



# **Preliminary Site Investigation: Environmental Site History**

Job Number: \$33474 - 253419

**Client: St Domenic's Priory College Ltd** 

Site: 74 Hill Street, North Adelaide, SA, 5006

Date: 30 January 2017

**Revision: 0** 

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|            |  |                                     |           |                    |
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# **Executive Summary**

| Site Location and Current Condition  | The site is located at 74 Hill Street, North Adelaide. The site occupies an area of approximately 2,050m² and comprises a vacant medical consulting rooms and associated car parking.  |  |
|--|--|--|
| Objectives of Investigation  The objectives of this PSI - ESH are to identify any potential source contamination associated with current or historical site uses and to an assessment of the potential Contaminants of Concern in soil (a identified in the ESH) that may pose unacceptable risks to future to the site. |  |  |
| Proposed Development   | Year 12 Centre.  |  |
| Environmental Setting  | Geology Description The Geological Survey of South Australia, 1:100,000 Adelaide 6628 sheet, (Department of Primary Industries and Resources South Australia) indicates that the geology beneath the site and surrounds is characterised by brown soloniszed soils.  Hydrogeology Description Depth to groundwater in the vicinity of the site is indicated to be approximately 20-30m bgl.  Hydrology Description The River Torrens is the closest surface water feature to the site, located approximately 800m west of the site.  |  |
| Potentially Contaminating activities and Associated Contaminants (Sources)   | <ul> <li>On-site PCAs identified are:</li> <li>Unknown activities associated with the structure historically located in the north-eastern portion of the site;</li> <li>Potential importation of fill material visible at the surface of the site;</li> <li>Maintenance of grassed/unsealed areas, including the use of herbicides;</li> <li>Potential importation of contaminated fill material for use as sub base of bitumen and as footings of building; and</li> <li>Sealing of the asphalt with bitumen.</li> <li>No potential offsite sources of contamination have been identified within the investigation.</li> </ul>  |  |
| Conclusions and Recommendations  | Based upon the findings of the ESH, FMG considers that there is a low to moderate potential risk presented to the identified human health and environment receptors associated with the site due to PCAs being identified and there being a potential for pollutant linkages to exist, during and following the residential redevelopment of the site. This warrants further investigation and consideration.  FMG recommends that a preliminary investigation comprising limited soil sampling is undertaken to assess the contamination status of the site. This will allow further investigation into the nature and extent of any site contamination and to further assess the potential risks posed to the identified receptors at the site, following the residential redevelopment. |  |

## **Shortened Form**

| AHD      | Australian Height Datum  |  |  |  |
|----------|--|--|--|--|
| AS       | Australian Standards   |  |  |  |
| ASC NEPM | Assessment of Site Contamination National Environmental Protection Measure |  |  |  |
| BTEX     | Benzene, Toluene, Ethylbenzene & Xylenes                                   |  |  |  |
| CSM      | Conceptual Site Model  |  |  |  |
| СТ       | Certificate of Title   |  |  |  |
| DEWNR    | Department of Environment, Water and Natural Resources                     |  |  |  |
| DWLBC    | Department of Water Land Biodiversity Conservation                         |  |  |  |
| EPA      | Environment Protection Authority South Australia                           |  |  |  |
| ESH      | Environmental Site History   |  |  |  |
| FMG      | FMG Engineering  |  |  |  |
| km       | Kilometres   |  |  |  |
| m        | Metres   |  |  |  |
| m²       | Square Metres  |  |  |  |
| m bgl    | Metres below ground level  |  |  |  |
| mg/kg    | Milligrams per kilogram  |  |  |  |
| mg/L     | Milligrams per litre   |  |  |  |
| NEPM     | National Environment Protection Measure                                    |  |  |  |
| PAH      | Polycyclic Aromatic Hydrocarbons   |  |  |  |
| PCA      | Potentially Contaminating Activities                                       |  |  |  |
| PCB      | Polychlorinated Biphenyls  |  |  |  |
| PSI      | Preliminary Site Investigation   |  |  |  |
| SARIG    | South Australian Resources Information Geoserver                           |  |  |  |
| TRH      | Total Recoverable Hydrocarbons   |  |  |  |
| VOCs     | Volatile Organic Compounds   |  |  |  |
| μg/L     | Micrograms per litre   |  |  |  |
|          |  |  |  |  |

## 1. Introduction

## 1.1. Background

FMG Engineering (FMG) was engaged by St Domenic's Priory College Ltd. (the client) to undertake a Preliminary Site Investigation (PSI) comprising an Environmental Site History (ESH) for land located at 74 Hill Street, North Adelaide (the site).

The site comprises an area of approximately 2,050 square metres (m<sup>2</sup>) and currently comprises vacant medical consulting rooms and associated car parking. The location and boundaries of the sites are presented in Figure 1.

The client is proposing to develop the site to include a new Year 12 centre. FMG understands that the Development Assessment Commission (DAC) and the Adelaide City Council requires a PSI completed to assess whether there are any unacceptable risks to the future users of the site, due to historical land use, following the proposed redevelopment.

## 1.2. Objectives

The objective of this PSI ESH is to identify any potential source(s) of contamination associated with current or historical site uses that may impact on the suitability of the site for future development, including residential land use, and/or warrant further investigation.

The purposes of the PSI ESH are to:

- To provide information on past and current uses of the site and surrounding area, and the nature of hazards and physical constraints;
- To provide information on the geology, hydrogeology and hydrology of the site to assist in establishing the conceptual model and in identifying constraints to the development of the site;
- To identify receptors, potential sources of contamination, likely pathways and any features of immediate concern; and
- To provide a preliminary Conceptual Site Model (CSM) of the nature and extent of potential contamination and data for a preliminary qualitative risk assessment.

#### 1.3. Scope of Work

All work was undertaken in accordance with the scope of work outlined in the FMG proposal (EST10864) dated 29 November 2016 and conformed to the requirements of FMG's Quality Management System, which is certified by NCS International Pty. Ltd. to comply with the requirements of ISO9001.

The scope of work was developed in accordance with:

- National Environment Protection (Assessment of Site Contamination) Measure, 1999, amendment May 2013 referenced in this report as "ASC NEPM"; and
- Australian Standard AS4482.1-2005, Guide to the investigation and sampling of sites with potentially contaminated soil.

The PSI ESH encompasses a desktop study and a site inspection only. No intrusive sampling works were undertaken as a part of the commission.

## 1.4. Sources of Information

The sources of information which have been consulted during the preparation of this report are presented in Table 1.4 overleaf.

**Table 1.4: Sources of Information and Search Results** 

| Source  | Information  | Section of the Report       |
|---|--|-----------------------------|
| Land Services Group DPTI,<br>Property Assist Application  | The Certificates of Title (Current and Cancelled) have been obtained and reviewed.   | Section 2 and<br>Appendix A |
| Adelaide City Council   | Planning and zoning Information  | Section 2 and<br>Appendix B |
| DEWNR, Mapland  | Historical aerial photographs have been obtained and reviewed.   | Section 3 and<br>Appendix C |
| Sands & McDougall's South<br>Australian Directory   | A review of the SA Directory, incorporating<br>Boothby's SA Directory has been undertaken  | Section 3                   |
| SA EPA Section 7 Search   | Records obtained from the SA EPA Database relating to the Land and Business (Sale and Conveyancing) ACT 1994.                            | Section 3 and<br>Appendix D |
| Safe Work SA Records  | Dangerous goods licensing Information.   | Section 3 and<br>Appendix E |
| Department of environment and Heritage, The Adelaide topographic series   | Sheet No.6627-IV and PT6627-1 Scale 1:50,000   | Section 5                   |
| Department of Primary<br>Industries and Resources<br>South Australia, The<br>Geological Survey of South<br>Australia  | Sheet No. 6628, Scale 1:100,000  | Section 5                   |
| CSIRO Australia, Report Book 94/9, Volume 1, "Soils, stratigraphy and engineering geology of near surface materials of the Adelaide Plains", Sheard and Bowman, 1998. | A review of the publication to obtain information relating to the geology of the site.   | Section 5                   |
| DEWNR Water Connect<br>Website  | Groundwater data relating to the site.<br>Accessed 19 January 2017.  | Section 5 and<br>Appendix F |
| Department of Environmental and Primary Industries, Victorian Resources Online  | A review of the resources online to gain information on the Groundwater Beneficial Uses relating to the groundwater quality of the site. | Section 5                   |
| Australian Soil Resource<br>Information System (ASRIS),<br>CSIRO online   | Information relating to Acid Sulphate Soils in the vicinity of the site.   | Section 5                   |

## 2. Site Identification

The information relating to the site is presented within Table 2.1

**Table 2.1: Site Details** 

| Site Address                                     | 74 Hill Street, North Adelaide   |  |
|--|--|--|
| Certificate of Title(s) and<br>Legal Description | Volume 5773 Folio 314 – Allotment 774, Filed Plan 183236, Area of North Adelaide, Hundred of Yatala. The current certificate of title is presented within Appendix A.  |  |
| Current Ownership                                | St Domenic's Priory College Inc.   |  |
| Site Area  | The site occupies approximately 2,050m².   |  |
| Current Land Use                                 | Vacant medical consulting rooms with associated car parking adjacent<br>the south-western corner of the building. Commercial land use as<br>defined within the ASC NEPM  |  |
| Local Government Authority                       | Adelaide City Council.   |  |
|  | North Adelaide Historic (Conservation) zone - "Conservation of the heritage values and historic character of North Adelaide established by areas of intact and architecturally diverse historic townscapes in a series of wide streets and other roads laid out according to Colonel William Light's original 1837 town plan." |  |
| Current Zoning                                   | A copy of the relevant extract from the Adelaide City Council Development Plan is provided in Appendix B.  |  |
|  | The zoning information provided is an extract only and should be read in conjunction with the other principles and objectives of development control contained within the Adelaide City Council Development Plan, dated 24 September 2015.   |  |
| Proposed Land use                                | Year 12 Centre. Recreational land use as defined within the ASC NEPM Public Open Space.  |  |
|  | To the North – Residential dwelling with Molesworth St beyond.   |  |
|  | To the East –Residential dwelling, including a tennis court.   |  |
| Surrounding Land Uses                            | To the South – Residential Dwelling.   |  |
|  | To the West – Hill Street with St Dominic's Priory College and residential dwellings beyond.   |  |

## 3. Site History

## 3.1. Historical Ownership

A review of the current and historic Certificates of Title (CT) was undertaken to identify:

- Previous ownership/ occupiers of the site;
- Any period during which ownership or tenancy is unknown or uncertain; and
- Any potentially contaminating activities that may have occurred on site.

The site has been owned by numerous medical practitioners and practicing solicitors from 1923 until 2007, when the site was owned by the Minister of Health. In 2013 the site was transferred to Tienan Corporation Pty Ltd., who, prior to transferring the site to St Domenic's Priory College Inc. obtained the site in March 2016. Copies of the CT documentation for the site are presented in Appendix A.

## 3.2. Aerial Photography Review

Aerial photographs of the site from 1949, 1959, 1969, 1979, 1989 and 1999 were obtained from Department of Environment Water and Natural Resources (DEWNR). Additionally, aerial photographs of the site from 2010 and 2013 were obtained from Google Earth. Copies of the aerial photographs are provided in Appendix C.

Table 3.2 provides a summary of the historical aerial photography review. In addition, any subsequent information has been included in the table, if considered relevant.

**Table 3.2: Historical Aerial Photograph Review Table** 

| Photograph Data  | Features Identified   |
|--|---|
| Survey: 7 Photo: 121 Scale: 1:15,800 Date: 10/01/1949                          | The photograph is black and white and of poor to moderate quality.  The site  A residential dwelling is visible immediately adjacent the northern boundary of the site, whilst a smaller structure (potential shed) is visible in the north-eastern corner of the site. The land surrounding the structure appears to be sealed (concrete). The remainder of the site appears to be unsealed with a few trees visible in the central portion of the site.  Surrounding land |
|  | The site appears to be situated in a predominately residential area, which appears to be well developed with what appears to be residential properties.   |
| Survey: 326 The photograph is black and white and of poor to moderate quality. |   |
| Photo: 9399 The site   |   |
| Scale: 1:15,800  | No significant changes are visible since the 1949 aerial photograph.  |
| Date: 3/1/1959   | Surrounding Land  |
|  | No significant changes are visible since the 1949 aerial photograph.  |
| Survey: 1132B  | The photograph is black and white and is of moderate quality.   |
| Photo: 463   | The site  |
| Scale: 1:15,840<br>Date: 9/1/1969  | Two structures, of unknown use have been developed along the southern boundary of the site. What appears to be a concrete slab has been placed surrounding the structure in the north-eastern portion of the site.  |
|  | Surrounding Land  |
|  | No significant changes are visible since the 1959 aerial photograph.  |

**Table 3.2 Continued: Historical Aerial Photograph Review Table** 

| Photograph<br>Data  | Features Identified  |  |
|---|--|--|
| Survey: 2408 Photo: 21 Scale: 1:16,000 Date: 19/03/1979   | The photograph is colour and is of good quality.  The site  The concrete slab visible around the structure in the north-eastern portion of the site, is no longer visible.  Surrounding Land  No significant changes are visible since the 1969 aerial photograph.   |  |
| Survey: 4108  Photo: 165 Scale: 1:20,000 Date: 28/09/1989  The photograph is colour and is of poor to moderate quality.  The site No significant changes are visible since the 1979 aerial photograph.  Surrounding Land No significant changes are visible since the 1979 aerial photograph. |  |  |
| Survey: 5717  Photo: 538 Scale: 1:20,000 Date: 26/09/1999  The photograph is colour and is of good quality.  The site  No significant changes are visible since the 1989 aerial photograph.  Surrounding Land  No significant changes are visible since the 1989 aerial photograph.           |  |  |
| Google earth<br>image, date<br>18/02/2010   | The photograph is colour and is of good quality.  The site  Land in the north-eastern portion of the site appears to be used as a garden, a circular object is visible in the centre of the garden.  |  |
| Google earth image, date 19/10/2013   | The photograph is colour and is of poor quality.  The site  Construction works are visible at the site, with what appears to be the road base beneath the bitumen car park is visible. The building is being extended in the northeastern portion of the site. The structure historically visible in the northeastern portion of the site has been demolished, as has the structure in the southern portion of the site. |  |

## 3.3. Sands and McDougall

FMG conducted a search of the Sands and McDougall Directories for the site. The first record of 74 Hill Street was in 1926 and was listed as "Reid, Mrs Lister". Mrs Lister Reid was noted within the Hill St section in the 1924 and 1925 editions, however, there was no street number adjacent her name. Mrs Lister Reid was recorded as occupying the property until the 1944-45 edition where the occupier was listed as "Britton-Jones, Dr A". A note next to Dr Britton-Jones was observed within the 1960 edition stating he was a surgeon. Dr A Britton-Jones was listed as the occupier until the 1966 edition. Within the 1967 edition Mrs M Britton-Jones was noted as the occupier of the site. Mrs M Britton-Jones remained the occupier of the site until the final Sands and McDougall was published in 1973. These entries in the Sands and McDougal generally coincide with the CTs, presented within Appendix A.

## 3.4. Environment Protection Authority

The SA EPA conducted a Section 7 - Land and Business (Sale and Conveyancing) Act 1994 search for the site boundary. A copy of the search result is included in Appendix D and reported the following, as of 30 May 2016:

- There are no mortgages, charges or prescribed encumbrances affecting the site under Sections 59, 93, 99 and 100 of the Environment Protection Act 1993;
- The EPA does not hold copies of any reports on any environmental assessments or any
  pollution or contamination in relation to the land or any part of the land;
- No licence to operate a waste depot or produce prescribed or listed waste has been issued for the site under the repealed South Australian Waste Management Commission Act 1979, the repealed Waste Management Act 1987 or the Environment Protection Act 1993.

The Section 7 search results note that historical records provided to the SA EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete.

Additionally, FMG searched the SA EPA Site Contamination Index for the North Adelaide, to determine if the EPA held reports, in relation to site contamination for any nearby sites. No records of any sites of interest were found.

## 3.5. SafeWork SA Dangerous Substances Register

A request for a search of the Dangerous Substances Register was lodged with Safework SA for the site. SafeWork SA indicated that they held no current or historical licenses for the site.

A copy of SafeWork SA search results is provided within Appendix E.

## 4. Environmental Setting

## 4.1. Site Topography& Drainage

The South Australian 1:50,000 Topographic Series, Sheet No. 6627-IV & PT6627-1 (Department of Environment and Heritage) indicates that the site is at an approximate elevation of 30m above Australian Height Datum (AHD).

