Sustainable Consulting Solutions

Southern Midlands Council
18 Church St. Oatlands – SMC Works Depot

Site History Report

For
Bzowy Architecture

June 2013

Project No: 4193.001

SCIENTISTS | ENGINEERS | MANAGERS | FACILITATORS

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Project No: 4193.001

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ABBREVIATIONS

ACM	Asbestos Containing Material
ALS	ALS Laboratory Group
AS	Australian Standard
AST	Aboveground Storage Tank
AST Laboratory	Analytical Services Tasmania Laboratory
BTEX	Benzene, Toluene, Ethyl-benzene and o, m & p Xylene
DRP	Decommissioning and Rehabilitation Plan
EPA	Environment Protection Authority, Tasmania.
EPN	Environmental Protection Notice
ERLUR	Environmentally Relevant Land Use Register
ESA	Environmental Site Assessment
ICPAES	Inductively Coupled Plasma Atomic Emission Spectrometry
L	Litre
LPG	Liquid Petroleum Gas
m	Metre
mbgs	Metres Below Ground Surface
NATA	National Association of Testing Authorities
NELMS	New Environmental Licensing and Monitoring System
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PID	Photo Ionisation Detector (meter)
PIR	Property Information Request
TPH	Total Petroleum Hydrocarbons
UST	Underground Storage Tank
WST	Workplace Standards Tasmania

EXECUTIVE SUMMARY

In August 2012 Bzowy Architecture engaged SEMF to undertake a site history investigation of the Southern Midlands Council (SMC) Oatlands Works Depot at 18 Church St, the adjacent Community Centre at 68 High St and antiques shop at 70 High St., defined on Figure 1 as the 'site'.

The purpose of the investigation was to identify the likely areas of contamination and to prepare a site sampling plan for an Environmental Site Assessment (ESA) of soil and groundwater quality to help estimate rehabilitation costs required for a change of use of the site to the Midlands Aquatic Centre (Appendix A).

Areas likely to cause site contamination are all located within the Works Depot which constitutes the majority of the site, including:

- A major diesel spill in 1993 which was retained on site.
- An underground fuel storage tank (UST 1) which became redundant in 1993, with no records of it having been removed from the site (contrary to anecdotal opinion) or contamination caused by it being properly managed.
- An above ground fuel storage tank (AST 1) which was removed from site and replaced in 1993 with an underground storage tank.
- An underground fuel storage tank (UST 2) which remains operational.
- Oil stores (past and present).
- Vehicle wash bay which doubles as pesticide/herbicide loading area.

No investigation has been made into the potential for building contaminants such as asbestos or lead-based paints. Localised occurrences of potential asbestos containing material were noted during the site investigation and it is intended that an asbestos audit be conducted in the future, including all site buildings.

Refer to Section 7 for project recommendations and Figure 3 for the site sampling plan.

1. INTRODUCTION

In August 2012, SEMF Pty. Ltd. (SEMF) was engaged by Bzowy Architecture to undertake a site history investigation of Southern Midlands Council's (SMC) Oatlands Works Depot (18 Church St), the Oatlands Community Centre (68 High St) and an Antiques Shop (70 High St). Land tittles for each address are defined on Figure 2 and hereafter referred to as the 'site'. The various operational areas within the site, which cross title boundaries, are defined on Figure 3.

The purpose of the site history investigation is to identify the nature and extent of potential soil and/or groundwater contamination (if any) that could be present due to current and former uses. Outcomes of the investigation will help establish the site's suitability for redevelopment as the Midlands Aquatic and Recreation Centre.

Given that the site may be converted from a relatively long-standing Municipal Works Depot, which is likely to exhibit some contamination; to a Recreation Centre, a field sampling plan will be developed irrespective of the outcomes of the site history investigation.

In addition to a general site-wide assessment, the field sampling plan will target likely areas of contamination such as where petroleum spills have occurred, or near fuel storage and refuelling depots.

Results of the field sampling program will enable us to quantify contamination that might be present and hence provide a reasonably accurate estimate of the cost to decontaminate the site for its proposed use.

1.1 Site Details

SITE LOCATION: 18 Church St., 68 High St. and 70 High St Oatlands, Tasmania.
TITLE REFERENCES: ▪ 18 Church St. - CT-22710/1, CT-46931/1 and CT-148207/1 ▪ 68 High St. - CT-148205/1 ▪ 70 High St. - CT-41274/3.
CURRENT LAND USE: ▪ 18 Church St (CT-22710/1, CT-46931/1, part CT-148207/1 and part 148205/1) - SMC Oatlands Works Depot ▪ 18 Church St (part CT-148207/1) – Public lawn (fronting High St). ▪ 68 High St. (part CT-148205/1) – Oatlands Community Centre. ▪ 70 High St. (CT-41274/3) – Antiques Shop.
PROPOSED LAND USE: Midlands Aquatic and Recreation Centre (Appendix A).
ASSESSMENT TEAM: Nigel Alexander, Principal Environmental Engineer – SEMF. Carly Harington, Senior Environmental Scientist – SEMF.

Plate 1: Site Viewed from High St.

Plate 2: Site Viewed from South Parade

Plate 3: Site Viewed from Church St. Entrance

2. SITE HISTORY

The site history involved an investigation into the site's prior uses and potential for the presence of contaminating activities. The site history investigation was conducted to locate external areas of potential contamination, prior to consideration for its redevelopment as the Midlands Aquatic and Recreation Centre (Appendix A). Potentially contaminating activities identified in the site history will be made the focus of the sampling program.

No investigation has been made into the potential for building contaminants such as asbestos or lead-based paints. Localised occurrences of potential Asbestos Containing Materials (ACM) were noted during the site investigation and it is intended that an asbestos audit be conducted in the future, including the Community Centre at 68 High St., an antiques shop at 70 High St. and all SMC Works Depot buildings.

The site history investigation has been based primarily on:

- Site visit by C Harrington (Senior Environmental Scientist, SEMF) on 14 August 2012 including discussions with key site related personnel.
- Site visit by N Alexander (Principal Environmental Engineer, SEMF) on 14 September 2012 including discussions with key site related personnel.
- Review of the dangerous goods file held at Workplace Standards Tasmania (WST) pertaining to the storage of dangerous goods on site.
- Review of the Environment Protection Authority, Tasmania (EPA) databases regarding past site uses and the potential for contaminating activities to have occurred, as a result of identified past uses.
- Review of the Land Title Information (Appendix B).

2.1 Regional Setting

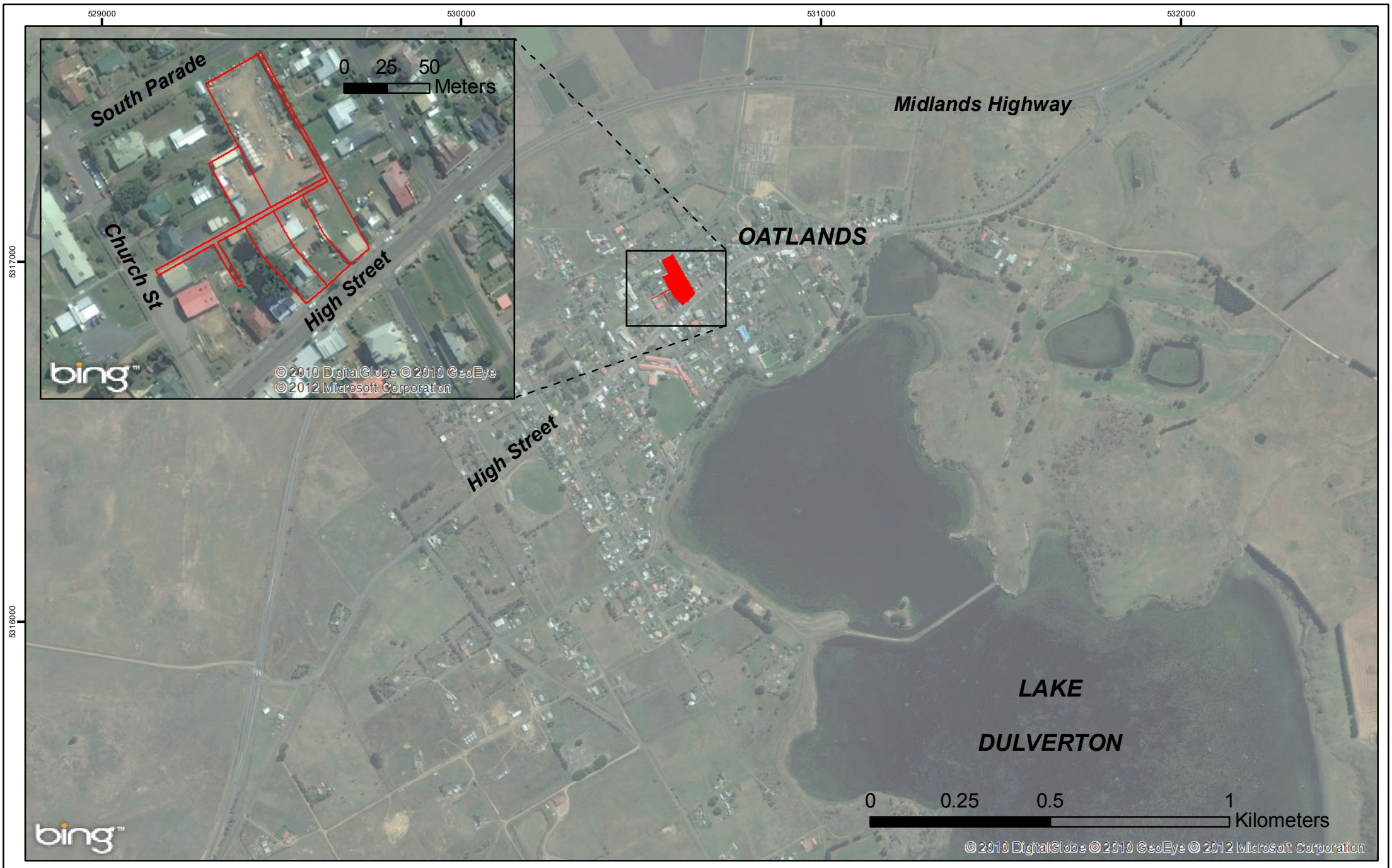
2.1.1 Zoning

The site is zoned Residential and Commercial for 18 Church St. (SMC Oatlands Works Depot and public lawn) and Commercial for 68 High St and 70 High St (Community Centre and Antiques Shop) under the SMC Planning Scheme 1998.

2.1.2 Locality

The site is located within the centre of Oatlands, fronting High Street (Main Road), approximately 82 km north of Hobart (Figure 1). The site slopes gently toward the northwest (South Parade). Neighbouring land uses include:

- South Parade to the northwest.
- Private/residential housing to the northeast.
- High Street to the southeast.
- Private/residential housing and commercial to the southwest.



18 Church St. Oatlands - SMC Works Depot
Site History Report

Figure 1: Site Locality Plan

SMC Works Depot

Base data TASMAP © State of Tasmania
Base image © Bing

Datum: GDA94
Grid: MGA Zone 55
Prepared by: SEMF Pty Ltd

TASMAP: Oatlands 5231
Project: 4193.001
Client: Bzowy Architecture

Date:1st October 2012

2.1.3 Site Owner

The site is owned by SMC.

2.1.4 Current Site Uses / Layout

Current site activities include:

- 18 Church St. (CT-22710/1; CT-46931/1, part CT-148207/1 and part CT – 148205/1): SMC Oatlands Works Depot since the mid 1970s for CT-46931/1 and since 1984 for CT- 22710/1.
- 18 Church St. (Part CT-148207/1): Public open space lawn/garden fronting High St.
- 68 High St. (Part CT-148205/1): Community Centre.
- 70 High St. (CT-41274/3): Antiques Shop.

Refer to Figure 3 for the current site layout.

2.1.5 Past Site Uses

Past site activities include:

- 18 Church St (CT-22710/1): private residential prior to 1984.
- 18 Church St. (CT-46931/1): private residential prior to the mid 1970s.
- 18 Church St. (CT-148207/1): unknown prior to the mid 1970s.
- 68 High St. (CT-148205/1): unknown prior to the mid 1970s.
- 70 High St. (CT-41274/3): Pre 1940s C.T. Fysh drapery shop (burnt 1979); video-hire shop, then restaurant.

2.2 Sources of Historical Information

A number of sources of information pertaining to the past uses of the site have been investigated. The findings of these investigations are summarised below:

2.2.1 EPA Tasmania Property Information Request

A Property Information Request (PIR) was submitted to the EPA Contaminated Sites Unit on 6 September 2012 (Appendix C), prompting searches of the following information sources:

- The Contaminated Sites Unit database for records of land and water contamination on the site;

- The Environmentally Relevant Land Use Register (ERLUR) – for selected potentially contaminating activities that may have been historically undertaken at or adjacent to the site (prior to 1992);

- The Underground Petroleum Storage System (UPSS) database for records of UPSS on, or adjacent to the site;

- The New Environmental Licensing and Monitoring System (NELMS) database for permits or notices (Environmental Protection Notice (EPN)), Site Investigations, Site Remediation or Site Management Notices that may have been issued in relation to the site.

