

ENVIRONMENTAL SITE ASSESSMENT (PHASE 1) SITE HISTORY

344-354 FINDON ROAD KIDMAN PARK SOUTH AUSTRALIA

Prepared for:

Leander Investments Pty Ltd

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EXECUTIVE SUMMARY

AEC Environmental Pty Ltd (AEC) was commissioned by Leander Investments Pty Ltd, to prepare a Phase 1 Environmental Site Assessment (Site History) for the property located at 344 – 354 Findon Road, Kidman Park.

Site History

The available historical information indicates that the site was originally used for market gardening until the late 1950's. The site was developed in the 1960's with the construction of some of the present day light industrial buildings. Further light industrial development of the site occurred in the late 1970's and again in the late 1990's.

Potential Contamination Issues

The potential sources of site contamination associated with past and present site uses include (but may not be restricted to):-

- Storage of adhesives and paints during freighting operations;
- Potential leaks from an electrical transformer located in the north eastern portion of the site:
- Pesticide and herbicide chemical usage during market garden operations; 0
- Use of general weed control chemicals around the site;
- Possible termite control chemical use underneath buildings; and 0
- Fill brought onto the site from various sources for use under buildings, as car parking/pavement base courses or site levelling.

Potential contaminants associated with the site may include (but not be limited to) heavy metals, PCB's, oils and solvents, combustion waste by-products (imported fill) and various pesticides and herbicides.

Based on the historical investigation conducted for the site, in our opinion there are no significant potential contamination issues associated with the site. It is considered there is nothing precluding the site to be developed for mixed use purposes subject to the relevant environmental approvals and/or audits required.



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1.0 INTRODUCTION

1.1 Background

AEC Environmental Pty Ltd (AEC) was commissioned by Leander Investments Pty Ltd, to prepare a Phase 1 Environmental Site Assessment for the property located at 344-354 Findon Road, Kidman Park. The purpose of this assessment was to identify potential contamination issues associated with past and present land use. The location of the site is presented in Figure 1 below.



Figure 1 – Site Location

Source: <u>www.nearmap.com</u>
Date viewed: 24 Nov 2010

The scope of work has comprised:-

- research of the site history;
- a site inspection;
- o review of local geology and hydrogeology; and
- identification of potential contaminants associated with current and past uses of the site.

The Phase 1 ESA has been prepared with reference to industry standards and guidelines including the National Environment Protection (Assessment of Site Contamination) Measure (NEPM,1999) AS4482.1-2005 (Guide to the investigation and sampling of potentially contaminated soil), and the South Australian Health Commission Contaminated Sites Monograph No.3, "Identification and Assessment of Contaminated Land – Improving Site History Appraisal".

This report has been prepared for the private and confidential use of the client. Whilst every effort has been made to check the particulars referred to in this report, prospective purchasers are advised to conduct their own verification.



2.0 SITE DETAILS

2.1 Site Identification and Zoning

The site is described by the Certificate of Title Volume 5339 Folio 984. The legal description of the site is Allotment 26 of Filed Plan 120845, in the area named Kidman Park, Hundred of Yatala. The site is registered to Leander Investments Pty Ltd.

The site is located within an Industry zone within the City of Charles Sturt. A copy of the current title and zoning information are provided in Appendix A.

2.2 Physical Setting

The site is situated in the suburb Kidman Park, located approximately 6.5 kilometres west of the Adelaide CBD and within 3.5 kilometres of the coast (Gulf St Vincent). The nearest watercourse is the Torrens River which is located approximately 1 kilometre to the south of the site.

2.3 Site Description and Current Land Use

The site is essentially rectangular in shape with a total area of approximately 2.64 hectares. The site is generally level and contains four warehouses, an operations/docking area and office buildings. A mobile phone tower is located on the top of the roof of Warehouse 2 (see figure below). The remainder of the site is covered with bitumen and concrete with the exception of some well established trees along the eastern and western boundaries. Several car parking areas are located across the site. A figure showing the current site layout is presented below.

