Appendix A

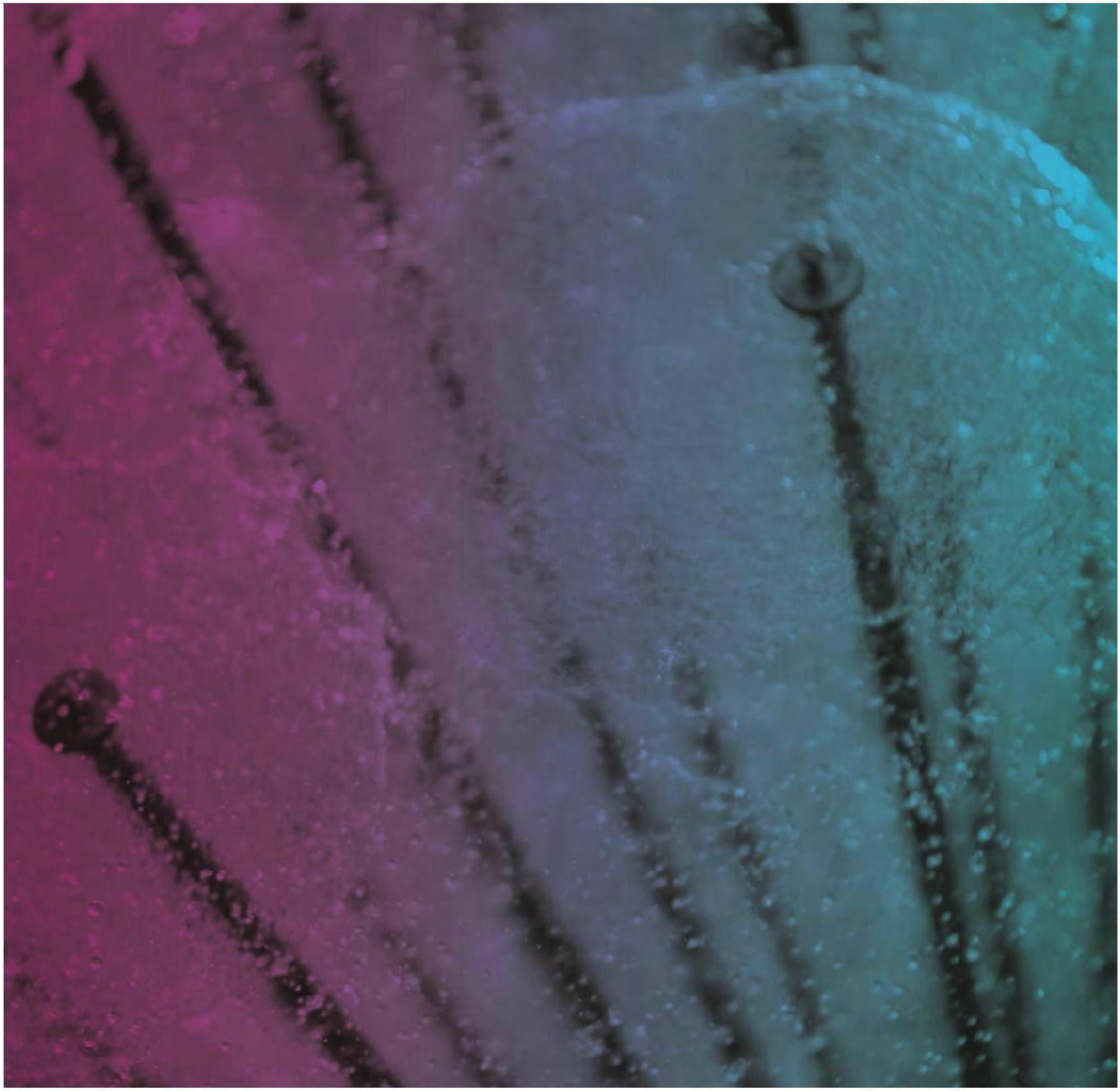
Waste Management Plan

AECOM

Worth Recycling Pty Ltd
14 May 2013

Waste Management Plan

Waste Management Facility, St Marys



Waste Management Plan

Waste Management Facility, St Marys

Prepared for

Worth Recycling Pty Ltd

Prepared by

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Quality Information

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Reviewed by Troy Collie and Kelly Pearsall

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	18-Sep-2012	Draft	Renae Gifford Associate Director	
B	26-Sep-2012	Final	Renae Gifford Associate Director	
C	14-May-2013	Final	Caitlin Bennett Principal Environmental Planner	

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1.0 Introduction

1.1 Background

Worth Recycling Pty Ltd (Worth) is a wholly Australian-owned company that formed in 1976 and commenced operations in the transport and recycling industries. The company has expanded to include collection, transportation, processing and recycling of liquid, sludge and solid waste as well as confined space and industrial cleaning services. Worth operates a number of wastewater treatment facilities including in the Sydney basin.