- The Incidents database – for any records of complaints, notifications etc. received in relation to the site.

The EPA response to the PIR is included in Appendix C. Search results relating directly to the site are summarised as follows:

- Land parcels defining the site include: 18 Church St. (CT-22710/1, CT-46931/1 and CT-148207/1); 68 High St. (CT-148205/1) and 70 High St. (CT-41274/3);

- An incident in 1998 involving the spillage of approximately 1.0 kL of aluminium sulphate; and

- Underground storage tanks were/are present on the site.

Although no other records pertaining to the site were found by EPA in any of the above-mentioned databases, EPA recommended that the history of each land parcel within the site and of neighbouring properties be investigated to determine further likelihood of onsite contamination. EPA also advised that as dangerous goods have been installed at the site, WST may have additional information (Refer to section 2.2.2).

2.2.2 WST Dangerous Goods File

A request for information was submitted to WST on 6 September 2012 (Appendix C) for records relating to the storage of dangerous goods at the site and for incidents or complaints associated with environmental management of the site. Search results for File No. 1611 (18 Church St.) are summarised in Table 1. No records existed for 68 High St. or for 70 High St.

Table 1 – Summary of WST Dangerous Goods Records

DATE	COMMENT
FILE No. 1611 (18 Church St.)	
10/08/11	▪ Site manifest (Licence 28552) indicates: ▪ Diesel – 5.0 kL UST (UST 2) ▪ Lube oil – 3 no. 0.2 kL (drums) ▪ Site deemed 'minor storage'
11/06/03	Application for renewal of Dangerous Goods Keepers Licence (no. 28552).
25/10/93	▪ Letter from a nearby resident to Dept. of Mines, indicating: ▪ Concern regarding the site being located in the centre of Oatlands). ▪ A third spillage of diesel (31/05/93 event) from an above ground storage tank (AST 1). ▪ An underground storage tank (UST 2) has been installed.
22/10/93	▪ Letter from a nearby resident to Dept. Env and Planning, indicating: ▪ Concern for the lack of progress in developing an alternative site (behind the town water tanks). ▪ Concern regarding the increase in vehicle numbers at the site. ▪ Concern regarding pollution and noise emanating from vehicles parked at the site.
02/09/93	▪ Dangerous Goods Inspectorate (approval no. 1017) indicates: ▪ Diesel tank – 5.0 kL (UST 2). ▪ Diesel tank – 5.0 kL (AST 1) - redundant and needs removal. ▪ Petrol tank – (volume not stated) (UST 1) - redundant and needs removal (bowser has been removed). ▪ L (lube)/oil – 3 no. 0.2 kL. ▪ LPG - used in workshop. ▪ Oxy-acetylene cylinders - used in workshop.
30/07/93	▪ Dept. of Mines Approval - site and construction of premises for keeping dangerous goods: ▪ Diesel - 1 no. 5 kL (UST 2).
28/07/93	▪ Letter from Dept. of Mines to a nearby resident, indicating: ▪ SMC has been requested to upgrade its diesel storage facility. ▪ Diesel tank (AST 1) will be replaced with a u/g diesel tank (UST 2). ▪ Petrol tank (UST 1) and bowser will be removed completely.
19/07/93	▪ Letter from SMC to Dept. of Mines referencing Notice of Inspection no. 146, indicating: ▪ Bulk petrol will no longer be stored on site. ▪ A 5 kL diesel tank will be installed u/g (UST 2), utilising the redundant u/g petrol tank bowser.

DATE	COMMENT
07/07/93	▪ Letter from a nearby resident to Dept. of Mine, indicating: ▪ Nearby fuel storages could be hazardous. ▪ Concern regarding the potential impact of a recent diesel spill. ▪ Desire for the SMC works depot to be relocated.
05/07/93	▪ Letter from a nearby resident to SMC, indicating: ▪ A major diesel spill discovered on 31/05/93. ▪ Remnants of diesel spill being covered with sand/soil. ▪ Potential for soil and groundwater contamination off-site, caused by spilt diesel that remains onsite. ▪ Damage to trees caused by vehicle exhaust.
03.06.93	▪ Dept. of Mines - Notice of Inspection no. 146, indicating: ▪ Requirement for AST 1 to be relocated to a safer area (with a bund) if it is not replaced, preferably with an underground tank.
02/06/93	▪ SMC internal report, indicating: ▪ AST 1 was converted to a portable diesel storage tank (2.2 kL). ▪ A diesel spill totalling approximately 0.83 kL had occurred whilst filling the portable diesel storage tank. The spill was "mostly" contained onsite within a 250 m^2 area.
01/06/93	▪ Complaint to Mineral Resources Tasmania (MRT) from neighbouring resident, registering: ▪ A diesel spill occurred at the site on 31/05/93.

The WST records summarised in Table 1 indicate:

- A major diesel spill which was retained on site (0.83 kL over a 250m^2 area) occurred in 1993.
- UST 1 (underground storage tank for petrol – unknown volume) became redundant in 1993 but there are no records of it having been removed from the site.
- AST 1 (5 kL aboveground storage tank for diesel) was replaced in 1993 with UST 2 (5 kL underground storage tank for diesel) which remains operational.
- Various ratepayer environmental and safety issues relating to the "impractical" location of the SMC Works Depot within a built-up area.
- No reference to the incident in 1998 involving the spillage of approximately 1.0 kL of aluminium sulphate (information provided in EPA's response to the PIR).

Refer to Figure 2 for details of tank locations, the diesel spill zone and other areas of interest.

2.2.3 Previous Investigations

No reports pertaining to previous investigations (in terms of contamination) were provided during the site visit and it is understood that no such investigations have been undertaken at the site.

2.2.4 Anecdotal Evidence

SEMF and SMC's Deputy Works Manager conducted a site inspection on 14 September 2012, to identify and discuss potentially contaminating activities, as located on Figure 2 and summarised in Table 2.

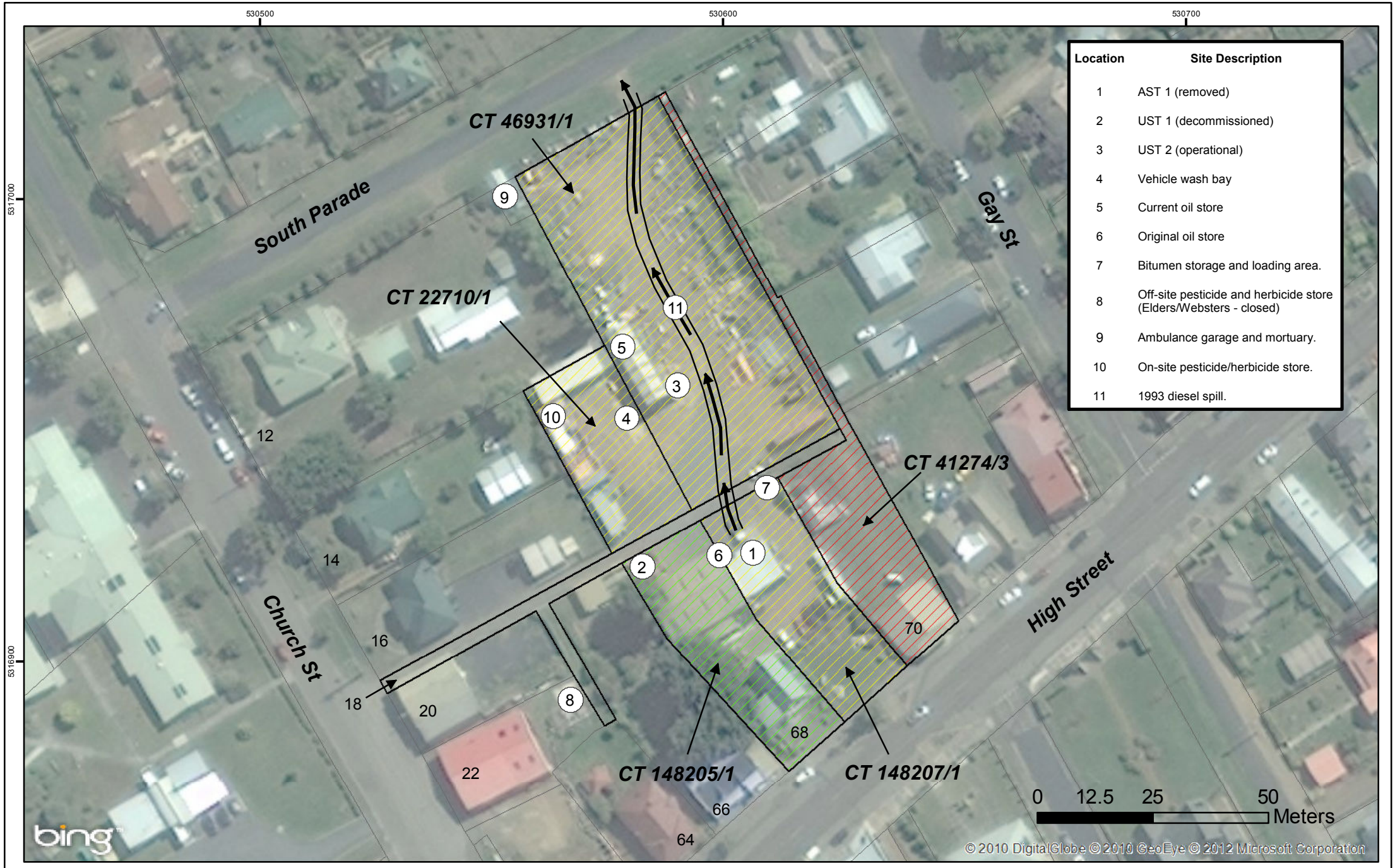
Anecdotal evidence provided during the site inspection is listed as follows:

- Deputy Works Manager commenced employment at the site in 1988 and is therefore familiar with the likely areas of contamination.
- The SMC Works Depot commenced operations at 18 Church St. in approx. 1970.
- Wastewater from the wash bay is disposed via an open stormwater pit to the SMC piped drainage system. Pesticides and herbicides are loaded over the wash bay by using sealed containers stored nearby. Site contamination caused by this procedure is unlikely.
- There is now no need for the storage of motor spirit (Petrol) at the Works Depot.
- 12 Church St. (site neighbour) - The Oatlands Hospital was recently converted to a private residence. Although the ambulance and mortuary building remain (on the site boundary) it is unlikely to be a source of contamination for the site.
- 14 Church St. (site neighbour) - Houses a private residence (circa 1950), from which contamination of the site is unlikely.
- 16 Church St. (site neighbour) – Recently converted from the site's work supervisor residence, to a 100 year lease for UTas. medical students.
- 18 Church St. (three site titles) – Address and part of the site.
- 22 Church St - Site of long-term pesticide and herbicide storage and supply area, used for commercial purposes. Operations (Elders/Websters) closed approx. 2006. The concrete slab for the storage area remains. Although serious localised contamination is possible (DDT etc), it is considered unlikely to have affected the site
- 66 High St. (site neighbour) – Bed and Breakfast since 1980 approx., recently converted to private residence, from which contamination of the site is unlikely.
- 68 High St. (a site title) - Part of the site and currently an Oatlands Community Centre.

- 70 High St. (a site title) - Part of the site and currently an Antiques store. Past uses include C.T. Fysh drapery shop (since pre-1940 and burnt 1979); video-hire shop, then restaurant.
- 72 High St. (site neighbour) – Private residence from which contamination of the site is unlikely.
- 74 High St. - Long-term use as Hobart Savings Bank, from which contamination of the site is unlikely.
- Gay St addresses (site neighbours) – Private residences from which contamination of the site is unlikely.
- Up to six 200 L drums for lube and hydraulic oil etc. were originally stored adjacent to the crib room (at site ID 6), then relocated in approx. 1992 to the vehicle service workshop (site ID 5).
- Petrol was stored on site (in UST 1) until approx. 1989. UST 1 bowser was then reused at UST 2 site. UST 1 was removed from site (NB – no records have been provided that confirm its removal, or defines the amount/level of residual site contamination it may have caused).
- S-mite (silent slow-expansion chemical explosive) was stored on site until 2003 approx., but not considered a potential source of site contamination.
- Historic site aerial photographs are available from the aquatic centre project archaeologist (Brad Williams – 0418303184).
- Asbestos is likely to be present in some buildings on the site.
- An significant diesel spill approximating 1.0 kL occurred on site during 1993 (0.84 kL over a 250m^2 area according to WST file note 2/6/93 – refer to Table 1).
- Cationic water-based tar (bitumen) is stored and loaded on site (site ID 7). Loading procedures avoid risk of spillage (sealed containers). No records of and spill events.
- LPG and oxy-acetylene cylinders are stored and used in the workshop areas.

