

Contamination Management Plan
Central Precinct
Development Phase

Prepared for

Maryland Development Company

Private Road
Off Forrester Road
St Marys 2760

JULY 2008

URS

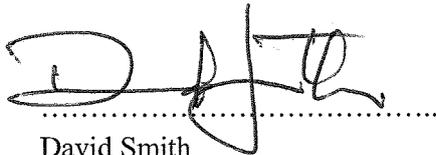
Project Director:



Seth Molinari
Senior Principal

URS Australia Pty Ltd
Level 3, 116 Miller Street
North Sydney, NSW 2060 Australia
Tel: 61 2 8925 5500
Fax: 61 2 8925 5555

Author:



David Smith
Principal

Date: 7th July 2008
Reference: 4321 7287
Status: Final

Glossary of Abbreviations and Terms	ii
1 Introduction -----	1-1
1.1 General Introduction	1-1
1.2 Introduction to the Contamination Management Plan	1-4
1.3 Contamination Management Plan Objectives	1-5
2 Contamination Management Plan -----	2-1
2.1 Potential Chemical Contamination	2-1
Extensive Contamination	2-2
2.2 Potential Explosive Ordnance Materials	2-2
Further Explosive Ordnance Surveys	2-3
2.3 Temporary Stockpiling of Materials	2-4
2.4 Contaminated Management Plan Flowchart	2-4
3 Summary of Roles & Responsibilities -----	3-1
4 Limitations -----	4-1

FIGURES

Figure 1	Aerial photograph of the St Marys Property.....	1-1
Figure 2	Central Precinct (with other developable areas).....	1-3
Figure 3	Contamination Management Process.....	2-4

APPENDICES

Appendix A Site Audit Statements

Glossary of Abbreviations and Terms

Abbreviation	Term	Definition
Ammunition	Ammunition	A device charged with explosives, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in connection with defence or offence including demolitions. Certain ammunition can be used for training, ceremonial or other non-operational purposes.
Category A	Category A ordnance items	An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and <u>containing explosive filling</u> , but excluding small arms ammunition.
Category B	Category B ordnance items -	An item clearly of a military nature and which might readily be recognised by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and <u>not containing explosive filling</u> , but excluding small arms ammunition.
CMP (2003)	Contamination Management Plan for the Eastern Precinct	The Contamination Management Plan prepared in 2003 and submitted to Blacktown City Council and other authorities as required by the Site Audit Statements issued in the Stage 2 Decontamination Audit of ADI St Marys Munitions Factory, dated 7 th June 1999.
CMP	Contamination Management Plan	A Contamination Management Plan issued in support of a Precinct Plan.
DPP	Dunheved Precinct Plan	The Dunheved Precinct Plans set out the future pattern of development for the Dunheved Precinct. The Plan was adopted by Penrith City Council on 11 December 2006 and by Blacktown City Council on 12 January 2007.
DUXOP	Defence Unexploded Ordnance Panel	The panel of contractors and consultants from whom the Department of Defence selects members for UXO related tasks.

Contents

Abbreviation	Term	Definition
EPP	Eastern Precinct Plan	The Eastern Precinct Plan sets out the future pattern of development for the Eastern Precinct. The Plan was adopted by Blacktown City Council on 4 February 2004.
Induction	Site Specific Induction	<p>Section 8(2) of the OHS Act requires employers to ensure that persons other than their workers are not exposed to risks while in the employer's workplace. These persons include contractors, customers and visitors.</p> <p>If there are significant risks in the workplace, there may be a need for site induction training and procedures for managing people while on the premises.¹</p>
Property	Property	The whole of the landholding by St Marys Land Limited and which is sometimes called the St Marys Property for the purposes of its rezoning and redevelopment.
Site	Site	The subject area, where potential contamination has been found.
UXO	Unexploded Ordnance	Explosive ordnance that has been primed, fused, armed or otherwise prepared for action and which has been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or material but remains unexploded either by malfunction or design or for any cause. UXO includes items of military ammunition or explosives removed from their original resting-place for any reason, including souveniring.

¹ "<http://www.workcover.nsw.gov.au/Employers/LegalResponsibility/default.htm>" WorkCover's webpage on 18th September 2006.

1.1 General Introduction

The former Australian Defence Industries (ADI) Property (the Property) at St Marys was endorsed by the NSW Government for inclusion on the Urban Development Program in 1993. The Property was seen to present an opportunity to provide housing for Sydney's growing population within an environmentally sustainable framework.

The Property is located approximately 45km west of the Sydney CBD, 5km north-east of the Penrith City Centre and 12km west of the Blacktown City Centre. The main western railway is located approximately 2.5km south of the Property. The Great Western Highway is located another 1 km south and the M4 Motorway a further 1.5km south.

The Property has an area of 1,545ha, and stretches roughly 7 kilometres from east to west and nearly 3 kilometres from north to south, from Forrester Road, St Marys in the east to The Northern Road, Cranebrook in the west, and is bounded by Llandilo and Willmot in the north and Cambridge Gardens / Werrington County and the Dunheved Industrial Area in the south. Figure 1, following, illustrates the location of the Property.

Figure 1 Aerial photograph of the St Marys Property



Given that the Property straddles the boundary between two local government areas (Blacktown and Penrith), the NSW Government decided that a regional environmental plan should be prepared covering development of the Property. Technical investigations into the environmental values and development capability of the land were commenced in 1994, and the Regional Environmental Plan for St Marys (Sydney Regional Environmental Plan No. 30 (SREP 30)) was gazetted in January, 2001. SREP 30 zoned the land for a combination of “urban”, “employment”, “regional open space”, and “regional park” uses.

A package of documents was prepared to guide and control development comprising SREP 30 (maps and a written instrument) and an Environmental Planning Strategy (EPS) which sets out performance objectives and strategies to address key constraints associated with the Property, including: conservation, cultural heritage, water and soils, transport, urban form, energy and waste, human services, employment and land contamination.

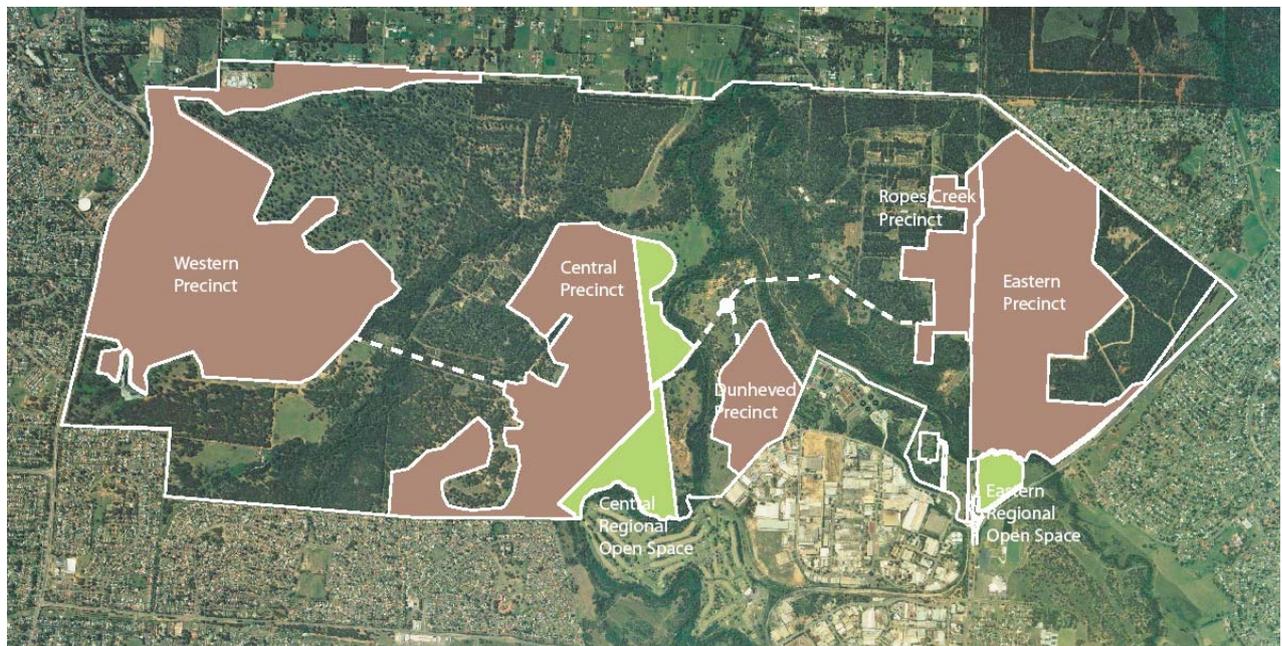
In December 2002, a Deed of Agreement was entered into between the landowner and developers of the land (a Joint Venture comprising ComLand and Lend Lease Development) and the NSW Government setting out the developer’s and State Government’s responsibilities in providing services and infrastructure.

SREP 30 identified six development “precincts” (known as the Western Precinct, Central Precinct, North and South Dunheved Precincts, Ropes Creek Precinct and Eastern Precinct) within the Property.

SREP 30 requires that a Precinct Plan, addressing the issues in SREP 30 and the EPS (including preparation of management plans for a range of key issues), be adopted by Council prior to any development taking place.

In March 2002, the Commonwealth Government advised that those areas of the Property listed on the Register of the National Estate should be excluded from urban development. This had the effect of changing the boundaries of the areas to be set aside for conservation. SREP 30 was subsequently amended in April 2006 to reflect these boundary changes. The precincts available for development are shown in Figure 2 below.

Figure 2 Central Precinct (with other developable areas)



On 29 September 2006, the Minister for Planning declared the Central Precinct a Release Area, paving the way for the preparation of a Precinct Plan for this area. The Central Precinct, the subject of this CMP, occupies an area of approximately 133 hectares. There is a draft amendment to SREP 30 currently being prepared under which the Employment zone in the Central Precinct is proposed to increase from 3.4 ha to 38.4 hectare.

A Precinct Plan for the Eastern Precinct (EPP) was adopted by Blacktown City Council (BCC) on 4 February 2004. The EPP incorporated a Contamination Management Plan (CMP) prepared by URS in 2003, and other management plans, and an accompanying Development Control Strategy (DCS). The Dunheved Precinct Plans have since been adopted by Penrith City Council and Blacktown City Council

Since completion of the CMP (2003), development of the Eastern Precinct Release Area has progressed and additional site investigations have been completed as required by Site Audit Statements. .

In addition, the Department of Environment and Conservation (DEC) (incorporating the NSW Environment Protection Authority and now known as the NSW Department of Environment and Climate Change (DECC)) has provided advice to Site Auditors that “*auditors should be able to rely on expert opinion* [Department of Defence Unexploded Ordnance panel (DUXOP) consultants] *to form a view about site suitability*” when assessing a site for munitions contamination. Further deliberations by the DEC and Site Auditors have determined that the presence of munitions items on a site is not likely to be within the ambit purview of a Site Auditor accredited under the Contaminated Land Management Act

(1997) – but rather a suitably qualified expert in procedures for the location, handling and disposal of munitions items. Such experts can be found in, but are not limited to, the DUXOP.

Notwithstanding this change in process, the 1999 Site Audit Statements for the St Marys property have addressed the issue of potential UXO contamination.

Bulk earthworks commenced in the Eastern Precinct on 8 December 2004. Development applications for the construction of the Ropes Creek Bridge and the Southern Entry Road into the site have been submitted to BCC and Penrith City Council.

