ResourceCo RRF Pty Ltd

Leachate Management Plan

Wetherill Park RRF

July 2025

1. Document Information

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Version History

The following table details the published date and amendment details for this document.

Date Published	Version Detail	Reason for issue of amendments	Author or Document Owner (Program)
12 March 2018	3	Approval by DPE 18/03/2018	GHD
March 2023	4	Update after IEA and OEMP audit. Update site data.	Gary Salway
January 2025	5	Update following rebranding	Ben Whitehouse

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Definitions

Term	Definition
Accredited laboratory	a testing laboratory accredited by the National Association of Testing Authorities, Australia (NATA) or a similar accreditation authority, or otherwise granted recognition by NATA, either solely or in conjunction with one or more other persons.
Applicant	ResourceCo RRF Pty Ltd
C&D	Construction and demolition
Construction and Demolition Waste	Waste arising from commercial or industrial premises, refurbishments and demolition and construction work
EfWP	NSW Energy from Waste Policy
EfWMP	Energy from Waste Management Plan
EIS	Environmental Impact Statement titled *Waste and Resource Management Facility* SSD 15-7256, ResourceCo Pty Ltd, 35-37 Franck Street, Wetherill Park, prepared by Nexus Environmental Planning Pty Ltd dated 8 March 2016
EMS	Environmental Management System
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued by the EPA under the POEO Act
Load	the quantity of waste material delivered to the stockpile by truck, bin, or trailer
Minister	Minister for Planning (or delegate)
NATA	National Association of Testing Authorities
OEMP	Operational Environmental Management Plan
Operation	The receipt, removal, or processing of waste
Particulates; Particulate Matter (PM_{10})	A criteria air pollutant. Particulate matter includes dust, soot and other tiny bits of solid materials that are released into and move around in the air. Particulates are produced by many sources, including burning of diesel fuels by trucks and buses, incineration of garbage, mixing and application of fertilizers and pesticides, road construction, industrial processes such as steel making, mining operations, agricultural burning (field and slash burning), and operation of fireplaces and woodstoves. Particulate pollution can cause eye, nose and throat irritation and other health problems.
PEF	Process Engineered Fuel
Personal Protective Equipment (PPE)	equipment and clothing that is used or worn by an individual person to protect themselves against, or minimise their exposure to, workplace risks. It includes items such as facemasks and respirators, coveralls, goggles, helmets, gloves, and footwear
PM_{10}/$PM_{2.5}$	PM_{10} is measure of particles in the atmosphere with a diameter of less than 10 or equal to a nominal 10 micrometres. $PM_{2.5}$ is a measure of smaller particles in the air.
POEO Act	*Protection of the Environment Operations Act 1997*
PROC	Procedure
Processing	the complete recycling process, including inspection of incoming loads, removal of extraneous material, crushing and blending of different materials to create a recycled product.
QC	Quality control
RTS	Response to Submissions titled *Response to Submissions Waste and Resource Management Facility* SSD 15-7256, ResourceCo Pty Ltd, 35-37 Frank Street, Wetherill Park, prepared by Nexus Environmental Planning Pty Ltd, dated 28 November 2016
SOP	Standard operating procedure
Waste	As defined in the POEO Act and includes any materials receive or processed on the site

2. Introduction

2.1 Overview

ResourceCo RRF Pty Ltd (ResourceCo) is the operator of the Wetherill Park Resource Recovery Facility (the facility) located at 35-37 Frank Street, Wetherill Park.

The facility comprises a waste and resource management operation which processes relevant waste materials to recover products including aggregates, metal, timber and to manufacture solid recovered fuel (Processed Engineered Fuel or PEF).

This Leachate Management Plan (LMP) is one of a suite of plans that governs the operation of the facility.

2.2 Purpose

This LMP has been developed to:

- Detail the proposed leachate management for the facility.
- Outline the monitoring program designed to determine the performance of the leachate management system.

The LMP provides an overall framework for leachate and fire water management during operation. It has been developed to satisfy the requirements of:

- Condition B21 of the Development Consent for SSD 7256 dated 10 April 2017
- the commitments made in the Environmental Impact Statement titled 'Waste and Resource Management Facility' SSD 15-7256, ResourceCo Pty Ltd, 35-37 Frank Street, Wetherill Park, prepared by Nexus Environmental Planning Pty Ltd dated 8 March 2016 (EIS)
- the commitments made in the Response to Submissions titled 'Response to Submissions Waste and Resource Management Facility' SSD 15-7256, ResourceCo Pty Ltd, 35-37 Frank Street, Wetherill Park, prepared by Nexus Environmental Planning Pty Ltd, dated 28 November 2016 (RTS)
- ResourceCo's Environmental Management System (EMS), including ISO14001.
- applicable legislation and regulatory requirements
- requirements of relevant government agencies

In the event of any inconsistency in the above documents, the Development Consent prevails.