Table 2 – Areas of Interest

Location	Site Description	Comments
1	AST 1 (removed)	In 1993 AST 1 Capacity 5 kL.) was removed (due to diesel spills and lack of an effective bund and later replaced with UST 2.
2	UST 1 (decommissioned)	Long-term used as 5 kL petrol tank until approx. 1989. Bowser was eventually relocated for use at UST 2. Although anecdotal evidence suggests UST 1 has been removed from the site, no records have been sited to justify that UST 2 has been removed, or of any remediation of contaminated soil likely to be remaining. There is no longer a requirement for petrol to be stored on site.
3	UST 2 (operational)	Installed to replace AST 1 as the on-site diesel storage tank. The UST 1 bowser was relocated for use at UST 2, after UST 1 was made redundant.
4	Vehicle wash bay	Wastewater from the wash bay is disposed via an open stormwater pit to the SMC piped drainage system.
5	Current oil store	Contains 3 no. 200L drums (lube and hydraulic oil etc.). Not bunded, but hard floor present.
6	Original oil store	Contained up to six no. 200L drums (lube and hydraulic oil etc.). Oil store relocated to site ID 5 in 1992 (vehicle service workshop).
7	Bitumen storage and loading area.	Cationic water-based tar (bitumen) is stored and loaded on site (site ID 7). Loading procedures avoid risk of spillage (sealed containers). No records of and spill events.
8	Off-site pesticide and herbicide store (Elders/Websters - closed)	Site of pesticide and herbicide storage and supply area, used for commercial purposes. Operations closed approx. 2006. Concrete slab remains and although localised contamination is likely, it poses no risk to the subject.
9	Ambulance garage and mortuary.	The Oatlands Hospital at 12 Church St. (site neighbour) was recently converted to a private residence. The ambulance garage and mortuary, which are located on the site boundary, remains.
10	On-site pesticide/herbicide store.	Pesticides and herbicides are loaded over the wash bay (Site ID 4) by using sealed containers stored nearby.
11	1993 diesel spill.	A significant diesel spill approximating 1.0 kL occurred on site during 1993 .The spill was “mostly” contained onsite within a 250 m^2 area.



Location	Site Description
1	AST 1 (removed)
2	UST 1 (decommissioned)
3	UST 2 (operational)
4	Vehicle wash bay
5	Current oil store
6	Original oil store
7	Bitumen storage and loading area.
8	Off-site pesticide and herbicide store (Elders/Websters - closed)
9	Ambulance garage and mortuary.
10	On-site pesticide/herbicide store.
11	1993 diesel spill.

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Figure 2: Site Layout and Areas of Interest

SMC Works Depot
70 High St
68 High St
18 Church St

Base data TASMAP © State of Tasmania
Base image © Bing

Datum: GDA94
Grid: MGA Zone 55
Prepared by: SEMF Pty Ltd

TASMAP: Oatlands 5231
Project: 4193.001
Client: Bzowy Architecture

Date:1st October 2012

3. POTENTIAL CONTAMINATION ISSUES

3.1 Areas of Potential Contamination

All potential land or groundwater contamination sources identified in the site history investigation relate to SMC Works Depot operations four land Titles constituting 18 Church St (CT-22710/1; CT-46931/1, part CT-148207/1 and part CT-148205/1). No other potential sources were identified at 68 High St. (Part CT-148205/1) or 70 High St (CT-41274/3). Therefore areas of potential contamination at the site (shown on Figure 3), all confined within the bounds of the SMC Works Depot, include:

- USTs and ASTs fuel storage and refuelling areas:
  - Location 1: Although AST 1 has been removed diesel from refuelling spills is likely to have contaminated the soil profile down to 1.0 metres below ground surface (mbgs), immediately below AST 1 and proximal to the concrete refuelling pad which still remains.
  - Location 2: Although UST 1 was decommissioned in 1989 and its bowser relocated for use at UST 2, petrol and normally associated compounds are likely to have contaminated the soil profile down to 2.5 mbgs, depending on the diameter and integrity of UST 1. Soil down to 1.0 mbgs proximal to the bowser/refuelling area is also likely to be contaminated. Also, although anecdotal evidence indicates that UST 1 has been removed, there are no records at WST or EPA to that effect. Therefore, unless more information comes to light, it is wise to assume that UST 1 remains on site and still needs to be exhumed along with any affected soil, in accordance with the requirements of the EPA bulletin No. 109: Underground Storage System Decommissioning Guidelines.
  - Location 3: UST 2 is operational for storing diesel and refuelling vehicles. Site decontamination requirements will therefore be similar to those for Location 2, including the removal of UST 2 in accordance with EPA guideline requirements.
- Dangerous substance storage areas and wash bay:
  - Location 4 – Vehicle wash bay: Likely to feature contamination down to 1.0 mbgs. No record of contamination, but drainage is inefficient and the wash bay features an un-bunded gravel floor. Expected contaminants unknown.
  - Location 5 – Current oil store. Undercover storage of oils, greases, fuel and solvents in drums and other sealed containers on concrete floor (un-bunded) is likely to result in localised contamination within the workshop and hydrocarbon-contaminated soil down to say 0.5 mbgs at the workshop entrances (caused by careless disposal).
  - Location 6 – Original oil store: Storage of oils, greases, fuel etc. in drums and other sealed containers on un-bunded gravel is likely to result in localised contamination down to 0.5 mbgs.

- Location 7 – Bitumen storage and loading area: Although, anecdotal evidence suggests procedures for storage and loading of bitumen prevent the risk of spillage, contamination caused by bitumen products may exist down to 0.5 mbgs.

- Other potential sources of contamination:
  - Location 8 – The off-site pesticide and herbicide store owned by Elders/Websters was decommissioned in 2006 and the risk of site contamination from this source is considered insignificant.
  - Location 9 – Ambulance garage and mortuary: The risk of site contamination from this source is considered insignificant.
  - Location 10 –The risk of site contamination from the onsite pesticide and herbicide store is considered insignificant, as sealed containers are transported to the wash bay for loading.
  - Location 11 – 1993 diesel spill: A 250m^2 on site area within the flow-path of the spill was partially remediated by overlaying imported sand/soil. Contamination from the event is likely to exist down to 1.0 mbgs (allowing for the imported cover). All material to that depth will probably require excavation, disposal and replacement with clean fill. The total area requiring remediation from this event may approach 450 m^2, but previous spills from AST 1 would have followed the same path and will therefore be remediated as part of the remediation of location 11.
  - Aluminium sulphate spill: The location (1.0 kL on site) and chemical state of the spilt material (liquid or solid) are unknown, but it is reasonable to assume the site soils would not be affected beyond 0.5 mbgs. Also, the material data sheet indicates that aluminium sulphate is not classified as dangerous goods under the criteria of the Australian Dangerous Goods (ADG) Code. Therefore, given the long-term use and nature of operations at the Works Depot, any residual aluminium sulphate will be removed as a consequence of dealing with TPH contamination likely to be identified site wide. Therefore, the aluminium sulphate spill is considered irrelevant to any future site investigation or remediation plan.
  - Polychlorinated biphenyl (PCB) in transformer coolant: As there are no transformers on the site, the risk of PCB contamination caused by transformer coolant leakage is probably not applicable.
  - The presence of asbestos in buildings is likely, but not a component of this site assessment. Presumably any asbestos found in site buildings will be appropriately dealt with during the demolition phase.

3.2 Contaminants of Potential Concern

Contaminants of potential concern for each location are summarised in

Table 3:

Table 3: Contaminants of Potential Concern at each Location

Location	Description	Likely Contaminants	Max. depth (mbgs)	Comments
1	AST 1	TPH.	1.0	Also below concrete ground slab which will need to be demolished.
2	UST 1	TPH, BTEX Pb	2.5	Also remove UST 1 (possibly still in the ground) and soil to 1.0 mbgs below site of relocated bowser
3	UST 2	TPH.	2.5	Also remove UST 2, bowser and soil to 1.0 mbgs below bowser.
4	Wash bay	TPH, BTEX, Pb, herbicides and pesticides.	1.0	No record of contamination, but drainage is inefficient and the wash bay features an un-bunded gravel floor.
5	Current oil store	TPH, BTEX Pb, oils and greases.	0.5	Only excavate at workshop entrance.
6	Old oil store	TPH, BTEX Pb, oils and greases.	0.5	Unless building demolition is imminent, ensure that foundations are not destabilised by over excavation of potentially contaminated soil.
11	1993 Diesel spill	TPH	1.0	Other unrecorded spills may have occurred on site outside this area.

key

TPH total petroleum hydrocarbons (diesel or motor spirit (petrol)).

BTEX (B), toluene (T), ethyl-benzene (E) and o, m and p xylene (X) – motor spirit additives.

Pb Lead (motor spirit additive)

4. LIKELY SITE REMEDIATION REQUIREMENTS

4.1 Soil Contamination

Remediation and validation requirements for each area of potential contamination are likely to be as follows:

4.1.1 Location 1(AST 1)

Soil remediation will involve demolition and disposal of the concrete ground slab on which AST 1 rested; excavation of soil down to maybe 1.0 mbgs within a 2.0 m perimeter of the ground slab; stockpiling the excavated soil (awaiting lab results) and disposal of any contaminated soil at an appropriate landfill. Stockpiled soil will be sampled in accordance with the EPA Tasmania *Information Bulletin No. 105* (EPA, 2010a).

Validation sampling of the excavation walls and floors will confirm that sufficient contamination has been removed, or in some cases, identify remnant contamination requiring removal and revalidation of that area.

Uncontaminated stockpiles deemed sufficiently clean for the site's future use and imported clean fill, required to replace disposed soil, will then be re-compacted to repair the disturbed area.

Plate 4: Site of AST 1 (removed)

4.1.2 Location 2 (UST 1) and Location 3 (UST 2)

Prior to any soil remediation, USTs which have been used for the storage of flammable or combustible liquids must be decommissioned in an appropriate manner when they are no longer required, or are no longer suitable, for such use. Adherence to strict decommissioning procedures is necessary to avoid the potential health, safety and environmental hazards associated with the closure of a UST system.

Decommissioning by removal is the preferred option (particularly given the proposed change of use at this site). During removal of the USTs, minimum soil and groundwater sampling is required as outlined in the EPA Tasmania *Information Bulletin No. 109* (EPA, 2010b). Depending on the depth of cover and the UST diameter, the excavation may reach 2.5 mbgs.

The analytical results from the sampling are compared to *Further Investigation Thresholds* in the EPA Tasmania Guidelines. If the contaminant levels are below thresholds, no further investigation is necessary. However, if the contaminant levels are above thresholds, it may be necessary to advise the EPA Tasmania Director of Environmental Management and SMC of the potential for environmental harm. Further investigation may be required to determine the extent of the identified contamination and a risk assessment and/or remediation plan may need to be developed.

It is noted from anecdotal evidence UST 1 may already have been removed. If so, given the lack of records to this effect, Location 2 will still need to be validated which may require the removal of remnant contamination. Management of excavated soil and requirements for validation sampling of excavations are as for Location 1.

Plate 5: Site of UST 1 (decommissioned)

Plate 6: Site of UST 2 and Bowser (operational)

4.1.3 Location 4 (vehicle wash bay)

Due to the lack of a bund, the gravel floor and poor drainage; potential exists for soil contamination down to 1.0 mbgs, extending to say 1.0 m beyond the wash bay boundary. Management of excavated soil and requirements for validation sampling of excavations are as for Location 1.

Plate 7: Vehicle Wash Bay

4.1.4 Location 5 and Location 6 (oil stores)

The potential exists for soil contamination to be present at the entrance to the workshop containing the current oil store (Location 5) and in the vicinity of the original oil store (Location 6). Contaminated soil may need to be removed down to 0.5 mbgs. Management of excavated soil and requirements for validation sampling of excavations are as for Location 1.