## 4.2. Regional Geology

**Table 4.2: Summary Table of Regional Geology** 

| Geology  | Details  | Source   |
|--|--|--|
| Brown<br>Solonized<br>Soils                        | Keswick Clay Formation is indicated by Sheard and Bowman to typically consist of a thin brown to grey sandy A horizon which is calcareous, a brown to redbrown calcareous clayey sand to sandy clay B horizon of variable thickness. | Geological Survey of South Australia, 1:100,000 Barker Series (SI5413), Adelaide 6627 sheet.  Soils, stratigraphy and engineering geology of near surface materials of the Adelaide Plains, Volume 1 (M.J Sheard and G.M Bowman). Report book 94/9 (March 1996). |
| Extremely Unlikely to comprise acid sulphate soils | The site is located in an area where there is no known occurrence of acid sulphate soils.  | ASRIS accessed 19 January 2017.  |

#### 4.3. Regional Hydrogeology

The Department of Water, Land and Biodiversity Conservation (DWLBC) report, 'Overview of the Hydrogeology of the Adelaide Metropolitan Area' (DWLBC, 2010) indicates that the site lies within Zone 4. The report describes Zone 4 as containing up to three Quaternary aquifers and two Tertiary aquifers and a fractured rock aquifer. Each Tertiary Aquifer consists mainly of thin layers of fine sand with low yield. Most of the Quaternary and Tertiary aquifers become thin, shallow and interconnected in the vicinity of the River Torrens. The shallow fractured rock aquifer near the River Torrens contains groundwater of low salinity and significant yield.

A search of the WaterConnect Enquiry System (on the DEWNR website) (19 January 2017) identified no groundwater wells on the site. The search identified 82 registered groundwater wells within a 1.0 km radius of the centre of the site. Wells installed earlier than 1960 were excluded from the data set due to the age of the available data. In addition, wells installed to depths greater than 100m below ground level were also excluded from the data set.

Table 4.3 provides a summary of the data collected from the enquiry system. The groundwater data is provided in Appendix F.

|         | Well<br>depth (m) | Standing<br>water level<br>(m bgl) | Water<br>level<br>(AHD) | TDS<br>(mg/L) | Electrical<br>conductivity<br>(mS) | рН  | Yield<br>(I/s) |
|---------|-------------------|------------------------------------|-------------------------|---------------|------------------------------------|-----|----------------|
| Minimum | 4.5               | 1.75                               | -1.01                   | 572           | 1040                               | 6.7 | 0.19           |
| Maximum | 80                | 28                                 | 21.24                   | 17,226        | 28,285                             | 8.2 | 2.5            |
| Average | -                 | -                                  | -                       | 3,243         | 5,602                              | 7.5 | 0.8            |

The search indicated that of the 82 wells in the data set, one well was recorded for 'Domestic' purposes. The remaining wells were recorded for irrigation, drainage, industrial, or observation purposes (including monitoring and investigation). A total of 20 wells did not have a recorded purpose.

The groundwater well located on the site (6628-691) is recorded for investigation use. Water Connect holds the following information on the well:

Drilled Date: 30 May 1974;

Well Depth: 26m bgl;

Standing Water Level: 26m bgl;

Reduced Standing Water Level: 20m AHD;

TDS: 1031mg/L;

Electrical Conductivity 1867mS; and

pH: 7.3.

A review of the reduced standing water levels (RSWLs) reported for the wells located in the vicinity of the site indicated that the localised groundwater flow direction is likely to be north westerly towards the Barker Inlet, this is supported by the likely regional groundwater flow.

The results of the Water Connect Enquiry are presented in Appendix F.

#### 4.3.1. Comparison of Groundwater Data with Victorian EPA Beneficial Uses

The South Australian EPA Water Quality Policy provides recommendations regarding the environmental management of water. However, the policy does not provide details for the classification of water use based on the available chemical and physical parameters. Therefore, the Victorian EPA Beneficial Use Segments (Victorian EPA, 1998) were adopted to categorise groundwater conditions into different Beneficial Use Segments based on water quality criteria, thus providing a benchmark to which protection measures can be applied. This adoption of the Victorian EPA criteria is purely for comparison and is not part of the South Australian EPA Water Quality Policy. Based on the local TDS concentrations (572mg/L to 17,226mg/L), local groundwater falls under the water quality segments A2(501-1000mg/L), B (1,001-3,500mg/L), C (3,501-13,000mg/L) and D (above 13,000mg/L) with the following uses (depending on the TDS concentration):

- Potable Water- acceptable (A2 only);
- Potable Mineral Water (A and B only);
- Irrigation (A and B only);
- Stock Water;

- Industry;
- · Ecosystem Protection; and
- Buildings and Structures.

Based upon the information provided by the Water Connect Enquiry system, the groundwater beneath the site may act as a potential receptor.

## 4.4. Regional Hydrology

The River Torrens is located approximately 800m west of the site. The River Torrens drains into the Gulf of St Vincent, which is located approximately 9km west of the site.

## 5. Site Inspection

#### 5.1. Site Features

On 20 January 2017, a suitably qualified FMG Environmental Scientist inspected the site. The features identified during the site inspection were recorded on the Preliminary Site Investigation Checklist, presented in Appendix G.

A summary of the identified site features are indicated on the Site Layout Plan, presented in Figure 2.

Selected site photographs taken during the site inspection are presented in Appendix H.

A summary of the identified site features is as follows:

- The site comprises vacant medical consulting rooms within the northern portion of the site, a bitumen car park in the western portion of the site and unsealed land in the eastern portion of the site.
- Minor stockpiles of fill material were noted along the southern boundary of the site, bitumen fragments were visible at the surface of the stockpile (potentially left over following the demolition of structures in this area);
- Fill material comprising pale brown gravelly sand (road base) was visible surrounding the bitumen carpark;
- Evidence of the structure historically located within the north-eastern portion of the site was visible, including walls and a portion of the concrete floor. Unknown staining was noted on the concrete floor;
- No odours or stained soils (except as mentioned above) were noted during the inspection;
   and
- No evidence of asbestos was noted during the site inspection.

Surrounding current land uses, as observed during the site inspection, are listed below:

- North: residential dwellings;
- East: residential dwellings;
- South: residential dwellings; and
- West: Hill Street, with residential dwellings and St Domenic's Priory College beyond.

#### 5.2. Indication of Preferential Pathways

Services (including a potential septic tank) are present beneath the site as presented in the Dial Before You Dig Plans in Appendix I. Services may act as a preferential pathway aiding the migration of contamination.

## 6. Preliminary Conceptual Site Model

## 6.1. Elements of a Conceptual Site Model

A conceptual site model (CSM) is a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments and provides the framework for identifying how the site may have become contaminated and how potential receptors may be exposed to contamination, either in the present or the future<sup>1</sup>.

The preliminary CSM is constructed from the results of the ESH and is used to identify data gaps and inform a decision on whether further investigation is required.

The essential elements of a preliminary CSM are:

- Known and potential sources of contamination (potentially contaminating activities) and contaminants of concern including the mechanism(s) of contamination;
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air);
- Human and ecological receptors; and
- Potential and complete exposure pathways.

In the absence of a plausible exposure pathway there is no risk. Therefore, the presence of measurable concentrations of contaminants of concern does not automatically imply that the site will cause harm. In order for this to be the case a plausible exposure pathway must be present allowing a source to adversely affect a receptor. The nature and importance of both receptors and exposure routes, which are relevant to any particular site, will vary according to its characteristics, intended end-use and its environmental setting.

#### 6.2. Potential Contaminants and Sources

The following sections use the information gathered during the ESH investigation to provide an indication of the potentially contaminative activities (PCAs) that have been carried out throughout the duration of the use of the site and surrounding land. Associated potential contaminants are also identified where appropriate.

#### 6.2.1. On-Site Sources

Based on the information obtained during the desktop study and the site inspection, PCAs have been identified, or were reasonably inferred, to have occurred at the site. The identified PCAs are as follows:

- Unknown activities associated with the structure historically located in the north-eastern portion of the site;
- Potential importation of fill material visible at the surface of the site;
- Maintenance/ treatment of grassed/unsealed areas, including the use of herbicides and pesticides;

<sup>&</sup>lt;sup>1</sup> Schedule B2 – Guideline on Site Characterisation, NEPM.

- Potential importation of contaminated fill material for use as sub base of bitumen and as footings of building; and
- Sealing of the asphalt with bitumen.

The associated contaminants relating to these PCA are presented in Table 6.2.

#### 6.2.2. Off-Site Sources

No off-site sources have been identified within the investigation.

**Table 6.2: Identified PCAs and Associated Contaminants of Concern** 

| PCAs   | Potential Contaminant   | Likely Location                                   | Chemical mobility, persistency and toxicity  | Potentially Affected<br>Media   |  |
|--|---|---|--|---|--|
| Unknown activities associated with the structure historically located in the north-eastern portion of the site | TRH/BTEX(fuels), TRH/BTEX (oils), metals, chlorinated hydrocarbons. | In the north-eastern corner of the site           | Metals - variably (potentially high) mobile,   | Heavy metals – Soil,<br>groundwater, surface<br>water   |  |
| Potential importation of fill material visible at the surface of the site                                      | TRH/ BTEX (fuels), TRH/BTEX (oils) and Metals, PAHs.                | In the central and southern portions of the site. | variable persistence, moderate toxicity.  TRH/BTEX (fuels) – highly mobile in the environment, moderate persistency, moderate to high toxicity to humans.  | Fuels and oils - Soil, groundwater, surface water, indoor and ambient air.  PAH – Soil, groundwater, surface water, indoor and ambient air.  Chlorinated hydrocarbons - Soil, groundwater, surface water, indoor and ambient air. |  |
| Maintenance and treatment<br>of grassed/unsealed areas,<br>including the use of<br>herbicides and pesticides   | Herbicides/ Pesticides  | In the eastern portion of the site.               | TRH (Oils) – generally lower mobility than fuels, moderate to high persistence, and moderate to high toxicity to humans.  PAH – low mobility, generally persistent, high toxicity associated with some PAH compounds,                      |   |  |
| Potential importation of contaminated fill material for use as sub base of bitumen and as footings of building | TRH/ BTEX (fuels), TRH/BTEX (oils) and Metals, PAHs.                | Beneath the bitumen surface and the building.     | such as benzo(a)pyrene.  Chlorinated hydrocarbons – highly mobile in the environment, moderate to high persistency, moderate to high toxicity to humans.  Herbicides – moderately mobile in the environment, moderate to high persistence, |   |  |
| Sealing of carpark portion of the site with asphalt  | TRH and PAHs  | Within the car parking area                       | moderately toxic to humans.  | Herbicides – Soil,<br>groundwater, surface<br>water   |  |

## 6.3. Potential Receptors

## 6.3.1. On-Site Receptors

It is understood that the site is to be redeveloped for use as a year 12 centre. Therefore, future site users, including adults and adolescents, are considered to be receptors at the site.

Additionally, construction and maintenance workers of the year 12 centre are considered to be a receptor, as they may be in direct contact with any contaminated soils during construction works.

A review of the hydrogeological data for the well closest to the site has indicated that the site is underlain with groundwater, recorded at approximately 20-30m below ground level. Due to the depth of the groundwater, it is not considered to be a potential on-site receptor.

#### 6.3.2. Off-Site Receptors

The site is located in a residential area; therefore, residents inhabiting residential properties surrounding the site are considered potential offsite receptors.

No other significant off-site receptors have been identified.

## 6.4. Potential Pathways

Table 6.4 details and discusses the potential and complete exposure pathways identified during the ESH investigation for any contaminants that may be present in the ground at the site following the proposed residential redevelopment. The potential receptors identified for each pathway have been provided.

Some source-pathway-receptor linkages mentioned in the table are not considered likely to be active at the site for the reasons specified in the comments section.

**Table 6.4: Potential Pathways and Receptors** 

| Potential Pathway   | Potential Receptor  | Comment   | Complete Exposure Pathway? |
|---|---|---|----------------------------|
| Dermal contact with soil.                                     | Future site users, construction and maintenance workers                   | Future site users, construction and maintenance workers may come into contact with soil during the development and within garden beds.  | Yes                        |
| Intake via direct ingestion of soil.                          | Future site users, construction and maintenance workers                   | Future site users, construction and maintenance workers may come into contact with soil during the development and within garden beds.  | Yes                        |
| Intake via inhalation and ingestion of contaminated dusts.    | Future site users, construction and maintenance workers                   | Future site users, construction and maintenance works may ingest or inhale soil.  | Yes                        |
| Intake via indoor and outdoor inhalation of vapours or gases. | Future site residents,<br>maintenance workers and<br>construction workers | Vapours from contaminated soils below buildings can accumulate within confined spaces inside houses. Vapours from contaminated soils can also accumulate in service trenches.   | Yes                        |
| Direct uptake from soil                                       | Ecological receptors comprising planted vegetation                        | Garden areas are located onsite, therefore, ecological receptors should be considered.  | Yes                        |
| Migration through soil /                                      | Groundwater beneath the site.   | Due to the depth of groundwater beneath the site, it is considered unlikely that potential contaminants could migrate into the underlying groundwater through the soil profile. | Yes                        |
| groundwater.  | Surface water.  | The nearest surface water course is located approximately 700m west of the site., therefore, due to the distance from the site is not considered to be a receptor.              | No                         |

## 6.5. Tabulated Preliminary Conceptual Model

The conceptual model for the site identifies all of the potential pollutant linkages based on the information collated in the ESH Investigation and an understanding of the way that the potential contaminants at the site are likely to behave in the local environment.

On the basis of the available information, the preliminary CSM in terms of present site conditions is provided in Table 6.5.

Not all potential contaminants have been included within the tabulated form of the conceptual model if they are not considered to be significant at this stage i.e. if a complete exposure pathway has not been identified.

The Key used within the table is as follows:

- LOW potential risks associated with the presence of the contaminant linkage are low and further assessment is not considered necessary.
- MOD potential risks associated with the presence of the contaminant linkage are moderate and further assessment should be considered.
- HIGH potential risks associated with the presence of the contaminant linkage are high and further assessment is considered necessary.
- N/A the contaminant has no potential to affect the receptor via this linkage.

**Table 6.5: Preliminary Conceptual Site Model** 

| Potentially Contaminating<br>Activities      | Unknown activities associated with the structure historically located in the northeastern portion of the site | Potential importation of fill material visible at the surface of the site; | Maintenance of grassed/unsealed areas, including the use of herbicides and pesticides | Potential importation<br>of contaminated fill<br>material for use as<br>sub base of bitumen<br>and as footings of<br>building | Sealing of carpark portion of the site with asphalt | Notes   |  |
|--|---|--|---|---|---|---|--|
| Receptors and pathways                       |   |  |   |   |   |   |  |
| Human health                                 |   |  |   |   |   |   |  |
| Dermal contact with soil                     | MOD   | MOD  | MOD   | MOD   | MOD   | There is potential for exposure to contaminants within the soil at the site through exposure from proposed garden areas |  |
| Ingestion of soil                            | MOD   | MOD  | MOD   | MOD   | MOD   |   |  |
| Inhalation, ingestion of contaminated dusts. | MOD   | MOD  | MOD   | MOD   | MOD   | and via inhalation of vapours and dusts indoors.  |  |
| Inhalation of vapours / gases                | MOD   | MOD  | N/A   | MOD   | MOD   |   |  |
| Controlled Waters                            |   |  |   |   |   |   |  |
| Migration to groundwater                     | LOW   | LOW  | LOW   | LOW   | LOW   | Due to distance of surface water bodies and likely depth  |  |
| Migration to surface water                   | LOW   | LOW  | LOW   | LOW   | LOW   | of groundwater, it is<br>considered unlikely<br>groundwater or surface water<br>could be impacted by the site.          |  |
| Ecological Receptors                         |   |  |   |   |   |   |  |
| Direct uptake from ecological receptors      | MOD   | MOD  | MOD   | MOD   | MOD   | Ecological receptors may be planted within contaminated soils.  |  |

## 7. Assessment of Data Gaps and Accuracy of Information

Schedule B2 of the ASC NEPM states that the ESH report should clearly identify any significant data gaps and include an assessment of the accuracy of the information collected.

The following data gaps have been identified during the ESH assessment:

- The exact use of the structure visible in the north eastern portion of the site;
- The date the onsite building was developed (prior to 1926);
- Whether the structure was historically used as a residential dwelling;
- The use of the structures historically located along the southern boundary of the site;
- The contamination status of the soils at the site; and
- The contamination status of the ground water beneath the site.

Based upon these data gaps it is considered that uncertainty exists within the assessment. Therefore, further investigation of the contamination status of the soils is required.

## 8. Conclusions and Recommendations

FMG completed an ESH assessment for the site located at 74 Hill Street, North Adelaide, SA, 5006. The site occupies an area of approximately 2,050m² and currently comprises vacant medical consulting rooms. The site is to be redeveloped for use as a year 12 centre.