2.3 Project description

The Waste and Resource Management Facility Project, as defined in the EIS includes the following key built elements:

- Industrial sheds for housing the facility operations.
- Processing equipment capable of converting up to 250,000 tonnes of relevant waste materials per year into approximately 150,000 tonnes of PEF and over 75,000 tonnes of reusable commodities such as metal, aggregates and timber.
- Workshop, office, and staff amenities

- Vehicular access and internal roadways, weighbridge and 42 car parking spaces in two car parking areas
- Stormwater management system for collection of water for reuse in the processing system, and dust suppression or treatment and discharge from the site, including a 300 kL underground stormwater storage tank and two above ground tanks with combined capacity of 27 kL
- 30 kL diesel fuel tank

2.4 Environmental management system

2.4.1 ResourceCo corporate EMS

This LMP has been developed and will be implemented in accordance with ResourceCo's corporate EMS. This EMS has been developed, implemented, and certified in accordance with the International Standard for Environmental Management Systems AS/NZS ISO 14001 (Certification No. 2012017).

Throughout the operation of the facility, ResourceCo will undertake periodic reviews and audits of the works to ensure the corporate commitments are fulfilled. ResourceCo's EMS, as implemented at the facility, will be periodically audited as part of the corporate EMS re-certification and ongoing validation process.

2.4.2 Wetherill Park Resource Recovery Facility OEMP

This LMP is a sub-plan to the Wetherill Park Resource Recovery Facility Operational Environmental Management Plan (OEMP). The OEMP is based on the ISO14001 Environmental Management System, which provides for continual improvement in environmental performance.

The OEMP is intended as an over-arching environmental management document that forms the basis for development of detailed sub plans (such as this) and procedures for managing specific environmental aspects and impacts. It includes a number of subordinate environmental planning and management instruments (e.g. sub plans, procedures, instructions, forms etc.) that will be implemented during operation of the facility.

The scope and interaction of this document within the OEMP document framework is illustrated in Figure 1.