Plate 8: Location of Original Oil Store

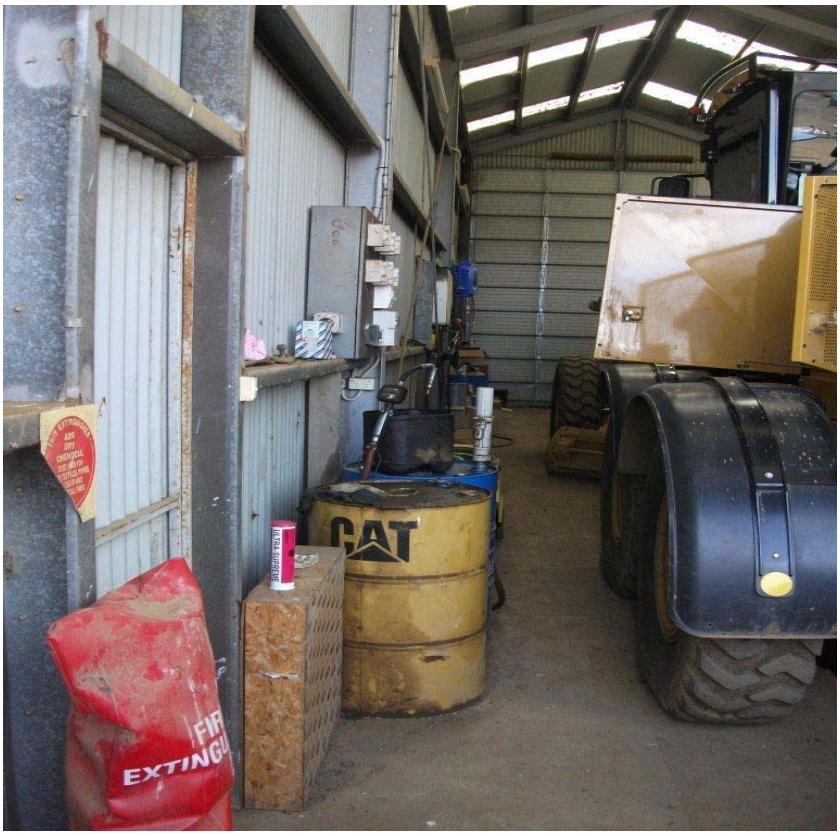

Plate 9: Current Oil Store

4.1.5 Location 11 (1993 diesel spill)

Although the 1993 diesel spill is recorded as being contained within the 250 m^2 zone located on Figure 2. It is expected that excavation may be required down to 1.0 mbgs over an area of up to 450 m^2 including 1.0 m either side of the recorded spill area. Management of excavated soil and requirements for validation sampling of excavations are as for Location 1.

4.1.6 Balance of the Site

Given that the majority of the site has operated as a municipal works depot for over 40 years, it is reasonable to assume that many potentially contaminating incidents have gone unrecorded. Therefore, as the site is to be redeveloped for a more sensitive use, removal of soil to a depth of 0.5 m across the entire Works Depot area (defined on Figure 3 as the majority of the site) is likely to prove necessary. Outcomes of the sampling program proposed in Section 5 will determine weather or not such action is required. Management of excavated soil and requirements for validation sampling of excavations are as for Location 1.

4.2 Groundwater Contamination

Groundwater contamination is only likely to be caused by a major fuel spill (eg 1993 diesel spill) or by significant and long-term leakage of fuel from UST 1 or UST 2. However, given that Oatlands relies on reticulated water for consumption (rather than groundwater), It is unlikely that remediation of polluted groundwater (if detected) will be required, particularly if all potential sources of contamination are removed from site.

4.3 Surface Water Contamination

There are no surface water bodies on the site, or surface water monitoring requirements for the site.

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5. ENVIRONMENTAL SITE ASSESSMENT (SAMPLING PLAN)

5.1 Purpose of Sampling Program

5.1.1 Soil Investigation

Prior to any site excavation, a sampling program is advised, in order to help quantify the expected amount of contamination and for estimating likely site remediation costs.

Given that the site is to be redeveloped for a sensitive use, intensive soil sampling across the entire Works Depot area (18 Church St) is likely to be required in accordance with the National Environment Protection (*Assessment of Site Contamination*) Measure (NEPM). A similar sampling program at 68 High St. and 70 High St is also considered wise, given the lack of records fort those addresses and their varied uses. Notably, the Works Depot includes half of the Title constituting 68 High St.

5.1.2 Groundwater Investigation

Regardless of the presence of any soil contamination; a minimum of three groundwater monitoring wells will need to be established within the vicinity of the USTs as a mandatory decommissioning requirement (EPA Tasmania requirement detailed in *Information Bulletin No. 109*). The monitoring wells will need to be surveyed to determine the groundwater gradient and direction of groundwater flow and water samples will need to be taken to assess the level (if any) of groundwater contamination that may have been caused.

Provided that the wells intercept the same aquifer, the groundwater gradient and direction of flow will be determined.

5.2 Site-Wide Sampling

When determining the number of soil samples required at a given site, the NEPM refers to the Australian Standard AS 4482.1 *Guide to the investigation and sampling of sites with potentially contaminated Soil Part 1: Non-volatile and semi-volatile compounds*. For example, a 0.1 hectare site requires 6 sampling points to detect contamination within a circular hotspot of diameter 15 m with 95% confidence.

Table 4 summarises the various site use areas (defined on Figure 3), the minimum sampling requirements prescribed by AS 4482.1 and the proposed number of samples for each use area (calculated as 100% of the minimum requirement).

Table 4: Soil Sampling Requirements

Address (Use)	Area (ha.)	Minimum sampling frequency (no./ha)	Minimum number of samples (AS4482.1)	Circle diameter detected with 95% confidence (m)
18 Church St. (Works Depot)	0.50	26	13	23
18 Church St (garden area)	0.03	100	3	10.5
68 High St. (Community Centre)	0.04	100	4	11.5
70 High St. (Antiques Shop)	0.09	60	5	15.0
Totals	**0.71 ha**	**-**	**25**	**-**

Table 4 proposes 13 soil sampling cores within the Works Depot for a 95% confidence of locating a 23 m diameter contaminated area. Presumably, four times as many cores (52) will detect a circle of half that diameter (12.5 m), which presumably can include the specific sampling locations described in Section 5.3.1. No other use areas have specific areas of interest. Therefore the number of cores proposed in Table 4 for those areas is considered adequate.

5.3 Specific Sampling Locations

5.3.1 Soil Cores

Location 1 (AST 1):

Four soil cores are adequate to determine the soil contamination status in the vicinity of AST 1. Soil samples will be analysed at the surface and every 0.5 mbgs, until refusal (rock) or to a maximum depth of 1.5 mbgs. Visibly contaminated soil horizons will be targeted.

Location 2 (UST 1):

Initially, to determine if UST 1 has been removed (or filled insitu with concrete) and to ascertain the amount of remnant contamination (if any) caused by it, six soil cores will be taken in the vicinity of UST 1. Samples will be analysed at the surface, 1.0 mbgs, 2.0 mbgs and 3.0 mbgs. Visibly contaminated soil horizons will be targeted.

Assuming UST 1 does need to be removed, then further sampling will be undertaken in accordance with the EPA Tasmania *Information Bulletin No. 109*. A minimum of six soil samples per tank are required and will be obtained from the pit walls, pit floor and packing sand beneath the tank.

If soil contamination exceeding relevant guidelines is identified, it may be necessary to undertake further soil sampling to delineate the extent of the identified contamination.

Soil requiring off-site disposal will be sampled and classified in accordance with the EPA Tasmania *Information Bulletin No. 105* and approval from EPA Tasmania may be required (based on the level of contamination).

Location 3 (UST 2)

UST 2 is essential to Works Depot operations and therefore must remain operational until the Works Depot is relocated. An Environmental Site Assessment (ESA) done prior to the removal of UST 2 will be the same as that proposed for Location 2 (UST 1).

Location 4 (wash bay)

Six soil cores are considered adequate to determine the soil contamination status in the vicinity of the wash bay (two within the wash bay and one on each of the four faces peripheral to the wash bay). It is envisaged that soil samples will be collected from the surface and every 0.5 mbgs, until refusal (rock) or to a maximum depth of 1.5 mbgs. Soil cores will therefore be analysed as for Location 1 (0.0 mbgs, 0.5 mbgs, 1.0 mbgs and 1.5 mbgs, or where visibly contaminated soil horizons are encountered).

Location 5 (current oil store - at workshop entrance)

Two soil core locations are considered adequate to determine the soil contamination status at the entrance to the workshop containing the current oil store. Soil cores will be analysed as for Location 1.

Location 6 (original oil store)

Four soil core locations are considered adequate to determine the soil contamination status at the location of the original oil store. Soil cores will be analysed as for Location 1..

Location 11 (1993 diesel spill)

Excavation may be required down to 1.0 mbgs over an area of up to 450 m^2 (includes 1.0 m either side of the recorded spill). The recorded spill measures 2.5 m wide by approximately 100 m long. Therefore, to reasonably map remnant contamination from the spill, soil cores will be analysed as for Location 1 and taken at the recorded spill centreline and at 3.0 m offsets (either side), repeated every 20 m longitudinally.

Remainder of the Site

As detailed above; a total of 40 soil cores are proposed for the specific areas of interest, all located within the Works Depot. Additionally; 52 cores (Section 5.2) will give a 95% confidence of detecting a contaminated circular area with a diameter of 12.5 m. Therefore, assuming that soil cores for specific areas can be included in an ESA, an additional 12 core locations within the Works Depot is considered adequate for an ESA.

The minimum number of soil core locations for all other site use areas, as proposed in Table 4, is considered adequate, as they contain no areas of specific interest and have no records of contaminating activities.

Soil cores will be analysed as for Location 1

Sampling Plan

The proposed sampling plan (Figure 3), which reflects the above requirements, will need EPA approval prior to commencement of the ESA.

Soil cores taken for Location 2 (UST 1) and Location 3 (UST 2) will be analysed at the surface, 1.0 mbgs, 2.0 mbgs and 3.0 mbgs, or until refusal (rock). Soil cores for all other Locations will be analysed at the surface and every 0.5 mbgs, to a maximum depth of 1.5 mbgs, or until refusal (rock). Visibly contaminated soil horizons will be targeted, whereby samples will be selected for analysis based on observation and the results of infield screening using a photo-ionisation detector (PID) meter. Samples with the highest PID reading will be selected from each core together with an additional sample obtained from a depth indicative of soil conditions below the extent of any inferred impact/s.

5.3.2 Groundwater Monitoring Wells

Three groundwater monitoring wells will be required to determine the groundwater status of the site in the vicinity of the USTs. Soil samples will be obtained at 1.0m intervals with samples selected for analysis based on the results of in field screening using a PID meter. Samples with the highest PID reading will be selected from each borehole together with an additional sample obtained from a depth indicative of soil conditions below the extent of any inferred impact/s.

Any soil generated will be stored on site and disposed of at an approved landfill by a licensed waste transport company. Each groundwater well will be left for approximately one week following installation and purging to ensure that the groundwater has stabilised prior to sampling. One groundwater sample will be obtained from each of the three groundwater monitoring wells.

Should groundwater contamination (in excess of relevant guidelines) be identified as part of the assessment then it may be necessary to undertake further groundwater monitoring well installation and sampling to delineate the extent of the identified contamination.

5.4 Sample Collection

5.4.1 Collection of Soil Samples

Soil samples will be collected with the aid of an excavator (from UST pit/s) and using hollow-flight augers on a truck mounted rig (soil bores and groundwater well installation). Soil sampling will be conducted using recognised standard protocols in accordance with the:

- AS 4482:2005 *Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds*, Standards Australia, 2005.

- *AS 4482.2:1999 Guide to the sampling and investigation of potentially contaminated soil – Part 2: Volatile substances, Standards Australia.* 1999.

- AS 5667:1998 – Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples, Standards Australia, 1998.

- NEPM, 1999. *Guideline on Investigation Levels for Soil and Groundwater, Schedule B (1)*, National Environment Protection (*Assessment of Site Contamination*) Measure, National Environment Protection Council, (NEPM, 1999).

- NSW EPA, 2011: *Soil Threshold Concentration for Sensitive Land Uses from Contaminated Sites: Guidelines for Assessing Service Station Sites*, New South Wales Environment Protection Authority, (NSW EPA, 2011).

- Dutch, 2009: *Intervention Levels, Target Values and Intervention Values for Soil Remediation*, (Dutch, 2009).

- NEPC, 1999. *Guideline on Data Collection, Sample Design and Reporting Schedule B (2)*, National Environmental Protection Measure (*Assessment of Site Contamination*), National Environment Protection Council, (NEPC, 1999).

- EPA 2010a, Information Bulletin No. 105 *Classification and Management of Contaminated Soil for Disposal*, Environment Protection Authority, November 2010, (EPA 2010a).

- EPA 2010b, Information Bulletin No. 109 *Underground Petroleum Storage System Decommissioning Guidelines*, Environment Protection Authority, September 2010, (EPA 2010b).

- SEMF ISO 9001 Quality Procedure *Soil Sampling for Chemical Analysis*.

UST Tank Pits:

Samples will be analysed at the surface, 1.0 mbgs, 2.0 mbgs and 3.0 mbgs. Visibly contaminated soil horizons will be targeted. Samples will be subject to in-field screening using a PID meter, to assess the potential for hydrocarbon contamination.

When site remediation is underway, and whilst USTs are being exhumed, soil samples will be obtained from each pit wall (close to the base of the tank), from the pit floor and from the packing sand beneath the tank. Excavated soil pending disposal will be sampled at the rate of 1 sample per 8 m^3 in order to minimise off-site disposal volumes (EPA 2010a limit - 1 sample per 20 m^3). Any build-up of clay or soil will be removed from the excavator bucket between samples.