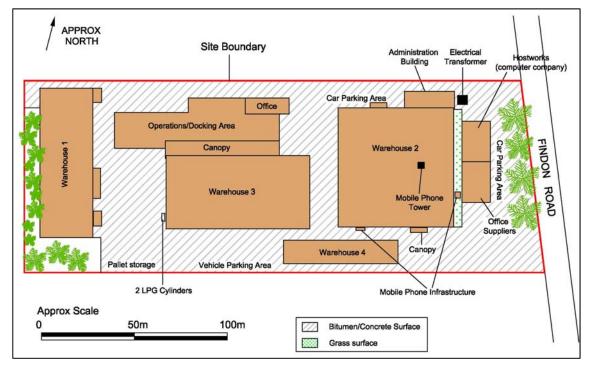


Figure 2 – Site Layout





View facing west at front of site



View facing west across the northern boundary of site



View facing west across the southern boundary of site



2.4 Surrounding Land Use

The site is bounded by Silcar Communications to the north, residences to the east and west and ECH Food Services to the south.

There are two motor mechanics located near the site; one approximately 40 metres south west of the site and the other approximately100 metres north. There is also a service station located approximately 500 metres north of the site.

2.5 Site Inspection

An AEC environmental scientist inspected the site on 18 November 2010. The objectives of the inspection were to locate and identify:-

- Structures and storage areas including underground tanks, waste pits and lagoons, hazardous materials storage, electrical transformers and hydraulic equipment, asbestos products, septic tanks and drain fields; and
- Obvious visual contamination indicators such as disturbed vegetation, discoloured, oily or disturbed soil, or the presence of any odours.

The following items of interest were noted during the inspection: -

1. Freighting Operations

Various goods are brought to site daily as part of the operations of the freighting company that currently occupies the site. The items of interest noted during the inspection were adhesives, paints and tyres. These goods were packaged on pallets and wrapped in plastic. The goods were handled in areas that were completely covered by either bitumen or concrete that appeared to be in good condition. No obvious drainage was noted in these areas.



View of Freighting Goods (includes drums & boxes containing adhesive)



2. Electrical Transformer

An electrical transformer was located in the north eastern portion of the site. The transformer is raised off the surface on a steel frame. A photograph is presented below.



View facing south at electrical transformer

No other items of interest were noted during the site inspection.

2.6 Geology and Hydrogeology

The 1:50,000 scale Adelaide geological map produced by the South Australian Department of Mines and Energy indicates the surface geology in the area comprises the Pooraka formation. The Pooraka formation reportedly comprises alluvial/colluvial clays with varying amounts of sand and silt.

Reference to the former Department of Mines and Energy Report Book 94/9 "Soils stratigraphy and engineering geology of the Adelaide Plains" indicates the site is situated in the Adelaide Plains in a landform area known as the lower alluvial plain. The general geological sequence in the lower alluvial plain comprises:-

Quaternary Age sediments of fluvial and marine origin of the order of 100 metres thickness. The dominant formation is Hindmarsh Clay, which is predominantly clay, but has lenses of gravels, silts and sands. Groundwater in the Quaternary sediments occurs in relatively thin layers (up to a few metres in thickness) of more permeable materials (sands, silts, gravels). There are reportedly up to six distinct aquifers within the Quaternary sediments. These aquifers are not highly utilised as the yield and water quality are highly variable; overlying



- Tertiary sediments of marine origin (limestones, sands and sandstones) up to 500 metres thickness. The Tertiary aquifers generally have better quality water and yields, and are highly utilised in some areas; overlying
- Precambrian Age basement rock below approximately 600 metres depth.

South Australian Department of Mines and Energy Information Sheet 21 indicates the expected water table level is between two and four metres from the surface, with total dissolved solids levels in the range of 2,500-5,000 mg/L. The regional groundwater flow direction is expected to be to the west to south west, however it is possible there are local variations.

Groundwater information from bores located within a 500 metre radius of the site was obtained from the Department of Water Land and Biodiversity Conservation (DWLBC). This information revealed that a groundwater well was located on the subject site. This well was not observed during the site inspection. According to DWBLC records the well has a total depth of 145.08 metres with a standing water level of 15.24 metres. Groundwater wells in the local area ranged from 7 to 145.08 metres in depth and groundwater salinity ranged between 237 mg/L and 7,297 mg/L total dissolved solids. The groundwater information is presented in Appendix B and a summary of the bores is presented in Table 1.

