

Our Ref: V160833GReport01.1

24 May 2016

Villawood Properties  
c/o Breese Pitt Dixon Pty Ltd  
1/19 Cato Street  
Hawthorn East VIC 3123

**Attention: Victoria Cook**

Dear Victoria,

**Cardno Victoria Pty Ltd**  
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## Review of Audit Site Former Sewerage Treatment Plant 405 Evans Road, Lyndhurst, Victoria

### 1 Introduction

#### 1.1 Background

Cardno Victoria Pty Ltd ("Cardno") was engaged by Villawood Properties ("the Client") to undertake a review of the status of a Certificate of Environmental Audit issued in 2011 for the property at 405 Evans Road, Lyndhurst ("the site"). The review was carried out in accordance with the scope and limitations presented in Cardno's proposal of 6 May 2016 (Our Ref: V160833G-Proposal01.1). The review commenced following approval of the proposed works by Breese Pitt Dixon, on behalf of the owner Villawood Properties, on 9 May 2016.

Anthony Lane of Lane Piper Pty Ltd (now Cardno), an Environmental Auditor appointed by EPA Victoria, was engaged by South East Water to issue a Certificate of Environmental Audit<sup>1</sup> (CoEA) in relation to the site. In September 2011, he completed an environmental audit and issued an Environmental Audit Report (EAR) containing a CoEA.

#### 1.2 Purpose and Objectives

The site is now zoned Residential 1 Zone under the Casey Planning Scheme and the site owner, Villawood Properties, proposes to develop the site for residential purposes.

The Client is seeking advice on whether any activities at the site, since the completion of the Audit, may have caused contamination and whether the CoEA remains valid. It is noted that the objective of this review is not to reopen the Audit, but rather to check that conditions at the site are the same as when the Audit was completed.

Specific objectives are as follows:

1. Identify the potential for activities at the site, since the issue of the CoEA, to have caused contamination of land at the site.

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<sup>1</sup> Lane Piper (2011) "Environmental Audit Report & Certificate of Environmental Audit – Former Cranbourne Sewerage Treatment Plant, 405 Evans Road, Lyndhurst." Reference 0785 Report01.2

2. Based on this information, the Auditor will make an assessment on whether or not the CoEA is still valid.
3. If the validity of the CoEA has been compromised through subsequent activities, provide recommendations for any further work to make the CoEA valid.

### **1.3 Scope of Work**

Cardno carried out the following tasks in order to satisfy the purpose and objectives of this assessment.

#### **Desktop Background Research**

- > Re-familiarisation with the Audit report.
- > Review aerial photography on NearMap imagery.

#### **Site Inspection**

- > Record site conditions, including potential 'fly-tipping' or dumping, and other relevant observations by taking notes and photographs.
- > Look for evidence of surface water occurrence, (such as dams, wetlands and creeks) that might indicate different site conditions to those in 2011.
- > Identify recent site uses or equipment with potential to cause contamination.
- > Inspect neighbouring properties to assess their potential for activities to have contaminated the site.

#### **Final Site Inspection by Auditor**

- > Inspection of the site by the Auditor (Anthony Lane) to confirm that the site conditions do not indicate that potential contamination been introduced since 2011.

#### **Reporting**

- > Preparation of this report to provide findings and recommendations relevant to the objectives of the Audit Review.

## **2 Desktop Background Research**

### **2.1 Re-familiarisation with Audit Report**

Cardno reviewed relevant sections of the audit report, with particular emphasis on the final site condition. This included a review of report figures and site photography, as well as findings and conclusions.

In summary, the EAR indicates that the subject site was commissioned as a sewerage treatment plant in 1978 and operated until 2005 when it ceased operations and was subsequently decommissioned. The treatment plant facilities were located in the south-eastern part of the site and included treatment lagoons, sludge storage lagoons, aeration ponds, site offices, raw sewerage pump station, fuel storage tank, chemical storage shed and laboratory. The pump station and first storage ponds were connected by asbestos cement pipes. A former sheep dip and filled ground were present in two small and separate areas near the southern site boundary. Extensive remedial works were undertaken to demolish and remove treatment plant facilities, including asbestos cement pipes, prior to completion of the Audit. This included dewatering and desludging of the lagoons and removal of sludge off-site. It is noted that the lagoon structures themselves remained in situ, and surface water (assessed at the time of the audit to be groundwater) remained in one of the lagoons.