The objective of the ESH is to identify any potential source(s) of contamination associated with current or historical site uses that may impact future development, as residential land use, and/or warrant further investigation and/or assessment.

Schedule B2, Guidelines on Site Characterisation of the ASC NEPM states that a PSI comprising an ESH should be sufficient to:

- Identify potential sources of contamination and determine potential contaminants of concern;
- Identify areas of potential contamination;
- Identify potential human and ecological receptors;
- Identify potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air).

The findings of the ESH are used to develop an initial conceptual site model (CSM). The components of the CSM have been discussed in detail within Section 6 of this report.

In summary, the CSM has identified several potential onsite **sources** of contamination. These have included:

- Unknown activities associated with the structure historically located in the north-eastern portion of the site;
- Potential importation of fill material visible at the surface of the site;
- Maintenance of grassed/unsealed areas, including the use of herbicides;
- Potential importation of contaminated fill material for use as sub base of bitumen and as footings of building; and
- Sealing of the asphalt with bitumen.

No off-site sources of contamination have been identified within the investigation.

The CSM has identified that there are potential human health and environmental **receptors** associated at the site. These include the future site residents (adults and children), construction and maintenance workers, the groundwater beneath the site, and the residents of the adjacent residential dwellings.

Further investigation of a site is required when the results of the ESH indicate that contamination is present or is likely to be present and the information available is insufficient to enable site management strategies to be devised.

Based upon the findings of the ESH, FMG considers that there is a low to moderate potential risk presented to the identified human health and environment receptors associated with the site. Potential pollutant linkages have been identified to exist, during and following the residential redevelopment of the site, which warrants further investigation and consideration.

FMG recommends that a preliminary soil investigation, specifically targeting the identified areas of interest identified during the ESH, is undertaken to:

 assess the contamination status of the soils at these locations, allowing an accurate assessment to be made of the nature and extent of any site contamination at the identified areas of interest;

- determine the potential risks posed to the identified future human receptors at the site, namely future site users, construction and site maintenance workers, as well as any offsite human receptors; and
- determine the potential risks posed to any identified ecological receptors at the site or offsite.

The intrusive investigation should be carried out in accordance with the Australian Standard, Guide to the investigation and sampling of sites with potentially contaminated soil, AS4482.1-2005 and with the ASC NEPM.





Figure 1

**Site Location Plan** 

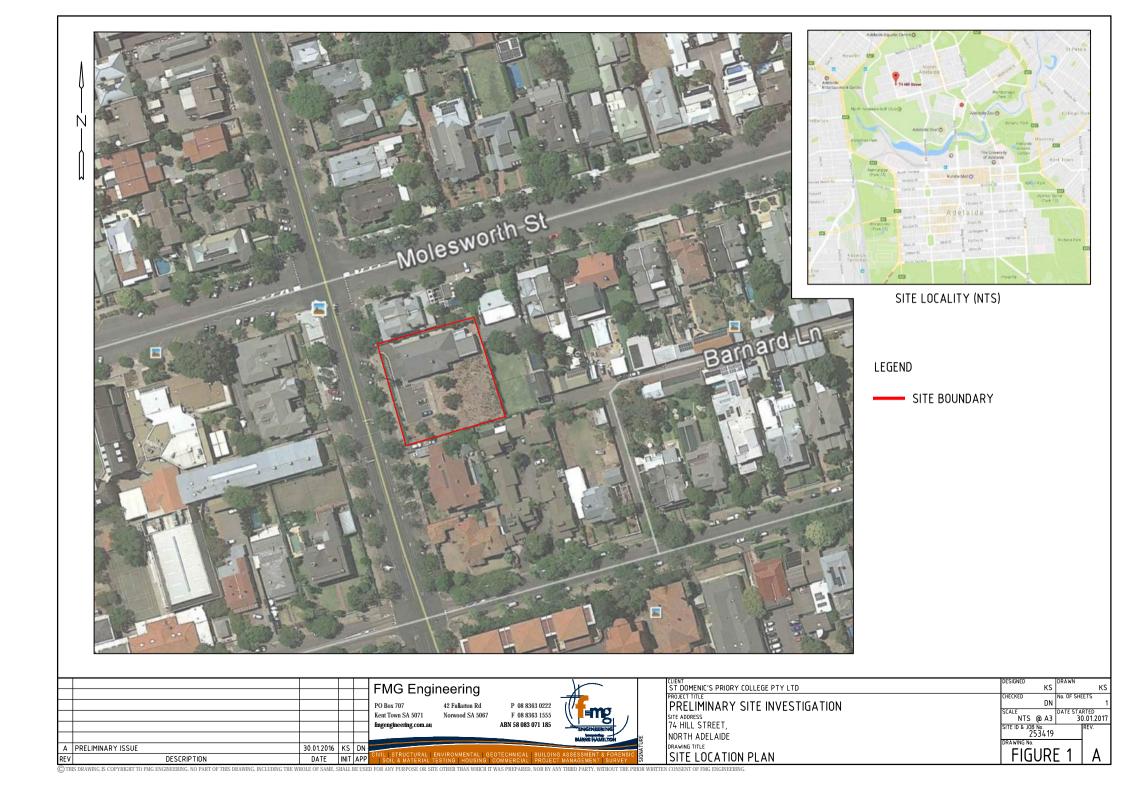
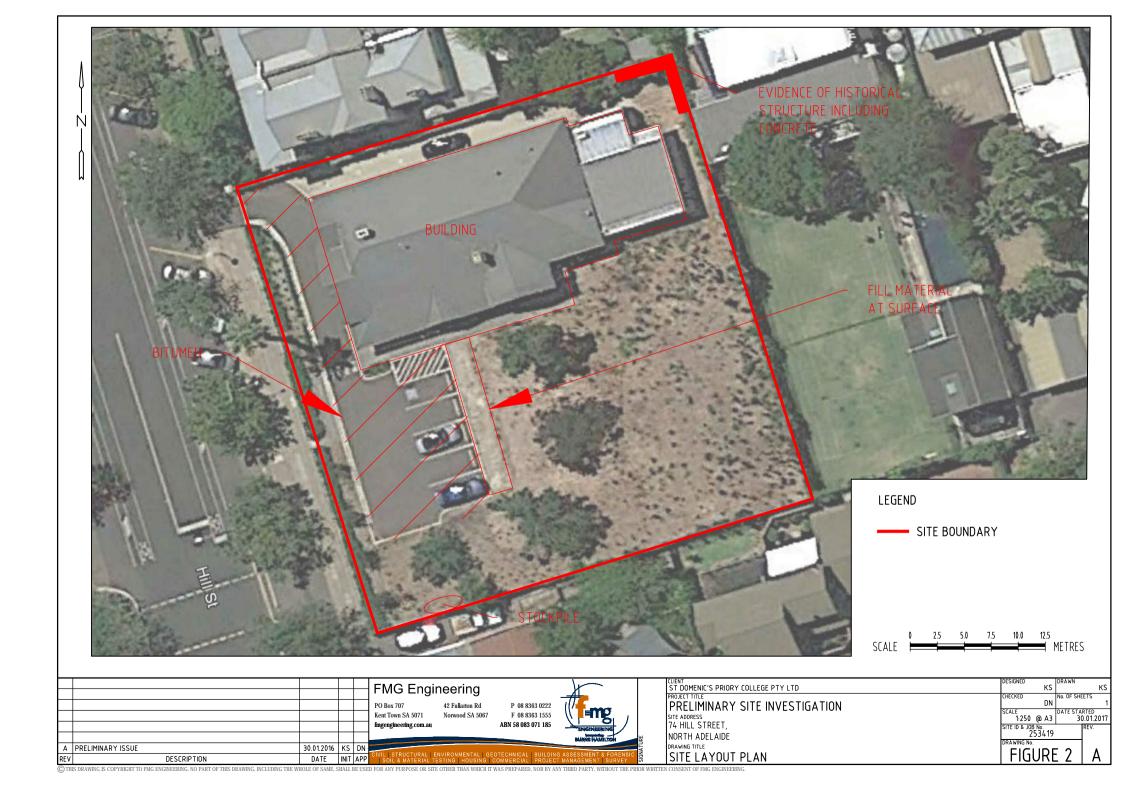




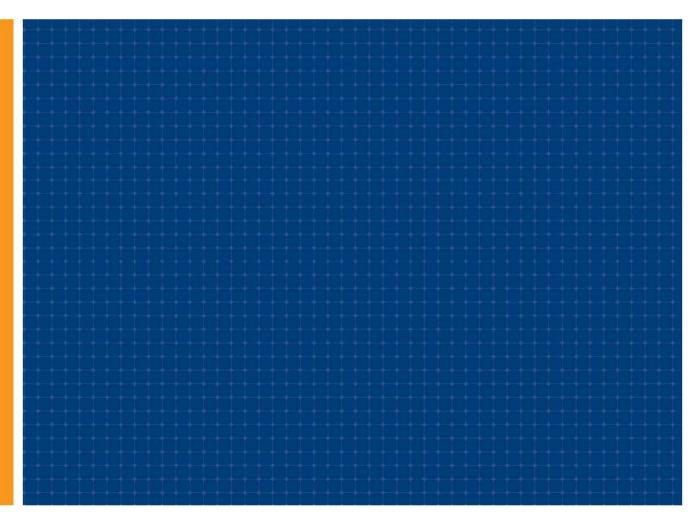


Figure 2

**Site Layout Plan** 







# **Appendix A**

**Certificates of Title** 



**Product** Date/Time **Customer Reference** 

Order ID

07/12/2016 01:43PM PO118346 20161207007861

Register Search

Cost \$27.75

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.



Registrar-General

Australia

## Certificate of Title - Volume 5773 Folio 314

Parent Title(s) CT 1277/175

Dealing(s) Creating Title **CONVERTED TITLE** 

Title Issued 11/05/2000

**Edition** 

**Edition Issued** 01/03/2016

## **Estate Type**

FEE SIMPLE

## **Registered Proprietor**

ST DOMINIC'S PRIORY COLLEGE INC. OF 139 MOLESWORTH STREET NORTH ADELAIDE SA 5006

# **Description of Land**

ALLOTMENT 774 FILED PLAN 183236 IN THE AREA NAMED NORTH ADELAIDE **HUNDRED OF YATALA** 

## **Easements**

NIL

# **Schedule of Dealings**

NIL

## **Notations**

## **Dealings Affecting Title**

| Lodgement Date | Dealing Number | Description | Status       |
|----------------|----------------|-------------|--------------|
| 13/10/2015     | 12410225       | CAVEAT      | Deleted      |
| 18/11/2016     | 12635038       | VESTING     | Unregistered |

#### **Priority Notices**

Land Services Page 1 of 3



Product
Date/Time
Customer Reference
Order ID

Register Search 07/12/2016 01:43PM PO118346 20161207007861

**Cost** \$27.75

NIL

**Notations on Plan** 

NIL

Registrar-General's Notes

NIL

**Administrative Interests** 

NIL

Product
Date/Time
Customer Reference

Order ID

PO118346 20161207007861

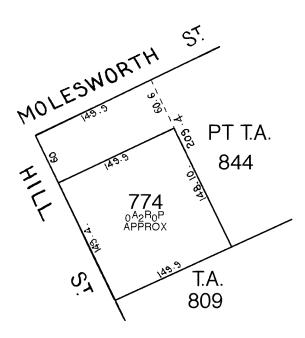
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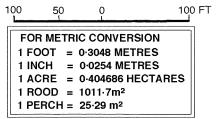
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**Cost** \$27.75

#### THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 1277/175







NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION



## **Certificate of Title**

**Title Reference:** CT 5773/314

Status: **CURRENT** 

Parent Title(s): CT 1277/175

Dealing(s) Creating Title:

**CONVERTED TITLE** 

Title Issued: 11/05/2000

**Edition:** 6

# **Dealings**

| Lodgement<br>Date | Completion Date | Dealing<br>Number | Dealing Type                | Dealing<br>Status | Details   |
|-------------------|-----------------|-------------------|-----------------------------|-------------------|---|
| 18/11/2016        |                 | 12635038          | VESTING                     | Unregistered      | ST DOMINIC'S PRIORY<br>COLLEGE LTD. (ACN: 613 332<br>602) |
| 29/01/2016        | 01/03/2016      | 12470014          | TRANSFER                    | Registered        | ST DOMINIC'S PRIORY<br>COLLEGE INC.                       |
| 29/01/2016        | 01/03/2016      | 12470013          | DISCHARGE<br>OF<br>MORTGAGE | Registered        | 11901590  |
| 29/01/2016        | 01/03/2016      | 12470012          | WITHDRAWAL<br>OF CAVEAT     | Registered        | 12410549  |
| 14/10/2015        | 20/10/2015      | 12410549          | CAVEAT                      | Registered        | ST DOMINIC'S PRIORY<br>COLLEGE INC.                       |
| 22/07/2015        | 20/08/2015      | 12367980          | WITHDRAWAL<br>OF CAVEAT     | Registered        | 12286211  |
| 04/03/2015        | 11/03/2015      | 12286211          | CAVEAT                      | Registered        | WILLAMS BURTON<br>ARCHITECTS PTY. LTD.                    |
| 04/03/2013        | 19/03/2013      | 11901590          | MORTGAGE                    | Registered        | COMMONWEALTH BANK OF AUSTRALIA                            |
| 04/03/2013        | 19/03/2013      | 11901589          | TRANSFER                    | Registered        | TIENAN CORPORATION PTY.<br>LTD. (ACN: 161 777 751)        |
| 26/06/2012        | 28/06/2012      | 11780167          | VESTING                     | Registered        | MINISTER FOR HEALTH AND AGEING                            |
| 26/04/2007        | 29/05/2007      | 10689737          | TRANSFER                    | Registered        | MINISTER FOR HEALTH                                       |

Land Services Page 1 of 1 south Australia

# (CERTIFICATE OF TITLE.)



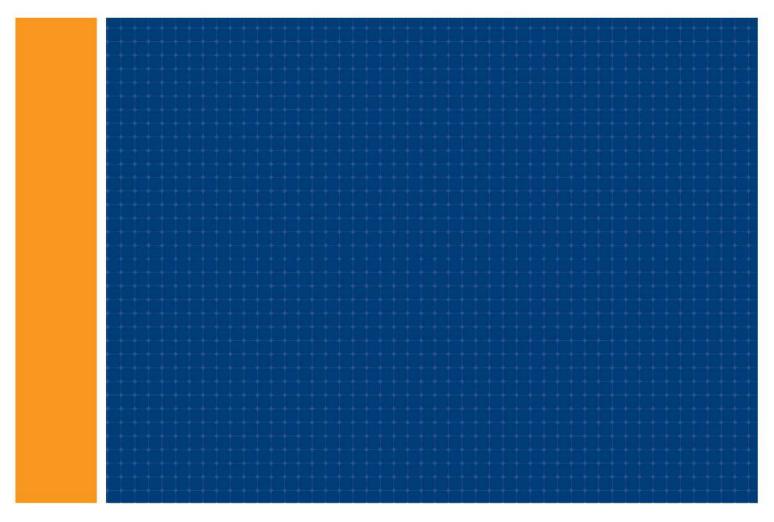
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| which said Town Acres are delineated in the public r   | map of the said City deposited in the Lands and Survey Office at Adelaide.   |
| In witness whereof I have hereunto signed my name and affixed my   | r seal this eighteenth day of May 1923   |
| Signed the day of May 1923, in the presence of   | Registrar-General.   |
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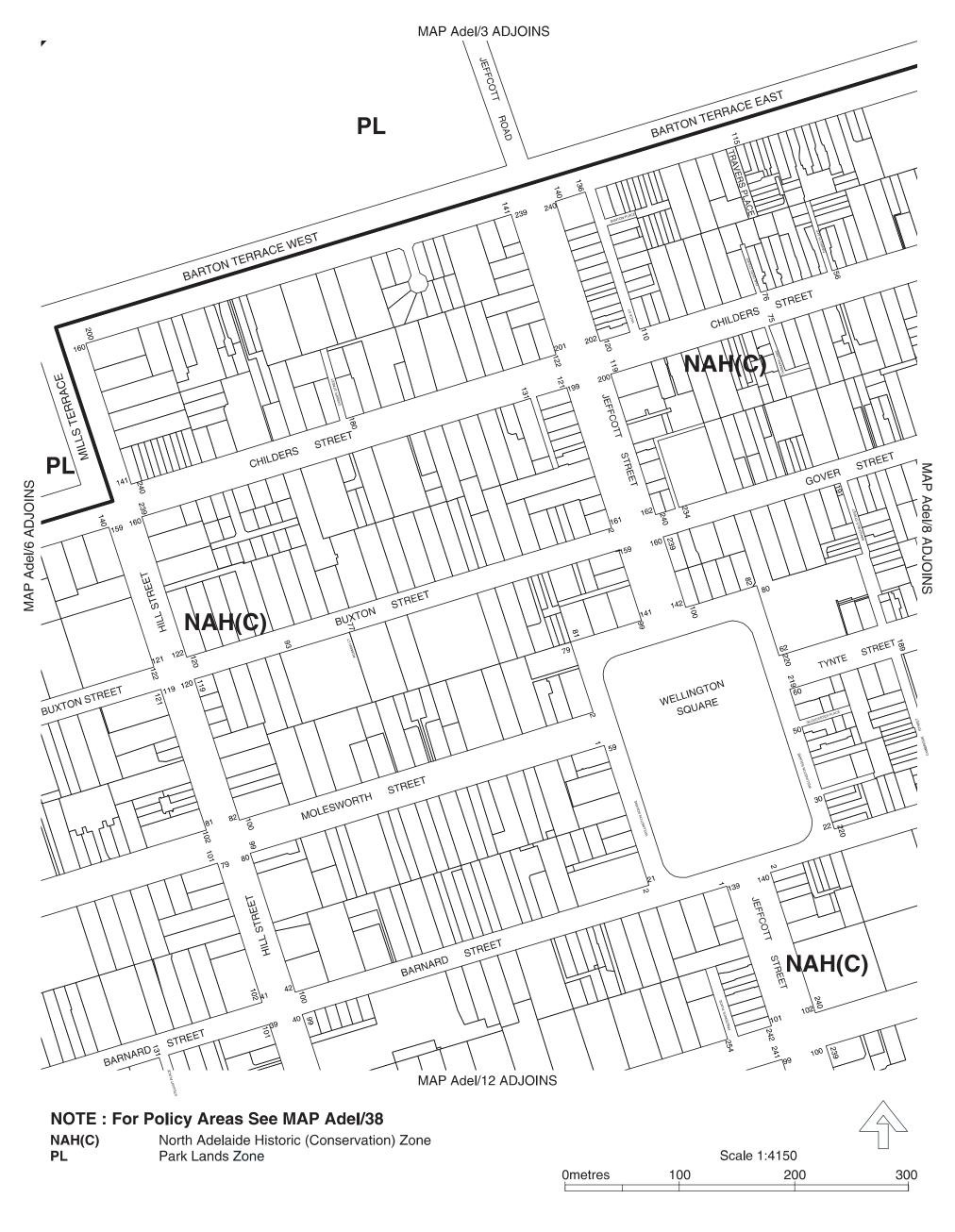
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# **Appendix B**