Table 1 - Local Groundwater Bore Information (DWLBC Records)

			,			
Location	PIRSA Bore ID	Total Depth (m)	Water Level & date (m)	TDS (mg/L)	Yield (L/sec)	Status/Purpose
On site	66287445	145.08	15.24 (1952)	1,070	6.32	-/-
70m NE	662821573	18	9 (2004)	3,320	1	- / Domestic
100m W	66287444	-	-	1,844	6	Abandoned / -
120m S	662816843	10	-	237	1	- / Drainage
120m SE	662813445	8	0 (1985)	1,418	-	-/-
150m S	662817159	18.5	-	1,658	-	- / Domestic
180m NE	662816878	20	-	2,932	2	- / Domestic
180m N	66287443	-	-	7,297	-	-/-
220m SE	662818240	9.5	5.5 (1997)	1,396	0.3	- / Domestic
240m S	662815919	12	5 (1992)	2,340	-	Operational / Domestic
240m SE	662813620	11	3.7 (1986)	1,670	1.13	-/-
240m N	662818956	22.5	6.5 (1998)	2,047	1	Domestic / -
250m S	66287448	140.21	-	1,042	-	-/-
270m N	662821923	7	5.5 (2004)	-	0.01	- / Monitoring
280m N	66287442	24.38	9.14 (1961)	1,773	-	-/-
320m NE	662812381	20	4.5(1982)	-	1	-/-
340m SE	662812556	221.5	8.9 (1983)	1,045	5	Operational / Irrigation
360m E	66287497	144.78	-	871	-	-/-
400m E	662816807	10	-	1,636	1	- / Domestic
480m E	66287498	125.27	-	871	-	-/-



3.0 SITE HISTORY

3.1 History of Ownership

A historical ownership search was conducted by reviewing information provided on historical Certificates of Title. Historical ownership and lease agreements for the site can be summarised as follows:

1894 – 1924. Edward John Keele (surveyor)

Various leases were produced over portions of the site during this time including:

- Lease to Wing Soon commencing 6/12/1893 for 1 year and 9 months
- Lease to Thomas Henfield commencing 6/12/1894 for 10 years
- Lease to John Fewings commencing 6/12/1894 for 10 years
- Lease to William Edward Quinn commencing 6/12/1894 for 10 years
- Lease to Thomas Shuse commencing 6/12/1894 for 3 years and 6 months
- Lease to Ernst Shuse commencing 6/12/1894 for 5 years and 4 months
- Lease to Jaung Chow and Ah Heung commencing 4/09/1895 for 5 years
- Lease to John Fewings commencing 6/12/1895 for 9 years
- Lease to William Claude Shuse (market gardener) commencing 9/06/1898 for 10 years
- Lease to Wang Ah Chow and Ah Wuck commencing 6/12/1898 for 6 years
- Lease to Pak Luon commencing 6/03/1901 for 2 years and 9 months
- Lease to Al Sherk commencing 6/03/1910 for 4 years
- Lease to Albert Edward Scott commencing 11/12/1916 for 5 years
- Lease to Lois Albert Pontt commencing 11/12/1918 for 4 years
- Lease to John James Barnett commencing 11/08/1919 for 5 years
- o 1924 1943. John James Barnett (gardener)
- 1943 1961. Walter Tilley (gardener)
- 1961 1961. B. F. Balnaves Investments Limited
- o 1961 1966. D & G Fowler Limited
- 1966 1976. Braemer Engineering Company (SA) Pty Ltd
- 1976 1978. Custodian Nominees Pty Ltd
 - Lease to Davleco Braemar Pty Ltd commencing 1/02/1976 for 1 year
 - Lease to Braemar Appliances Limited commencing 25/02/1977
- o 1978 1984. T & G Mutual Life Society Limited
- 1984 1988. Farmer's Co-operaive Executors and trustees Limited
- 1988 Present. Leander Investments Pty Ltd
 - Lease to Braemer Appliances commencing 1/02/1976 for 15 years
 - Lease to Central Express & Warehousing Pty Ltd commencing 1/09/1991