Anthony Lane of Lane Piper Pty Ltd (now Cardno), an Environmental Auditor appointed by EPA Victoria, was engaged by South East Water to issue a Certificate of Environmental Audit (CoEA) in relation to the site. In September 2011, he completed an environmental audit and issued an Environmental Audit Report containing a CoEA that certifies the site suitable for any land use, including low density residential.

Further, the Auditor noted that *"while there have been extensive works to remove the infrastructure associated with the site's previous use as a sewage treatment plant, there is a possibility that some remnant structures occur below ground in the south eastern part of the site."*

## 2.2 Review of Aerial Photography

Cardno completed a review of NearMap aerial photography for the period August 2011 to April 2016. This period covers the approximate date of the Auditor's last site inspection to the date of the aerial photograph closest to present day.

The review indicated that there have been no significant changes to the site condition apart from the minor dumping of hard waste along the southern and south-eastern part of the site. It is also noted that there has been some development in the south-west of the site, to the immediate north of the footpath adjacent to Boland Drive. This is the probable location of temporary sales offices, and includes an area that is in the process of being levelled and 'decorated' with feature rocks.

It is noted that a large advertising board, measuring approximately 9 m x 3 m, lies face down a short distance to the north of the aforementioned site development. The board appears to have been discarded in this location since February 2010.

## 3 Site Inspection

A site inspection was completed by the Auditor's assistant on 17 May 2016. This is the same environmental scientist who assisted the Auditor with the 2011 audit and who is therefore familiar with the site. The inspection included the traverse of selected parts of the site by vehicle and on foot, and the taking of notes and photographs to document site features.

Much of the site is bordered by a 1.8 m cyclone ringlock fence which has locked gates, and is therefore relatively secure. Public access is only possible from Boland Drive in the south-west of the site.

With respect to land disturbances or dumping, the site inspection confirmed the findings of the aerial photography review, that there is no evidence of on-site wastes or other materials that are considered likely to cause potential contamination of the site. The dumping of small quantities of hard wastes was noted in the southern and south-eastern parts of the site. This included domestic-type wastes, including wood, metal, plastic, paper, children's toys and a mattress, which are not considered likely to result in contamination of the underlying soil. Further, there is no visible evidence of excavations, new access tracks, or off-road traffic across the site (potential fly tippers). It is noted that there have not been changes to neighbouring properties that may be considered as potential sources of contamination that could affect the subject site.

Further, there is no evidence of changed surface water occurrences or conditions (such as dams, wetlands and creeks) that indicate different site conditions to those in 2011. It is noted that the site lagoons are dry, as in 2011. Only one lagoon (IDAL 1A and 1B) contained surface water at the time of this recent site inspection. This lagoon had been dewatered and desludged in 2010 and was interpreted by the Auditor to be a water table window.

The Auditor inspected this site on 24 May 2016 and confirmed the earlier observations made by his assistant, as described above.

## 4 Conclusion

In summary, there is no evidence of any potentially contaminating activities at the site since September 2011 that could have altered the status of the site to the extent that the CoEA may no longer be representative of current site conditions. Consequently, I see no reason for the validity of the CoEA to be questioned at this time.

Yours faithfully  
**Cardno**

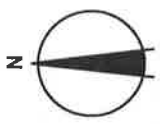


**Anthony P Lane**  
Environmental Auditor  
(appointed pursuant to the Environment Protection Act 1970)

Attached:

Figure 1: Site Layout Plan

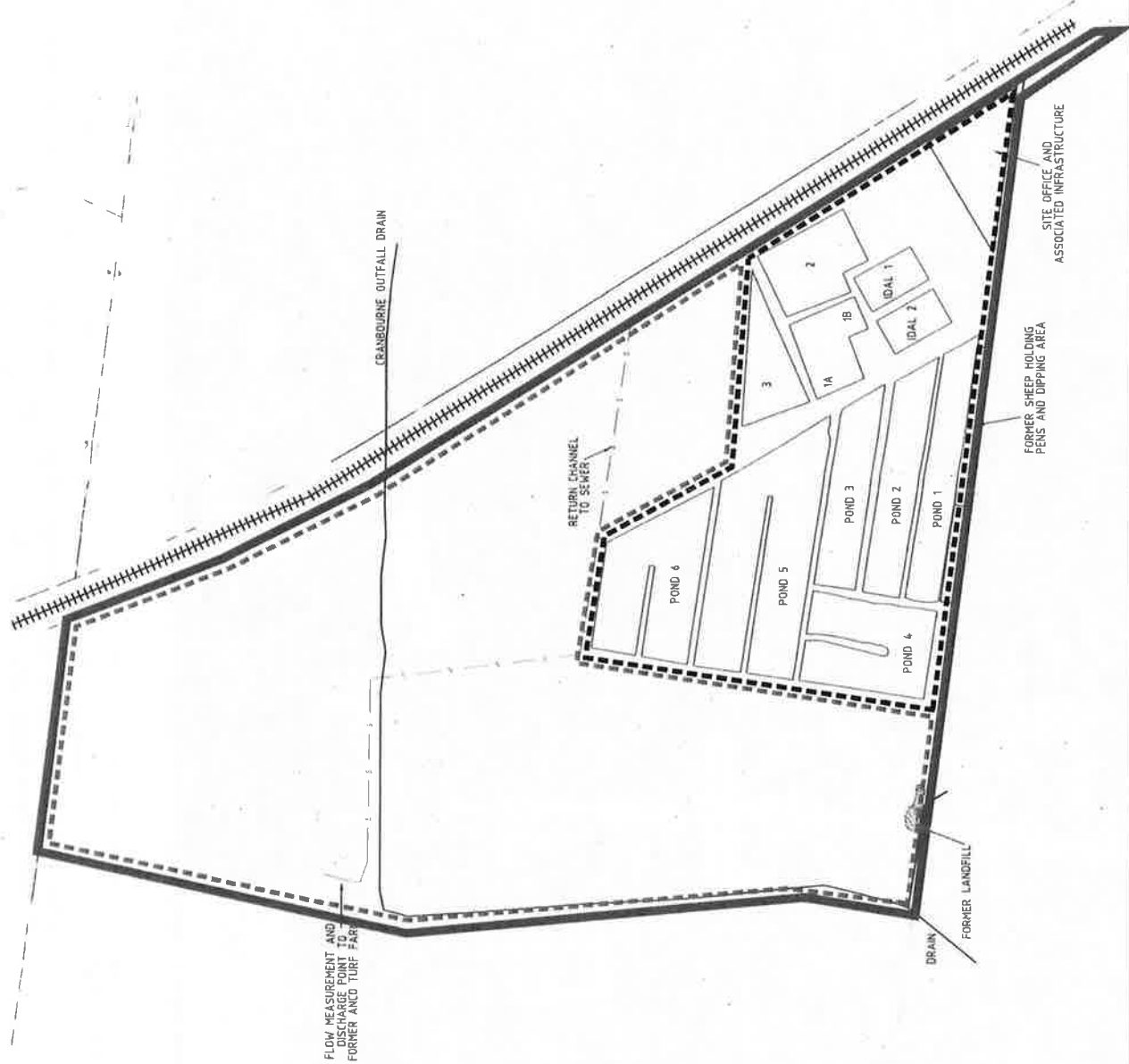
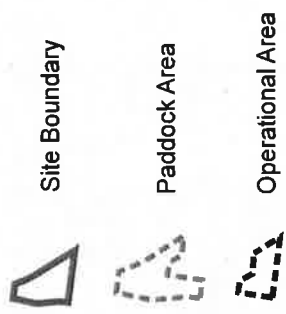
Figure 2: Site Aerial Photograph



**Legend**



**Scale**



After Coffey Environments, 2007

<b>PROJECT:</b> Audit Site Review Former Cranbourne Sewerage Treatment Plant 405 Evans Road, Lyndhurst Victoria	<b>SCALE:</b> See Scale Bar	<b>DATE:</b> May 2016	<b>TITLE:</b> Site Layout Plan
	<b>DRAWN:</b> DJL	<b>JOB No:</b> V160833G	<b>REV:</b> 1
<b>REF:</b> File Figure 2.cdr			<b>FIG:</b> 1





After NearMap (April 2016)