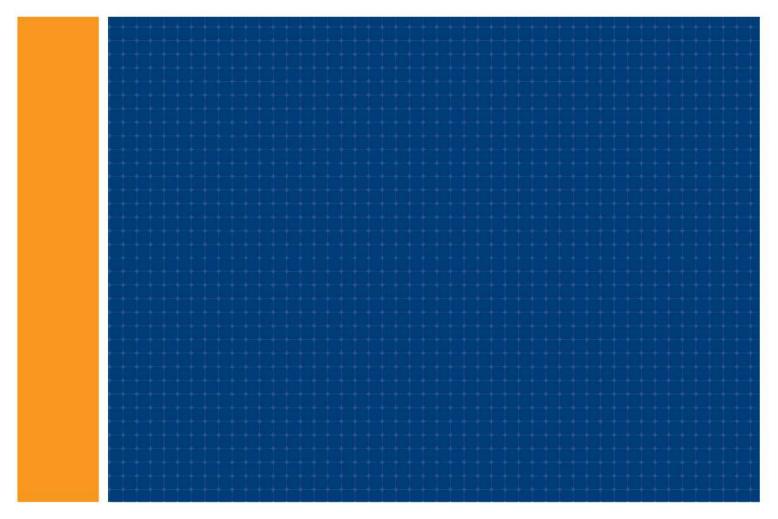
**Adelaide City Council Development Plan Extract** 



# ADELAIDE (CITY) ZONES MAP Adel/7 Consolidated - 24 September 2015

Zone Boundary
Development Plan Boundary

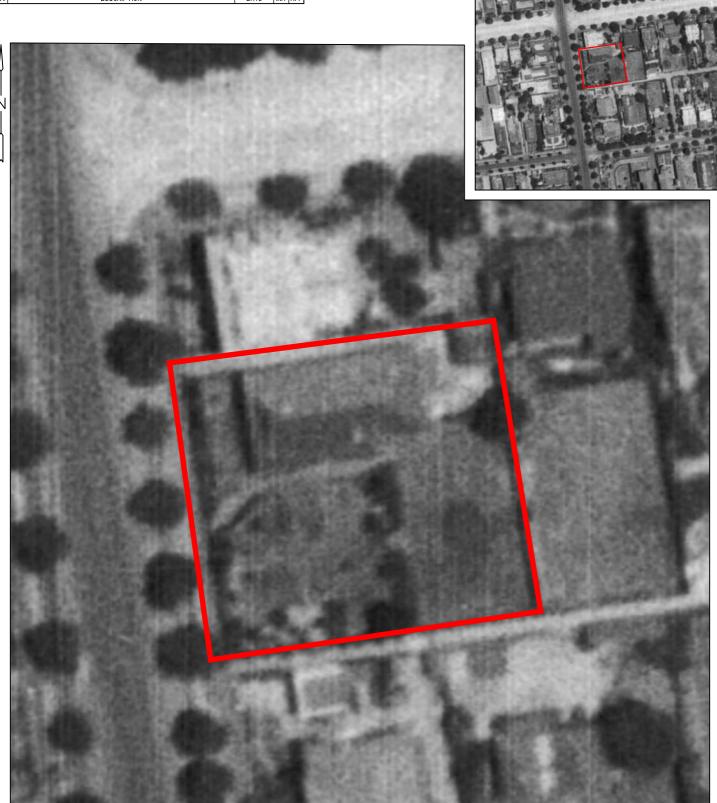




# **Appendix C**

**Historical Aerial Photographs** 

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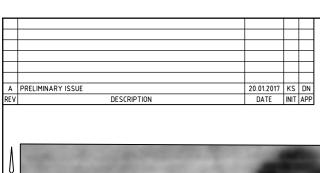


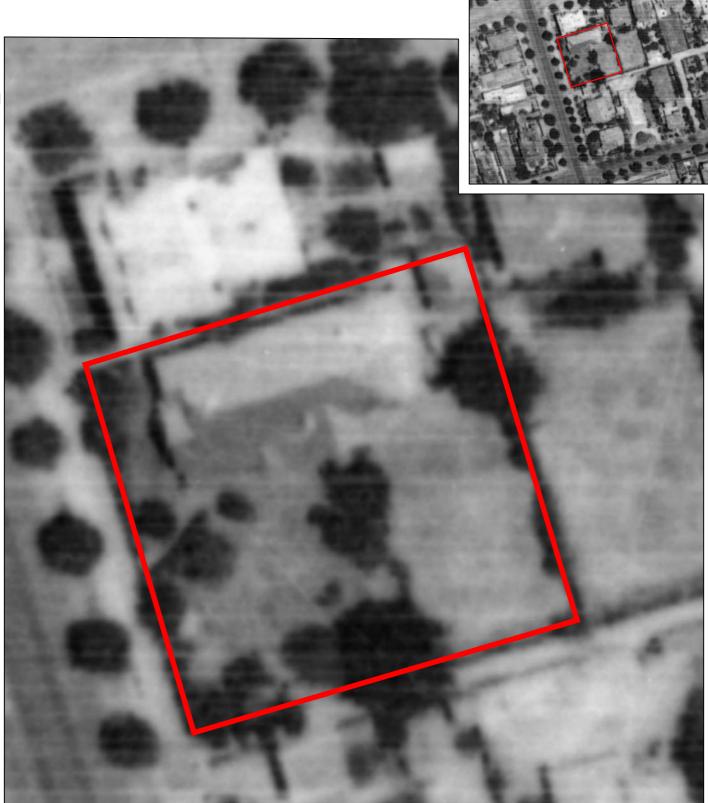
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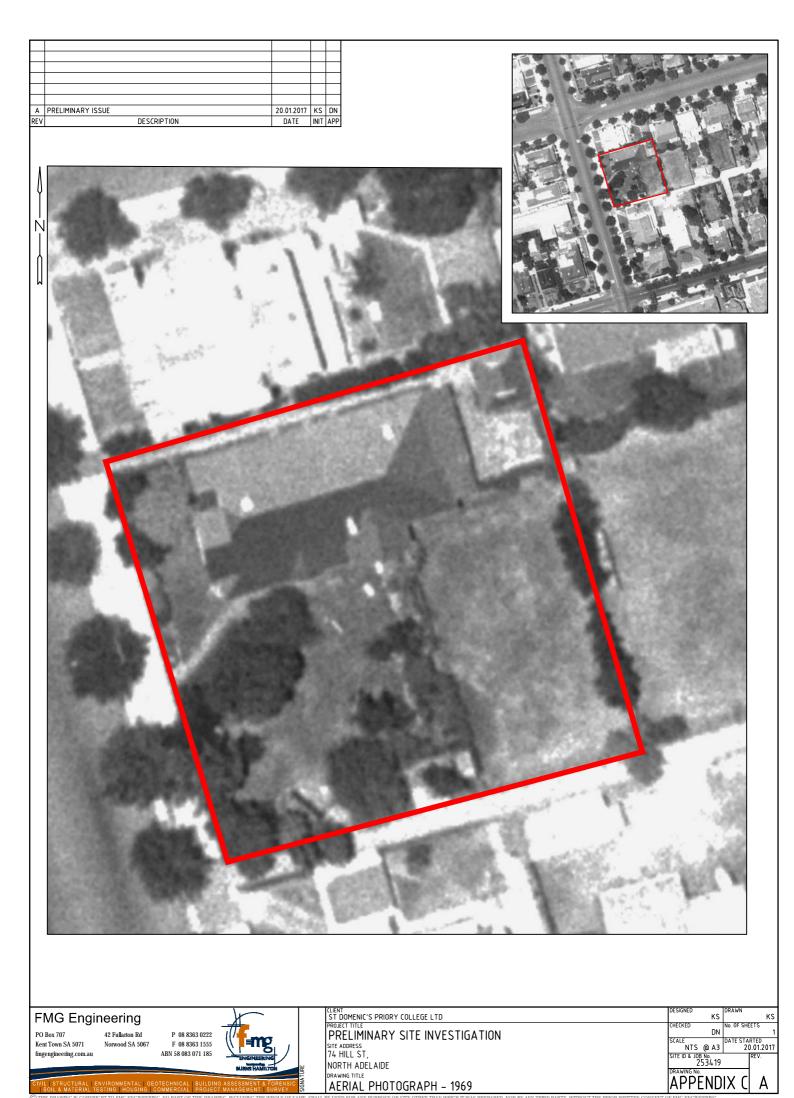
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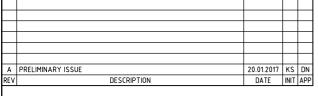
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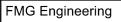


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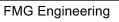
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APPENDIX C





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42 Fullarton Rd Norwood SA 5067 P 08 8363 0222 F 08 8363 1555 ABN 58 083 071 185

| ENGINEERING BURGE HAMITON  G ASSESSMENT & FORENSIC |  |
|--|--|
| G ASSESSMENT & FORENSIC                            |  |

| ST DOMENIC'S PRIORY COLLEGE LTD |
|---------------------------------|
| PROJECT TITLE                   |
| PRELIMINARY SITE INVESTIGATION  |
| SITE ADDRESS                    |
| 74 HILL ST,                     |
| NODTH ADELAIDE                  |

NORTH ADELAIDE

PRAWING TITLE

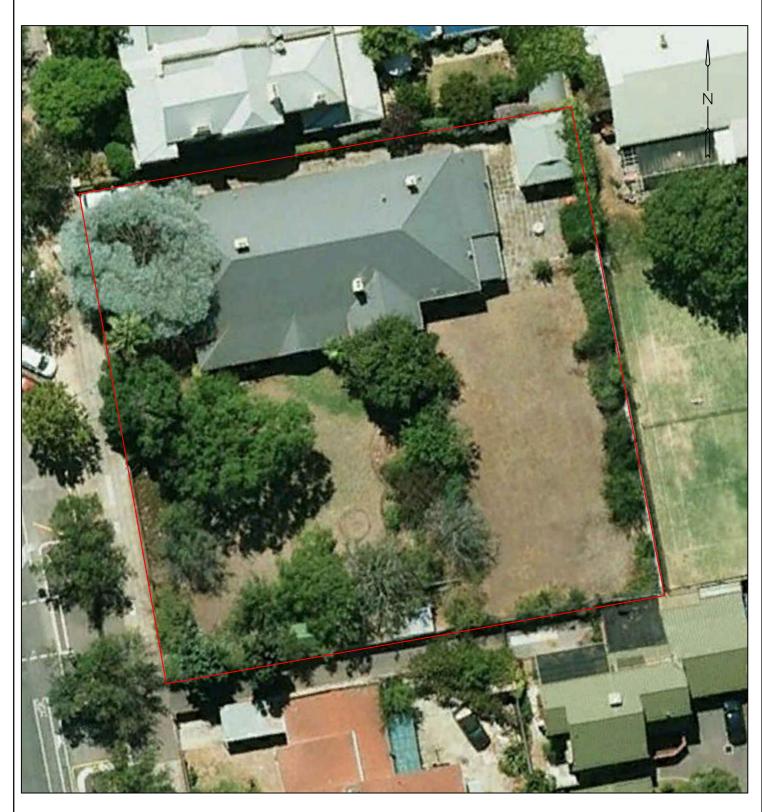
AERIAL PHOTOGRAPH - 1999

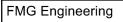
| DESIGNED KS                 | DRAWN KS                |
|-----------------------------|-------------------------|
| CHECKED                     | No. OF SHEETS           |
| NTS @ A3                    | DATE STARTED 20.01.2017 |
| SITE ID & JOB No.<br>253419 | REV.                    |
| APPEND                      | IX C A                  |

L MOUTOURAM - 1999

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| Α   | PRELIMINARY ISSUE | 20.01.2017 | KS   | DN  |
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42 Fullarton Rd Norwood SA 5067 P 08 8363 0222 F 08 8363 1555 ABN 58 083 071 185



| ST DOMENIC'S PRIORY COLLEGE LTD | KS                          | DRAWN KS                |
|---------------------------------|-----------------------------|-------------------------|
| PRELIMINARY SITE INVESTIGATION  | DN                          | No. OF SHEETS           |
| SITE ADDRESS                    | SCALE<br>NTS @ A3           | DATE STARTED 20.01.2017 |
| 174 HILL ST,<br>NORTH ADELAIDE  | SITE ID & JOB No.<br>253419 | REV.                    |
| DRAWING TITLE                   | DRAWING No.                 | 17 (                    |
| AERIAL PHOTOGRAPH - 2010        | <u>APPEND</u>               | IX LI A                 |

| Α   | PRELIMINARY ISSUE | 20.01.2017 | KS   | DN  |
|-----|-------------------|------------|------|-----|
| REV | DESCRIPTION       | DATE       | INIT | APP |





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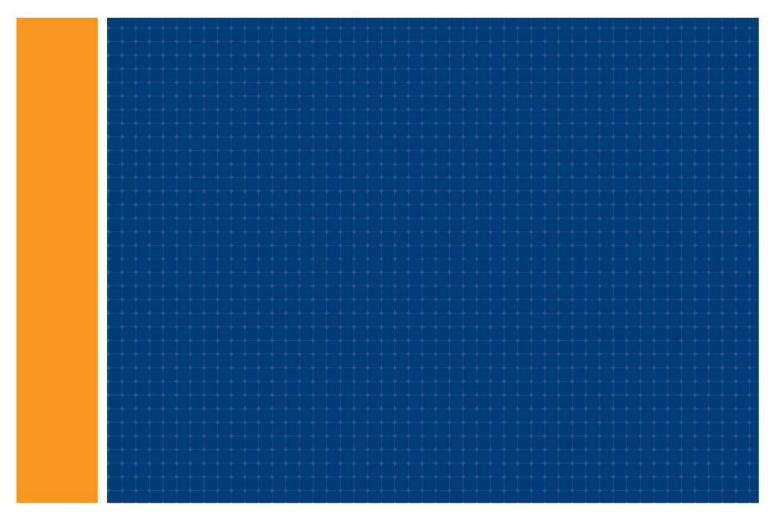
42 Fullarton Rd Norwood SA 5067

P 08 8363 0222 F 08 8363 1555 ABN 58 083 071 185



| CLIENT<br>ST DOMENIC'S PRIORY COLLEGE LTD   | DESIGNED | KS    | DRAWN      |                | KS  |
|---|----------|-------|------------|----------------|-----|
|   | CHECKED  | DN    | No. OF SHE | ETS            | 1   |
| PRELIMINARY SITE INVESTIGATION SITE ADDRESS | SCALE    | -     | DATE STAF  |                | 047 |
| 7/ 1011 CT                                  | NTS @    | 3 A 3 |            | 0.01.2<br>REV. | 017 |
| NORTH ADELAIDE                              |          | 419   |            |                |     |
| DRAWING TITLE                               | APPF1    | ٩D    | ıv d       | ٨              |     |
| AERIAL PHOTOGRAPH - 2013                    | APPEI    | עוי   | <u> </u>   | F              | ١.  |





# **Appendix D**

**EPA Section 7 Search Results** 



FMG Engineering 42 Fullarton Road NORWOOD SA 5067 Contact: Section 7
Telephone: (08) 8204 2026
Email: epasection7@sa.gov.au

Contact: Public Register Telephone: (08) 8204 9128 Email: epa.publicregister@sa.gov.au

13 December, 2016

#### **EPA STATEMENT TO FORM 1 - CONTRACTS FOR SALE OF LAND OR BUSINESS**

The EPA provides this statement to assist the vendor meet its obligations under section 7(1)(b) of the Land and Business (Sale and Conveyancing) Act 1994. A response to the questions prescribed in Schedule 1-Contracts for sale of land or business-forms (Divisions 1 and 2) of the Land and Business (Sale and Conveyancing) Act 1994 is provided in relation to the land.