- Lease to Central Warehousing & Distribution Pty commencing 18/01/1996
- Lease to National Consolidated Ltd commencing 7/04/1992 for 9 years
- Lease to Safe Transport Pty Ltd commencing 18/01/1996
- Lease to Optus Mobile Pty Ltd commencing 10/11/1999
- Lease to Crown Castle Australia Pty Ltd 9/10/2003

A copy of the current title is presented in Appendix A.

3.2 Aerial Photographs

Aerial photographs of the site dating from 1949 have been reviewed. Copies of aerial photographs reviewed are attached in Appendix C.

The 1949 aerial photograph shows the site to contain two buildings in the north eastern corner and a small patch of vegetation. There is a small shed/structure in this area adjacent the northern boundary. The south eastern corner of the site contains a round object which is likely to be a rainwater tank. The remainder of the site contains several rows of glasshouses. The land surrounding the site consists of market gardens and multiple cleared fields, likely to be used for broad acre faming.

The 1959 aerial photograph shows that the configuration of one of the buildings in the north east corner has changed. Some of the glasshouses located on the site have been cleared and new ones erected in eastern portion of the site. Dark patches of soil are evident in the central portion of the site which suggests possible disturbance or cultivation of the soil. Significant development has occurred to the east and north east of the site, with the construction of numerous residences that are serviced by sealed roads.

The 1969 aerial photograph shows the site has been redeveloped with two of the present day buildings being constructed in the eastern portion of the site. Two car park areas have also been constructed, one adjacent the northern boundary and the other adjacent the southern boundary. The remainder of the site is vacant. Additional residential development has occurred to the north, east and south of the site. The blocks adjacent to the site to the north and south have been developed into commercial/industrial properties.

The 1979 aerial photograph shows two new buildings have been constructed since the 1969 photograph, one in the central portion of the site and another adjacent the southern boundary. It appears that approximately half of the surface of the site is sealed with either bitumen or concrete. The remainder of the surface is unsealed. There appears to be a small patch of darker coloured, possibly disturbed soil within the unsealed area. The area also appears to be used for storage of various items which cannot be distinguished in the photograph. The majority of market gardens formerly surrounding the site have been removed and replaced with residences. Some commercial/industrial development has occurred to the north of the site along Grange Road.

The 1989 aerial photograph shows minor changes to the site since the 1979 photograph. Fewer vehicles are parked at the site than that in 1979 aerial photograph. Some shrubs and other vegetation are covering the surface of the western portion of the site. The glasshouses



on the adjacent property to the north of the site appear to have been removed and replaced with a commercial/industrial building.

The 1999 aerial photograph shows that an additional building has been constructed in the western portion of the site and another adjacent the northern boundary of the site. The majority of the site is now covered with buildings, bitumen and/or concrete. There does not appear to be any major changes to the surrounding area since the 1989 photograph.

The 2005 aerial photograph shows the site in essentially its present day layout. The operations/docking area shows a slightly modified roof layout with the addition of a canopy. There is little change to surrounding properties.

3.3 Government Records

EPA SECTION 7 SEARCH

A freedom of information search was conducted of the South Australian Environment Protection Authority (EPA) database for information relating to the subject land in accordance with Section 7 of the Land & Business (Sale & Conveyancing) Act, 1994. The EPA advised (in written form) that it has no records of issues associated with:-

- o Particulars of mortgages, charges, prescribed encumbrances affecting the land; or
- Particulars relating to environmental protection including:
 - Environmental assessments;
 - Waste depots;
 - Production of certain waste; and
 - Waste on land.

Copies of the EPA's written response from the Section 7 search is presented in Appendix D.