Subsequently, CMPs have been prepared by URS for the North and South Dunheved Precincts (2004), Ropes Creek and Eastern Precincts (2006) and the Eastern Regional Park (2006).

This CMP (Central Precinct Contamination Management Plan) has been prepared to support the lodgement of the Central Precinct Plan and takes into account current site knowledge including and DECC guidance relating to the reliance on specialist consultants for use in the development phase prior to sub-division.

1.2 Introduction to the Contamination Management Plan

The Central Precinct was the subject of extensive investigation during the 1990s. The investigation work was undertaken with the full involvement of the EPA and subsequently an independent NSW EPA accredited Site Auditor who produced and issued Site Audit Statements for the whole of the St Marys Property (*Stage 2 Decontamination Audit of ADI St Marys Munitions Factory*, dated 7 June 1999).

The investigation and remediation programme for the Property commenced in 1990, with the objective of assessing the nature, degree of chemical contamination and remediating to a level suitable for redevelopment for a variety of land uses including residential. For the purposes of the remediation and validation, the Property was divided into nine sectors. The Central Precinct covers part of the following sectors as follows:

- Southern West Sector Covered by SASs CHK001/1 and CHK001/6.
- Central West Sector Covered by SASs CHK001/1, CHK001/6 and CHK001/7.
- North Western Sector Covered by SASs CHK001/1, CHK001/6 and CHK001/7.

The information presented in the remediation and validation reports for these sectors has been considered, along with other relevant information for the Property, to develop this CMP (Central Precinct).

The majority of the Central Precinct was assessed by the Site Auditor to pose a negligible risk to the public or the environment with regard to chemical contamination and/or explosive ordnance (See SASs as listed above in Appendix A). Conditions on the SASs required investigation and assessment of areas underlying roadways which had not been investigated at the date of the SASs.

1.3 Contamination Management Plan Objectives

The objective of this CMP is to provide a framework for identifying and addressing any discovery of chemical contamination or potentially explosive ordnance so as to ensure a safe working environment for workers during development and to avoid unacceptable impact on the natural environment.

Unexpected finds may occur in areas which, although searched extensively, contain remnant materials which were obscured by the local topography, the type of surface cover (e.g. building) or at a depth preventing detection. The Site Auditor considered that, while explosive ordnance may be uncovered during earthworks, it is unlikely that these will present an unacceptable risk provided appropriate procedures for the safe handling and disposal of such material are adopted.

The successful implementation of the CMP requires the appropriate briefing and Site Specific OHS Induction of Site Operatives who may uncover potential chemical contamination (including potential asbestos containing materials) and/or explosive ordnance. It is proposed this briefing will include the review of this CMP and the associated flow chart (Figure 3 on p2-4).

This CMP describes reporting procedures and lines of responsibility (See Section 3). These experts should include those with detailed knowledge of the remediation which has been undertaken at the Property and details on the location of, and access to, the supporting documents related to the assessment and remediation of the Central Precinct.

The Property has been remediated, audited and declared suitable for its intended land uses, and remnant contamination, if present, is most likely to be discovered during the development earthworks which will occur prior to subdivision.

The approaches included in this CMP are intended for use only during the site preparation phase of development, during which structures may be demolished and disposed of, land levels may be altered and redundant infrastructure is removed and new infrastructure is installed.

Subsequent plans, if required, will be administered through the relevant local government authority.

The operation of the CMP is described in the attached flow-chart (Figure 3).

The objective of the CMP is to provide clear guidance on the safe and appropriate actions in the event of encountering potential chemical or explosive ordnance contamination during site development works. Where such material is uncovered the CMP prescribes the quarantining of the relevant area of concern, allowing other site works to proceed unhindered, while the area of concern is assessed and, if necessary, remediated and validated.

Where required, reference should be made to the extensive library of documents containing information on the historic assessment and remediation of the site. This library provides a valuable source of information which can be drawn on to provide support for development of remedial and/or assessment approaches.

Two classes of potential contamination are discussed separately below: chemical (including potential asbestos containing materials) and ordnance.

2.1 Potential Chemical Contamination

Potential chemical contamination may be indicated in the field by:

- Discoloured soils;
- Odorous soils;
- Potentially asbestos containing sheeting, fragments or insulation materials; or
- The presence of other foreign materials, such as drums, waste dumps or building rubble which could be a source of contamination.

If the Site Manager considers material to be potential chemical contamination the area will be quarantined and a suitably qualified Environmental Consultant will be contacted. The Environmental Consultant will be responsible for assessing the findings, taking samples to characterise and delineate the extent of the potential contamination and defining appropriate remedial actions, if required.

Suspected asbestos containing materials should be managed in accordance with relevant WorkCover requirements and a site specific Asbestos Management Plan.

If deemed necessary by the Environmental Consultant, the contamination will be removed for disposal at a suitably licensed facility in accordance with *Waste Classification Guidelines* (NSW DECC, April 2008). The resultant excavation will be validated by the Environmental Consultant and a report on the remediation and subsequent validation will be completed and, if appropriate, be reviewed and approved by an independent NSW EPA accredited Site Auditor. The quarantine barriers can be removed and the earthworks continued upon receipt of advice from the Environmental Consultant, issue of an SAS, or preliminary advice from the Site Auditor.

If the area is determined by the Environmental Consultant to not be contaminated or the analyses meet the relevant site validation criteria, the Environmental Consultant should notify the Site Manager that the quarantine restrictions on the area can be lifted and the works in that area may resume. The Environmental Consultant will prepare a report on the investigation and the conclusions drawn.

Extensive Contamination

In the event that assessment by the Environmental Consultant identifies that the contamination is extensive² in its lateral and/or vertical extent, then the Environmental Consultant will prepare a sampling and analysis plan to delineate the contamination and assess the extent of any remediation required. The sampling and analysis plan must be reviewed by the independent Site Auditor, who would be engaged to review the works and issue a new SAS, on successful completion of the works.

2.2 Potential Explosive Ordnance Materials

Potential explosive ordnance material may be indicated in the field by:

- Munitions shells;
- Flares;
- Ammunition packaging;
- Grenade components; or
- Metal debris not identifiable as non-munitions or of uncertain origin.

Should potential ordnance material be uncovered, the earthworks will cease immediately and the Site Manager informed. The area should be quarantined, by means of some appropriate barrier to prevent access to the area to protect the workforce from potential injury.

The Site Manager will make a preliminary assessment of the find and determine whether it is some miscellaneous debris, a fragment of ordnance or a potentially explosive device.

Where the Site Manager can identify the item as non-ordnance debris or a minor harmless fragment of ordnance debris, the material should be removed from the excavation and disposed of appropriately.

Where it is considered to be a potentially explosive device, the Site Manager shall contact an appropriately qualified Ordnance Contractor, to assess the item and the area.

Should the Ordnance Contractor consider the object(s) to be non-ordnance or harmless fragments of ordnance, the object(s) can be removed and disposed of appropriately. The quarantine restrictions can be lifted and the earthworks continued.

² When the area is sufficiently large to warrant audit of the remediation and issue of a replacement Site Audit Statement, the Environmental Consultant will advise when to engage an Auditor reflecting contemporary industry practise. Less than 1000 m² would not immediately qualify.

If the Ordnance Contractor identifies the object(s) as potential explosive ordnance, the Ordnance Contractor shall inform the Site Manager, and arrange disposal.

Based on the nature of find, it may be recommended that a geophysical survey of the area be undertaken to establish whether the item was an individual piece, one of a number of pieces or a disposal pit. The survey would be undertaken by the Ordnance Contractor using appropriate equipment. Further surveys are mandatory if the explosive ordnance is considered a Category A item or more than three readily identifiable Category B items are found at one location.

- **Category A** - An item clearly of a military nature and which might readily be recognized by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and containing explosive filling, but excluding small arms ammunition.
- **Category B** - An item clearly of a military nature and which might readily be recognized by a member of the public as such (e.g. in effect complete in appearance as a projectile of 20 mm calibre or greater, hand grenade, mortar, bomb, etc) and not containing explosive filling, but excluding small arms ammunition.

This is in accordance with the validation procedures for the earlier site assessments, remediation and audit, and maintains the same level of confidence for the whole Property.

The Ordnance Contractor will prepare a report on the investigations undertaken, remediation works undertaken and validation surveys completed. Subject to review of the Ordnance Contractor's report by a suitably qualified consultant, the quarantine restrictions on the area can be removed and the earthworks resumed. The Site Auditor will be provided with a copy of the Clearance Report for the area issued by the Ordnance Consultant.

Further Explosive Ordnance Surveys

Any additional ordnance surveys should be designed to characterise the extent and character of the ordnance contamination and then (or concurrently) to remove the contaminant so that the area is safe for the development activities to resume. These surveys should be undertaken by an Ordnance Contractor, with the objective of characterising and delineating the extent of the explosive ordnance contamination. Such surveys may, as appropriate, utilise magnetic, electromagnetic or other diagnostic techniques.

In the event that further explosive ordnance is discovered the search area may need to be extended to ensure a suitable buffer zone is searched. A remediation and sampling strategy for the area is to be developed in consultation with the Ordnance Consultant.

All additional finds should be logged and disposed of appropriately. Once the investigation is complete a report on the scope of the investigation, remedial work and results should be produced by the Ordnance Contractor, approved by the Ordnance Consultant and provided to the independent Site Auditor. The quarantine restrictions on the area can be removed and the earthworks resumed.

2.3 Temporary Stockpiling of Materials

Earthworks in the development phase are likely to, temporarily, generate excess material which may be stockpiled for re-use. Unless some event or observation indicates that the material excavated and placed into the stockpile is potentially contaminated, no particular treatment is required other than normal dust suppression, and erosion controls in accordance with relevant Council requirements.