Remainder of the Site:

Soil samples will be analysed at the surface and every 0.5 mbgs, until refusal (rock) or to a maximum depth of 1.5 mbgs. Visibly contaminated soil horizons will be targeted. Samples will be subject to in-field screening using a PID meter, to assess the potential for hydrocarbon contamination.

5.4.2 Collection of Groundwater Samples

Groundwater monitoring well installation and sampling will be conducted using recognised standard protocols in accordance with:

- AS/NZS 5667.1:1998 *Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Standards Australia, 1998.
- AS/NZS 5667.11:1998 *Water quality – Sampling, Part 11: Guidance on the sampling of groundwater*, Standards Australia, 1998.
- NEPM, 1999. *Guideline on Investigation Levels for Soil and Groundwater, Schedule B (1)*, National Environment Protection (*Assessment of Site Contamination*) Measure, National Environment Protection Council, (NEPM, 1999).
- EPA 2010b, Information Bulletin No. 109 *Underground Petroleum Storage System Decommissioning Guidelines*, Environment Protection Authority, September 2010, (EPA 2010b).
- *Minimum construction requirements for water bores in Australia*, Edition 2, Land and Water Biodiversity Committee, September 2003, (LWBC, 2003).
- *Groundwater Sampling Guidelines Publication 66*, EPA Victoria, April 2000, (EPA Vic, 2000).
- *Hydrogeological Assessment (Groundwater Quality) Guidelines, Publication 668, EPA Victoria, September 2006, (EPA Vic., 2006).*

It is envisaged that the groundwater monitoring wells will be purged and sampled by hand bailing using disposable Teflon bailers. Purged water will be stored in sealed 205 L drums and disposed by a licensed contaminated waste transport company.

5.4.3 Quality Control Samples

Soil and groundwater duplicate samples (blind replicates) will be obtained during the assessment for quality control purposes.

5.5 Sample Analysis

5.5.1 Analysis of Soil Samples

Soil samples will be analysed by the National Association of Testing Authorities (NATA) accredited ALS Laboratory Group (ALS), utilising NATA certified methodology. The samples will be analysed for parameters that have the potential to be present based on known previous activities on the site and will include a combination of the following:

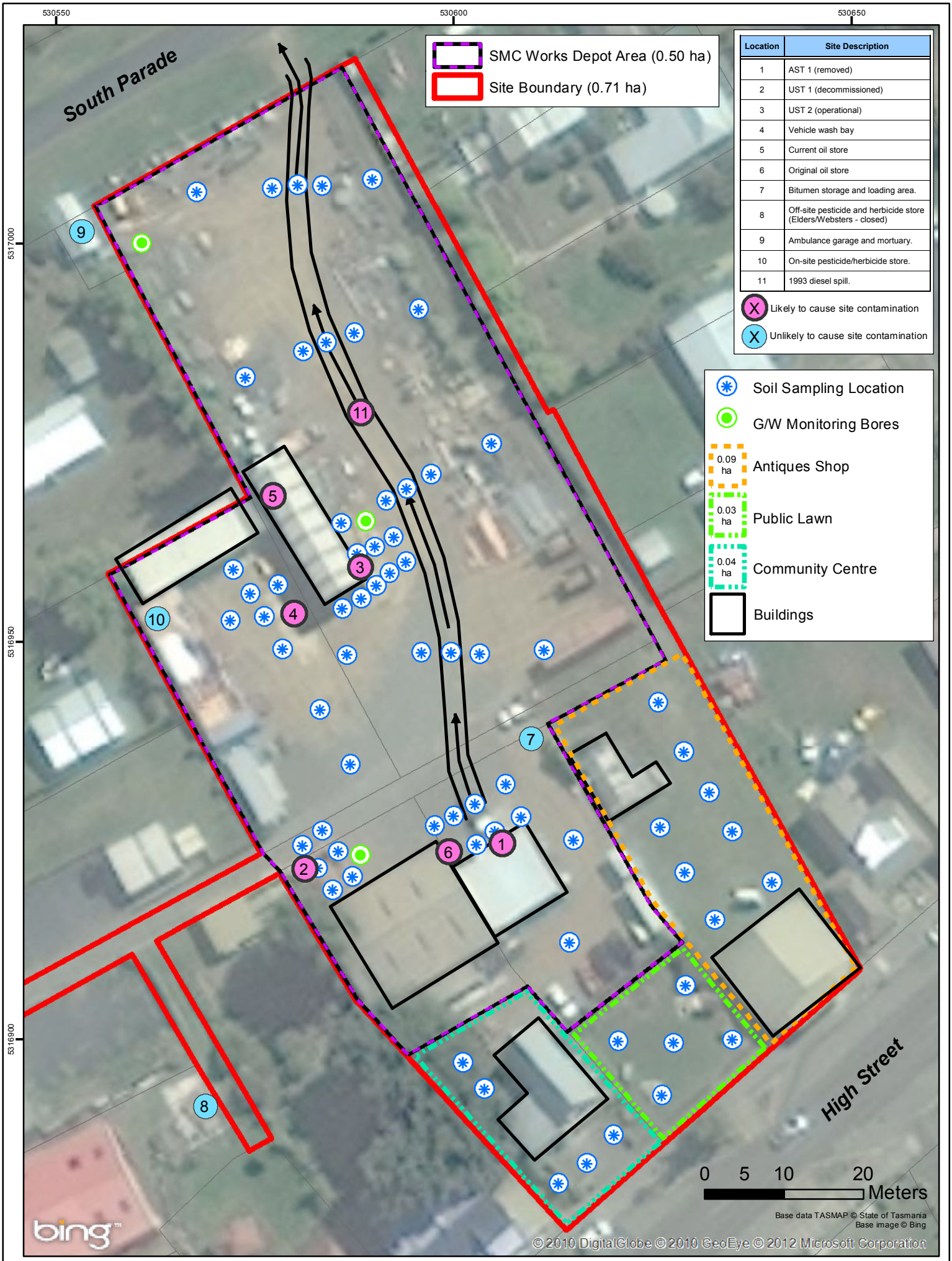
- BTEX analysed by Gas Chromatograph Flame Ionisation Detector (GC-FID).
- TPH analysed by GC-FID.

- Polycyclic aromatic hydrocarbons (PAH) if TPH or BTEX contamination is detected.
- Heavy metals analysed by Inductively Coupled Plasma Atomic Emission Spectrometry (ICPAES).
- PCBs (applicable to transformer coolant contamination).
- Organochloride pesticides (eg DDT and dieldrin).

5.5.2 Analysis of Groundwater Samples

Groundwater samples will be analysed by the NATA accredited AST Laboratory. The samples will be analysed for parameters that have the potential to be present based on known previous activities on the site, as follows:

- BTEX analysed by GC-FID.
- TPH analysed by GC-FID.
- Lead analysed by ICPAES.



Location	Site Description
1	AST 1 (removed)
2	UST 1 (decommissioned)
3	UST 2 (operational)
4	Vehicle wash bay
5	Current oil store
6	Original oil store
7	Bitumen storage and loading area.
8	Off-site pesticide and herbicide store (Elders/Websters - closed)
9	Ambulance garage and mortuary.
10	On-site pesticide/herbicide store.
11	1993 diesel spill.

18 Church St. Oatlands - SMC Works Depot Site History Report

Figure 3: Sampling Plan

Datum: GDA94
Grid: MGA Zone 55
Prepared by: SEMF Pty Ltd

TASMAP: Oatlands 5231
Project: 4193.001
Client: Bzowy Architecture

Date:1st October 2012

6. CONCLUSIONS

The site history investigation indicates that potential soil and groundwater contamination is likely to be the result of SMC Oatlands Works Depot activities since its commencement at 18 Church St around 1970.

The Oatlands Works Depot covers the majority of the site. Other site uses, including the Community Centre (68 High St.), public lawns (18 Church St. but fronting High St.) and an antiques shop (70 High St.) have no history of potentially contaminating activities or incidents.

Areas likely to cause site contamination at the Works Depot include:

- A major diesel spill in 1993 which was retained on site.
- UST 1 which became redundant in 1993, as there are no records of it having been removed from the site or contamination caused by it being properly managed.
- AST 1 which was replaced in 1993 with UST 2 (5 kL underground storage tank for diesel) which remains operational.
- UST 2 which remains operational.
- Oil stores (past and present).
- Vehicle wash bay (doubles as pesticide/herbicide loading area).

A site sampling plan to assess soil or groundwater contamination (Figure 3) has been developed as a component of this investigation and for use in an ESA which will be necessary to quantify site rehabilitation requirements for a change of use to the Midlands Aquatic and Recreation Centre (Appendix A).

No investigation has been made into the potential for building contaminants such as asbestos or lead-based paints. Localised occurrences of potential ACM were noted during the site investigation and it is intended that an asbestos audit be conducted in the future, including the community centre at 68 High St, the antiques shop at 70 High St. and all SMC Works Depot buildings located at 18 Church St.

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7. RECOMMENDATIONS

We make the following recommendations:

- Gain approval from EPA for the site sampling plan proposed on Figure 3.
- Proceed with an ESA utilising the site sampling plan, including the installation and monitoring of three groundwater bores and soil analysis at areas likely to have caused contamination and generally across the site.
- Soil samples obtained near UST 1 and UST 2 to be analysed at the surface, 1.0 mbgs, 2.0 mbgs and 3.0 mbgs. Visibly contaminated soil horizons to be targeted.
- Soil samples obtained at other areas of interest and generally across the site to be analysed at the surface and every 0.5 mbgs, until refusal (rock) or to a maximum depth of 1.5 mbgs. Visibly contaminated soil horizons to be targeted.
- Detailed logging of the groundwater well installations, in accordance with guideline requirements.
- Survey of the groundwater wells to determine groundwater gradient and direction of groundwater flow.
- Undertake an asbestos audit of all buildings on the site, including the Community Centre at 68 High St., the antiques shop at 70 High St. and all SMC Works Depot buildings.
- Submit soil samples to NATA accredited ALS for analysis.
- Submit groundwater samples to NATA accredited AST Laboratory for analysis.
- Review and interpret the ESA analytical results in order to ascertain the cost of site rehabilitation required for a change of use to the Midlands Aquatic Centre.
- Proceed with site rehabilitation which will specifically include:
    - Removal of UST 1 which became redundant in 1993, as contradictory to anecdotal evidence, there are no records of it having been removed from the site or contamination caused by it being properly managed.
    - Removal of UST 2 after the Works Depot has been relocated. UST 2 is essential to Works Depot operations and therefore must remain operational until the Works Depot is relocated.
    - Disposal of a 1993 diesel spill which remains on site.

8. REFERENCES

AS 4482:2005 *Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds*, Standards Australia, 2005.

AS 4482.2:1999 Guide to the sampling and investigation of potentially contaminated soil – Part 2: Volatile substances, Standards Australia. 1999.

AS 5667:1998 – Part 1: *Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Standards Australia, 1998.

AS/NZS 5667.1:1998 *Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Standards Australia, 1998.

AS/NZS 5667.11:1998 *Water quality – Sampling, Part 11: Guidance on the sampling of groundwater*, Standards Australia, 1998.

NEPM, 1999. *Guideline on Investigation Levels for Soil and Groundwater, Schedule B (1)*, National Environment Protection (*Assessment of Site Contamination*) Measure, National Environment Protection Council, (NEPM, 1999).

NSW EPA, 2011: *Soil Threshold Concentration for Sensitive Land Uses from Contaminated Sites: Guidelines for Assessing Service Station Sites*, New South Wales Environment Protection Authority, (NSW EPA, 2011).

Dutch, 2009: *Intervention Levels, Target Values and Intervention Values for Soil Remediation*, (Dutch, 2009).

NEPC, 1999. *Guideline on Data Collection, Sample Design and Reporting Schedule B (2)*, National Environmental Protection Measure (*Assessment of Site Contamination*), National Environment Protection Council, (NEPC, 1999).

EPA 2010a, Information Bulletin No. 105 *Classification and Management of Contaminated Soil for Disposal*, Environment Protection Authority, November 2010, (EPA 2010a).

EPA 2010b, Information Bulletin No. 109 *Underground Petroleum Storage System Decommissioning Guidelines*, Environment Protection Authority, September 2010, (EPA 2010b).

Minimum construction requirements for water bores in Australia, Edition 2, Land and Water Biodiversity Committee, September 2003, (LWBC, 2003).

Groundwater Sampling Guidelines Publication 66, EPA Victoria, April 2000, (EPA Vic, 2000).

Hydrogeological Assessment (Groundwater Quality) Guidelines, Publication 668, EPA Victoria, September 2006, (EPA Vic., 2006).

SEMF ISO 9001 Quality Procedure *Soil Sampling for Chemical Analysis*.

EPA, *Contaminated Sites Unit* database for records of land and water contamination on the site.

EPA, *Environmentally Relevant Land Use Register* (ERLUR) for selected potentially contaminated activities that may have been historically undertaken at or adjacent to the site.

EPA, *Underground Petroleum Storage System* (UPSS) database for records of UPSS on, or adjacent to the site.