I refer to your enquiry concerning the parcel of land comprised in

Title Reference CT Volume 5773 Folio 314

Address 1-2 / 74 Hill Street, NORTH ADELAIDE SA 5006

## Schedule - Division 1 - Land and Business (Sale and Conveyancing) Regulations 2010

#### PARTICULARS OF MORTGAGES, CHARGES AND PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

#### 7. Environment Protection Act 1993

Does the EPA hold any of the following details relating to the Environment Protection Act 1993:

| 7.1 | Section 59 - Environment performance agreement that is registered in relation to the land.                               | NO |
|-----|--|----|
| 7.2 | Section 93 - Environment protection order that is registered in relation to the land.                                    | NO |
| 7.3 | Section 93A - Environment protection order relating to cessation of activity that is registered in relation to the land. | NO |
| 7.4 | Section 99 - Clean-up order that is registered in relation to the land.  | NO |
| 7.5 | Section 100 - Clean-up authorisation that is registered in relation to the land.   | NO |
| 7.6 | Section 103H - Site contamination assessment order that is registered in relation to the land.                           | NO |
| 7.7 | Section 103J - Site remediation order that is registered in relation to the land.  | NO |

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| 7.8  | Section 103N - Notice of declaration of special management area in relation to the land (due to possible existence of site contamination). | NO |
|------|--|----|
| 7.9  | Section 103P - Notation of site contamination audit report in relation to the land.  | NO |
| 7.10 | Section 103S - Notice of prohibition or restriction on taking water affected by site contamination in relation to the land.                | NO |

## Schedule – Division 2 – Land and Business (Sale and Conveyancing) Regulations 2010

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

## 3-Licences and exemptions recorded by EPA in public register

| Does | the EPA hold any of the following details in the public register:   |    |
|------|---|----|
| a)   | details of a current licence issued under Part 6 of the <i>Environment Protection Act 1993</i> to conduct, at the land-   |    |
| i)   | a waste or recycling depot (as referred to in clause 3(3) of Schedule 1 Part A of that Act); or   | NO |
| ii)  | activities producing listed wastes (as referred to in clause 3(4) of Schedule 1 Part A of that Act); or   | NO |
| iii) | any other prescribed activity of environmental significance under Schedule 1 of that Act?   | NO |
| b)   | details of a licence no longer in force issued under Part 6 of the <i>Environment Protection Act</i> 1993 to conduct, at the land-  |    |
| i)   | a waste or recycling depot (as referred to in clause 3(3) of Schedule 1 Part A of that Act); or   | NO |
| ii)  | activities producing listed wastes (as referred to in clause 3(4) of Schedule 1 Part A of that Act); or   | NO |
| iii) | any other prescribed activity of environmental significance under Schedule 1 of that Act?   | NO |
| c)   | details of a current exemption issued under Part 6 of the <i>Environment Protection Act 1993</i> from the application of a specified provision of that Act in relation to an activity carried on at the land?             | NO |
| d)   | details of an exemption no longer in force issued under Part 6 of the <i>Environment Protection</i> Act 1993 from the application of a specified provision of that Act in relation to an activity carried on at the land? | NO |
| e)   | details of a licence issued under the repealed South Australian Waste Management Commission Act 1979 to operate a waste depot at the land?  | NO |
| f)   | details of a licence issued under the repealed Waste Management Act 1987 to operate a waste depot at the land?  | NO |
| g)   | details of a licence issued under the repealed South Australian Waste Management Commission Act 1979 to produce waste of a prescribed kind (within the meaning of that Act) at the land?                                  | NO |

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| h)         | details of a licence issued under the repealed <i>Waste Management Act 1987</i> to produce prescribed waste (within the meaning of that Act) at the land?   | NO |
|------------|---|----|
| 4-Poll     | ution and site contamination on the land - details recorded by the EPA in public register   |    |
| Does tand: | the EPA hold any of the following details in the public register in relation to the land or part of the   |    |
| a)         | details of serious or material environmental harm caused or threatened in the course of an activity (whether or not notified under section 83 of the <i>Environment Protection Act 1993</i> )?  | NO |
| b)         | details of site contamination notified to the EPA under section 83A of the <i>Environment Protection Act 1993</i> ?   | NO |
| c)         | a copy of a report of an environmental assessment (whether prepared by the EPA or some other person or body and whether or not required under legislation) that forms part of the information required to be recorded in the public register?                     | NO |
| d)         | a copy of a site contamination audit report?  | NO |
| e)         | details of an agreement for the exclusion or limitation of liability for site contamination to which section 103E of the <i>Environment Protection Act 1993</i> applies?  | NO |
| f)         | details of an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103l of the <i>Environment Protection Act</i> 1993?  | NO |
| g)         | details of an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the <i>Environment Protection Act 1993?</i>   | NO |
| h)         | details of a notification under section 103Z(1) of the <i>Environment Protection Act 1993</i> relating to the commencement of a site contamination audit?   | NO |
| i)         | details of a notification under section 103Z(2) of the <i>Environment Protection Act 1993</i> relating to the termination before completion of a site contamination audit?  | NO |
| j)         | details of records, held by the former South Australian Waste Management Commission under the repealed Waste Management Act 1987, of waste (within the meaning of that Act) having been deposited on the land between 1 January 1983 and 30 April 1995?           | NO |
| 5-Poll     | ution and site contamination on the land - other details held by EPA  |    |
| Does       | the EPA hold any of the following details in relation to the land or part of the land:  |    |
| a)         | a copy of a report known as a "Health Commission Report" prepared by or on behalf of the South Australian Health Commission (under the repealed South Australian Health Commission Act 1976)?   | NO |
| b)         | details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103I of the <i>Environment Protection Act 1993?</i> | NO |
| c)         | details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the <i>Environment Protection Act 1993</i> ?             | NO |

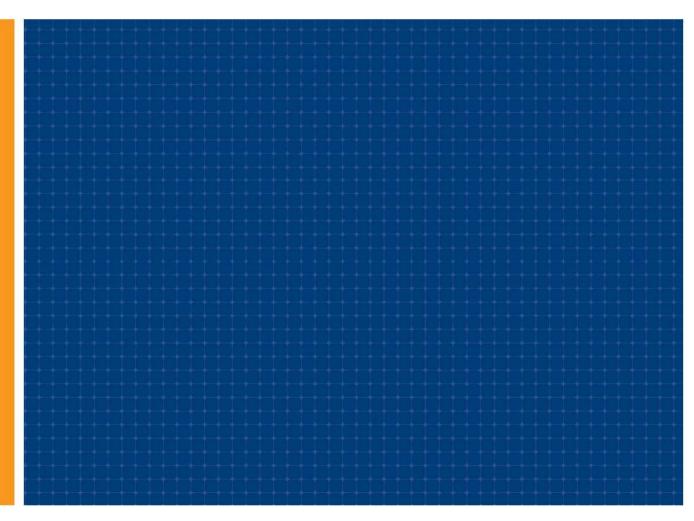
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- d) a copy of a pre-1 July 2009 site audit report?
- e) details relating to the termination before completion of a pre-1 July 2009 site audit?

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA cannot confirm the accuracy of the historical information provided.

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# **Appendix E**

**Safe Work SA Dangerous Goods Search Results** 

Attorney-General's Department

Licensing, Customer Services Team

Level 4 World Park A 33 Richmond Road Keswick SA 5035

GPO Box 465 Adelaide SA 5001

DX 715 Adelaide

Phone 1300 365 255

1300 365 255 08 8204 9200

Fax 0

Email licensing.safework@sa.gov.au

ABN

50-560-588-327

www.safework.sa.gov.au

Jane Nunes FMG Engineering 42 Fullarton Road NORWOOD SA 5067

14 December 2016

Dear Ms Nunes

## DANGEROUS SUBSTANCES LICENCE SEARCH

PROPERTY DETAILS: 74 Hill and 112 Barnard Street, North Adelaide SA 5006

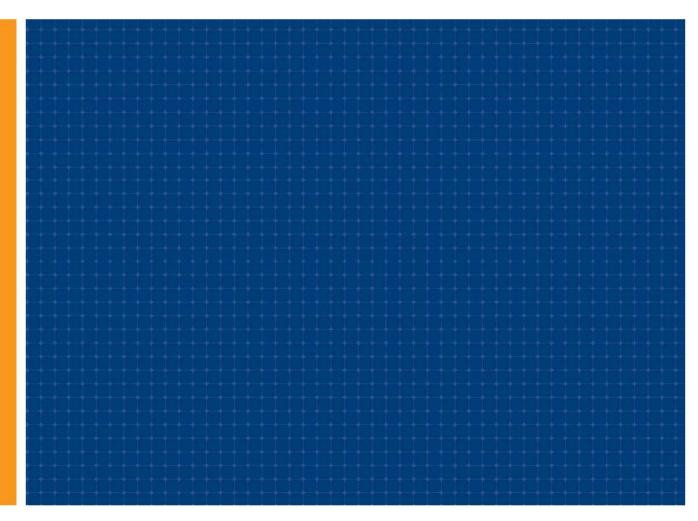
Further to your Application for a Dangerous Substance Search dated **7/12/2016** for the abovementioned site, I advise that there are no current or historical records for this site.