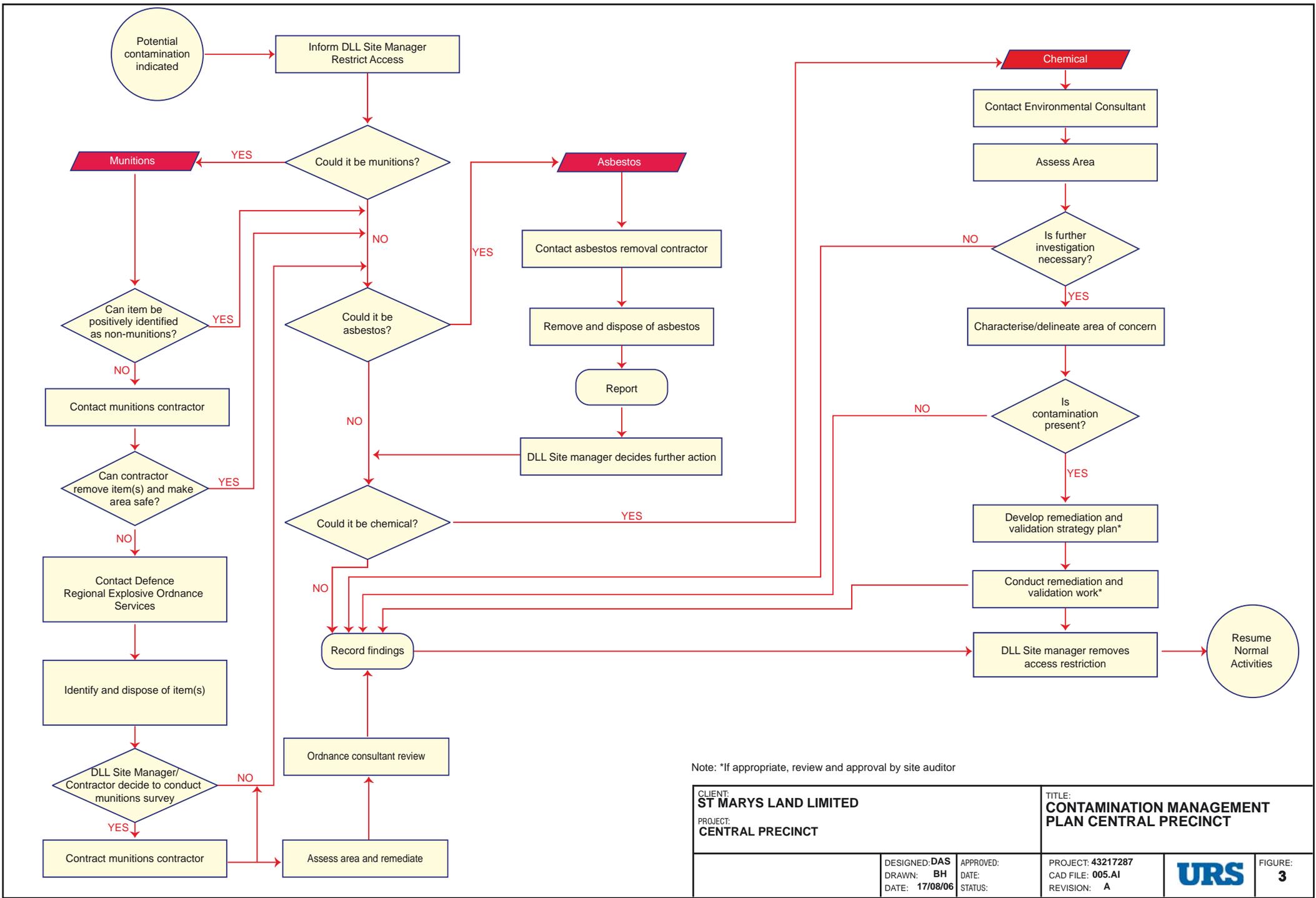
If assessment by the Environmental Consultant or the Ordnance Contractor identifies contamination that is extensive in its lateral and/or vertical extent, or a stockpile is observed to be contaminated, then the Environmental Consultant will prepare a sampling and analysis or survey plan to delineate the contamination and assess the extent of remediation required. The sampling and analysis plan or survey plan should, as appropriate, be reviewed by the Site Auditor or the Ordnance Consultant.

Subject to the agreement of the relevant Consultant, it may be possible to move and stockpile the affected material. Where temporary stockpiling is permitted such stockpiles shall be installed and maintained to eliminate risk to workers and other people due to exposure to contaminants in dust or vapours and risk to the environment as a result of silt or contamination of stormwater.

Validation sampling or surveying of the contaminated area or stockpile would be required before earthworks continue in that area.

2.4 Contaminated Management Plan Flowchart

Figure 3, following, describes the decision processes in the implementation of this CMP



Note: *If appropriate, review and approval by site auditor

CLIENT: ST MARYS LAND LIMITED		TITLE: CONTAMINATION MANAGEMENT PLAN CENTRAL PRECINCT	
PROJECT: CENTRAL PRECINCT		PROJECT: 43217287 CAD FILE: 005.AI REVISION: A	
DESIGNED: DAS DRAWN: BH DATE: 17/08/06	APPROVED: DATE: STATUS:		FIGURE: 3

The key roles³ and responsibilities with respect to this CMP are as follows:

Title	Role
Asbestos Consultant	Responsible for reviewing the assessment of areas contaminated by potential asbestos containing materials. The Asbestos Consultant will provide a brief report which certifies the subject area is free of asbestos and suitable for residential development.
Asbestos or Environmental Contractor	Responsible for removal or treatment of contaminated material in accordance with this procedure and direction by the Environmental Consultant and the Site Manager.
Environmental Consultant	Once called to the site, the Environmental Consultant will be responsible for assessing the potential chemical contamination find, undertaking any necessary sampling and delineation, if required, developing a remedial scope and validating remediation to render the site suitable for residential development. The Environmental Consultant may, as appropriate, have expertise in environmental assessment and/or asbestos assessment. All findings and conclusions will be reported, as appropriate, to the satisfaction of the Site Manager and/or the Site Auditor or asbestos consultant if a Site Audit is not required.
Site Manager:	Responsible for the preliminary assessment of potential contamination and/or ordnance materials discovered and assessing whether further action is required. The Site Manager is responsible for ensuring the induction of Site Operatives, assessing the adequacy of quarantine measures and contacting the relevant Consultant and/or Ordnance Contractors and Site Auditor where appropriate. Once an area is declared free of the contamination, the Site Manager's role will be to remove the quarantine and allow site works to proceed.
Ordnance Consultant	Responsible for reviewing the survey and assessment of areas contaminated by suspected ordnance which is undertaken either as a consequence of discovery of suspect materials or as a requirement of the Site Audit Statements. The Ordnance Consultant, who will be independent of the Ordnance Contractor and be a member of DUXOP, will, when satisfied with information provided by the Ordnance Contractor, provide a letter which confirms the site is suitable for recommencement of development activities.

³ Contact details are updated as required and can be seen in Appendix A.

Title	Role
Ordnance Contractor	<p>Once called to the site, the Ordnance Contractor will be responsible for assessing the ordnance find, undertaking any surveying sampling and delineation, developing any necessary remedial scope and validating any remediation necessary to render the site suitable for residential development. The Ordnance Contractor shall complete a clearance report on each area investigated and/or remediated and provide a copy for review by the Ordnance Consultant.</p> <p>As necessary, the Ordnance Contractor will conduct surveys of the site and complete reports to validate the remediation of areas where ordnance is discovered for review by the Ordnance Consultant.</p>
Site Auditor	<p>Responsible for reviewing the remediation and assessment of areas contaminated by chemicals which is undertaken either as a consequence of discovery of suspect materials or as a requirement of the Site Audit Statements. The Site Auditor, who will be independent of the Environmental Consultant and accredited by the NSW EPA, will then, when satisfied by the information provided and relying on clearance reports provided by the Ordnance Consultant, issue further Site Audit Statements which certify the site is suitable for residential development.</p>
Site Operatives:	<p>During the works, the Site Operative will be vigilant for potential contamination and/or ordnance. Where potential contamination and/or ordnance is identified, Site Operatives will quarantine the area and inform the Site Manager</p>

URS Australia Pty Ltd (URS) has prepared this report for the use of Maryland Development Company in accordance with the usual care and thoroughness of the consulting profession. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated 12 July 2007.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared in the period up to 7th 2008 and is based on the information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal vice. Legal advice can only be given by qualified legal practitioners.

Appendix A
SITE AUDIT STATEMENTS

**NSW Environment Protection Authority
SITE AUDIT STATEMENT (SAS)**

Site Audit Statement No.: CHK001/1

Site Auditor (accredited under NSW Contaminated Land Management Act 1997):

Name: Christopher H Kidd **Company:** HLA-Envirosciences Pty Limited
Address: 55-65 Grandview Street, Pymble, NSW **Postcode:** 2076
Phone: (02) 9988 4422 **Fax:** (02) 9988 4441

Site Details

ADI St. Marys Property – excluding Eastern Sector, QEL, Site 6 and Site 23, buildings and concrete stockpile.

Address: Forrester Road, St. Marys **Postcode:** 2760
Lot and DP Number: Lot 2 in DP803832
Lot 2 and 3 in DP223888 (part of)
Lot 3 in DP789196
Lot 3 in DP598653
(see attached map for excluded areas)

Local Government Area: Penrith and Blacktown

Site Audit requested by:

Name: Mr P Newton **Company:** Department of Urban Affairs and
Planning
Address: Sydney Region West
Level 8, Signature Tower
2-10 Wentworth Street
Parramatta NSW 2150
Phone: (02) 9895 7142 - **Fax:** (02) 9895 6270

Name of contact person (if different from above):

Consultancy(ies) who conducted the site investigation(s) and/or remediation:

- ADI Limited Chemical and Explosives Ordnance
Investigations, Remediation and Validation 1990 -
1999
- Mackie Martin & Associates Groundwater Investigations, 1991

Title(s) of Report(s) reviewed:

1. Historical Report – St Marys Property, ADI Limited, 1996;
2. Validation Report for the Western Sector, ADI St Marys Facility, ADI Limited
November 1994;
3. Validation Report for the North Western Sector of the ADI St Marys Facility, Report No.
498800, ADI Limited 1995;
4. Validation Report for the Southern Sector West of the ADI St Marys Property, Report
No. 498810, ADI Limited 1996;



5. Validation Report for the Southern Sector East of the St Marys Property, Report No. 498810, ADI Limited 1996;
6. Validation Report for the Northern Sector of the ADI St Marys Property, Report No. 498820, ADI Limited 1996;
7. Validation Report for the Central Sector East of the ADI St Marys Property, Report No. 498840, ADI Limited 1997;
8. Validation Report for the Central Sector West of the ADI St Marys Property, Report No. 498840, ADI Limited 1996;
9. Validation Report for the North Eastern Sector of the ADI St Marys Property, Report No. 498850, ADI Limited 1996;
10. QA/Verification Survey Results, ADI St Marys Property, Report No. PG980323da ADI Limited, 1999.

Other Information reviewed:

1. Site Investigation Report of St Marys Facility Ammunition and Missiles Division, Volume 4 - Discussions and Conclusions, ADI, June 1991.
2. Remediation Action Plan for the Northern Sector, ADI St Marys Facility, Report No. 498820, ADI Limited 1996;
3. Remediation Action Plan for Central Eastern Sector, ADI St Marys Facility, Report No. 498840, ADI Limited 1996;
4. Remediation Action Plan for the Eastern Sector of the ADI St Marys Property, Report No. 498830, ADI Limited 1996;
5. Stage I Decontamination Audit, ADI St Marys CMPS&F, 1997.

Summary Site Audit Report Title:

Stage 2 Decontamination Audit Report for ADI Site, St Marys.

I have completed a site audit (as defined in the Contaminated Land Management Act 1997) and reviewed the reports and information referred to above with due regard to relevant laws and guidelines. I certify that the site (tick all appropriate boxes)

(a) is suitable for the following use(s):

- residential, including substantial vegetable garden and poultry;
- residential, including substantial vegetable garden, excluding poultry; *llk*
- residential with accessible soil, including garden (minimal home grown produce contributing less than 10% fruit and vegetable intake), excluding poultry; *llk*
- residential with minimal opportunity for soil access including units;
- daycare centre, preschool, primary school;
- secondary school;
- park, recreational open space, playing field;
- commercial/industrial use;
- Other *llk*



subject to

✓ Conditions

1. Excludes Eastern Sector, QEL, Site 6 and Site 23 which are covered by separate site audit statements, namely CHK001/2, CHK001/3, CHK001/4 and CHK001/5.
2. Excludes areas not yet investigated including the footprint of original buildings, car parks and roads, mainly around former Administration Centre Buildings (CHK001/6) and the concrete stockpile in Central Sector West. (Stockpile CHK001/7)
3. An appropriate management plan, including procedures for the safe handling and disposal of any items of ordnance that may be found during earthworks, should be lodged prior to the commencement of development earthworks. This plan should be similar to the "Remnant Contamination Management Plan" submitted by ADI (see Appendix E of the Site Audit Report).