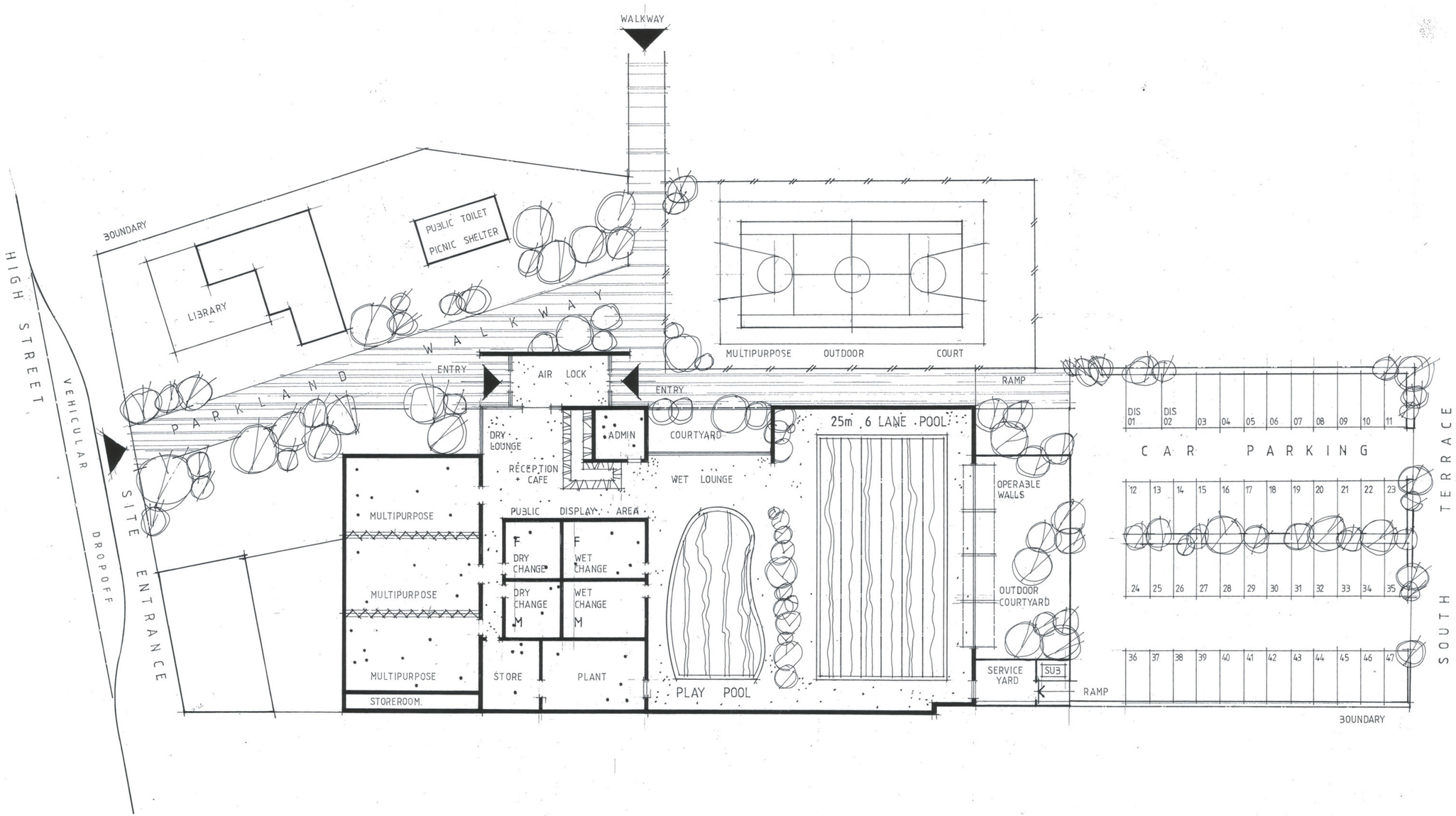
EPA, *New Environmental Licensing and Monitoring System* (NELMS) database for permits or notices ((EPNs), Site Investigation, Site Remediation or Site Management Notices) that may have been issued in relation to the site.

The *Incidents* database for any records of complaints, notifications etc., received in relation to the site.

Prepared and Published by SEMF Pty. Ltd.

Project No. 4193.001

Appendix A
Midlands Aquatic and Recreation Centre Concept Plan



Client
SOUTHERN MIDLANDS COUNCIL

Project
MIDLANDS AQUATIC
& RECREATION CENTRE
HIGH STREET OATLANDS

Principal Consultant

BZOWY ARCHITECTURE
11889 Tasman Highway (PO Box 382) Swansea Tasmania 7190
T 03 6257 8999 F 03 6257 8889 e-mail: design@bzowyarc.com.au

DATE	REV.	COMMENTS	DWN

BZOWY
ARCHITECTURE

Drawing Title
CONCEPT PLAN

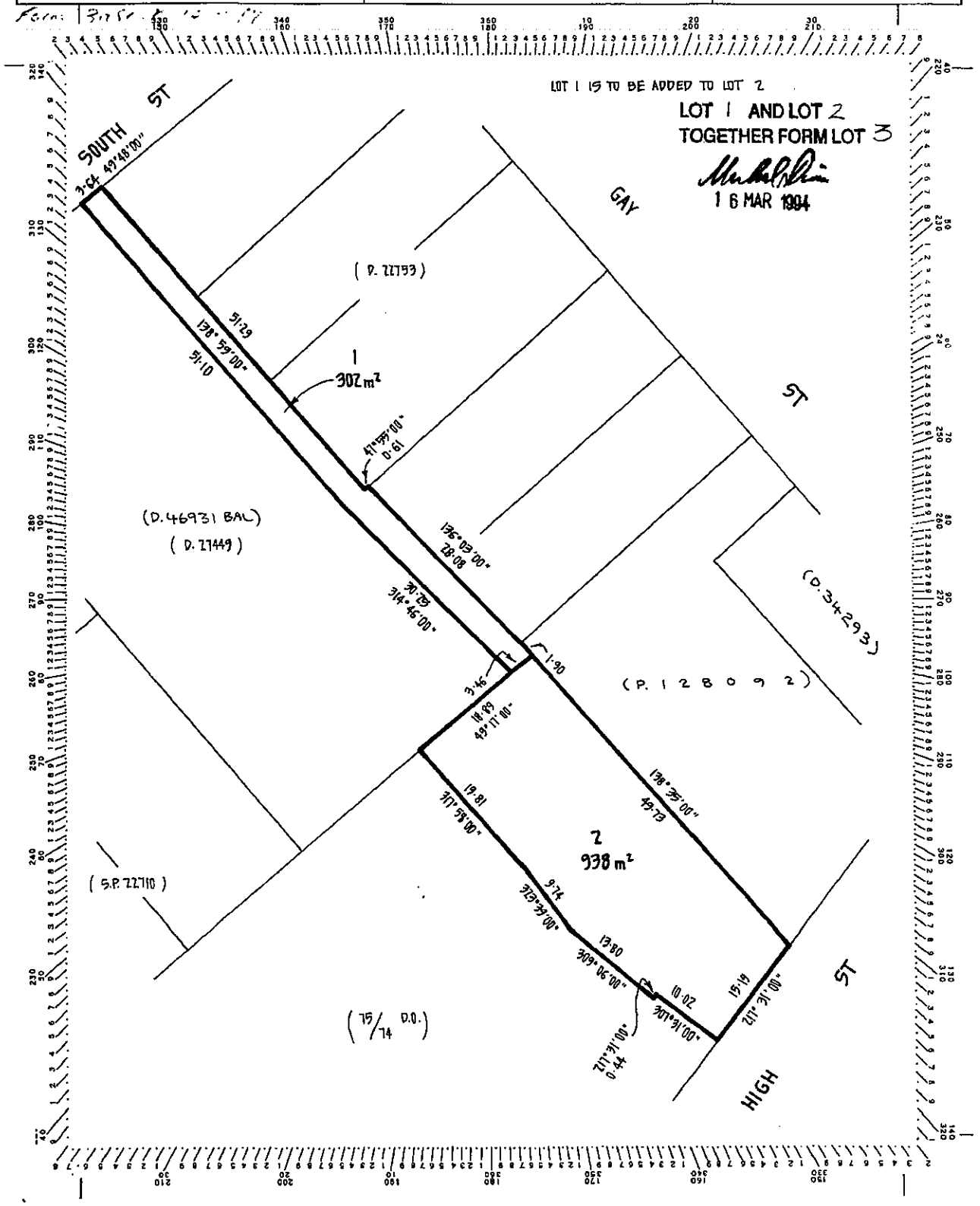
Issue

Job	Drawing	Revision
021211	CD 001	
Date	Scale	
FEB 2012	1 200	
Drawn	Checked	
BZOWY	RB	

PLAN NORTH

Appendix B
Land Title Information

Owner: THE WARDEN, COUNCILLORS & ELECTORS OF THE MUNICIPALITY OF OATLANDS (LOT 1) KEITHA MARY KEAN & IRVIN DAVID KEAN (LOT 2)	**PLAN OF SURVEY** by Surveyor... JOHN LEONARD CERUTTY of land situated in the TOWN OF OATLANDS	Registered Number: **SP41274**
Title Reference: C.T. 4216/86 (LOT 1) CONV 38-6633 (LOT 2)		~~Approved~~ Effective from: 31 OCT 1990
Grantee: PART OF (1.3.37) SEC 1 GTD TO J. ROBINSON & PART OF 1-2-6 & 1-2-36 GTD TO JOHN ROBINSON	SCALE 1: 500 MEASUREMENTS IN METRES	Recorder of Titles



FILE NUMBER A.23362

GRANTEE
PART OF LOT 7 (1A-2R-36P) GTD. TO JOHN ROBINSON

CONVERSION PLAN

LOCATION
TOWN OF OATLANDS
(SEC. I)

CONVERTED FROM 42/655

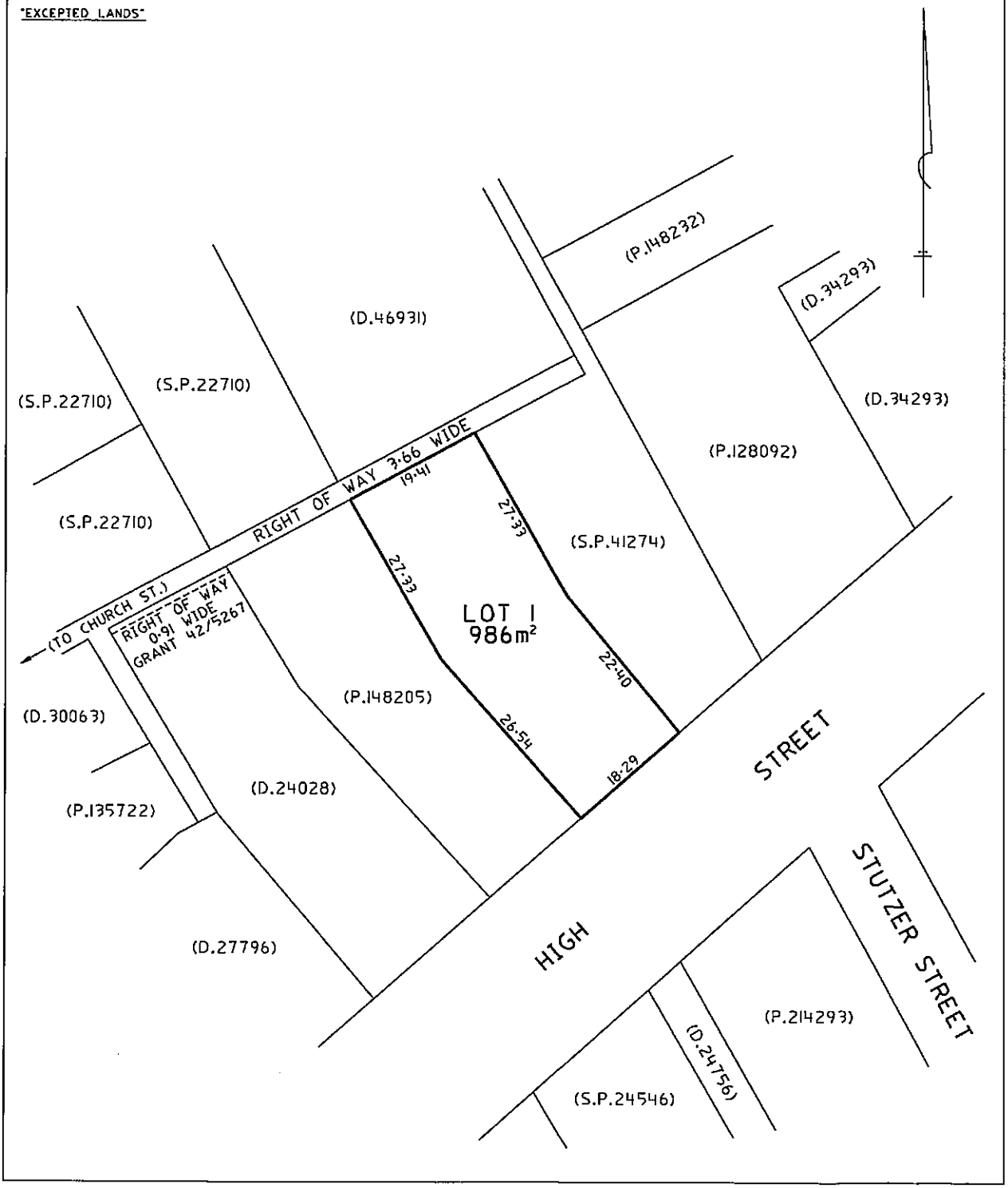
NOT TO SCALE LENGTHS IN METRES

Registered Number
P.148207

APPROVED 23 MAR 2007
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 125 (5231-23)	LAST UPI No. 2500646	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	DRAWN NC