PROJECT: **Audit Site Review**  
**Former Cranbourne Sewerage Treatment Plant**  
**405 Evans Road, Lynnhurst Victoria**

SCALE: NA

DRAWN: DJL

REF: Figure2.cdr

DATE: May 2016

JOB No: V160833G

TITLE:

**Site Aerial Photograph**

REV: 1

FIG: 2

## ENVIRONMENTAL AUDIT REPORT & CERTIFICATE OF ENVIRONMENTAL AUDIT

### Former Cranbourne Sewage Treatment Plant, 405 Evans Road, Lyndhurst

#### EXECUTIVE SUMMARY

This report is in response to a request for a Certificate of Environmental Audit (CoEA) in accordance with Part IXD of the *Environment Protection Act (1970)*. The summary information on this audit is presented in the following table, in accordance with EPA Pub 1147:

Table 1: Summary of Audit Information

EPA File Reference No.	62275-1
Auditor	Anthony Lane
Auditor Term of appointment	29 July 2009 to 30 May 2014
Name of Person Requesting Audit	Pam Kerry
Relationship to Premises/Location	Senior Project Quality Scientist, South East Water
Date of Request	4 May 2007
Date EPA Notified of Audit	7 May 2007
Completion Date of Audit	30 September 2011
Reason for Audit	Planned rehabilitation and divestment of the site for future residential development
Current Land Use Zoning	Residential 1 Zone 1 (R1Z)
EPA Region	South Metro
Municipality	Casey
Dominant - Lot on title plan	Plan of Consolidation 107209
Additional - Lot on plan(s)	
Site / Premises name	Former Cranbourne Sewage Treatment Plant
Street / Lot - Lower No.	
Street / Lot - Upper No.	405
Street Name	Evans
Street Type (road, court, etc)	Road
Street Suffix (North, South etc)	
Suburb	Cranbourne
Postcode	3975
GIS Coordinate of Site Centroid	
Longitude / Northing (GDA 94)	145.252179
Latitude / Easting (GDA 94)	-38.068620

Site Area (hectares)	41 ha
Members and Categories of Support Team Utilised	Brian Eva - Environmental chemistry
Outcome of the Audit	Certificate of Environmental Audit
Further Work or Requirements	No further work or requirements
Nature and Extent of Continuing Risk	There are no significant residual environmental contamination risks at the site requiring management.

**Table 2: Physical Site Information**

Site Aquifer Information	Baxter Sandstone Formation
Average Depth to Groundwater	1.7 m (Coffey bores screening upper aquifer)
Groundwater Segment	B
Groundwater Flow Direction	Westerly
Past Use / Site History	Sewage Treatment Plant
Surrounding Land Use	North: Residential to north-west; paddocks, then residential to north-east East: Railway Line, then paddocks, then residential further to the east South: Residential (previously farm land) West: Residential (previously farm land)

## Site Definition and History

The site is located at the Former Cranbourne Sewage Treatment Plant, 405 Evans Road, Lyndhurst. The Audit site boundary is shown in Figure A, attached to the Executive Summary.

The site history review revealed that the site had been used as sewage treatment plant. The site has been remediated and is currently vacant.

## Site Development Plan

There is no definitive development plan for the site although it is likely to be used for low density residential development.

## Site Assessments & Clean Up Works

The Assessor conducted sampling of the surface soils at 429 locations and groundwater was investigated using 12 groundwater bores. The density and quantity of assessment data was sufficient as the basis for the audit.

The following remediation activities were carried out:

- Demolition and removal of STP pumping station and pipe works
- Removal of an above-ground fuel storage tank



- Removal of sheep yards and dip
- Removal of a small landfill area
- Removal of asbestos cement pipes
- Removal of aged, dry sludge from lagoons
- Dewatering and de-sludging of Pond 1A
- Decommissioning of groundwater monitoring bores
- Final site tidy-up to remove rubbish and soil stockpile

While every effort was made to remove the known asbestos cement materials, it is still possible that some remains onsite and could be discovered during site development works, particularly in the south eastern part of the site.