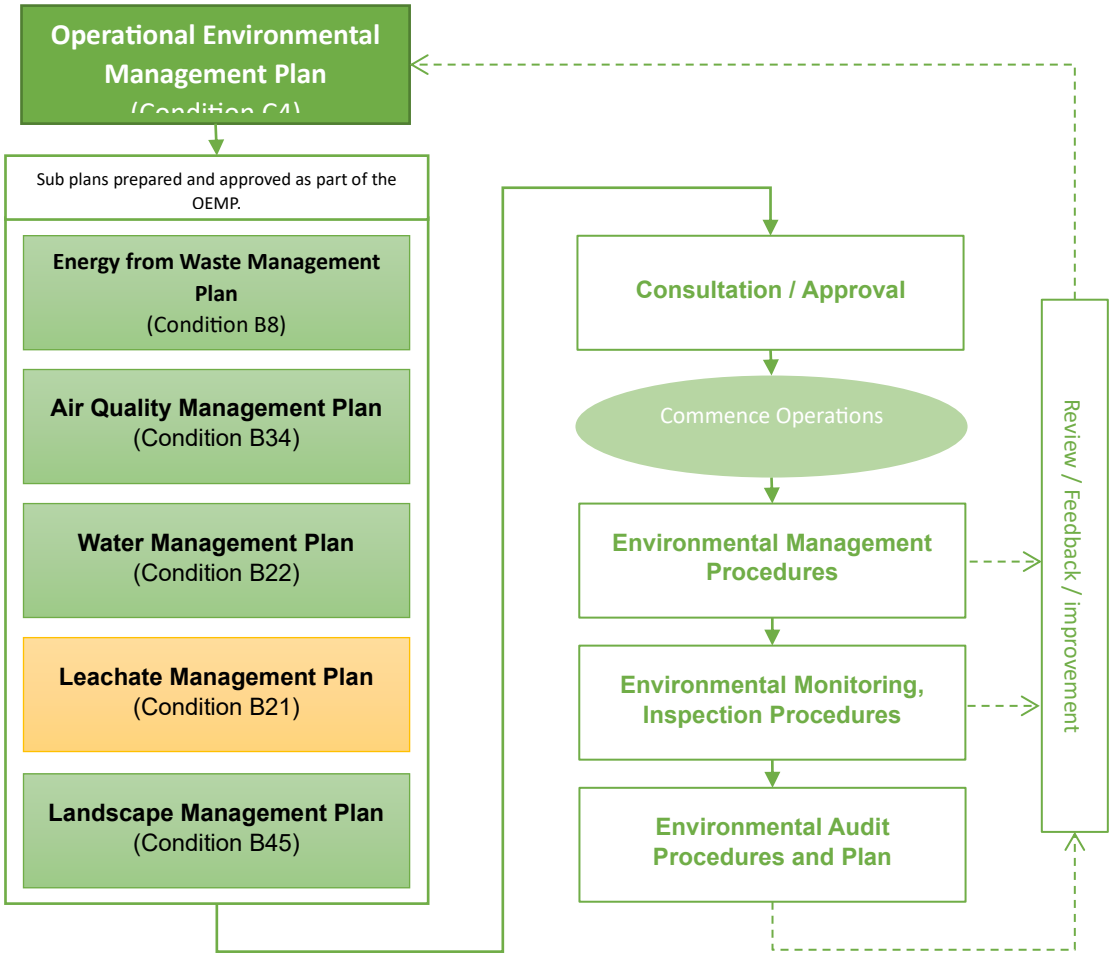


Figure 1 Opérationnel Environmental management document structure

2.4.3 Sub plans

In accordance with the Conditions of Approval, a number of sub plans are required to document ResourceCo's management approach to identified risks (e.g. air quality, water and leachate). These sub plans identify potential impacts as they relate to the operation of the facility (as defined in the EIS and RTS) and outline the physical and management safeguards, mitigation measures, responsibilities and monitoring requirements to be implemented to minimise potential impacts on the environment.

The sub plans (including this plan) required according to the Conditions of Approval are shown in Figure 1. Additionally, this shows the sub plans that are to be approved as part of the OEMP and those that are to be approved and/or consulted upon separately.

2.4.4 Procedures and forms

In addition to the environmental management documents nominated above, ResourceCo uses a suite of additional processes and procedures for its EMS. These management tools (described below) are referred to in this LMP and/or the individual sub plans:

- Procedures (PROC) and Safe Operating Procedures (SOP) – provide instructions to ResourceCo staff and subcontractors to guide the completion of tasks required during the operation of the facility. The implementation of these PROCs and SOPs will ensure consistency in approach and quality of results. Specific procedures are

developed for management issues including Job Safety and Environmental Analysis (JSEA) for reviewing works to identify hazards and appropriate control measures, and environmental monitoring etc.

- Environment-related forms (FORM) are used to document environmental issues, actions and/or performance against requirements. Typical forms include incident reporting, inspection checklists, audit protocols, complaints/feedback reports etc.

2.5 Consultation and approval process

2.5.1 LMP compliance with the Conditions of Approval

Table 1 lists the key requirements of Condition B21 and indicates where these requirements are addressed within this LMP or other documents.

Table 1 Conditions of Approval requirements

Condition requirements	Response/reference
Condition B21	
Prior to the commencement of operations, the Applicant must prepare a Leachate Management Plan for the management of leachate and firewater at the site, including any possible leachate generated around the baling and wrapping area. The leachate system must:	
(a) be designed by a suitably qualified and experienced person(s) in consultation with FRNSW	Design provided by Triaxial Consulting. Refer Section 2.5.2 and Section 3.
(b) provide a management protocol for leachate and firewater	Section 4
(c) control leachate and firewater so that they do not mix with any stormwater on the site	Section 4
(d) include water quality monitoring to determine the performance of the leachate management system	Section 5

2.5.2 Consultation and approval

In accordance with Condition B21, the leachate system is required to be prepared in consultation with Fire and Rescue NSW.

Fire and Rescue NSW has been consulted with vie email and telephone during the development of the proposed fire management system and design for the facility. Fire and Rescue NSW provided input with respect to requirements for maximum sizes of stockpiles and separation of stockpiles, requirements for fire hydrant water supply and other provisions for firefighting.

A draft version of this document was sent to Fire and Rescue NSW for review and comment. Fire and Rescue NSW provided a response (**Error! Reference source not found.**) which indicated that it is satisfied with the Leachate Management Plan as provided.

3. Proposed leachate and fire water management system.

Drawing TX-11972.00-C4.2 (Appendix A) shows the design of the leachate and fire water management system within the manufacturing building.