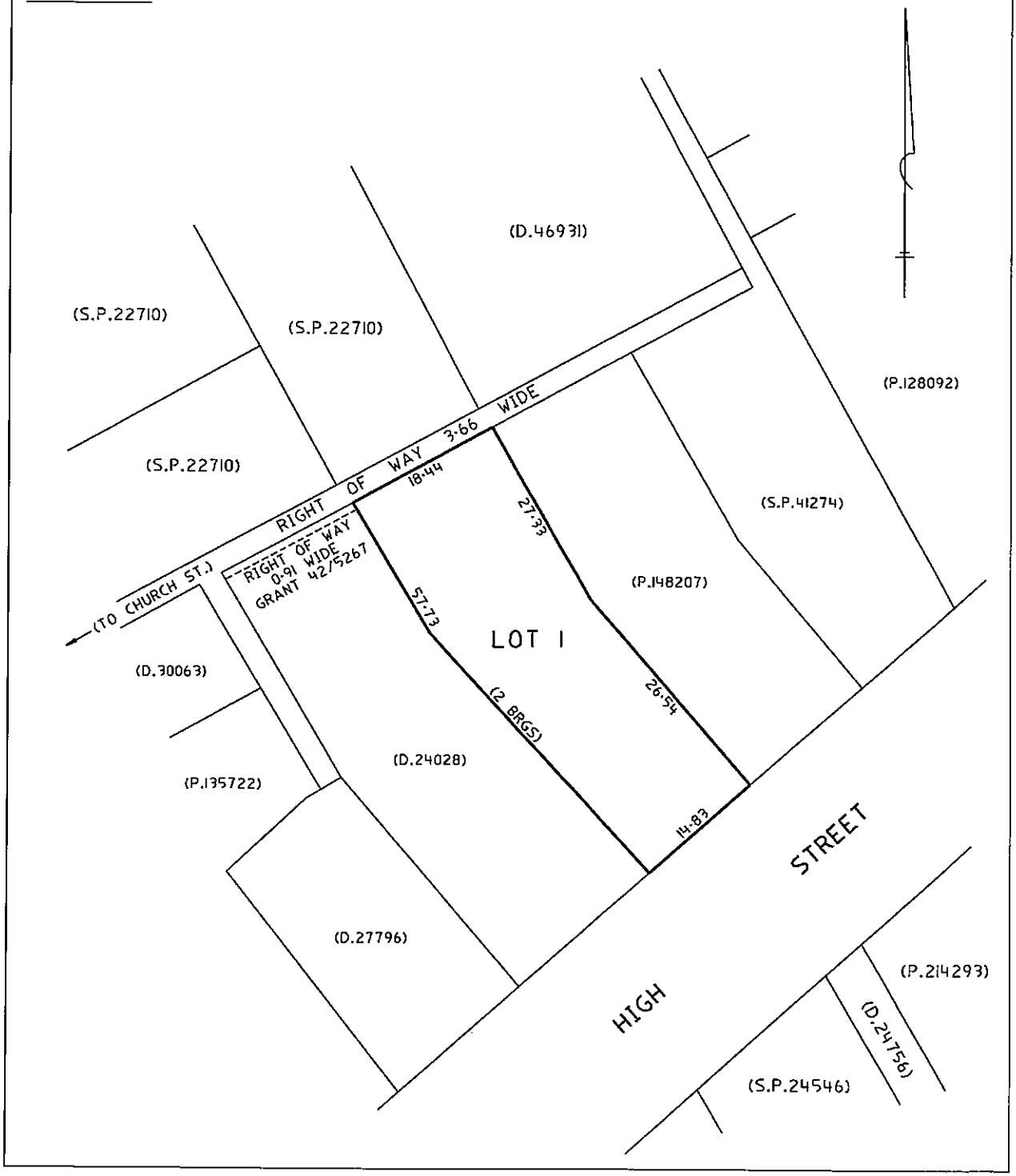
SKETCH BY WAY OF ILLUSTRATION ONLY
"EXCEPTED LANDS"



FILE NUMBER A.23301 GRANTEE PART OF LOT 6 (1A-2R-36P) GTD. TO JOHN ROBINSON	**CONVERSION PLAN** LOCATION TOWN OF OATLANDS (SEC. I) CONVERTED FROM 22/3133 NOT TO SCALE LENGTHS IN METRES	Registered Number **P.148205** APPROVED 23 MAR 2007 Alice Kava Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 125 (5231-23)	LAST UPI No. 2500645	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN — DRAWN NC

SKETCH BY WAY OF ILLUSTRATION ONLY

"EXCEPTED LANDS"



SEARCH OF TORRENS TITLE

VOLUME	FOLIO
148205	1
EDITION	DATE OF ISSUE
1	16-Apr-2007

SEARCH DATE : 01-Oct-2012
SEARCH TIME : 10.41 AM

DESCRIPTION OF LAND

Parish of OATLANDS Land District of MONMOUTH
Lot 1 on Plan 148205
Being the land described in Conveyance No.22/3133
Derivation : Part of Lot 6, 1A-2R-36P Gtd to John Robinson
Derived from A23301

SCHEDULE 1

SOUTHERN MIDLANDS COUNCIL

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
22/3133 BENEFITING EASEMENT: Right of Carriageway over the Right of Way 3.66 Wide shown on Plan No.148205

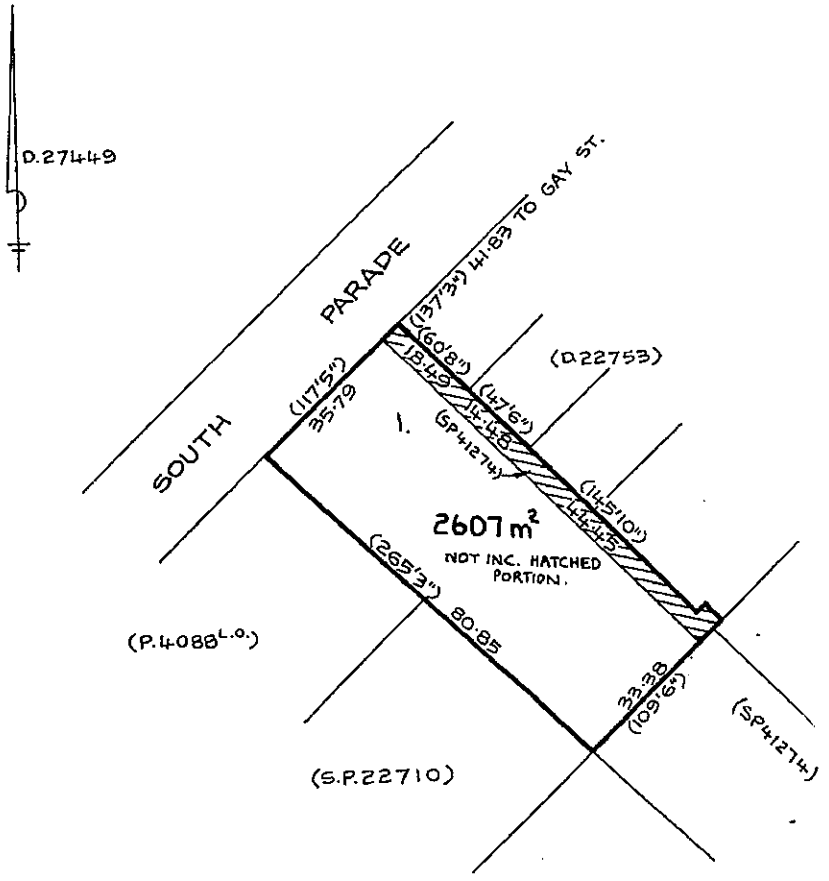
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

Owner:	PLAN OF TITLE of land situated in the TOWN OF OATLANDS	Registered Number D.46931
Title Reference: CT 4216-86	COMPILED FROM D.27449	Approved 31 OCT 1990
Grantee:	~~SCALE 1:~~ MEASUREMENTS IN METRES	Recorder of Titles

SKETCH BY WAY OF ILLUSTRATION ONLY

~~CITY~~/TOWN OF OATLANDS. SEC.I.
~~LAND DISTRICT OF~~
~~PARISH OF~~
LENGTHS ARE IN METRES. NOT TO SCALE.
LENGTHS IN BRACKETS IN ~~LINKS~~/FEET & INCHES.



FOLIO PLAN

RECORDER OF TITLES

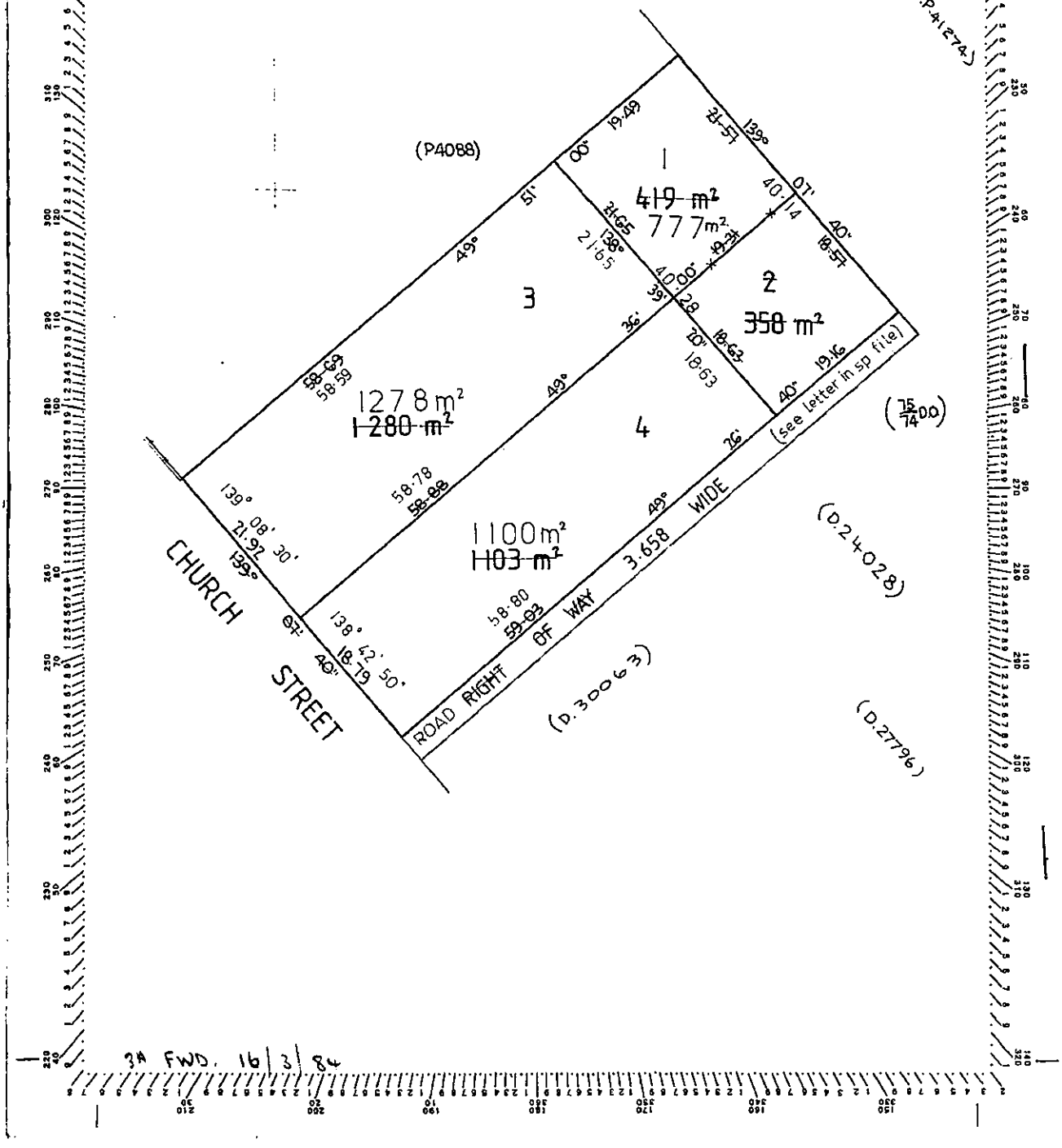
Issued Pursuant to the Land Titles Act 1980