~~(b) is not suitable for any beneficial use due to risk of harm from contamination~~ *MLA*

~~(comments):~~ *gll*

I am accredited by the NSW Environment Protection Authority under the Contaminated Land Management Act, 1997 as a site auditor (Accreditation No. 9813).

I Certify that:

- (a) I have personally examined and am familiar with the information contained in this statement, including the reports and information referred to in this statement, and
- (b) this statement is to the best of my knowledge, true, accurate and complete, and
- (c) on the basis of my inquiries made to those individuals immediately responsible for making the reports, and obtaining the information, referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties for wilfully submitting false, inaccurate or incomplete information.

Signed: *Louisa*

Date: *7/6/99*

15. Validation Report for the Southern Sector East of the St Marys Property, Report No. 498810, ADI Limited 1996;
16. Validation Report for the Northern Sector of the ADI St Marys Property, Report No. 498820, ADI Limited 1996;
17. Validation Report for the Central Sector East of the ADI St Marys Property, Report No. 498840, ADI Limited 1997;
18. Validation Report for the Central Sector West of the ADI St Marys Property, Report No. 498840, ADI Limited 1996;
19. Validation Report for the North Eastern Sector of the ADI St Marys Property, Report No. 498850, ADI Limited 1996;
20. QA/Verification Survey Results, ADI St Marys Property, Report No. PG980323da ADI Limited, 1999.

Other Information reviewed:

6. Site Investigation Report of St Marys Facility Ammunition and Missiles Division, Volume 4 – Discussions and Conclusions, ADI, June 1991.
7. Remediation Action Plan for the Northern Sector, ADI St Marys Facility, Report No. 498820, ADI Limited 1996;
8. Remediation Action Plan for Central Eastern Sector, ADI St Marys Facility, Report No. 498840, ADI Limited 1996;
9. Remediation Action Plan for the Eastern Sector of the ADI St Marys Property, Report No. 498830, ADI Limited 1996;
10. Stage I Decontamination Audit, ADI St Marys CMPS&F, 1997.

Summary Site Audit Report Title:

Stage 2 Decontamination Audit Report for ADI Site, St Marys.

I have completed a site audit (as defined in the Contaminated Land Management Act 1997) and reviewed the reports and information referred to above with due regard to relevant laws and guidelines. I certify that the site (tick all appropriate boxes)

(a) is suitable for the following use(s):

- residential, including substantial vegetable garden and poultry; *msk*
- residential, including substantial vegetable garden, excluding poultry; *msk*
- residential with accessible soil, including garden (minimal home grown produce contributing less than 10% fruit and vegetable intake), excluding poultry; *msk*
- residential with minimal opportunity for soil access including units; *msk*
- day care centre, preschool, primary school; *msk*
- secondary school; *msk*
- park, recreational open space, playing field; *msk*
- commercial/industrial use;
- Other – May continue to be used for existing commercial use and carparks, but underlying soils need to be tested for chemical and ordnance contamination after demolition.

subject to

✓ Conditions

1. Soils under existing buildings, car parks, roads and the concrete stockpile shall be tested for ordnance and/or chemical contamination when these facilities are removed; site audits statements for these areas will also be required.
2. An appropriate management plan, including procedures for the safe handling and disposal of any items of ordnance that may be found during earthworks, should be lodged prior to the commencement of development earthworks. This plan should be similar to the "Remnant Contamination Management Plan" submitted by ADI (see Appendix E of the Site Audit Report).

~~(b) is not suitable for any beneficial use due to risk of harm from contamination~~
 (comments) *plh*

I am accredited by the NSW Environment Protection Authority under the Contaminated Land Management Act, 1997 as a Site Auditor (Accreditation No. 9813).

I Certify that:

- (a) I have personally examined and am familiar with the information contained in this statement, including the reports and information referred to in this statement, and
- (b) this statement is to the best of my knowledge, true, accurate and complete, and
- (c) on the basis of my inquiries made to those individuals immediately responsible for making the reports, and obtaining the information, referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete.

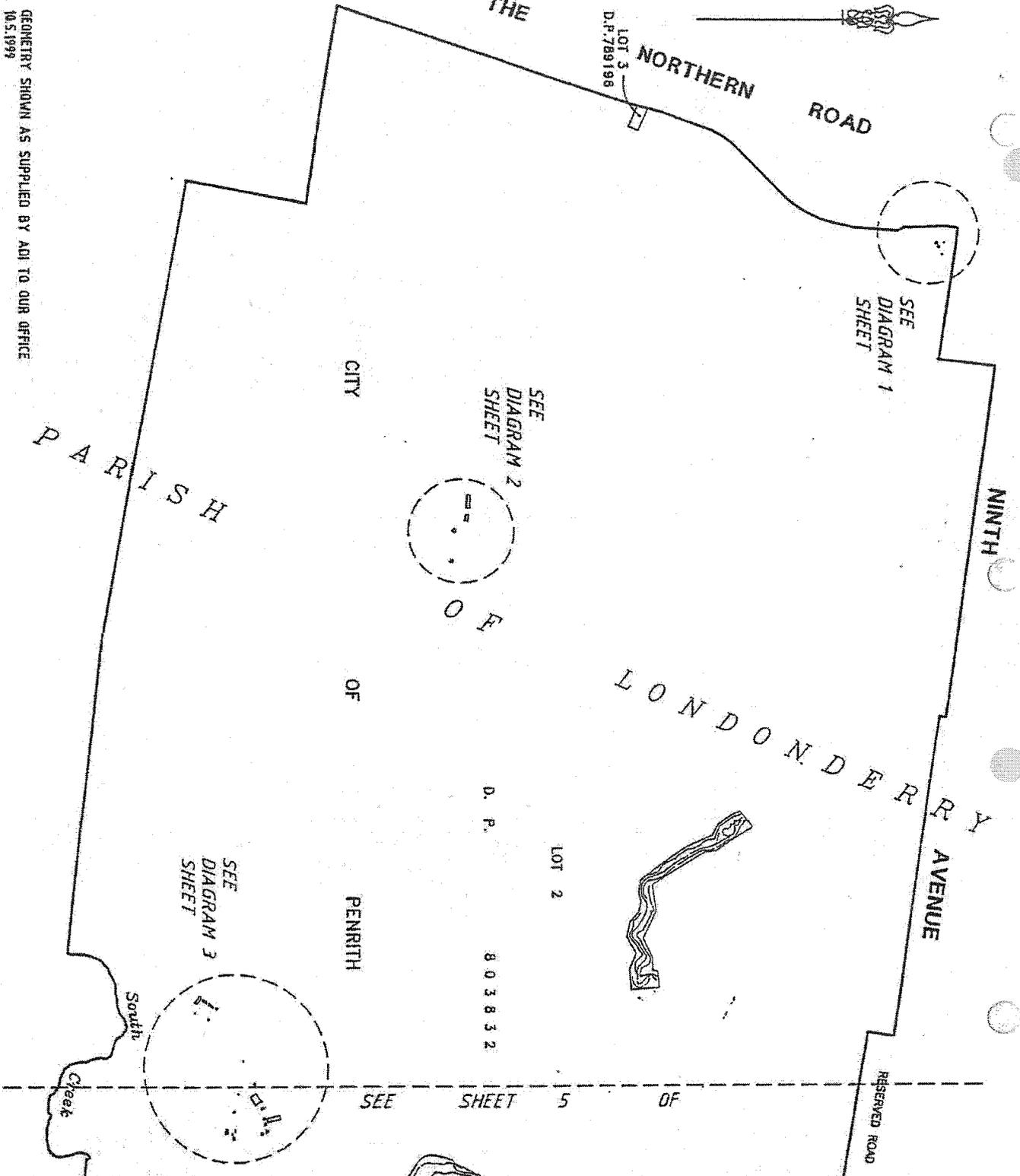
I am aware that there are penalties for wilfully submitting false, inaccurate or incomplete information.

Signed: _____

Lawson

Date: _____

7/6/99



GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
10.5.1999

NOTES:

COPYRIGHT © WHELAN AUSTRALIA PTY LTD.
 INFORMATION CONTAINED IN THIS DRAWING / FILE IS THE
 COPYRIGHT OF WHELAN AUSTRALIA PTY LTD. COPYING OR
 USING THIS DATA IN WHOLE OR PART, IN ANY FORMAT,
 WITHOUT PERMISSION INFRINGES COPYRIGHT. ©
 THIS DOCUMENT IS BOTH ELECTRONIC AND HARD COPY
 FORMATS AND SHALL REMAIN THE PROPERTY OF
 WHELAN AUSTRALIA PTY LTD. THE INFORMATION MAY
 ONLY BE USED FOR THE PURPOSE FOR WHICH IT HAS
 BEEN PROVIDED AND IS NOT TO BE REPRODUCED OR
 ENGAGEMENT FOR THE COMMISSION. UNAUTHORIZED USE
 OF THIS INFORMATION IN ANY FORM WHATSOEVER IS
 PROHIBITED.

PREPARED BY:

Whelans
 Whelans Australia Pty Ltd

Head Office:

Whelans Australia Pty Ltd
 Level 5, 141 Elizabeth Street
 Sydney, New South Wales
 2000 Australia
 Telephone (02) 9283 2400
 Facsimile (02) 9281 5012

Parramatta Office:

Level 1, Suite 2
 12 Victoria Road, Parramatta,
 NSW 2150
 Telephone (02) 9630 4199
 Facsimile (02) 9630 4598

PREPARED FOR:

ADI PROPERTY
ADI ST MARY'S PROPERTY
RETAINED BUILDINGS/PAVED AREA
PLAN TO ACCOMPANY SITE AUDIT
STATEMENT CHK001/6

A3

ORIGINAL SIZE:	SCALE:	HOR:	VERT:
	1:2500		
CO-ORDS:	DATUM:		
DATE OF SURVEY:	DATE OF PLAN:	19 MAY 1999	
SURVEY:	DRAWN:	DW	
CHECKED:	DATE:	24.3.1998	
APPROVED:	DATE:	24.3.1999	
JOB REF:	8663		
CAD REF:	5467-126	SHEET 7 OF 13 SHEETS	

Handwritten signature

NOTES:

COPYRIGHT: © WHELANS AUSTRALIA PTY LTD. INFORMATION CONTAINED IN THIS DRAWING / FILE IS THE COPYRIGHT OF WHELANS AUSTRALIA PTY LTD. COPYING OR USING THE DATA IN WHOLE OR IN PART IN ANY FORMAT, WITHOUT PERMISSION INWRITES COPYRIGHT ©

PREPARED BY:

Whelans
 Surveyors
 Planners
 Geomatic Engineers

Whelans Australia Pty Ltd

Head Office:

Whelans Australia Pty Ltd
Level 5, 141 Elizabeth Street
Sydney, New South Wales.
2000 Australia
Telephone 02) 9293 2400
Facsimile 02) 9261 5012

Parramatta Office:

Level 1, Suite 2
12 Victoria Road, Parramatta.
NSW 2150
Telephone 02) 9630 4199
Facsimile 02) 9630 4599

PREPARED FOR:

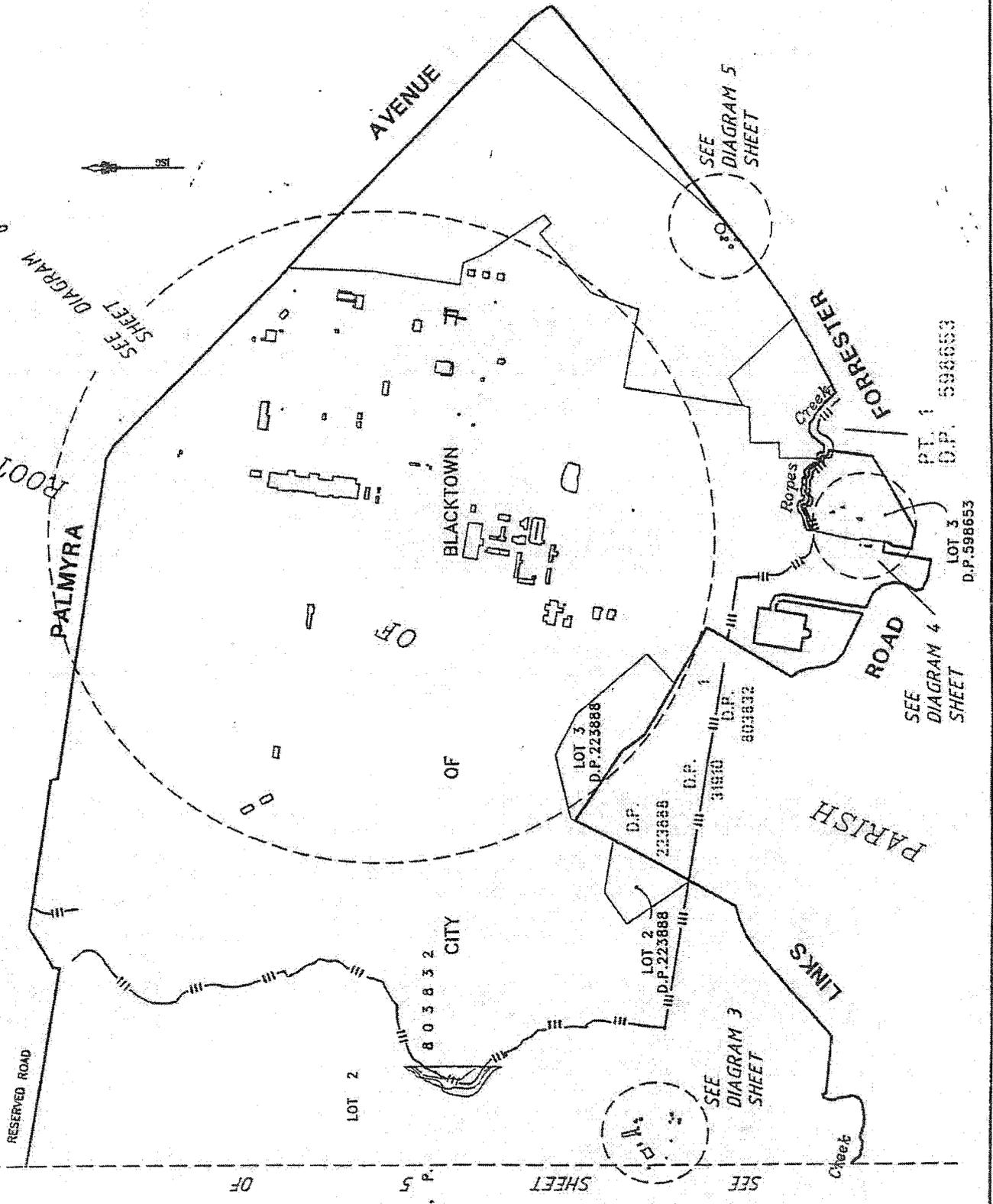
ADI PROPERTY

ADI ST MARYS PROPERTY
RETAINED BUILDINGS/PAVED AREA
PLAN TO ACCOMPANY SITE AUDIT
STATEMENT CHK001/6

A3

ORIGINAL SIZE:	SCALE:	HOR:	VERT:
		1:2500	
DATE OF SURVEY:	DATE OF PLAN:	19 MAY 1999	
SURVEY:	DRAWN:	DDW	
CHECKED:	DATE:	24.5.1999	
APPROVED:	DATE:	24.5.1999	
JOB REF:	8662		
CAD REF:	5487-123		
SHEET 6 OF 13 SHEETS			

GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
10.5.1999



NOTES:

COPYRIGHT: © WHELANS AUSTRALIA PTY LTD.
 INFORMATION CONTAINED IN THIS DRAWING / FILE IS THE
 COPYRIGHT OF WHELANS AUSTRALIA PTY LTD. COPYING OR
 USING THIS DATA IN WHOLE OR PART, IN ANY FORMAT,
 WITHOUT PERMISSION INFRINGES COPYRIGHT. ©
 THIS DOCUMENT IN BOTH ELECTRONIC AND HARD COPY
 FORMAT IS AND SHALL REMAIN THE PROPERTY OF
 WHELANS AUSTRALIA PTY LTD. THE INFORMATION MAY
 ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS
 COMMISSIONED AND IN ACCORDANCE WITH THE USE
 OF THIS INFORMATION IN ANY FORM WHATSOEVER IS
 PROHIBITED.

PREPARED BY:

Whelans
 Surveyors
 Planners
 Geomatics Engineers
Whelans Australia Pty Ltd

Head Office:

Whelans Australia Pty Ltd
 Level 5, 141 Elizabeth Street
 Sydney, New South Wales.
 2000 Australia
 Telephone 02) 9283 2400
 Facsimile 02) 9261 6012

Parramatta Office:

Level 1, Suite 2
 12 Victoria Road, Parramatta.
 NSW 2150
 Telephone 02) 8630 4199
 Facsimile 02) 8630 4599

PREPARED FOR:

ADI PROPERTY

**ADI ST MARYS PROPERTY
 RETAINED BUILDINGS/PAVED AREA
 PLAN TO ACCOMPANY SITE AUDIT
 STATEMENT CHK001/6**

ORIGINAL SIZE:

A3

SCALE	HOR:	VERT:
	2000	
CD-ORDS:	DATE OF SURVEY	DATE OF PLAN: MAY 1999
SURVEY	DRAWN: DOW	DATE: 21.5.1999
CHECKED: DOW	DATE: 21.5.1999	DATE: 21.5.1999
APPROVED: PW		
JOB REF: 8862		
CAD REF: 5457-127		
		SHEET 9 OF 13 SHEETS

CONCRETE BUILDING	274588 1267987 274590 1267987 274590 1267985 274588 1267985
SUBSTATION	274625 1267979 274626 1267983 274631 1267982 274630 1267978
WATERTANK	274606 1267968 274603 1267964 274598 1267968 274602 1267972.
WATERTANK	274589 1267965 274586 1267960 274591 1267957 274594 1267960.
K6	275465 1266407 275425 1266410 275426 1266422 275466 1266419
K2	275507 1266403 275487 1266407 275488 1266416 275508 1266413
CARETAKERS SHED	275532 1266368 275537 1266377 275546 1266373 275541 1266364
K4	275642 1266357 275635 1266360 275637 1266367 275645 1266364

COORDINATES ARE APPROXIMATE ONLY
 GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
 10.5.1999

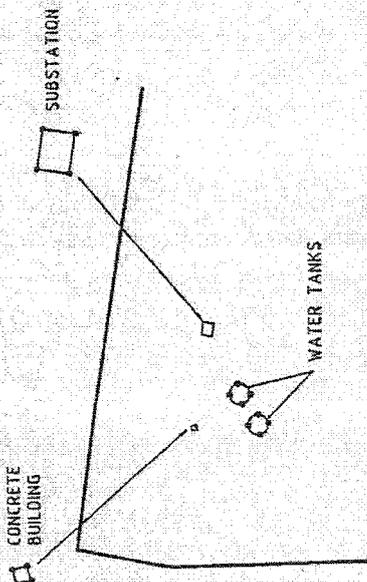


DIAGRAM 1

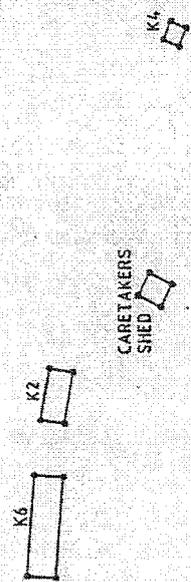


DIAGRAM 2

well

NOTES:

© WHELANS AUSTRALIA PTY LTD.
 INFORMATION CONTAINED IN THIS DRAWING / PLAN IS THE
 PROPERTY OF WHELANS AUSTRALIA PTY LTD. COPYING OR
 USING THIS DATA IN WHOLE OR PART, IN ANY FORMAT,
 WITHOUT PERMISSION INFRINGES COPYRIGHT.
 THIS DOCUMENT IN BOTH ELECTRONIC AND HARD COPY
 FORMATS IS AND SHALL REMAIN THE PROPERTY OF
 WHELANS AUSTRALIA PTY LTD. THE INFORMATION MAY
 ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS
 COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF
 ENGAGEMENT FOR THE COMMISSION. UNAUTHORIZED USE
 OF THIS INFORMATION IN ANY FORM WHATSOEVER IS
 PROHIBITED.

PREPARED BY:

Whelans
 SURVEYORS
 Chartered Engineers
 Whelans Australia Pty Ltd.

Head Office:
 Whelans Australia Pty Ltd
 Level 6, 141 Elizabeth Street
 Sydney, New South Wales.
 2000 Australia
 Telephone (02) 9283 2400
 Facsimile (02) 9261 5012

Parramatta Office:

Level 1, Suite 2
 12 Victoria Road, Parramatta.
 NSW 2150
 Telephone (02) 9630 4199
 Facsimile (02) 9630 4599

PREPARED FOR:

ADI PROPERTY

**ADI ST MARYS PROPERTY
 RETAINED BUILDINGS & PAVED AREA
 PLAN TO ACCOMPANY SITE
 AUDIT STATEMENT CHK000/6**

A3

ORIGINAL SIZE:	SCALE:	HOR:	2000	VERT:	
CO-ORDS:	DATE OF SURVEY:	DATE OF PLAN: MAY 1998			
SURVEY:	DRAWN:	DOW			
CHECKED:	DATE:	21.5.1998			
APPROVED:	PW	DATE 24.5.1998			
JOB REF:	8082				
CAD REF:	5467-128	SHEET 10 OF 13 SHEETS			

BDG No	EASTING	NORTHING
W09	277529	1265648
	277530	1265651
	277524	1265652
	277524	1265650
W02	277513	1265658
	277513	1265661
	277520	1265662
	277520	1265659
W02	277453	1265658
	277511	1265634
	277527	1265632
	277526	1265626
W02	277536	1265658
	277536	1265652
	277546	1265653
	277546	1265659

BDG No	EASTING	NORTHING
TOILET	277519	1265773
	277521	1265766
	277516	1265765
	277514	1265772
POWER	277283	1265888
	277285	1265886
	277287	1265889
	277286	1265891
W11	277477	1265767
	277468	1265809
	277480	1265811
SHED	277489	1265770
	277439	1265759
	277437	1265763
CONTROL TOWER	277439	1265764
	277441	1265761
	277453	1265658
	277511	1265634
	277527	1265632
	277526	1265626