Worth has operated the Windsor waste treatment plant for 25 years, and the last 10 years have seen rapid growth and diversification. This rapid growth has meant that the Windsor site is not large enough to accommodate the number of processes and future anticipated total volumes of waste to be treated. Worth is therefore planning to relocate the processing of Acid Sulfate Soils (ASS) from the Windsor facility to another facility, providing adequate space to enable safe and efficient processing and treatment.

Worth have recently acquired the site at 42-46 Charles St, St Marys and will use the site to treat ASS, which are currently being processed at its Windsor depot.

1.2 Scope

Worth has recently purchased a developed site in St Marys to establish an ASS treatment facility (the Facility). The site has current development consent (DA08/0805) from Penrith City Council (PCC) which currently permits the use of the site as a materials recycling facility. This Waste Management Plan (WMP) has been prepared to provide actions for the management of waste generated at the Facility and associated with the treatment of ASS. The purpose of this WMP is to provide management actions, and appoint responsibilities and performance criteria and corrective actions for the management of waste at the Facility.

The WMP only applies to the operational use of the Facility for ASS treatment. Should further development of the Facility occur or additional activities be introduced, the scope of this WMP can be modified to cover these activities.

This WMP has been prepared in accordance with Section *C5 Waste Management* of the Penrith City Council Development Control Plan (DCP) 2010.

2.0 Project Site

2.1 Site Description

The Facility is located at 42-46 Charles Street, St Marys, on land that is described as Lot 300 of Deposited Plan (DP) 01143213 (formerly Lots 44 and 47 DP 31908) within the Penrith local government area. The Facility is located within an industrial precinct in St Marys, approximately 10km west of Blacktown central business district (CBD) and 45 km west of Sydney CBD. The Facility location is shown in **Figure 1**.

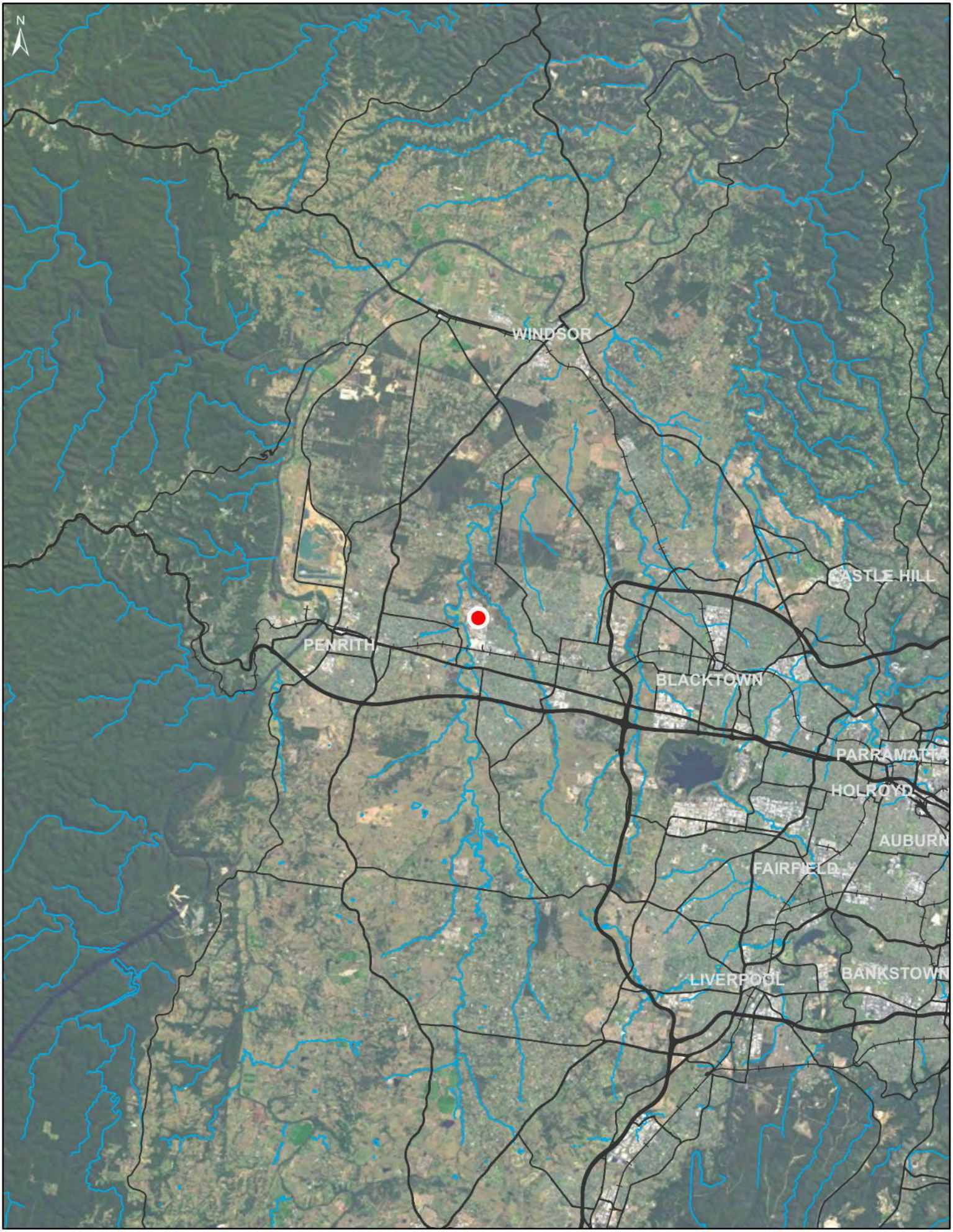
Neighbouring premises within the industrial estate include:

- Linfox (transport and logistics);
- ARC (steel industry);
- Jasco (stationery products);
- Corinthian Doors (timber door manufacturer);
- R & G Fencing (metal fencing manufacturing);
- Australian Waste Oil Refineries (oil recycling services);
- Jaybro Civil and Safety Products (safety and environmental products); and
- Ronstin (paint manufacturers and wholesalers).

2.2 Environmental Management

Currently, there are no operations undertaken on the site. Environmental management is limited to the management of stormwater through the existing Humeceptor. There are no other current activities, discharges or emissions from the site.

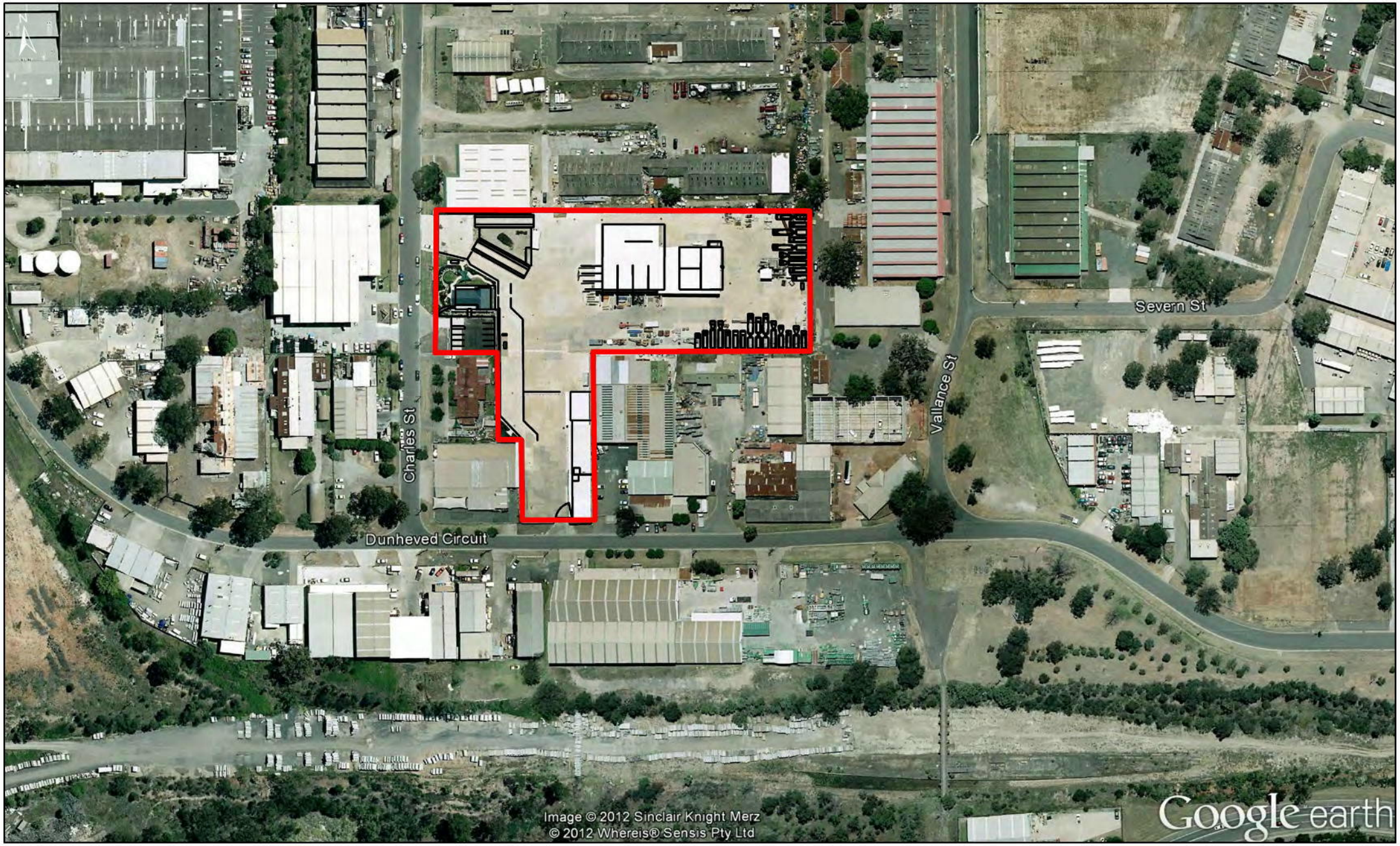
This WMP will compliment ongoing environmental management action to be implemented by Worth at the Facility.



● Waste Management Facility

Regional Overview
Waste Management Facility, St Marys
Source: Worth Recycling (2012)
0 1 2 4 Kilometers

6/08/2012
60270987
Fig. 1



Property Boundary

Proposed Layout

Site Plan

Waste Management Facility, St Marys

Source: Worth Recycling (2012)

0 10 20 40 Meters

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Fig. **2**

3.0 Site Operations

3.1 Overview

Worth will use the Facility for the storage and treatment of ASS until it has been deemed suitably stable for disposal to a licensed solid waste land fill. Treatment of ASS is relatively straightforward through the application of lime or other chemical agents that neutralise the acidity and sulphur content of the soil. The amount of lime required for the treatment process depends on the amount of oxidisable sulfur in the soils (for treatment) which determines the amount of acid the soil can produce.

In NSW the process for identifying management and treating ASS is guided by the *Acid Sulfate Soils Assessment Guidelines* (NSW Acid Sulfate Soils Advisory Committee, 1998). Prior to accepting ASS for treatment, the generator of ASS must have prepared an Acid Sulfate Soils Management Plan (ASSMP) which details the management requirements, including lime dosing levels, necessary to minimise acid production from the soils to be treated.

The Facility will only accept soils which are managed under a Plan approved by the appropriate consent or determining authority or the NSW Office of Environment and Heritage.

Development consent was granted for the Facility in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act) by PCC on 31 October 2012.

3.2 Site Operations

Delivery of ASS shipments will be via truck and dog with a typical capacity of 25 tonnes. The source of the material will vary, depending on the specific customers throughout the year. All access and exit from the Facility will be via Charles Street. Upon entering the Facility, the trucks will initially cross the existing weigh bridge before proceeding to the treatment shed (refer Figure 2).

It is anticipated that during peak periods of activity, up to 200 tonnes of material per day may be received, which equates to approximately sixteen truck movements per day (assuming a truck capacity of 25 tonnes). Peak periods may occur for periods of up to 3 - 4 weeks, after which no receipt or processing of material may be required for a number of weeks.