Tasmania
Explore the possibilities

Owner: The Warden Councillors & Electors of the Municipality of Oatlands	PLAN OF SURVEY by Surveyor A.O. CARRICK of land situated in the TOWN OF OATLANDS	Registered Number: S.P22710
Title Reference: Conv 19|1877 & Conv 46|1066		Approved 29 AUG 1984 Effective from:
Grantee: Part of 1a 3r 37p John Robinson pur	SCALE 1: 500 MEASUREMENTS IN METRES	E. R. Thorp Recorder of Titles

Mains 31/5/84

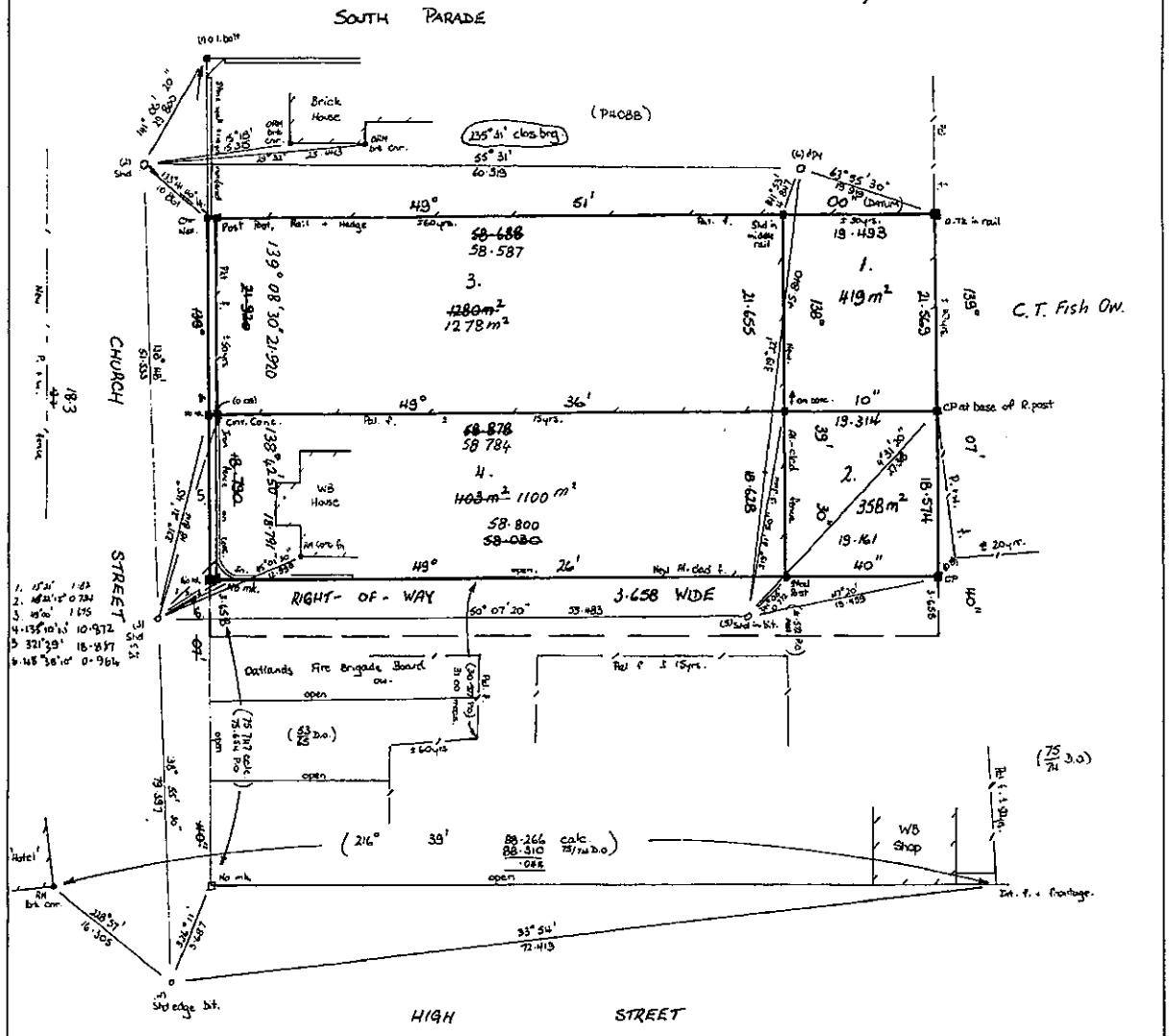
LOT 1 IS TO BE ADDED TO LOT 2



3A FWD. 16/3/84

Survey Notes by A.O. Carrick
Town of Oatlands
Part of 1-3-37, J. Robinson pur.
Conv. 19/1877 The Warden, Councillors & Electors of the Municipality of Oatlands as. (Lots 1 + 3)
Conv. 46/1066 " (Lots 2+4)
Survey Commenced : 6-1-84
Survey Completed : 6-1-84
Error of Close : See calcs

Lot 1 is to be added to Lot 2.



See memo inside SN's for amendments in red.

SURVEY CERTIFICATE

I Anthony Owen Carrick of Hobart

in Tasmania a registered surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits;

(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and

(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Anthony Carrick
REGISTERED SURVEYOR

Date 11·1·84

Appendix C
Property Information Search

Tasmania

Department *of* Primary Industries, Parks, Water and Environment

EPA Division, Contaminated Sites Unit

PROPERTY INFORMATION REQUEST FORM

Fax to: *03 6233 3800*

Tasmania

PROPERTY DETAILS

Minimum Information required for a Database Search

Street number & name: South Parade	Current site owner: Southern Midlands Council
Suburb / Town: Oatlands Post code:	Current site use & operator: Council Works Depot.

Land title information (please specify land titles to be searched):
CT 4216-86

Further Information

Current Potentially Contaminating Activity on site: Council Works Depot (Underground tanks, service pit)	Current Potentially Contaminating Activity on surrounding land:
Past Potentially Contaminating Activity on site:	Past operator(s):
Past Potentially Contaminating Activities surrounding the site:	Past operator(s) of surrounding Potentially Contaminating Activities:

Additional notes / comments

APPLICANT'S DETAILS

Name of applicant: Carly Harrington Company: SEMF Pty. Ltd. Daytime phone number: 0447 328 885 Facsimile number:	Mailing address of applicant: Level 2 / 162 Macquarie Street Hobart TAS 7000

Payment options

Payment for this service is to be made by cheque. Cheques are to be made payable to the '**Department of Primary Industries, Parks, Water and Environment**'. The charge for this service is $77.00 (including GST).
Please tick *one* of the following boxes:

- Please send me an invoice for this service on completion of the search: ☑
  or
- Payment for this service is included with this application. ☐

Applicants Signature..... Date.....6/9/12.....

Level 7, 134 Macquarie Street, Hobart TAS
GPO Box 1550, Hobart, TAS 7001 Australia

Enquiries: Bruce Terry
Ph: +61 3 6233 6313 Fax +61 3 6233 3800
Email: bruce.terry@environment.tas.gov.au
Web: www.epa.tas.gov.au
Our Ref: (A219939:100706)tm

ENVIRONMENT PROTECTION AUTHORITY

21 September 2012

Ms Carly Harington
SEMF Pty Ltd
L2, 162 Macquarie Street
HOBART TAS 7001

Dear Ms Harington

Property Information Request
18 Church Street, 68 High Street and 70 High Street, Oatlands
(Certificate of Titles (CT): 22710/1, 46931/1, 41274/3, 148207/1, 148205/1)

On 19 September 2012, the Contaminated Sites Unit received your revised property information request relating to the land referred to above ('the site').

The following databases have been searched for references to the site:

- The *Contaminated Sites Unit* database for records of land and water contamination on the site;
- The *Environmentally Relevant Land Use Register* (ERLUR) for selected potentially contaminating activities that may have been historically (prior to 1992) undertaken at, or adjacent to, the site;
- The *Underground Petroleum Storage System* (UPSS) database for records of UPSS on, or adjacent to the site;
- The *New Environmental Licensing and Monitoring System* (NELMS) database for permits or notices (Environment Protection (EPN)), Site Investigation, Site Remediation or Site Management Notices) that may have been issued in relation to the site; and
- The *Incidents* database for any records of complaints, notifications etc., received in relation to the site.

Please note that records relating directly to the site include:

- An incident in 1998 involving the spillage of some 1000L of aluminium sulphate; and
- Underground storage tanks were/are present on the site.

Please note that the *Contaminated Sites Unit* database only contains records of sites for which notification has been provided under sections 32 and 74B of the *Environmental Management and Pollution Control Act 1994* (EMPCA), that have historically hosted or currently host Scheduled Premises and where significant contamination has occurred, or that have been assessed by the Contaminated Sites Unit upon requirement of a planning authority because they are potentially contaminated and being redeveloped to a sensitive use. Therefore, this database does not list all sites that are, or may be, contaminated. It is recommended that the history of the parcels and neighbouring properties be investigated in order to determine the likelihood of potential on-site contamination. If the potential for on-site contamination is considered likely, then further site assessment by a competent environmental assessment practitioner is recommended. Site assessment should be performed in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council.

Please also note that as dangerous goods have been stored at the site, Workplace Standards Tasmania (WST) (1300 366 322) may have issued the dangerous goods licences and hold records of licences for the site. As the storage of dangerous goods is regarded as an environmentally relevant activity, you may wish to contact them for further information. Details on the regulatory requirements relating to the operation of the tanks are also available on EPA Division website[1].

As local councils are able to issue EPNs, Environmental Infringement Notices (EINs) and record complaints, you may wish to contact them for additional information that may be relevant to the site. Further, if the site has historically been subject to a permit under the *Land Use Planning and Approvals Act 1993*, the Council would have issued the permit.

Under the *Right to Information Act 2009* (RTI Act) you are entitled to apply for any records mentioned within this letter such as reports, letters, or other relevant documents. For further information on how the RTI process works and how to request information under the RTI Act please visit http://www.justice.tas.gov.au/corporateinfo/rti#application.

If you are purchasing a property, you should consider Part 5A of the EMPCA which defines and specifies requirements for managing contaminated sites. If there is reason to believe the site is, or may be potentially contaminated, there are certain requirements that you must meet (e.g. notification of a contaminated site to the Director, EPA or Council, as outlined in section 74B of the EMPCA).

Finally, the EPA Division publishes lists of individuals and corporations that have been prosecuted either by court proceedings (http://epa.tas.gov.au/regulation/prosecutions-by-court-proceedings) or infringement notices (http://epa.tas.gov.au/regulation/prosecutions-by-infringement-notices) for violating environmental legislation.

Although all due care has been taken in the preparation of this letter, the Crown gives no warranty, express or implied, as to the accuracy or completeness of the information provided. The Crown and its servants or agents accept no responsibility for any loss or damage which may arise from reliance upon this letter, and any person relying on the letter does so at their own risk absolutely.

As you are aware, property searches incur a charge of $77.00 (excluding GST). An invoice will be forwarded to you separately. Please make your cheque payable to the Department of Primary Industries, Parks, Water and Environment.

If you have any queries in relation to the matters above, please contact the Contaminated Sites Unit Officer nominated at the head of this correspondence.

Yours sincerely

Jaimie Clarke
SECTION HEAD – WASTE MANAGEMENT

[1] Available at: http://epa.tas.gov.au/regulation/buying-a-property-with-underground-fuel-tanks

RIGHT TO INFORMATION ACT 2009
Authority to Release Information to a Third Party
Dangerous Substances Location

I, (full name) David Cundall

authorise Workplace Standards Tasmania to release information relating to Facility Number

Location of Facility (Full Address): Southern Midlands Council Municipal Depot (located between High Street & South Terrace, Oatlands)

to: (full name): Carly Harington

of: (company name): SEMF Pty. Ltd.

Address:

Signature: David Cundall Date: 5.09.12

Address: 85 Main St Kempton TAS 7030 Phone Number: 62591258

Email: dcundall@southernmidlands.tas.gov.au

- [x] Current Manifest
- [x] Current Site Plan
- [x] All Historical information
- [x] Contamination issues
- [x] Decommissioning details
- [x] Other (please give details below)

Other Information required: Please provide entire file/s to SEMF.

FEES AND CHARGES - ACTIVE DISCLOSURE

Print form

Fees and charges (if applicable) will be invoiced after the provision of the information.

FOR FURTHER ASSISTANCE Please contact:

Workplace Standards Tasmania
Information Unit
PO BOX 56
ROSNY PARK TAS 7018

Phone 1300 366 322 (within Tasmania) or
(03) 6233 7657 (outside Tasmania)
Fax (03) 6233 8338
Email wstinfo@justice.tas.gov.au

GF153 July 2011