BDG No	EASTING	NORTHING
W01	277452	1265655
	277456	1265654
	277457	1265658
	277453	1265658
W04	277475	1265762
	277481	1265760
	277479	1265755
	277474	1265756
W05	277493	1265729
	277407	1265712
	277395	1265731
	277418	1265746
W05	277444	1265749
	277440	1265755
	277444	1265758
	277448	1265751
W05	277399	1265671
	277397	1265674
	277395	1265672
	277396	1265670
W05	277360	1265728
	277365	1265731
	277368	1265726
	277363	1265723

BDG No	EASTING	NORTHING
X7	277113	1265596
	277111	1265594
	277105	1265598
	277107	1265601
X6	277106	1265591
	277101	1265585
	277091	1265570
	277096	1265566
X4	277076	1265549
	277082	1265545
	277091	1265559
	277086	1265563
X3	277067	1265535
	277072	1265542
	277094	1265527
	277089	1265520
X9	277127	1265521
	277125	1265518
	277122	1265520
	277124	1265523
X5	277142	1265565
	277145	1265563
	277150	1265568
	277145	1265571

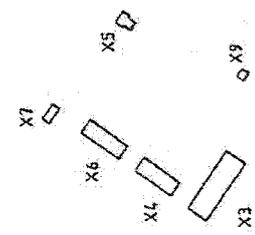
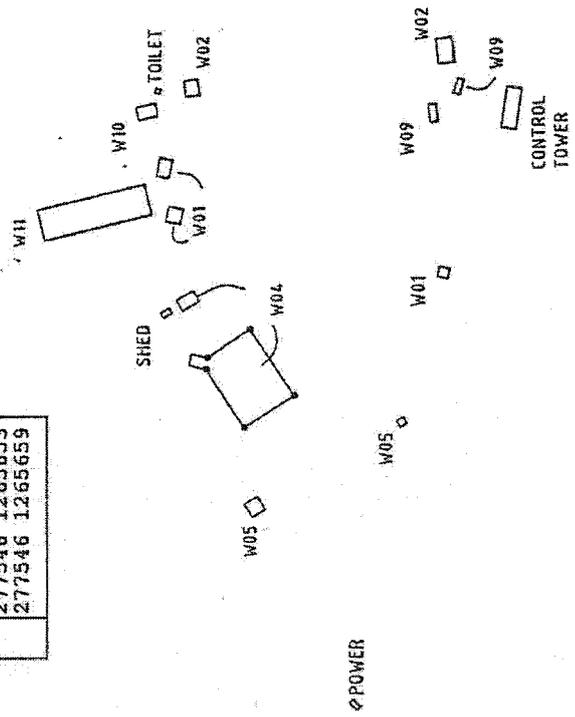
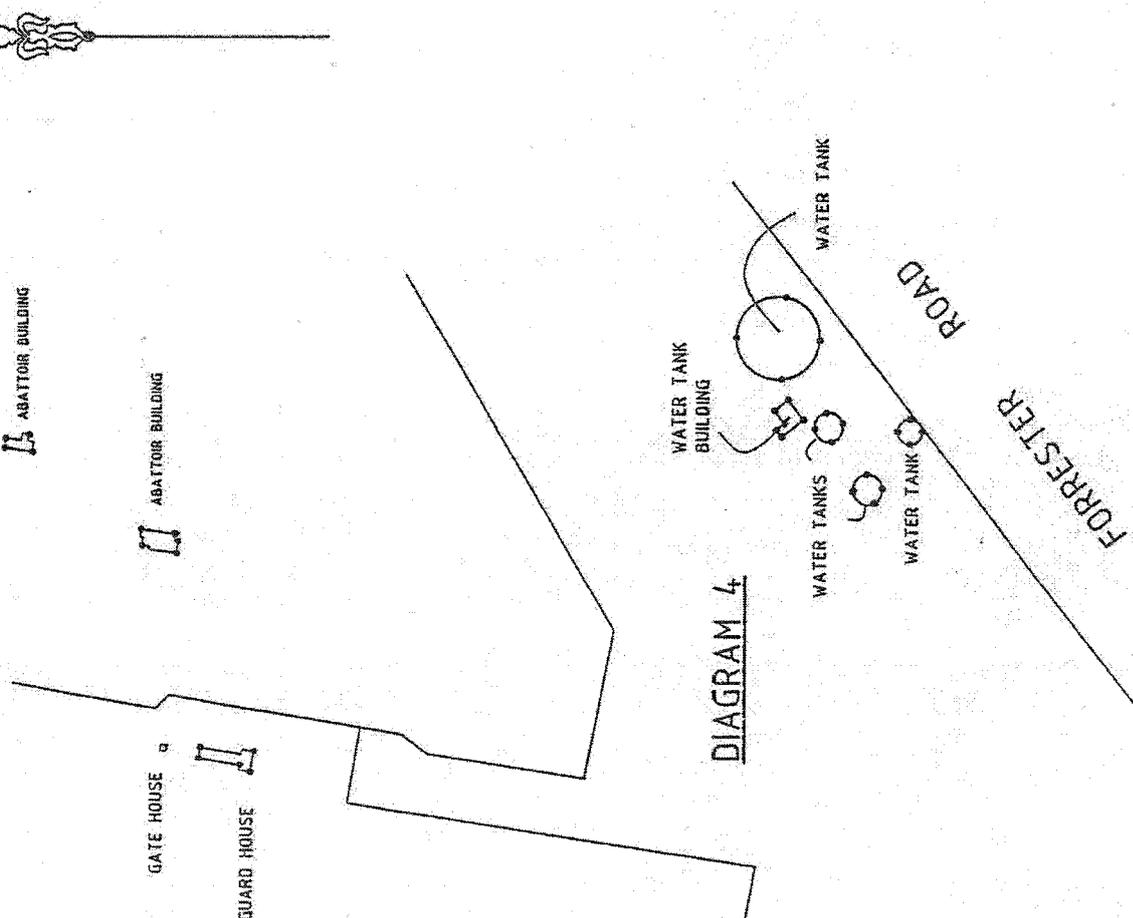


DIAGRAM 3

Handwritten initials/signature

NOTES:

BIG No	EASTING	NORTHING
WATER TANK BUILDING	280345	1265484
	280349	1265492
	280351	1265494
	280354	1265491
WATER TANKS	280359	1265495
	280389	1265510
	280403	1265494
	280305	1265477
	280371	1265496
	280357	1265477
	280358	1265474
	280350	1265468
	280347	1265475
	280326	1265452
GATE HOUSE	280372	1265458
	280334	1265459
	280330	1265464
	280354	1265445
GUARD HOUSE	280356	1265441
	280347	1265444
	280349	1265436
	279372	1265033
ABATTOR BUILDINGS	279375	1265032
	279372	1265030
	279374	1265030
	279369	1265017
	279374	1265016
	279372	1264995
ABATTOR BUILDINGS	279364	1264997
	279366	1265001
	279459	1265041
	279453	1265040
	279450	1265027
	279454	1265026
	279457	1265027
	279491	1265094
	279495	1265093
	279489	1265083
279496	1265084	
ABATTOR BUILDINGS	279473	1265130
	279476	1265131
	279478	1265125
	279475	1265124
ABATTOR BUILDINGS	279475	1265117
	279480	1265121
	279482	1265118
	279478	1265114



COORDINATES ARE APPROXIMATE ONLY
 GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
 10.5.1999

DIAGRAM 5

© WHELANS AUSTRALIA PTY LTD.
 INFORMATION CONTAINED IN THIS DRAWING / FILE IS THE
 COPYRIGHT OF WHELANS AUSTRALIA PTY LTD. COPYING OR
 USING THIS DATA IN WHOLE OR PART, IN ANY FORMAT,
 WITHOUT PERMISSION INFRINGES COPYRIGHT. ©
 THIS DOCUMENT IN BOTH ELECTRONIC AND HARD COPY
 FORMAT IS AND SHALL REMAIN THE PROPERTY OF
 WHELANS AUSTRALIA PTY LTD. THE INFORMATION MAY
 ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS
 COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF
 CONTRACT. THE INFORMATION IS NOT TO BE REPRODUCED OR
 OF THIS INFORMATION IN ANY FORM WHATSOEVER IS
 PROHIBITED.

PREPARED BY:

Whelans
 Surveyors
 Planners
 Geomatics Engineers
Whelans Australia Pty Ltd

Head Office:

Whelans Australia Pty Ltd
 Level 5, 141 Elizabeth Street
 Sydney, New South Wales,
 2000 Australia
 Telephone 02) 9283 2400
 Facsimile 02) 9281 5012

Parramatta Office:

Level 1, Suite 2
 12 Victoria Road, Parramatta.
 NSW 2150
 Telephone 02) 9630 4198
 Facsimile 02) 9630 4599

PREPARED FOR:

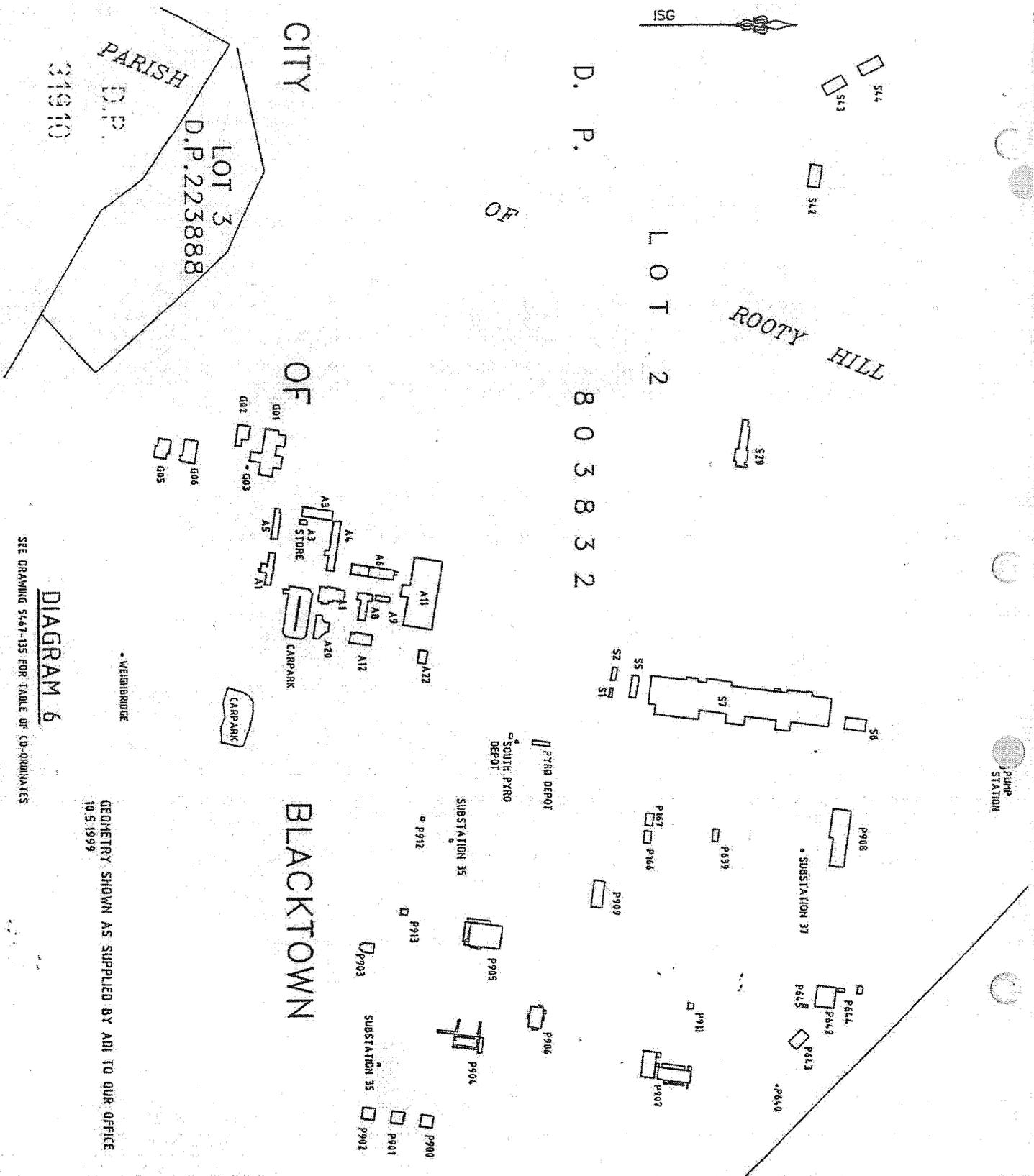
ADI PROPERTY

ADI ST MARYS PROPERTY
 RETAINED BUILDINGS/PAVED AREA
 PLAN TO ACCOMPANY SITE AUDIT
 STATEMENT CHK001/6

ORIGINAL SIZE: **A3**

SCALE: HORI: 2000	VERT:
CO-ORDS:	DATUM:
DATE OF SURVEY	DATE OF PLAN: MAY 1999
SURVEY	DIWANN ACAD/DOW
CHECKED: DOW	DATE: 21.5.1999
APPROVED: PW	DATE: 21.5.1999
JOB REF: 9982	
CAD REF: 5497-129	