### Land Contamination and Risks

Following a review of the data provided and the Auditor's independent testing of soil samples, and having regard to the *SEPP Prevention and Management of Contaminated Land*, the Auditor is of the opinion that the land at the site is not contaminated beyond the investigation criteria applying to any of the protected beneficial uses of the land. A review of biohazards concluded that soil at the site presented no more risk than in normal background soils.

### Groundwater Contamination and Risks

Groundwater quality was reviewed with respect to all beneficial uses in Segment B, given the classification of the groundwater salinity (measured as TDS) in the aquifer. Following a review of the data provided, and having regard to the *SEPP Groundwaters of Victoria*, the Auditor is of the opinion that none of the protected beneficial uses of the groundwater are precluded by contamination.

### Audit Outcome

The site located at the Former Cranbourne Sewage Treatment Plant, 405 Evans Road, Lyndhurst, Victoria, qualifies for a Certificate of Environmental Audit (CoEA) to be issued, which is attached to this Executive Summary. A CoEA implies that the site is suitable for all beneficial uses and land uses, including low density residential.

### Other Related Information

Other related information included in the CoEA is as follows:

- *While there have been extensive works to remove the infrastructure associated with the site's previous use as a sewage treatment plant, there is a possibility that some remnant structures occur below ground in the south eastern part of the site.*

### Read in Conjunction with Audit Report

While this Executive Summary has endeavoured to accurately summarise the key points of the Audit Report, the latter shall take precedence and the Executive Summary must be read in

conjunction with the full report by the Auditor (Lane Piper document ref. 0785Report01.2), and the Certificate of Environmental Audit, attached to this Executive Summary.

The full Audit Report and appendices are presented in electronic format on CD-ROM. Summary Information comprising a copy of the CoEA, a plan of the site and the Executive Summary of the Report are provided separately in paper copies.

### **About this Environmental Audit Report**

While this Environmental Audit has been undertaken in accordance with the EPA Auditor Guidelines and current industry practice, there may be some limitations on the meaning and use of this report. The reader is advised to read this report in conjunction with the attached document *About Site Environmental Audits and Reports* (Appendix I).

In September 2007, EPA issued new guidance to Auditors (Publication 1147) which included the need to insert an information document in all audit reports. This document is titled *Information Regarding Environmental Audit Reports* and is included as Appendix H of this report.

**Anthony P. Lane**  
Environmental Auditor  
*(appointed pursuant to the Environment Protection Act 1970)*

## ENVIRONMENT PROTECTION ACT 1970 CERTIFICATE OF ENVIRONMENTAL AUDIT

I, *Anthony P. Lane of Lane Piper Pty Ltd, Building 2, 154 Highbury Rd, Burwood, Victoria*, a person appointed by the Environment Protection Authority ("the Authority") under the *Environment Protection Act 1970* ("the Act") as an environmental auditor for the purposes of the Act, having:

1. been requested by *Pam Kerry of South East Water* to issue a Certificate of Environmental Audit in relation to the site located at *"405 Evans Road, Lyndhurst"* as shown in *Plan of Consolidation 107209* located in the City of Casey ("the site") owned/occupied by *South East Water* (see attached audit site plan).
2. had regard to, among other things,
  - (i) guidelines issued by the Authority for the purposes of Part IXD of the Act;
  - (ii) the beneficial uses that may be made of the site; and
  - (iii) relevant State environment protection policies/industrial waste management policies, namely:
    - *SEPP Prevention and Management of Contamination of Land*
    - *SEPP Groundwaters of Victoria*
    - *SEPP Waters of Victoria*in making a total assessment of the nature and extent of any harm or detriment caused to, or the risk of any possible harm or detriment which may be caused to, any beneficial use made of the site by any industrial processes or activity, waste or substance (including any chemical substance); and
3. completed an environmental audit report in accordance with Section 53X of the Act, a copy of which has been sent to the Authority and the relevant planning and responsible authority.

HEREBY CERTIFY that I am of the opinion that the condition of the site is neither detrimental nor potentially detrimental to any beneficial use of the site.

Other related information:

- *While there have been extensive works to remove the infrastructure associated with the site's previous use as a sewage treatment plant, there is a possibility that some remnant structures occur below ground in the south eastern part of the site.*

This Certificate forms part of the Environmental Audit Report (Environmental Audit Report & Certificate of Environmental Audit, Former Cranbourne Sewage Treatment Plant, 405 Evans Road, Lyndhurst, September 2011 - Lane Piper, Doc. Ref. 0785Report01.2). Further details regarding the conditions of the site may be found in the Environmental Audit Report.