UNDERGROUND STORAGE TANK SEARCH

Safe Work SA (under the Department for Premier and Cabinet) was contacted regarding knowledge of dangerous good storage at the site. Safe Work SA advised that according to their records there were no licenses for dangerous goods storage at the site. The search revealed the following licences were found on the surrounding properties:

- 245 Findon Road, Findon There is a current license to store a total of 175 kilolitres
 (5 underground storage tanks) of class 3 flammable liquid.
- 293 Findon Road, Flinders Park There is a cancelled licence to store a 52.1 kilolitre underground storage tank
- 297 Findon Road, Flinders Park There is a cancelled licence to store a 52.1 kilolitre underground storage tank

A copy of the Safe Work SA response is presented in Appendix D.



3.4 Interviews

During the site inspection the AEC environmental scientist was accompanied by Mr. Mike Wilkins the commercial manager of Central Freight Management Services (currently leasing a significant portion of the site). Mr Wilkins provided the following information:

- Central Freight Management Services are a freighting company that has occupied the site for the last 20 years.
- o Various goods are brought to site daily and leave within 48 hours of arrival.
- Mr. Wilkins advised that some of the goods brought to site include chemicals, particularly adhesives. These goods are only on site for a short period of time. These goods are kept on pallets and covered with plastic to keep them secure.
- No underground storage tanks are known to be present at the property. Two
 above ground gas cylinders are present in the western portion of the site
 and are used to fuel the forklifts and pallet runners.
- A portion of the site is leased to Chrisco, which package and delivers Christmas hampers. These include furniture and food hampers.
- The building fronting Findon Road is leased to two companies; an office supplier and a computer company.

AEC contacted the current owner Mr. Joe Fraterman who provided the following information in relation to the past and present site use:

- Leander Investments have owned the site since 1988.
- Braemer Engineering occupied the site just prior to Mr. Fraterman's ownership. Although it was known the company constructed hot water systems and air conditioners, their use of the site was unknown.
- Since owning the site, Mr. Fraterman has constructed the two warehouses in the northern and western portions of the site. They were constructed in the late 1990's.
- Since 1988, the site has been occupied by various freighting companies.

3.5 Information Sources

- Department for Environment, Heritage and Aboriginal Affairs. Mapland, Adelaide - Provision of aerial photography.
- Department for Administrative and Information Services, Lands Titles Office,
 Adelaide Provision of title information.
- Department of Water, Land and Biodiversity Conservation, South Australia Provision of groundwater information.
- The South Australian Environment Protection Authority Information on any known environmental issues on the site.
- Department for Premier and Cabinet (Safe Work SA) Information on underground storage tanks



- City of Charles Sturt information on zoning.
- Mr Joe Fraterman, current owner of site provided information relating to past and present site use.
- Mr. Mike Wilkins the commercial manager of Central Freight Management Services provided information relating to the site.



4.0 POTENTIAL CONTAMINANTS OF CONCERN

Based on the historical site review and the site inspection, the following potentially contaminating activities and their likely significance have been identified for the site. Degrees of significance are based on general knowledge of the potential contamination sources and are defined as follows:

- High: Contaminants from activity that have a high potential to cause harm to receptors including ecosystems and humans
- Moderate: Contaminants from activity that have a high potential to cause harm to receptors including ecosystems and humans
- Low: Contaminants from activity that have a high potential to cause harm to receptors including ecosystems and humans

Table 2. Potential Contamination Sources & Contaminants of Concern

Potential Contamination Sources		Contaminants of Potential Concern	Likelihood of Occurrence	Likely Significance
On-Site	Freighting operations - storage of adhesives and paints	TPH, BTEX, PAH's and metals	Unlikely	Low significance
	Imported fill material across site (unknown source/s)	Metals and PAH's	Likely	Moderate significance
	Leaks from electrical transformer	PCB's	Unlikely	Low significance
	Former market gardens - pesticide and herbicide chemical usage	OCP's, OPP's and metals	Likely	Low to moderate significance
	General weed control chemicals around the site	OCP's and metals	Likely	Low to moderate significance
	Termite control chemical use underneath buildings	OCP's and metals	Likely	Low to moderate significance
Off Site	Storage and use of petroleum hydrocarbons (from motor mechanics located 40m south west and 100m north of site)	TPH, BTEX, PAH's and metals	Unlikely	Low to moderate significance
	Light industrial activities	TPH, BTEX, PAH's and metals	Unlikely	Low to moderate significance