SHEET 11 OF 13 SHEETS



PARISH
D.P.
LOT 3
D.P. 223888
31910

D. P.
803832
LOT 2

DIAGRAM 6

SEE DRAWING 5467-135 FOR TABLE OF CO-ORDINATES

GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
10.5.1999

<p>COMPARED: 6 WHELANS AUSTRALIA PTY LTD. INFORMATION CONTAINED IN THIS DRAWING / FILE IS THE PROPERTY OF WHELANS AUSTRALIA PTY LTD. COPYING OR USING THIS DATA IN WHOLE OR PART IN ANY FORM, WITHOUT PERMISSION HEREOF IS PROHIBITED.</p> <p>THIS DOCUMENT IN BOTH ELECTRONIC AND HARD COPY FORMATS AND SHALL REMAIN THE PROPERTY OF WHELANS AUSTRALIA PTY LTD. THE INFORMATION MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF ENGAGEMENT FOR THE COMMISSION. UNAUTHORISED USE OF THIS INFORMATION IN ANY FORM WHATSOEVER IS PROHIBITED.</p>		<p>NOTES:</p>
<p>PREPARED BY:</p> <p>Whelans Structural Planning General Architects</p> <p>Whelans Australia Pty Ltd</p>		<p>Head Office: Whelans Australia Pty Ltd Level 5, 141 Elizabeth Street Sydney, New South Wales 2000 Australia Telephone (02) 9289 2400 Facsimile (02) 9281 5012</p> <p>Parramatta Office: Level 1, Suite 2 12 Victoria Road, Parramatta, NSW 2150 Telephone (02) 9630 4199 Facsimile (02) 9630 4599</p>
<p>PREPARED FOR:</p> <p>ADI PROPERTY</p> <p>ADI ST MARYS PROPERTY RETAINED BUILDINGS/PAVED AREA PLAN TO ACCOMPANY SITE AUDIT STATEMENT CHK001/6</p>		<p>ORIGINAL SIZE: A3</p> <p>SCALE: HOR: 6000 VERT: 6000</p> <p>CO-ORDS: DATE: DATE OF PLAN: MAR 1999</p> <p>DATE OF SURVEY: DATE OF PLAN: MAR 1999</p> <p>SURVEY: DRAWN: KCOB/GDW</p> <p>CHECKED: DDW DATE: 24.5.1999</p> <p>APPROVED: PW DATE: 24.5.1999</p> <p>JOB REF: 5467-134 SHEET 12 OF 13 SHEETS</p>

rule

BOG NO	EASTING	NORTHING	BOG NO	EASTING	NORTHING	BOG NO	EASTING	NORTHING
A11	279334	1266254	279567	1266996	279556	1266990	279525	1266609
	279340	1266297		279556	1266996		279523	1266581
	279449	1266279		279532	1266953		279560	1266592
	279442	1266237		279587	1266945		279561	1266504
A12	279484	1266274		279606	1266940		279533	1266970
	279503	1266258		279631	1266942		279511	1266937
	279482	1266261		279609	1266990		279510	1266935
A9	279398	1266217		279539	1266993		279531	1266921
	279406	1266215		279384	1266608		279502	1266821
	279403	1266194		279379	1266596		279502	1266821
	279394	1266195		279383	1266604		279514	1266818
A8	279394	1266191		279464	1266607		279115	1266791
	279433	1266178		279203	1266629		279599	1266655
	279402	1266172		279200	1266606		279580	1266665
	279390	1266158		279178	1266591		279575	1266685
A6	279344	1266158		279136	1266601		279605	1266652
	279355	1266155		279138	1266602		279750	1266652
	279354	1266224		279144	1266597		279746	1266623
A4	279276	1266141		279145	1266593		279837	1266617
	279274	1266129		279122	1266592		279840	1266639
	279353	1266117		279119	1266572			
	279355	1266128		279155	1266566			
A3	279280	1266128		279142	1266581			
	279274	1266126		279146	1266593			
	279266	1266079		279182	1266597			
	279292	1266079		279177	1266571			
A5	279302	1266026		279174	1266580			
	279304	1266037		279171	1266582			
	279262	1266043		279141	1266583			
	279254	1266033		279144	1266584			
A7	279324	1266023		278527	1267007			
	279326	1266033		278511	1266998			
	279377	1266025		278525	1266966			
	279357	1266017		278545	1266974			
	279342	1266010						
A1	279380	1266107		278729	1266884			
	279404	1266108		278732	1266903			
	279405	1266143		278696	1266909			
	279387	1266146		278693	1266890			
A2	279454	1266162		279324	1266023			
	279455	1266155		279326	1266033			
	279470	1266153		279377	1266025			
	279475	1266187		279376	1266015			
A12	279425	1266100		279618	1266973			
	279462	1266094		279614	1266941			
	279453	1266113		279590	1266916			
	279437	1266113		279588	1266635			

BOG NO	EASTING	NORTHING	BOG NO	EASTING	NORTHING	BOG NO	EASTING	NORTHING
S7	279564	1266923	P903	279973	1266187	P644	280039	1266932
	279611	1266916		279971	1266170		280032	1266927
	279588	1266635		279957	1266172		280028	1266896
S8	279560	1266976	P902	280226	1266189	P643	280058	1266892
	279618	1266973		280245	1266186		280111	1266883
	279614	1266941		280242	1266167		280133	1266842
	279590	1266916		280323	1266170		280120	1266850
	279588	1266916		280226	1266189		280099	1266870
S29	279324	1266023	P901	280251	1266231	P642	280032	1266927
	279326	1266033		280252	1266234		280028	1266896
	279377	1266025		280229	1266215		280058	1266892
	279376	1266015		280248	1266212		280111	1266883
S44	278729	1266884	P900	280258	1266278	P640	280190	1266832
	278732	1266903		280239	1266278		280189	1266831
	278696	1266909		280236	1266259		280190	1266832
	278693	1266890		280235	1266257		280189	1266831
S43	278578	1266916	P909	279860	1266552	P911	280055	1266689
	278560	1266949		279856	1266533		280066	1266697
	278544	1266939		279900	1266528		280055	1266689
	278562	1266907		279902	1266946		280192	1266831
S42	278527	1267007	P166	279799	1266627	P907	280135	1266656
	278511	1266998		279798	1266615		280177	1266639
	278525	1266966		279779	1266617		280178	1266637
	278545	1266974		279753	1266634		280178	1266637
G05	279174	1266580	P167	279772	1266631		280186	1266630
	279171	1266582		279770	1266618		280135	1266656
	279141	1266583		279752	1266621		280178	1266637
	279144	1266584		279753	1266634		280178	1266637
G06	279142	1266580	P639	279593	1266784	P906	280063	1266442
	279146	1266593		279608	1266782		280096	1266448
	279182	1266597		279604	1266751		280093	1266447
	279177	1266571		279589	1266753		280060	1266431
G02	279144	1266597	ST 37	279814	1266876	P905	279967	1266380
	279145	1266593		279814	1266872		279924	1266329
	279122	1266592		279814	1266876		279960	1266327
	279119	1266572		279814	1266876			
G01	279136	1266601	P908	279750	1266652	P904	280111	1266935
	279138	1266602		279746	1266623		280105	1266931
	279144	1266597		279837	1266617		280125	1266930
	279145	1266593		279840	1266639			
CAR/PARK	279384	1266608	S5	279523	1266589	substation 35	280151	1266194
	279379	1266596		279523	1266592		280155	1266193
	279383	1266604		279561	1266604		280152	1266198
	279453	1266604		279533	1266970		279792	1266307
	279464	1266607		279511	1266937		279792	1266310
				279510	1266935		279796	1266306
				279531	1266921			
				279502	1266821			
				279502	1266821			
				279514	1266818			
				279115	1266791			
				279599	1266655			
				279580	1266665			
				279575	1266685			
				279605	1266652			
				279750	1266652			
				279746	1266623			
				279837	1266617			
				279840	1266639			

NO	EASTING	NORTHING	NO	EASTING	NORTHING	NO	EASTING	NORTHING
P645	280059	1266671	P644	280039	1266932			
	280060	1266681		280032	1266927			
	280055	1266680		280028	1266896			
	279799	1266627		280058	1266892			
				280111	1266883			
				280133	1266842			
				280120	1266850			
				280099	1266870			
				280039	1266932			
				280032	1266927			
				280028	1266896			
				280058	1266892			
				280111	1266883			
				280133	1266842			
				280120	1266850			
				280099	1266870			
				280039	1266932			
				280032	1266927			
				280028	1266896			
				280058	1266892			
				280111	1266883			
				280133	1266842			
				280120	1266850			
				280099	1266870			
				280039	1266932			
				280032	1266927			
				280028	1266896			
				280058	1266892			
				280111	1266883			
				280133	1266842			
				280120	1266850			
				280099	1266870			
				280039	1266932			
				280032	1266927			
				280028	1266896			



Other Information reviewed:

- 3 Site Investigation Report of St Marys Facility Ammunition and Missiles Division, Volume 4 – Discussions and Conclusions, ADI, June 1991.
- 4 Stage I Decontamination Audit, ADI St Marys CMPS&F, 1997.

Summary Site Audit Report Title:

Stage 2 Decontamination Audit Report for ADI Site, St Marys.