In accordance with Building Code of Australia and AS 2118 requirements, sufficient detention is provided within the building for 90 minutes of fire sprinklers active time in both the main facility area and the PEF storage area.

Drawing TX-11972.00-C4.2 (Appendix A) provides the detention calculations for the fire sprinkler system within the manufacturing building. It demonstrates that sufficient detention volume is provided within the graded floor of the building and concrete valley to contain the fire water from 90 minutes of fire sprinklers active time.

The design includes a graded floor so that fire water will run to the proposed concrete valley and pond on the floor of the building. 496 m^3 of retention volume with 200 mm freeboard is provided with this arrangement to contain leachate and fire water.

4. Management protocol for leachate and fire water

4.1 Fire water containment

In the event of a fire event within the building, the building design has been designed to cater for the containment of potentially contaminated fire services water within the building. This is discussed in Section 3 and shown in Drawing TX-11972.00-C4.2 (Appendix A). Sufficient detention volume is provided within the graded floor of the building and concrete valley to contain the fire water from 90 minutes of fire sprinklers active time (496 m^3 with 200 mm freeboard).

Should a significant fire occur in the unbaled PEF or raw stockpiled materials, in accordance with Fire and Rescue NSW requirements, the affected pile(s) may need to be spread out using the wheel loaders on site to achieve full extinguishment (irrespective of sprinkler system activation and control) by direct handheld hose lines. The concrete areas of the site will be used for this purpose – most likely between the weighbridge and the northern end of the manufacturing building.

In order to contain fire services water onsite in the event that this stockpile fire protocol is required to be implemented, a shut off valve will be installed in the 675 mm site stormwater discharge to the 900 mm stormwater pipe. This will prevent fire water entering the stormwater pipe. The valve will be automated and will automatically close when the firefighting sprinkler system is activated. Upon activation, the shut off valve will be checked to ensure that it has closed, and if for any reason the shut off valve doesn't close automatically, then the valve will be manually closed. The valve will only be able to be manually re-opened to allow water discharge after this is sequenced.

Contained contaminated fire services water will be removed from the site by vacuum truck and disposed of at a suitably licenced facility.

4.2 Leachate management

The waste materials received into the site will be dry in nature and will all be stored under cover in the manufacturing building. There will be no waste materials stored outside. In the rare instance that materials received into the manufacturing process release leachates, for example if a non-conforming load of wet waste is delivered, the design of the receiving slab levels grades to a concrete valley within the receiving area which will contain leachate.

The low spots will be emptied via vacuum trucks and any leachates removed from the site to an appropriately licensed disposal facility as required.

In the event that a significant leachate spill occurs outside the manufacturing building, the stormwater shut off valve is to be manually closed to prevent leachate entering the stormwater pipe. Contained leachate will be removed from the site by vacuum truck and disposed of at a suitably licenced facility.

5. Monitoring and evaluation

This section outlines the program that will be implemented to evaluate the performance of the facility operation and determine compliance with key performance indicators.

5.1 Key performance indicators/targets

The key performance indicators/targets for the proposed leachate and fire water controls are:

- All collected leachate is removed to an appropriately licenced disposal facility.
- Leachate is not to mix with stormwater on site.
- Fire water is not to mix with stormwater on site.
- No exceedances of EPL conditions for water quality

5.2 Monitoring

The site monitoring for leachate management performance is detailed in the Water Management Plan and summarised herein.

The overall site leachate management comprises waste receipt/storage under cover (inside building), dry sumps leachate capture, and approved disposal. Potential impacts from leachate would be unlikely (no operations outside building) and generally only conveyed to downstream surface water during rainfall events. Leachate generated or received on site (e.g., wet waste containing pollutants) is designed to be contained by the site leachate management measures. In the event of an overflow (or spill) of leachate from the leachate management or operations spill (e.g., diesel fuel or oil), the leachate would be contained per the protocol noted in above Section 4, though leachate-impacted water may flow to the site surface water management system. As such, monitoring conducted to assess the site surface water discharge with site-specific leachate analytes (refer Water Management Plan) is deemed appropriate for assessing leachate management performance.

The monitoring locations for the site are proposed based on the site surface water management system, providing data for assessment of leachate management performance. These locations characterise the majority of site runoff (approximately 98%), are listed below and are shown on drawing TX-11972.00 – C2.2 Issue C, provided as Appendix B.