Yours sincerely

*f* 

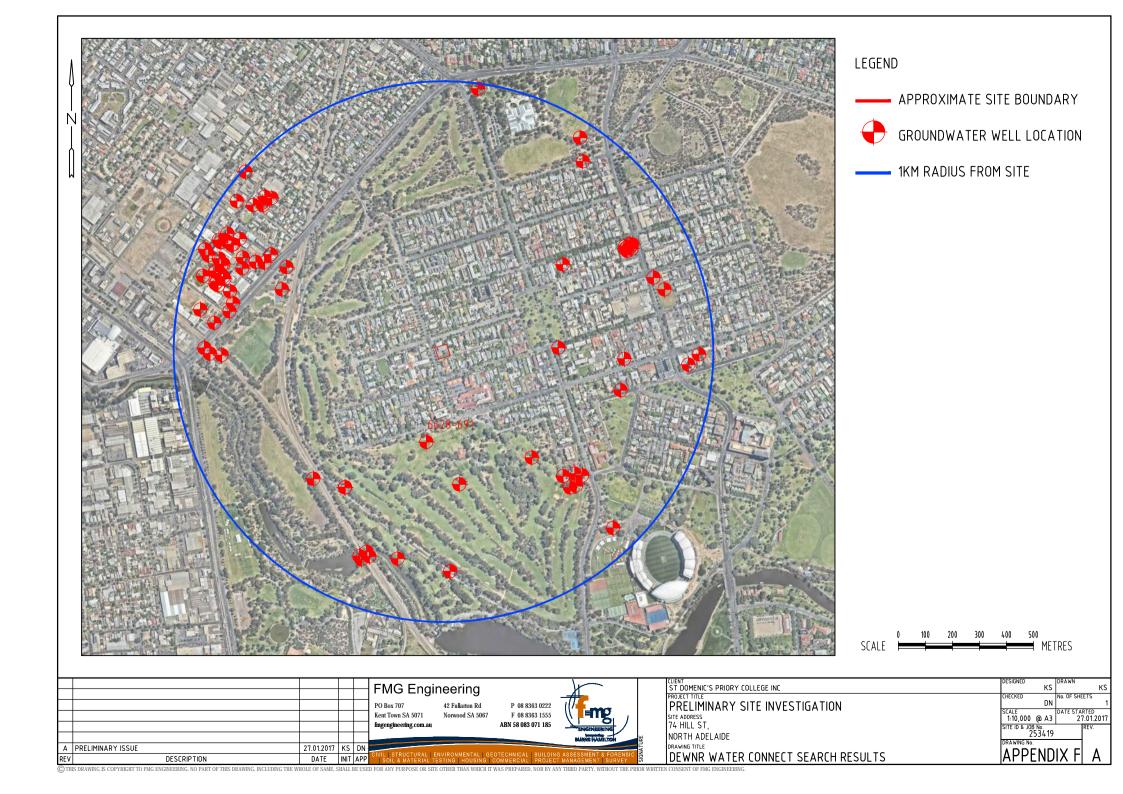
MANAGER LICENSING, CUSTOMER SERVICES TEAM SAFEWORK SA





# **Appendix F**

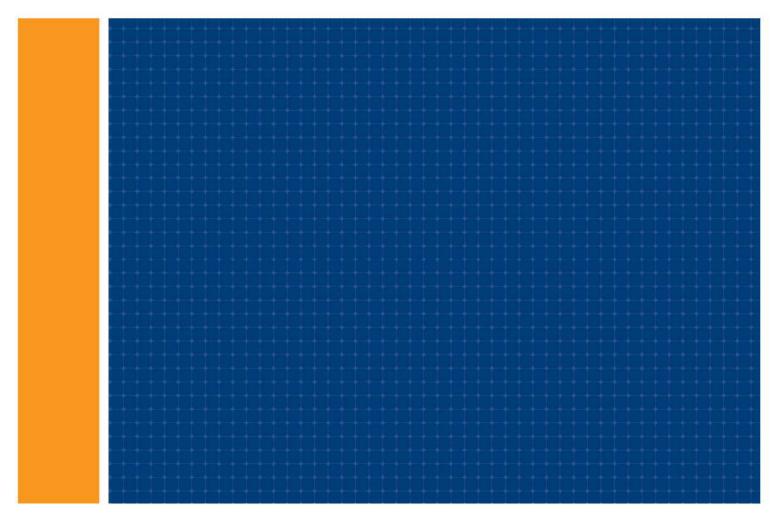
**DEWNR** WaterConnect Search Results



## Appendix F Water Connect Search Results

| Well ID    | Drilled Depth | Drilled Date | Purpose | Standing Water<br>Level (m bgl) | Reduced Standing<br>Water Level (m<br>AHD) | Total Dissolved<br>Solids (mg/L) | Electrical<br>Conductivity<br>(mS/cm) | рН  | Yield (I/s) |
|------------|---------------|--------------|---------|---------------------------------|--|----------------------------------|---------------------------------------|-----|-------------|
| 6628-23514 | 80            | 27-08-08     | -       | 28                              | 17.67                                      | 2887                             | 5160                                  | -   | 0.19        |
| 6628-27435 | 12            | 27-08-14     | INV     | 7.21                            | 15.06                                      | 2699                             | 4831                                  | 8   | 0.2         |
| 6628-690   | 32            | 07-04-66     | DRN     | 25.91                           | 21.24                                      | -                                | -                                     | -   | 0.25        |
| 6628-18614 | 19            | 10-09-96     | OBS     | 12                              | 1.61                                       | 2517                             | 4510                                  | -   | 0.56        |
| 6628-27504 | 66            | 27-08-14     | INV     | 1.75                            | 20.51                                      | 17226                            | 28285                                 | 7.7 | 1           |
| 6628-13493 | 31.6          | 26-07-85     | IND     | 13.7                            | 0.61                                       | 1027                             | 1860                                  | 7.2 | 1.5         |
| 6628-12385 | 26            | 24-04-83     | -       | 13.5                            | 3.46                                       | 1061                             | 1920                                  | 7.8 | 2.5         |
| 6628-433   | 56.39         | 30-12-65     | -       | -                               | -  | 3530                             | 6285                                  | 6.7 | -           |
| 6628-16153 | 17            | 18-06-92     | OBS     | 15.5                            | -0.94                                      | 1743                             | 3140                                  | 7   | -           |
| 6628-16154 | 17            | 17-06-92     | OBS     | 15.5                            | -0.43                                      | 9015                             | 15500                                 | 7.2 | -           |
| 6628-682   | 26.23         | 30-05-74     | -       | 26                              | 20   | 1031                             | 1867                                  | 7.3 | -           |
| 6628-401   | 25.35         | 26-06-74     | -       | 6.02                            | 16.98                                      | 940                              | 1703                                  | 7.9 | -           |
| 6628-17336 | 15            | 19-06-95     | DOM     | -                               | -  | 572                              | 1040                                  | 8.2 | -           |
| 6628-25019 | 9.55          | 23-11-09     | MON     | 6.65                            | 17.77                                      | 874                              | 1585                                  | -   | -           |
| 6628-25015 | 19.96         | 18-11-09     | MON     | 17.59                           | 2.09                                       | 1580                             | 2850                                  | -   | -           |
| 6628-25017 | 6.55          | 20-11-09     | MON     | 2.16                            | 14.43                                      | 1939                             | 3490                                  | -   | -           |
| 6628-20361 | 15            | 29-05-00     | INV     | 14.6                            | -1.01                                      | -                                | -                                     | -   | -           |
| 6628-432   | 25.91         | 12-12-65     | -       | 23.62                           | 18.38                                      | -                                | -                                     | -   | -           |
| 6628-26755 | 5             | 07-12-12     | INV     | 2.8                             | -  | -                                | -                                     | -   | -           |
| 6628-27777 | 5             | 05-09-14     | INV     | 2.8                             | -  | -                                | -                                     | -   | -           |
| 6628-26752 | 5             | 10-12-12     | INV     | 3.2                             | -  | -                                | -                                     | -   | -           |
| 6628-26753 | 5             | 07-12-12     | INV     | 4.7                             | -  | -                                | -                                     | -   | -           |
| 6628-26754 | 5             | 06-12-12     | INV     | 4.8                             | -  | -                                | -                                     | -   | -           |
| 6628-25046 | 20            | 02-02-10     | INV     | 15.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25004 | 20.5          | 04-11-09     | INV     | 15.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25194 | 20            | 06-05-10     | INV     | 15.8                            | -  | -                                | -                                     | -   | -           |
| 6628-27411 | 18            | 29-04-14     | INV     | 16                              | -  | -                                | -                                     | -   | -           |
| 6628-25193 | 20            | 06-05-10     | INV     | 16                              | -  | -                                | -                                     | -   | -           |
| 6628-28500 | 25            | 01-09-16     | INV     | 16                              | -  | -                                | -                                     | -   | -           |
| 6628-25712 | 20            | 19-04-11     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-25713 | 20            | 19-04-11     | INV     | 16.3                            | -  | -                                | ,                                     | -   | -           |
| 6628-26786 | 21            | 27-02-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26788 | 21            | 28-02-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26790 | 21            | 05-03-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26791 | 21            | 06-03-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26792 | 21            | 06-03-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26793 | 21            | 07-03-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-26794 | 21            | 05-03-13     | INV     | 16.3                            | -  | -                                | -                                     | -   | -           |
| 6628-28442 | 18            | 09-08-16     | INV     | 16.4                            | -  | -                                | -                                     | -   | -           |
| 6628-26784 | 20            | 27-02-13     | IRR     | 16.4                            | -  | -                                | -                                     | -   | -           |
| 6628-26892 | 20            | 20-03-13     | INV     | 16.4                            | -  | -                                | -                                     | -   | -           |
| 6628-26785 | 21            | 27-02-13     | INV     | 16.4                            | -  | -                                | -                                     | -   | -           |
| 6628-26789 | 21            | 01-03-13     | INV     | 16.4                            | -  | -                                | -                                     | -   | -           |
| 6628-25005 | 20            | 04-11-09     | INV     | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25006 | 20            | 05-11-09     | -       | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25007 | 20            | 05-11-09     | INV     | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25008 | 20            | 06-11-09     | INV     | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25009 | 20            | 06-11-09     | INV     | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-25715 | 20            | 20-04-11     | -       | 16.5                            | -  | -                                | -                                     | -   | -           |
| 6628-27734 | 20            | 06-05-15     | INV     | 17                              | -  | -                                | -                                     | -   | -           |
| 6628-26899 | 20            | 28-05-13     | INV     | 17.2                            | -  | -                                | -                                     | -   | -           |
| 6628-26902 | 20            | 28-05-13     | INV     | 17.2                            | -  | -                                | -                                     | -   | -           |
| 6628-26900 | 20            | 28-05-13     | INV     | 17.3                            | -  | -                                | -                                     | -   | -           |
| 6628-27822 | 20.2          | 18-05-15     | INV     | 17.73                           | -  | -                                | -                                     | -   | -           |
| 6628-28368 | 20            | 29-06-16     | INV     | 17.8                            | -  | -                                | -                                     | -   | -           |
| 6628-28367 | 20            | 29-06-16     | INV     | 18                              | -  | -                                | -                                     | -   | -           |
| 6628-28194 | 4.5           | 09-07-15     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-26599 | 5.5           | 19-06-12     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-26600 | 5.5           | 19-06-12     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-538   | 7.2           | 13-01-76     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-541   | 10.6          | 23-12-75     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-25016 | 10.9          | 19-11-09     | MON     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-14545 | 11.8          | 22-02-83     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-26598 | 17.4          | 18-06-12     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-436   | 18.29         | 10-12-65     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-28400 | 19            | 03-05-16     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-24630 | 20            | 23-09-08     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-28440 | 20            | 12-08-16     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-539   | 20.4          | 30-01-76     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-402   | 20.5          | 06-07-74     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-25014 | 20.75         | 16-11-09     | MON     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-26787 | 21            | 28-02-13     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-28428 | 21.5          | 06-06-16     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-540   | 22.8          | 22-01-76     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-434   | 24.38         | 10-12-65     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-27688 | 25            | 04-03-15     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-27758 | 25            | 31-03-15     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-28441 | 25            | 11-08-16     | INV     | -                               | -  | -                                | -                                     | -   | -           |
| 6628-683   | 26.2          | 29-05-74     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 6628-13492 | 31.5          | 23-07-85     | -       | -                               | _  | -                                | -                                     | -   | -           |
| 6628-25044 | 35            | 03-02-10     | INV     | -                               | -  | -                                |                                       | -   | -           |
| 6628-435   | 40.84         | 17-01-66     | -       | -                               | -  | -                                | -                                     | -   | -           |
| 00EU 7JJ   | 70.04         | T. OT.00     | l .     | l                               |  |                                  |                                       | l   | <u> </u>    |





# **Appendix G**

**Preliminary Site Investigation Checklist – Site Inspection** 



Document no: OPCL-756

Version: 1

Issued: 17/08/2015

## **PSI Site Inspection Checklist**

1. Job details

Client: St Domenic's Priory College Job number: 253419 Site name: 74 Hill St, North Adelaide

Site address:

## 2. Pre-visit checklist

| Element  | ✓ X | Comment<br>(optional) |  |
|--|-----|-----------------------|--|
| Site plan obtained?  |     |                       |  |
| Aerial photographs reviewed and copies on hand?                  |     |                       |  |
| Topographic map checked for any sensitive receiving environment? | /   |                       |  |
| Dangerous goods licensing reviewed?                              |     |                       |  |
| CT history reviewed?   | V.  |                       |  |
| WaterConnect groundwater bore data reviewed?                     |     |                       |  |
| Council records reviewed?  | //  |                       |  |
| EPA Section 7 search results reviewed?                           | ~   |                       |  |
| Site access OK?  |     |                       |  |
| Person with knowledge of site history available?                 | X   |                       |  |

## 3. Site inspection

| Ref | Element                           | Site inspection observations   |
|-----|-----------------------------------|--|
| 1   | Inspection conducted by           | Kate Stead.  |
| 2   | Date of site inspection           | 20th January 2017.   |
| 3   | Meteorological conditions         | Fine, Sunny.   |
| 4   | Presence of stockpiles            | Stockpile visible along southern bounds<br>Bitumen fragments visible at surface. |
| 5   | Evidence of cut and fill activity | Fill material as described above.  |

Date reviewed: 17/08/2015



OPCL-756

Version: 1

Issued: 17/08/2015

## **PSI Site Inspection Checklist**

| Ref | Element   | Site inspection observations   |
|-----|---|--|
| 6   | Topography  | undulating in unsealed areas.  |
| 7   | Overland flow                                     | Include presence of standing water and direction of water run-off.  None observed.   |
| 8   | Surface water courses                             | Direction of water courses and rate of flow, water levels, flood levels, tidal fluctuations, quality of surface water eg sheens noted etc. |
| 9   | Receiving environment                             | Include creeks, rivers, oceans etc.  |
| 10  | Groundwater<br>bores                              | Condition, number, measurement of groundwater table.   |
| 11  | Any contaminant preferential pathways identified? | Services?  |
| 12  | Vegetation  | Include any evidence of disturbed, discoloured, distressed vegetation.   |

Date reviewed: 17/08/2015



OPCL-756

Version: 1

Issued: 17/08/2015

## **PSI Site Inspection Checklist**

| Ref | Element                          | Site inspection observations   |
|-----|----------------------------------|--|
| 13  | Obstructions                     | Eg transmission lines, trees subject to preservation orders, gas and water pipes etc.  |
| 14  | Surface cover                    | Include evidence of fill, asphalt paving and condition, surface staining, earthworks, demolition activities, percentage of each surface cover etc.  Bitumen Carpark and Unsealed areas minor concrete in north eastern corner of site. |
| 15  | Soil type                        | Include comment about wetness of soil.   |
| 16  | Adjacent land uses               | Include names and types of businesses, distance from site, apparent condition of properties etc.  North Residential.  East Residential.  South Residential  West Hill St with residential dwellings beyond.                            |
| 17  | Complaints<br>from<br>neighbours |  |
| 18  | Odours                           |  |
| 19  | Asbestos                         |  |

Date reviewed: 17/08/2015



**PSI Site Inspection Checklist** 

OPCL-756

Version: 1

Issued:

17/08/2015

| Ref | Element  | Site inspection observations  |
|-----|--|---|
| 20  | Obvious evidence of contamination                  | Comment about staining, odours, wastes, spills etc. Staining on concrete in north eastern portion.                      |
| 21  | Aboveground storage tanks:                         | Quantity: Volume: Content: Condition: Bunded:   |
| 22  | Underground storage tanks:                         | Quantity: Volume: Content: Condition: Bunded:   |
| 23  | Pipelines  |   |
| 24  | Waste<br>treatment,<br>storage and<br>disposal     | Include details on liquid waste and solid waste. Area bunded? Describe condition.                                       |
| 25  | Means of<br>heating and<br>cooling in<br>buildings | Include fuel type.  |
| 26  | Warehouses,<br>sheds and<br>buildings              | Include information on quantity, conditions, location, size, construction materials eg concrete slab, timber floor etc. |

Date reviewed: 17/08/2015



## Document no: OPCL-756

Version: 1

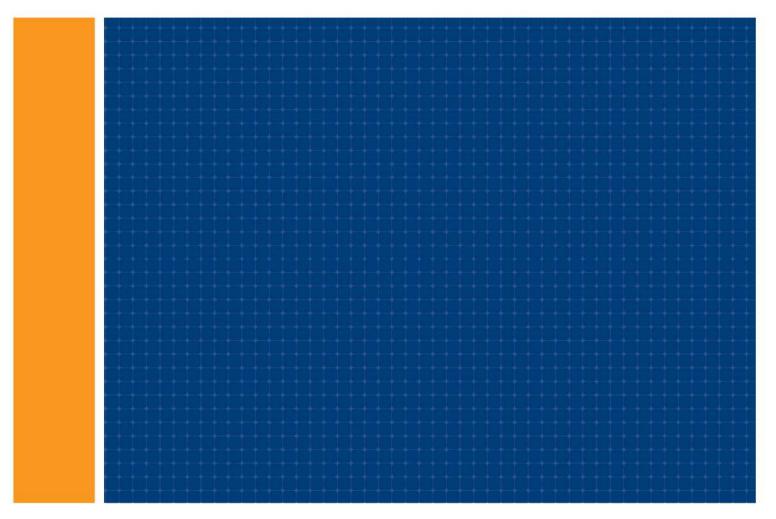
Issued: 17/08/2015

## **PSI Site Inspection Checklist**

| Ret | Element                     | Site inspection observations          |
|-----|-----------------------------|---------------------------------------|
| 27  | Plant and                   |                                       |
|     | equipment                   |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     | T 6                         | · · · · · · · · · · · · · · · · · · · |
| 28  | Transformers or substations |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
| 29  | Pits or sumps:              |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     | ·                           |                                       |
|     |                             |                                       |
| 30  | Septic system               |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
| 31  | Incinerators                |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     | -                           |                                       |
| 32  | No. of                      |                                       |
|     | employees:<br>Operating     |                                       |
|     | hours/days:                 |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |
|     |                             |                                       |

Date reviewed: 17/08/2015





# **Appendix H**

**Site Inspection Photographs** 



Photograph 01: View of the site across Hill Street, looking east.



View across unsealed portion of the site, looking north.

## **FMG Engineering**

PO Box 707 42 Fullarton Rd Kent Town SA 5071 Norwood SA 5067

P 08 8363 0222 F 08 8363 1555



Title:
APPENDIX H SITE INSPECTION PHOTOGRAPHS

Project Reference: 253419



Photograph 03: View across car parking, looking south east.



Photograph 04: View of fill material at surface of stockpile located along the southern boundary of the site.

## FMG Engineering

42 Fullarton Rd Norwood SA 5067



Title: APPENDIX H SITE INSPECTION PHOTOGRAPHS

Project Reference: 253419



Photograph 05: View of fill at surface in the central portion of the site.



Photograph 06: View of concreted portion in north eastern corner of the site.

# 

Title: APPENDIX H SITE INSPECTION PHOTOGRAPHS

Project Reference: 253419

Site:



Photograph 07: View of Staining on concrete surface in north eastern corner of the site.



Photograph 08: View of building on-site.

## **FMG Engineering**

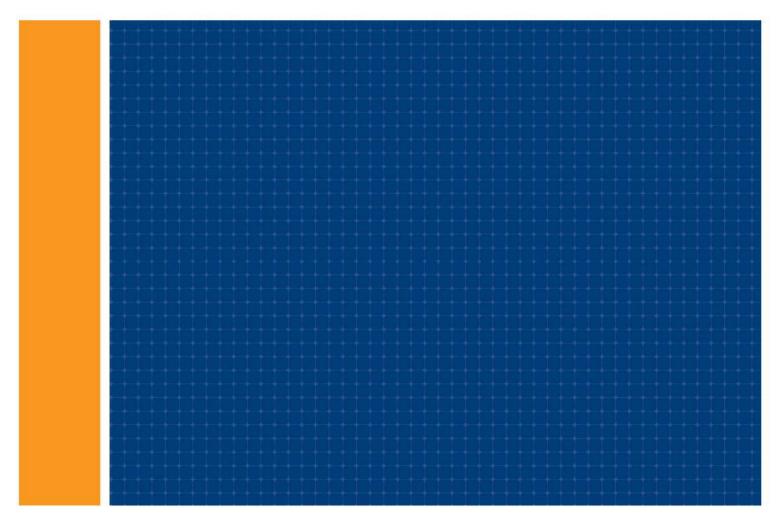
42 Fullarton Rd Norwood SA 5067



Title:
APPENDIX H SITE INSPECTION PHOTOGRAPHS

Project Reference: 253419





# **Appendix I**

**Dial Before You Dig Plans** 



## Job No 11618165

Phone: 1100 www.1100.com.au

#### **Caller Details**

Contact:Mrs Kate SteadCaller Id:1124155Phone:0883630222Company:FMG EngineeringMobile:Not SuppliedFax:Not SuppliedAddress:42 Fullarton RoadEmail:kate.stead@fmgengineering.com.au

Norwood SA 5067

## **Dig Site and Enquiry Details**

**WARNING:** The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



#### Notes/Description of Works:

Not Supplied

User Reference: 253419

Working on Behalf of:

Private

**Enquiry Date: Start Date: End Date:** 07/12/2016 10/12/2016 31/01/2017

Address:

112 Barnard Street North Adelaide SA 5006

**Job Purpose:** Design

Onsite Activity: Planning & Design

Location of Workplace: Both

Location in Road: CarriageWay,Footpath,Nature Strip

• Check that the location of the dig site is correct. If not you must

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility.
   If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

## Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.1100.com.au
- For more information on safe excavation practices, visit www.1100.com.au