NOTES:- OCP = organochlorine pesticides

OPP = organophosphate pesticides

TPH = total petroleum hydrocarbons

BTEX = benzene, toluene, ethyl benzene, xylenes

PAH = polycyclic aromatic hydrocarbons

PCB = Polychlorinated Biphenyls



5.0 CONCLUSIONS

AEC Environmental Pty Ltd (AEC) was commissioned by Leander Investments Pty Ltd, to prepare a Phase 1 Environmental Site Assessment (Site History) for the property located at 344 – 354 Findon Road, Kidman Park.

Site History

The available historical information indicates that the site was originally used for market gardening until the late 1950's. The site was developed in the 1960's with the construction of some of the present day light industrial buildings. Further light industrial development of the site occurred in the late 1970's and again in the late 1990's.

Potential Contamination Issues

The potential sources of site contamination associated with past and present site uses include (but may not be restricted to):-

- Storage of adhesives and paints during freighting operations;
- Potential leaks from an electrical transformer located in the north eastern portion of the site;
- Pesticide and herbicide chemical usage during market garden operations;
- Use of general weed control chemicals around the site;
- o Possible termite control chemical use underneath buildings; and
- Fill brought onto the site from various sources for use under buildings, as car parking/pavement base courses or site levelling.

Potential contaminants associated with the site may include (but not be limited to) heavy metals, PCB's, oils and solvents, combustion waste by-products (imported fill) and various pesticides and herbicides.

Based on the historical investigation conducted for the site, in our opinion there are no significant potential contamination issues associated with the site. It is considered there is nothing precluding the site to be developed for mixed use purposes subject to the relevant environmental approvals and/or audits required.



6.0 LIMITATIONS OF THIS REPORT

This environmental site assessment report has been prepared in accordance with industry recognised standards and procedures at the time of the work. The report presents the results of the assessment based on the quoted scope of works (unless otherwise agreed in writing) for the specific purposes of the commission. No warranties expressed or implied are offered to any third parties and no liability will be accepted for use of this report by any third parties.

Information provided by third parties has been assumed to be correct and complete. AEC does not assume any liability for misrepresentation of information by third parties or for matters not visible, accessible or present on the subject property during any site inspections conducted during the time of the work.

The first stage in the site assessment process generally involves site history research and/or a site inspection. This stage is intended to establish whether there is a likelihood of site contamination. Depending on the location of the site and surrounding land use, there could be contamination present which could not have been identified by preliminary investigation of this nature - for example, if there had been dumping of waste liquids which has left no visual evidence and past owners were not aware of. If recommendations have been made on whether or not to conduct further investigation, these have been based on the likelihood of site contamination, and are generally based on the sensitivity of the proposed future use of the site. A more conservative approach is generally adopted for a sensitive future use such as residential or a child care centre. Subsequent stages of soil or groundwater investigation may follow. The site assessment process is often ongoing, with additional stages of investigation being required to resolve issues raised in previous stages of the investigation. In cases where sampling and analysis of soil and/or groundwater has been conducted, then the following standard limitations apply:-

- The results presented in the report apply only to the specific locations and the time the sampling was conducted. The nature and extent of contaminants present on a site can change due to physical disturbance or removal, chemical or biological transformation, or due to the migration of the contaminants to different areas.
- The borehole or test pit logs indicate the approximate subsurface conditions only at the specified test locations. Soil and rock formations are variable, and conditions in areas not sampled may differ from those at the actual sampling locations due to natural subsurface variation.
- The precision with which subsurface conditions are indicated depends largely on the frequency and method of sampling and investigation, and the degree of subsurface variation. There can be no complete guarantee that contaminants are not present at significant concentrations in some areas, even with the most thorough site assessment.
- Any conclusions or recommendations are based solely on the land use assumptions stated in the report. These conclusions or recommendations do not apply to any other land use for the site.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. Opinions and judgements expressed herein are based on AEC's understanding of current regulatory standards and should not be construed as legal opinions.