Treatment of the ASS will primarily be undertaken within the existing enclosed sheds located within the Facility. On occasion, during high activity periods, there may be a requirement to treat some of the material in the semi enclosed bunkers. The ASS is treated with the application of a predetermined dose of lime. The material is then mechanically turned over, typically with a small excavator or bobcat. The treatment of the material will typically be undertaken within 3 – 5 days, after which it is suitable for disposal at a licensed solid waste facility. It is predicted that times of peak activity, the site will store up to 1,000 tonnes of treated material and 600 tonnes of material that is untreated or being treated. Disposal of the treated material will be also by truck and dog, equating to approximately eight movements per day during peak processing and shipment for disposal.

Lime slurry for the treatment of ASS will be stored onsite in a bunded area in quantities of typically 1,000 litres up to a maximum of 3,000 litres.

Estimated waste types and volumes that will be generated as a result of the operations are listed in Table 1.

Table 1 Waste types and quantities

Type	Description	Estimated quantity
General Office and amenity buildings waste	General waste from bins in the site offices and kitchen.	<100kg / week nominal
Recyclable office and amenity waste	Recyclable content from office and amenity areas such as waste paper and plastic drink containers.	<100kg / week nominal
Waste water (sewage)	Connected to sewer mains	<500L / week nominal
Acid Sulfate Soils	Treated ASS which have had acid neutralised to an acceptable level and is ready for removal to landfill.	< 200t / day

Type	Description	Estimated quantity
Acidic Water	Potentially acidic water runoff from stored ASS.	Varies

4.0 Waste Management

4.1 Structure of the WMP

The structure used for the strategy and management action implementation, checking and, if necessary correction, is detailed in Table 2.

Table 2 EMP Structure

Management Strategy Component	Description of Content
Element/Issue	Aspect of operational environmental issue to be managed (as it affects environmental values). Stochastic
Potential Impacts	The potential impacts the element may create without management.
Performance Objective	The aims and objectives which drive the need for management of the element or issue.
Performance Criteria	Measurable performance criteria (outcomes) for each element of the operation.
Monitoring	The monitoring requirements to measure actual performance (e.g. specified limits to pre-selected indicators of change).
Management Actions	The strategies, tasks or action program (to nominated operational design standards) that will be implemented to achieve the performance criteria.
Responsibility	Identify who will be responsible for implementing the management actions, undertaking monitoring of actions any subsequent reporting requirements or other responsibilities which may arise out of the individual management actions.
Timing	Identify the frequency at which management actions need to be implemented.

4.2 Waste Management Actions

Potential Impacts	- Waste may impact on public and environmental health as well as public amenity and visual impacts.
Environmental Performance Objectives	- Appropriately manage the handling and storage of all waste materials.
Performance Criteria	- All waste materials to be handled and stored in a safe and appropriate manner. - No environmental impact on, or disturbance to, the surrounding environment from waste. - No pests are encouraged.
Monitoring and Reporting	- Worth will monitor the management and disposal of waste. - Regular visual site inspections for wastes. - Any incidents will be recorded in Worth's database in order to identify areas where waste management is creating adverse impacts.

Management Actions	Responsibility	Timing	Corrective Actions
All deliveries of ASS to the site must be accompanied by an ASSMP.	Site Manager	Every time ASS is brought to site	Review and modify site delivery practices.
All treated ASS removed from the site to be disposed of at licensed landfill.	Site Manager/Driver	Ongoing	Take waste ASS to identify alternate appropriately licensed facility.
The materials entering and exiting the site will be tracked via a materials tracking process. Two weigh bridges will be used by trucks immediately upon entering the site via Charles Street and directly prior to exiting the site, therefore the materials on site will be tracked accurately. Security gates will also restrict access to and egress from the site	Site Manager/Driver	Every time ASS is brought to and from the site	Review and modify materials tracking practices.
All waste material for processing at the site and disposal from the site will be assessed and classified in accordance with the EPA's *Waste Classification Guidelines*	Site Manager	Ongoing	Review assessment and classification system.
All ASS related waste to be received, processed, stored and disposed of from the site will be in accordance with the Waste Management Plan	Site Manager	Ongoing	Review and modify the Waste Management Plan.
All above ground tanks containing material that is likely to cause environmental harm, including dangerous goods and hazardous substance, will be contained within a bunded area so as to contain 110% of the volume of the largest vessel stored within the	Site Manager	Ongoing	Review tanks and bunding capacity.