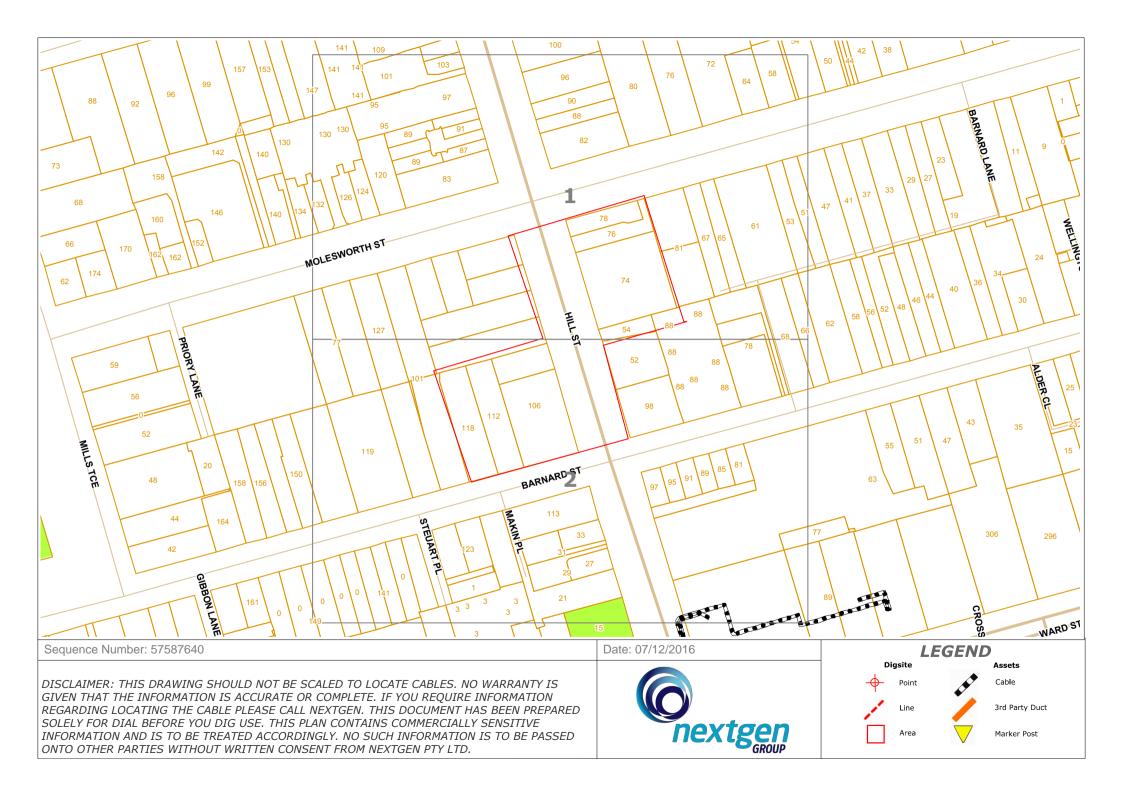
## **Asset Owner Details**

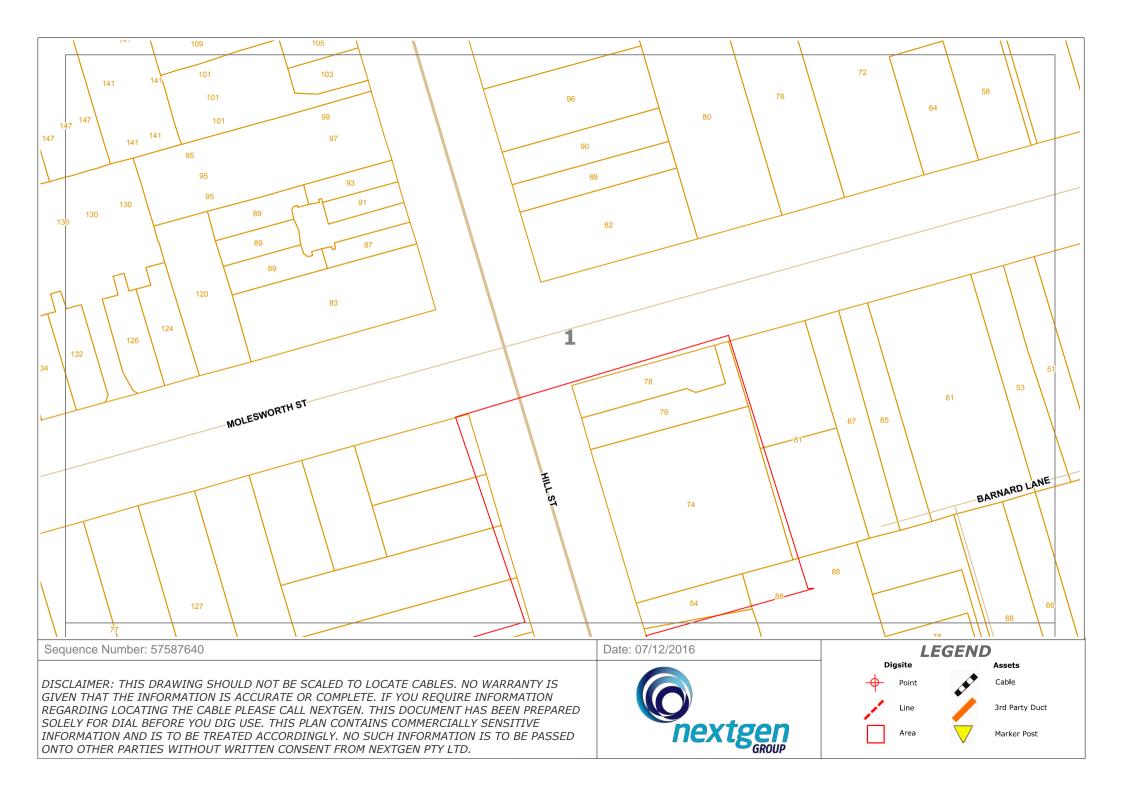
The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

- \*\* Asset owners highlighted by asterisks \*\* require that you visit their offices to collect plans.
- # Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

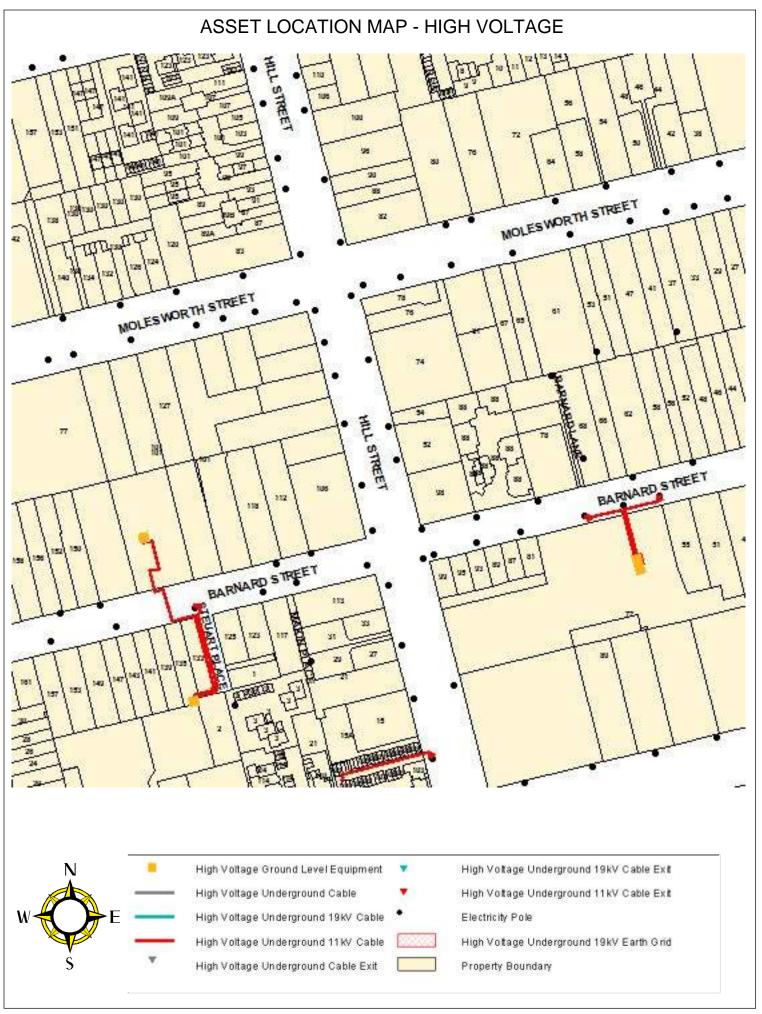
| Seq. No. | Authority Name    | Phone      | Status   |
|----------|-------------------|------------|----------|
| 57587643 | APA, Sa           | 0881154500 | NOTIFIED |
| 57587640 | Nextgen, NCC - SA | 1800032532 | NOTIFIED |
| 57587641 | SA Power Networks | 0882920218 | NOTIFIED |
| 57587644 | SA Water          | 0874241117 | NOTIFIED |
| 57587642 | Telstra SANT      | 1800653935 | NOTIFIED |