DATED: 30 September 2011

Signed:

  
Anthony P. Lane  
Environmental Auditor

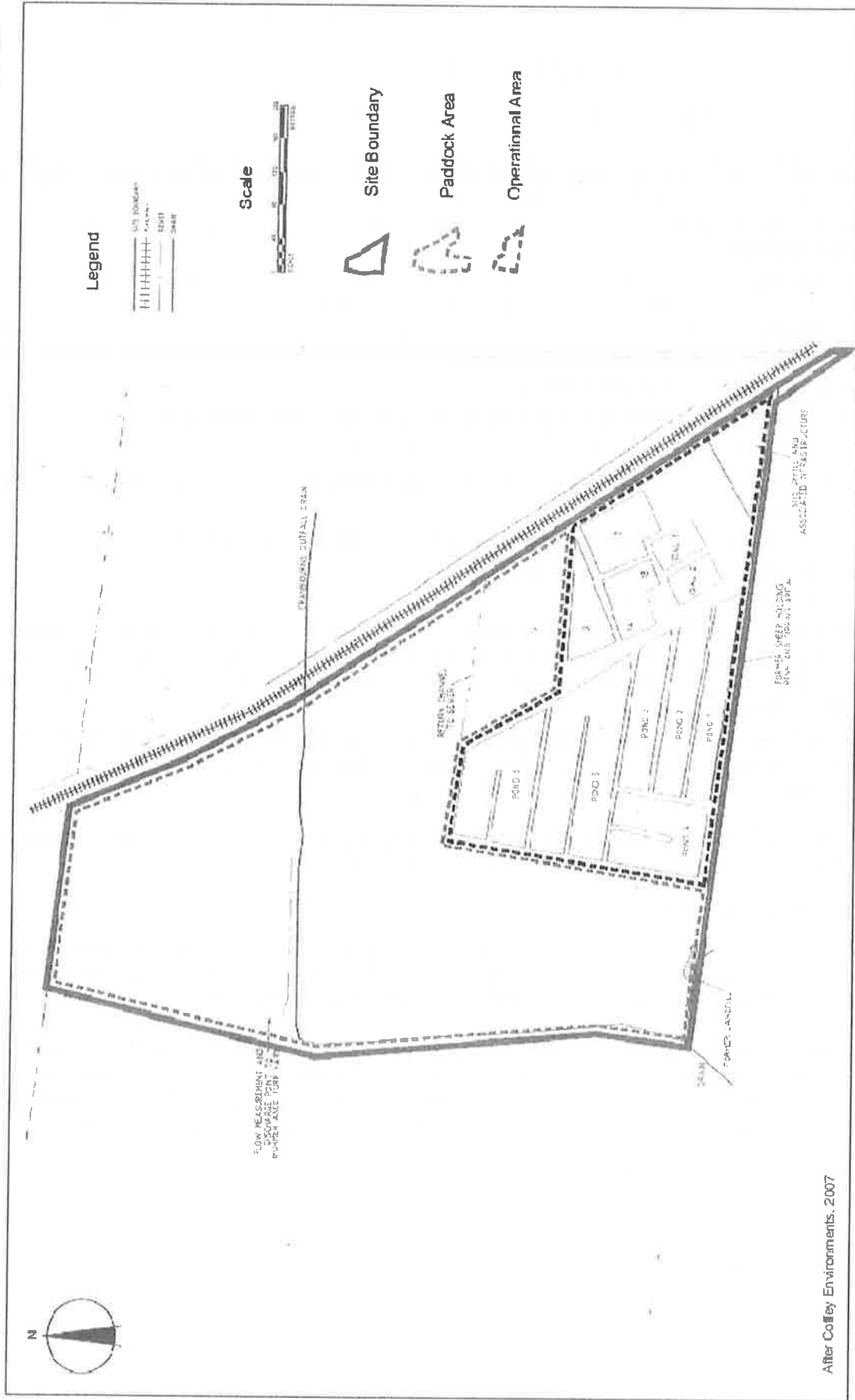


Figure A: Audit Site Plan