bunded area			
All waste materials, including drums and containers containing ASS and drums and containers contaminated with residues of ASS, will be handled and stored only within the bunded area and under cover at all times	Site Manager	Ongoing	Review handling and storage procedures.
Wastewater generated as a result of ASS materials treatment processes will be captured and removed by a licenced contractor, separate to the stormwater drainage and treatment network as specified in condition 21	Site Manager	Ongoing	Appropriate waste contractor to be sourced.
Diversion drains will be installed at the base of stored ASS to direct any potentially acidic water to an onsite tank. This water will potentially constitute leachate from ASS material stockpiles and will be collected and transported for off-site disposal and treatment at a suitably licenced facility	Site Manager	Ongoing	Review drains, storage and collection systems.
All wastewater from site amenities to be regularly removed by a licensed waste water contractor.	Site Manager	Ongoing	Appropriate waste contractor to be sourced.
Waste hierarchy Implementation - Designated bins to be provided in site office and staff areas for: - Recyclables (glass, plastic, paper) - Putrescible waste for disposal.	Office Manager	Ongoing	Audit availably bin use and waste stream separation. Improve bin signage or revise staff induction.
All general inert and solid waste generated will be stored in waste containers located at designated points, isolated from surface water drains.	Site Manager	Ongoing	Review the size, number and location of waste points and acceptable waste types to allow for maximum utilisation.
All bins to be fitted with sealed lids to minimise odour and pest problems.	Waste contractor	Ongoing	Review appropriate bin types or contractor performance to rectify.
Site stormwater pit sediment trap to be emptied.	Site Manager	Annually	Increase frequency of empting or increase size of trap.
Handling, storage and transport of hazardous materials and waste will be in accordance with the National Code of Practice and the relevant Material Safety Data Sheet (MSDS) for the product.	Site Manager	Ongoing	Prevent hazardous materials from the site.
Compilation of a waste data form for recording waste movement including; solid and inert waste materials, provision of a description of the waste types, physical nature of wastes, proposed treatment, dates of movement, transporters and waste	Site Manager	Ongoing	Review record keeping system.

destination details.			
At regular intervals, waste to be disposed offsite will be taken to a waste facility that is licensed under the POEO Act to receive waste of that type.	Site Manager	Ongoing	Review interval length for waste pick up.
Consider waste generation in all materials used during ongoing operations. E.g. chose products with minimal packaging.	Procurement officer	Ongoing	Source alternative products with less packaging, or recyclable/recycled packaging.

5.0 Action Program

5.1 Continuous Improvement

This WMP is a 'living document' that will be reviewed (at least annually) and amended as necessary accommodate and changes to the Facility and its operations.

Other triggers for WMP review may include:

- Changes to organisational structure and roles and responsibilities;
- Changes in environmental legislation and/or policies;
- Changes to the ASS treatment activities; and
- New technologies/innovation relevant to applied methods and controls.

5.2 Monitoring

Monitoring for each action is detailed at Section 4.0. This monitoring program will enable:

- Early detection of any waste issues; and
- Development of baseline waste data from which trends and changes in waste generation and management can be detected.

5.3 Records

As noted in Section 5.2, records will be kept of all environmental monitoring and actions taken in regards to this WMP to enable possible auditing. Records will allow auditing and encourage the use of preventative action, as well as corrective action following non-compliance.

Environmental records and the WMP will be controlled in accordance with Worth's existing site management systems.

5.4 Staff training

All personnel shall attend an induction prior to commencing work at the Facility. The induction shall include the environmental commitments and measures contained within this WMP.

6.0 Community Protocols

This section outlines plans for ongoing community enquiries and complaints.

6.1 General Enquiries

Worth's general contact details phone number and email is:

Phone: (02) 8558 5100
Fax: (02) 8558 5122
Email: enquiries@worthrecycling.com.au

Contact can also be made via the electronic enquiry form on Worth's website.
http://www.worthrecycling.com.au/contact-us.html

6.2 Complaints Management

Complaints can be made through the contact details which are listed in Section 6.1.

All complaints received must be recorded including investigations undertaken, conclusions formed and actions taken. Notification about the complaint and any associated response must be provided to the Site Manager in a timely fashion.

The complaint response procedure will include the documentation of:

a) the time, date name and contact details of the complainant;

b) reasons for the complaint;

c) any investigations undertaken;

d) conclusions formed; and

e) any actions taken.

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