I have completed a site audit (as defined in the Contaminated Land Management Act 1997) and reviewed the reports and information referred to above with due regard to relevant laws and guidelines. I certify that the site (tick all appropriate boxes)

(a) is suitable for the following use(s):

- residential, including substantial vegetable garden and poultry;
- residential, including substantial vegetable garden, excluding poultry;
- residential with accessible soil, including garden (minimal home grown produce contributing less than 10% fruit and vegetable intake), excluding poultry;
- residential with minimal opportunity for soil access including units;
- day care centre, preschool, primary school;
- secondary school;
- park, recreational open space, playing field;
- commercial/industrial use;
- Other – May continue to be used as stockpile for crushed concrete, but underlying soils need to be tested for chemical and ordnance contamination after stockpile removed.

subject to

- Conditions

1. On removal of all or part of the stockpile the underlying ground should be tested for both chemical and ordnance contamination. The testing should follow similar methods and levels of quality assurance as other parts of the ADI St Marys site. Appropriate remediation and validation should be performed (if necessary) the work reviewed by a site auditor.
3. Appropriate management plan including procedures for the safe handling and disposal of any items of explosive ordnance, shall be in place before development earthworks commences and shall remain in place to cover any excavation on the site during its ongoing use. This plan should be similar to the "Remnant Contamination Management Plan" submitted by ADI (see Appendix E of the Site Audit Report).
4. The final surface of any earthworks in areas which are to be used for active recreational land uses, e.g. sports grounds, school grounds and picnic areas, or low density residential use, should, on completion of the earthworks, be surveyed with a metal detector by appropriately qualified and experienced personnel and the work reviewed by an independent site auditor.

~~(c) is not suitable for any beneficial use due to risk of harm from contamination~~

~~(comments):~~

1111



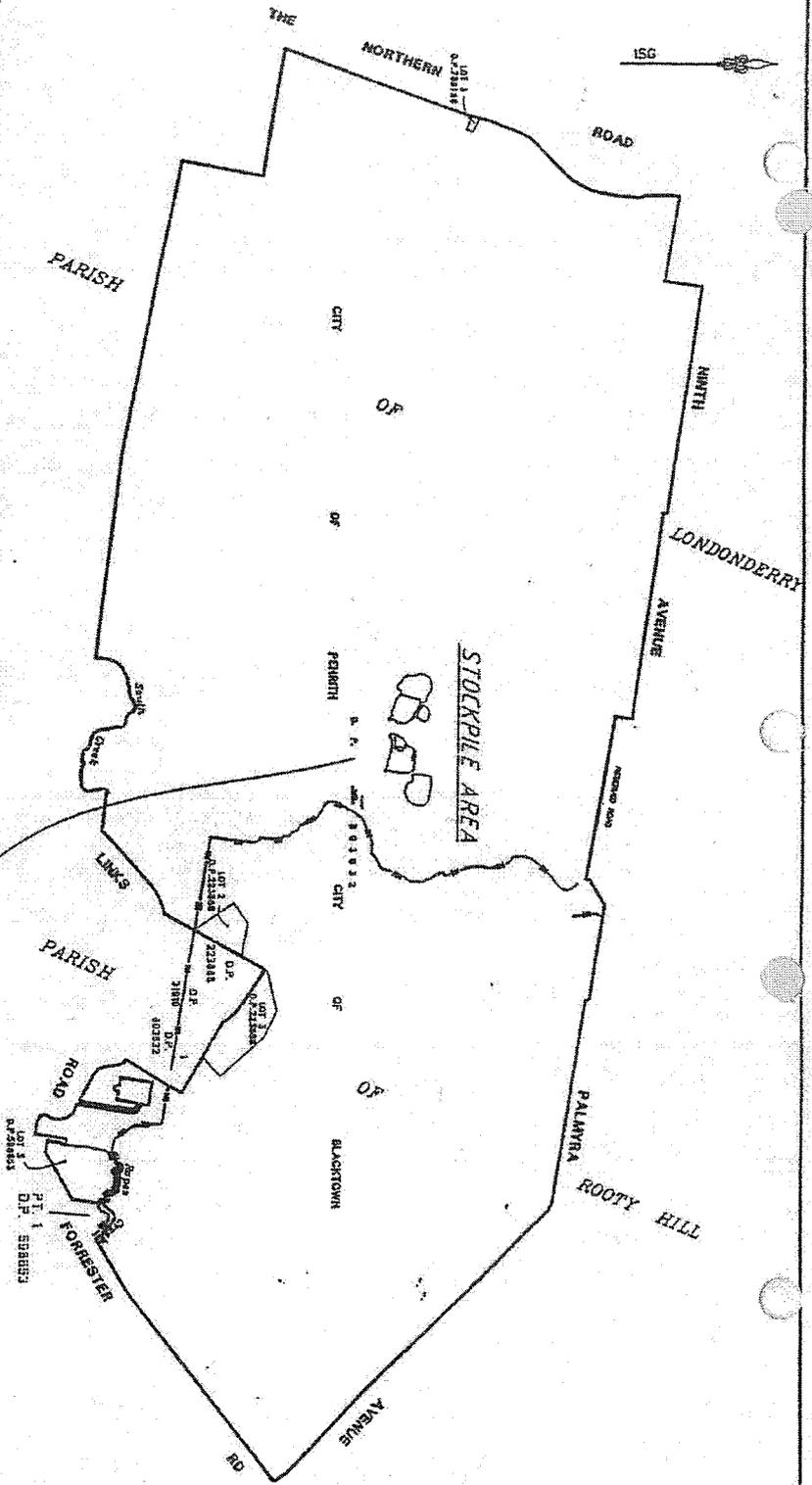
I am accredited by the NSW Environment Protection Authority under the Contaminated Land Management Act, 1997 as a Site Auditor (Accreditation No. 9813).

I Certify that:

- (g) I have personally examined and am familiar with the information contained in this statement, including the reports and information referred to in this statement, and
- (h) this statement is to the best of my knowledge, true, accurate and complete, and
- (i) on the basis of my inquiries made to those individuals immediately responsible for making the reports, and obtaining the information, referred to in this statement, those reports and that information are, to the best of my knowledge, true, accurate and complete.

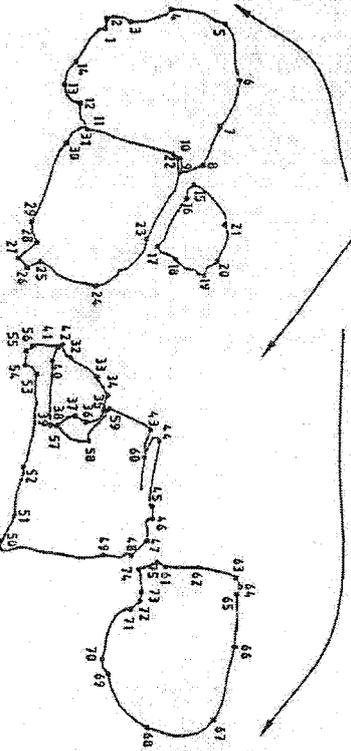
I am aware that there are penalties for wilfully submitting false, inaccurate or incomplete information.

Signed: *Lawson* Date: 7/6/99



No	EASTING	NORTHING	No	EASTING	NORTHING
277 000	1 266 663	1 266 642	31	277 039	1 266 632
277 000	1 266 664	1 266 632	32	277 309	1 266 632
277 003	1 266 607	1 266 657	33	277 326	1 266 648
276 994	1 266 727	1 266 668	34	277 344	1 266 664
277 005	1 266 729	1 266 664	35	277 358	1 266 664
277 054	1 266 793	1 266 657	36	277 368	1 266 657
277 098	1 266 775	1 266 654	37	277 382	1 266 654
277 133	1 266 758	1 266 651	38	277 391	1 266 651
277 146	1 266 738	1 266 648	39	277 371	1 266 648
277 127	1 266 738	1 266 648	40	277 362	1 266 648
277 114	1 266 738	1 266 648	41	277 352	1 266 648
277 078	1 266 639	1 266 644	42	277 289	1 266 644
277 040	1 266 632	1 266 636	43	277 288	1 266 636
277 039	1 266 635	1 266 635	44	277 325	1 266 635
277 164	1 266 751	1 266 709	45	277 352	1 266 709
277 164	1 266 714	1 266 714	46	277 457	1 266 714
277 208	1 266 705	1 266 705	47	277 459	1 266 705
277 220	1 266 715	1 266 715	48	277 459	1 266 715
277 232	1 266 714	1 266 714	49	277 454	1 266 714
277 166	1 266 704	1 266 704	50	277 454	1 266 704
277 123	1 266 704	1 266 704	51	277 450	1 266 704
277 201	1 266 656	1 266 600	52	277 326	1 266 600
277 265	1 266 656	1 266 591	53	277 326	1 266 591
277 264	1 266 602	1 266 590	54	277 303	1 266 590
277 264	1 266 602	1 266 590	55	277 303	1 266 590
277 204	1 266 583	1 266 613	56	277 311	1 266 613
277 188	1 266 583	1 266 650	57	277 315	1 266 650
277 188	1 266 583	1 266 650	58	277 315	1 266 650
277 118	1 266 637	1 266 703	59	277 356	1 266 703
277 118	1 266 637	1 266 703	60	277 400	1 266 703

No	EASTING	NORTHING
61	277 584	1 266 725
62	277 584	1 266 725
63	277 516	1 266 725
64	277 523	1 266 725
65	277 530	1 266 725
66	277 530	1 266 725
67	277 530	1 266 725
68	277 632	1 266 704
69	277 632	1 266 704
70	277 590	1 266 691
71	277 584	1 266 691
72	277 528	1 266 701
73	277 528	1 266 701
74	277 528	1 266 699
75	277 499	1 266 716



COORDINATES ARE APPROXIMATE ONLY

GEOMETRY SHOWN AS SUPPLIED BY ADI TO OUR OFFICE
10.5.1999

STOCKPILE AREA
NOT TO SCALE

NOTES:

COPYRIGHT © WHELANS AUSTRALIA PTY LTD. ALL INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF WHELANS AUSTRALIA PTY LTD. COPYING OR USING THIS DATA IN WHOLE OR PART IN ANY FORM, WITHOUT PERMISSION INFRINGES COPYRIGHT. ©

THIS DOCUMENT IN BOTH ELECTRONIC AND HARD COPY FORMATS IS AND SHALL REMAIN THE PROPERTY OF WHELANS AUSTRALIA PTY LTD. THE INFORMATION MAY ONLY BE USED FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED AND IN ACCORDANCE WITH THE TERMS OF THE AGREEMENT FOR THE COMMISSION. UNAUTHORIZED USE OF THE INFORMATION IN ANY FORM WHATSOEVER IS PROHIBITED.

PREPARED BY:

Whelans
SPECIALISTS
Planners
Geomatics Engineers

Whelans Australia Pty Ltd

Head Office:
Whelans Australia Pty Ltd
Level 5, 141 Elizabeth Street
Sydney, New South Wales
2000 Australia
Telephone (02) 9283 2400
Facsimile (02) 9281 5012

Perth Office:

Level 1, Suite 2
12 Victoria Road, Perth
NSW 2150
Telephone (02) 9630 4199
Facsimile (02) 9630 4599

PREPARED FOR:

ADI Property
ADI ST MARYS PROPERTY
STOCKPILE AREA
PLAN TO ACCOMPANY SITE
AUDIT STATEMENT CHK001/7

A3

ORIGINAL SIZE:	SCALE:	HOR.:	VERT.:
1:25,000	1:25,000		

CO-ORDS:	DATE:	DRAWN:	DATE:
ISC	11 May 1999		

DATE OF SURVEY:	DATE OF PLAN:	DATE OF REV:
	11 May 1999	

SURVEY:	DATE:	DRAWN:	DATE:
DDW	24.5.1999	Asad/DW	

CHECKED:	DATE:	DATE:
PH	24.5.1999	

JOB REF:	8662	SHEET 6	OF 13 SHEETS
CAD REF:	5487-1310MG		