END OF UTILITIES LIST

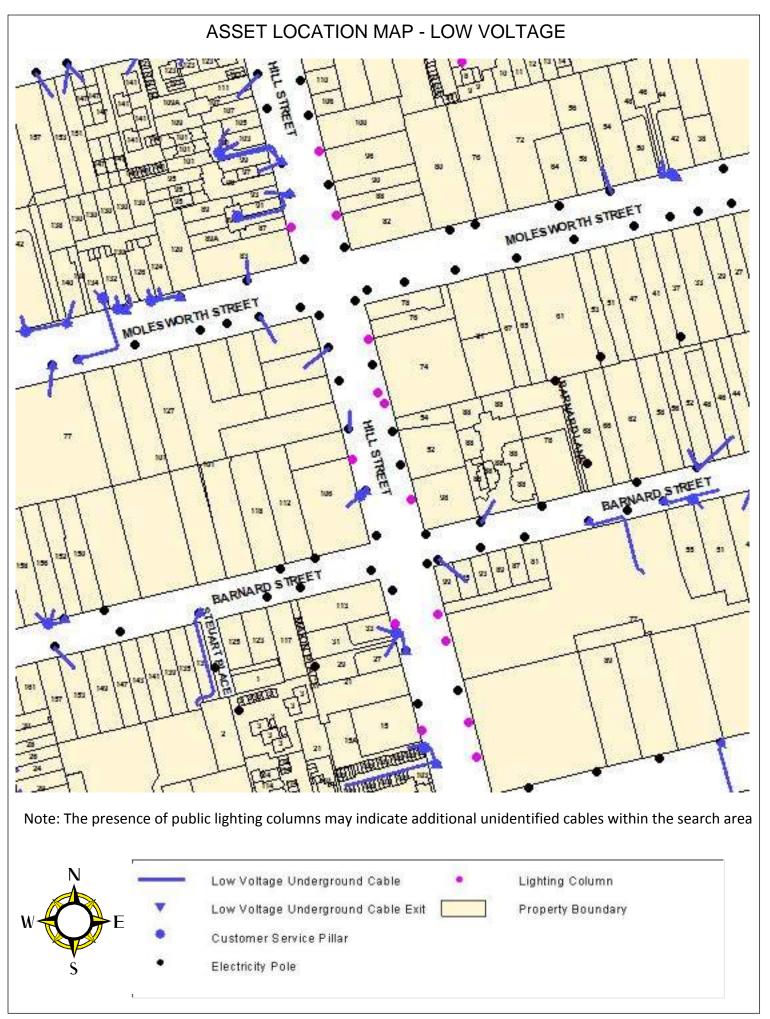




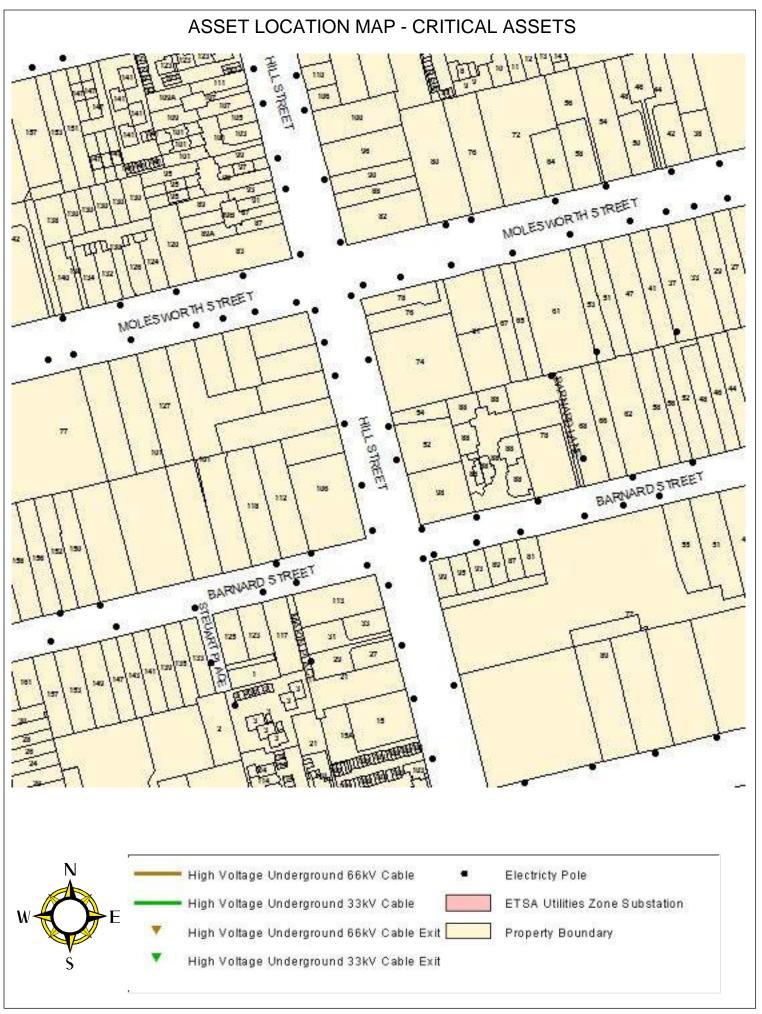




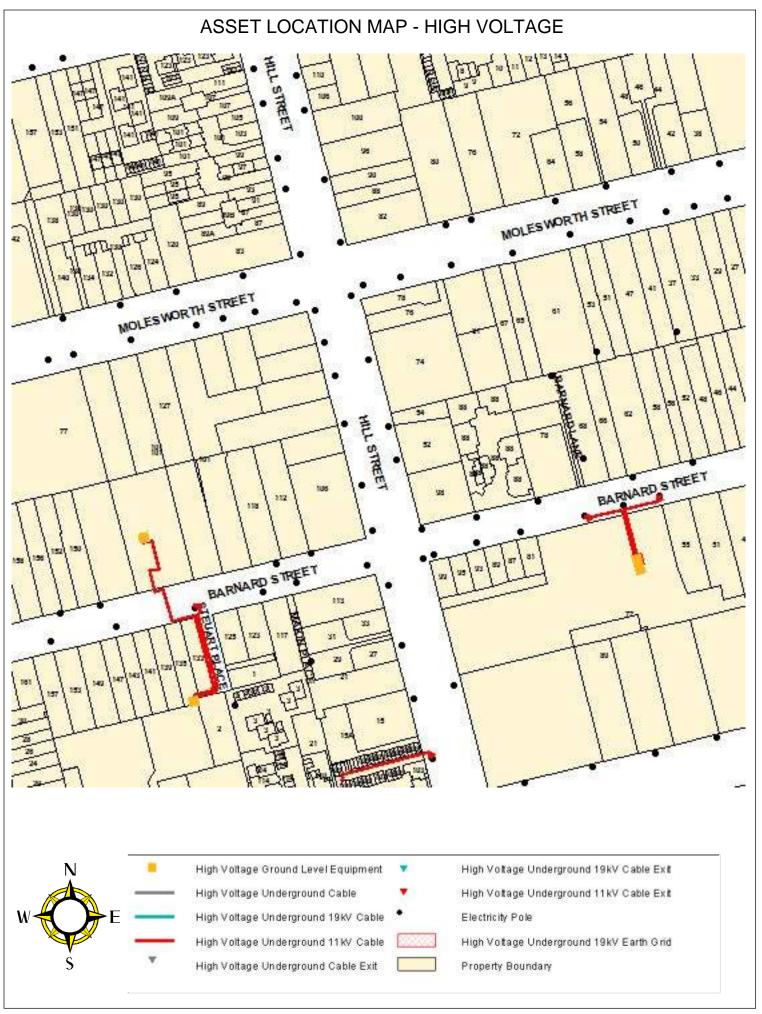




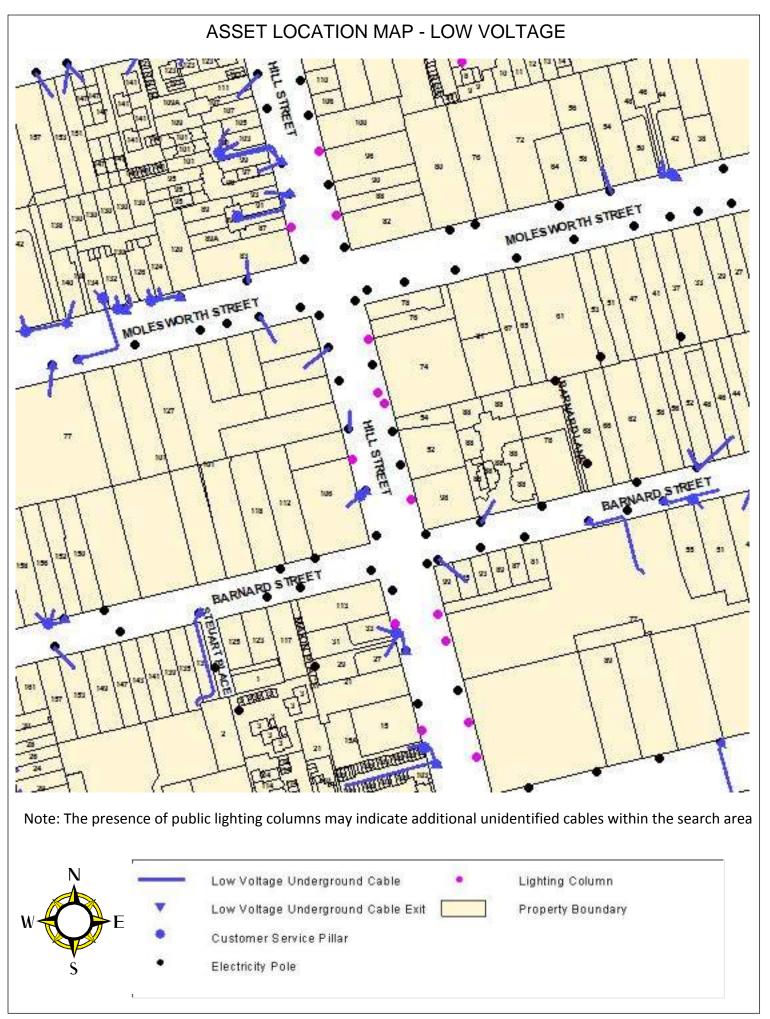




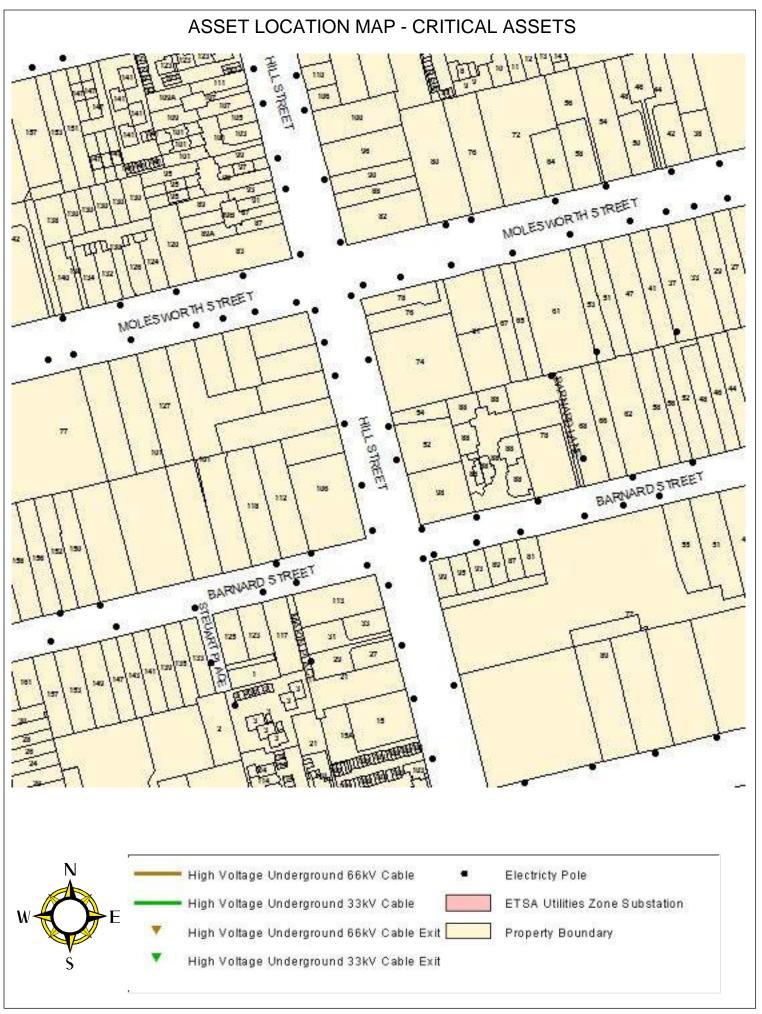
















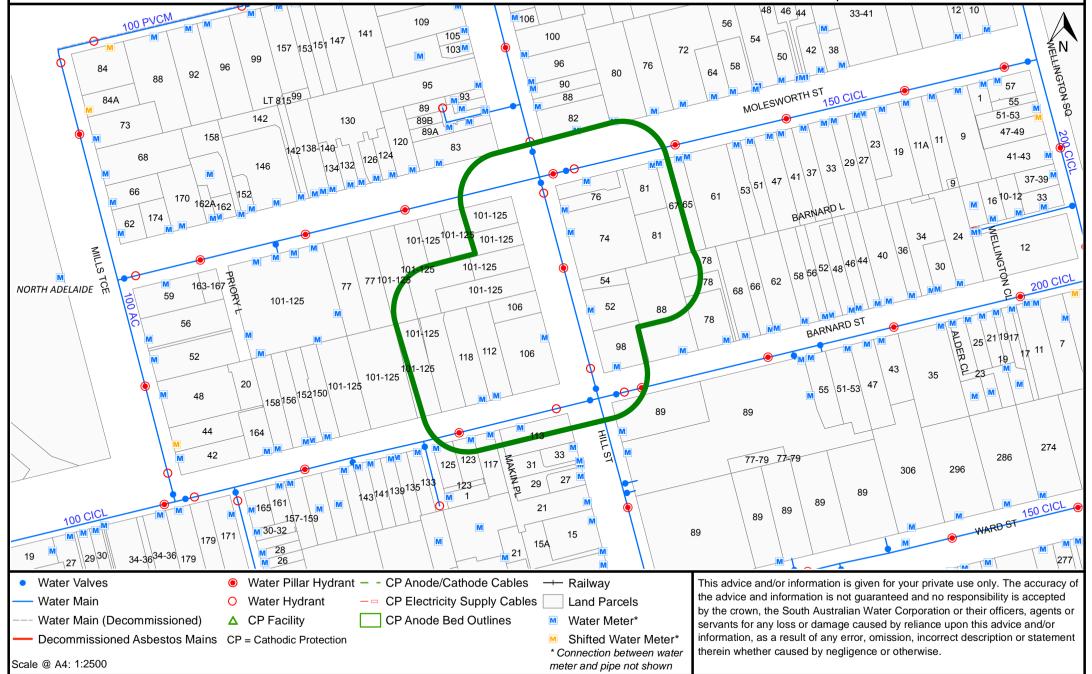
# **South Australian Water Corporation**

#### WATER RETICULATION



DBYD Sequence No: 57587644

Map Tile: 1



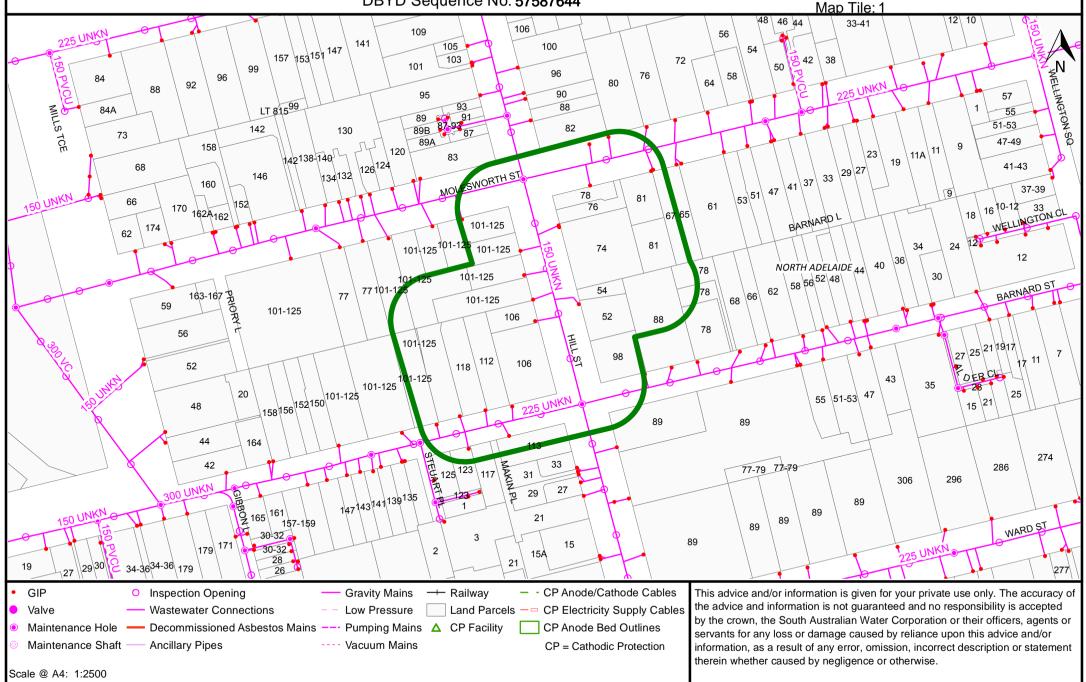


## **South Australian Water Corporation**

### WASTEWATER RETICULATION



DBYD Sequence No: 57587644







For all Telstra DBYD plan enquiries email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 07/12/2016 16:26:00

Sequence Number: 57592308

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

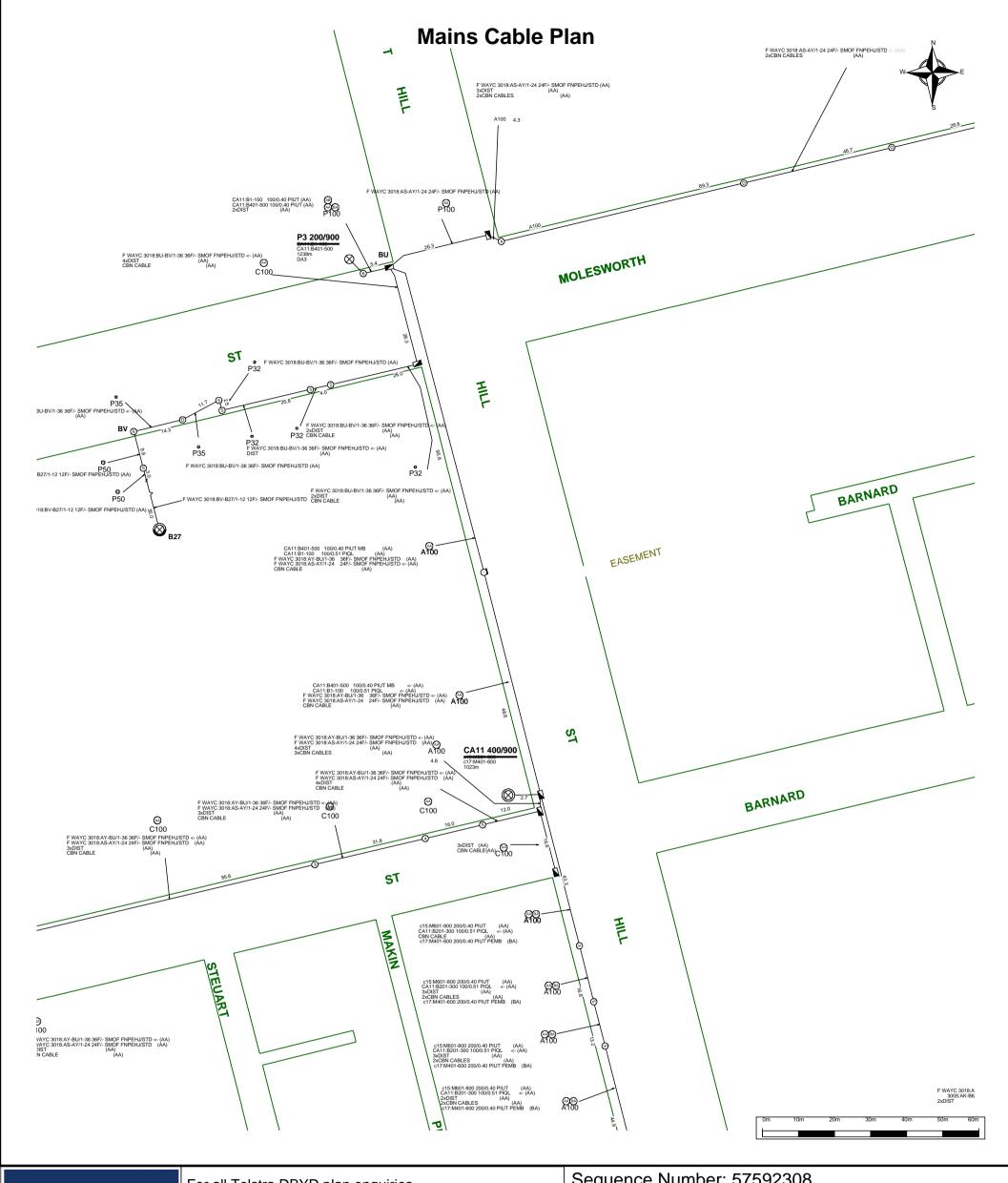
### The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.





For all Telstra DBYD plan enquiries email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 07/12/2016 16:26:05

Sequence Number: 57592308

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

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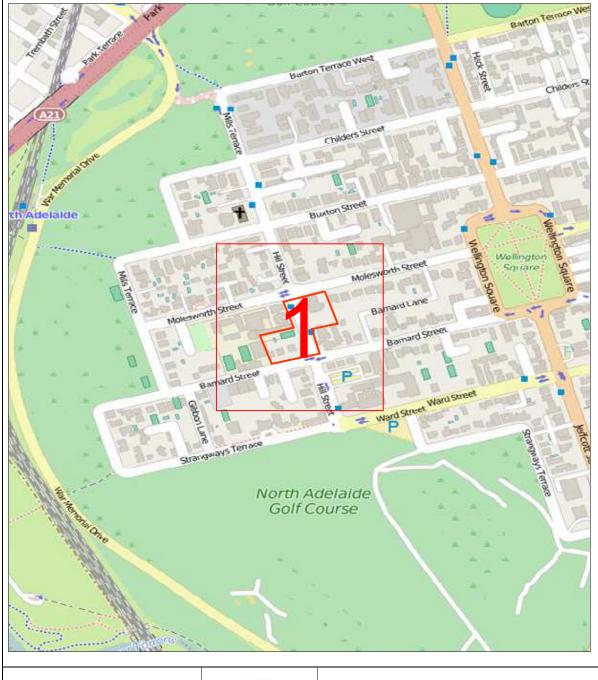
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Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.





| Site<br>Address | 112 Barnard Street<br>North Adelaide<br>5006 | Sequence<br>No | 57587643 |
|-----------------|--|----------------|----------|
| Name            | Mrs Kate Stead                               |                |          |
| Email           | kate.stead@fmgengineering.com.au             |                |          |



Scale 1: 6000 Enquiry Area Map Key Area





112 Barnard Street 57587643 Site Address North Adelaide Sequence No 5006 Мар UbdAde kate.stead@fmgengineering.com.au Email 118A3,118A4,118B3 Reference Before you commence any works you are required to complete the attached 'Work In The Vicinity Of Critical Gas Assets' request form and forward this to APA asap FIGTREE CT 笞 É 100 0g \2 100 SP minics Priory College 100 100 SP 101 A754 BARNARD 100 CI ó 100CI 90PMT 8\_1E13 CALVARY HOS Map Key SYMBOL **TERMS** ITEM LOW PRESSURE 1.2 - 1.7kPa B - BOUNDARY MEDIUM PRESSURE 35 - 100kPa D - DEPTH HIGH PRESSURE 70 - 350kPa 1 TRANSMISSION PRESSURE 900 - 15000kPa Bok - Back of Kerb PROPOSED MAIN 1,2 - 15000kPa Fok . Front of Kerb ABANDONED MAIN NORTH Scale 1:1000