-
TPH C29 - C36	-	93.6	-	-	-

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 009 823 089
357 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5699
Fax (03) 9562 0036

Quality Results

Replacement Report No. 55859

	0202071Q027	0202071Q028	0202071Q029	0202071Q030	0202071Q031
	10/02/02 Spike Recovery lab control	10/02/02 Duplicate 0202071/010	10/02/02 Spike Recovery 0202071/010	08/02/00 QCBlank METHOD BLANK	08/02/00 Duplicate 0202071/010
BTEX/-MAH (PURGE & TRAP), AS RECEIVED					
Method: 504P&T Units: mg/kg					
Benzene	-	-	-	<0.1	-
Ethylbenzene	-	-	-	<0.1	-
Toluene	-	-	-	<0.1	-
Xylenes	-	-	-	<0.1	-
QC RESULTS - DUPLICATES					
Relative Percent Difference, %					
TPH C6 - C9	-	<1.0	-	-	-
Benzene	-	-	-	-	<1.0
Ethylbenzene	-	-	-	-	<1.0
Toluene	-	-	-	-	<1.0
Xylenes	-	-	-	-	<1.0
QC RESULTS - SPIKED SAMPLES					
Percent Recovery, %					
TPH C6 - C9	95.0	-	97.0	-	-

Explosives
Water & Waste Water
Environmental
Food & Pharmaceuticals
Biological

GRIBBLES Analytical Laboratories
A.C.N. 006 823 089
585 Blackburn Road
Notting Hill, Victoria, Australia 3168
Telephone (03) 9562 5999
Fax (03) 9562 0376

Quality Results

Replacement Report No. 55859

0202071Q032

08/02/00
Spike
Recovery
0202071/010

QC RESULTS - SPIKED SAMPLES

Percent Recovery, %

Benzene	112
Ethylbenzene	118
Toluene	110
Xylenes	102

Quality Results provided in this report are for laboratory Quality Control purposes.