- **Upstream**–within drainage easement at point JB1 (sampled upstream of the location where site runoff enters the easement pipe).
- **Site discharge** –within junction box ahead of JB1 to sample all runoff discharged from the site at this location

The monitoring of water quality for the clean rainfall runoff (approximately 2%) from the southwest corner of the property is not deemed required based on the small catchment of this area and lower quality risk posed by this area.

Should the water quality findings indicate analyte concentrations consistently at less than 50 percent of the site performance benchmarks (refer Water Management Plan) or less than the limit of reporting, discontinuing sampling for the analyte may be warranted.

With regard to monitoring of surface water flow rates and volumes, runoff from the site is conveyed by gravity to the area 900 mm stormwater drainage easement. As such, the direct measurement of this flow rate is not practicable. The site staff will collect as appropriate rainfall records for the applicable to the area. Using these records and if required by the NSW EPA, calculations of estimated volume discharged from the site could be performed.

As detailed in the Water Management Plan, the monitoring frequency includes rainfall event and spill event triggered sampling by trained site staff following also a quality assurance and quality control program during pre-commissioning, commissioning, and ongoing operations stages. The water quality sampling results collected during the pre-commissioning and commissioning stages of monitoring would be used along with reference to the ANZECC guidelines to derive the performance benchmarks for use during the ongoing operations stage. These benchmarks would provide water quality analysis triggers for further investigation of site performance during the operations stage.

The investigation findings will identify the potential need for further investigation and/or mitigation and assist in leachate management including the prevention of contamination of surface water to minimise potential impacts to downstream flow conditions.

6. Records and reporting

Environmental management records generated will be identified, collected and stored in accordance with ResourceCo's quality management system. Reporting and review will include the following:

- Summary of water quality monitoring results to the EPA as part of Annual Return for EPL
- Exceedances of EPL conditions will be reported at toolbox or site meetings.
- Leachate disposal quantities reported as part of annual environmental review

Monitoring results and records generated will be identified, collected and stored in accordance with ResourceCo's quality management system.

7. Review and improvement

7.1 Review of the Leachate Management Plan

The LMP will be reviewed on a regular basis to ensure that it accurately reflects the ResourceCo EMS and conforms to applicable legislative and other requirements. The frequency of review will be at least annually as part of the OEMP review, or more frequently, as a result of a significant non-conformance or as directed by the Secretary of the Department of Planning and Environment or other authority.

At the conclusion of the review process, any recommendations for change, or improvement, to EMS will be reflected through amendments to the relevant system element including the OEMP, other sub plans, procedures or forms.

An assessment will be undertaken of the proposed documentation change against the Conditions of Approval (including development consent, EIS and RTS).

Minor changes to the documentation will be recommended by the appropriate manager. The revised documents will be managed in accordance with ResourceCo's quality management system – including document control and communication of changes to relevant staff.

Major documentation changes to the documentation will be reviewed by senior management and if deemed necessary, approval will be sought from the Department of Planning and Environment. Approved revised documents will be managed in accordance with ResourceCo's quality management system – including document control and communication of changes to relevant staff.

Table 2 lists the types of amendments that would be considered minor and major, and the approval process.

Table 2 LMP approval process

Review trigger	Amendment type	DPE approval	Examples
Minor amendments and corrections	-	No	Changes to system processes without change to environmental outcome. Minor changes to operational processes without change to environmental outcomes
In response to environmental incidents	Minor	No	Contained leachate spill
	Major	Yes	Non-compliance with EPL
Audit findings	Minor	No	Change to procedure to improve a process
	Major	Yes	Non-compliance with a Condition of Approval
Request by government agency	Minor or major	Yes	-
Annual review findings	Minor	No	Non-compliance with a target

7.2 Non-conformance, corrective, and preventative action

Non-conformances, including those of an environmental nature, shall be identified through verification processes such as monitoring, inspections, audits and reviews as well as through the receipt of complaints and incidents and near misses. All

ResourceCo personnel can raise a non-conformance. In summary, the management process is:

- When a non-conformance issue is detected, the corrective and preventative actions are entered on a CAR (Corrective Action Request) form. In addition, the CAR assigns responsibilities for actions to a manager for close-out and the timing for completion.
- The CAR is entered into the CAR register for recording and tracking progress of follow-up and close-out.
- Upon satisfactory completion of all corrective actions and follow-on preventative actions (e.g. revision of documented procedures), the CAR is closed-out by the responsible staff member.
- The environmental CARs will be reviewed monthly and during the regular review meetings.
- During the annual environmental review, CAR statistics will be assessed and trends analysed.

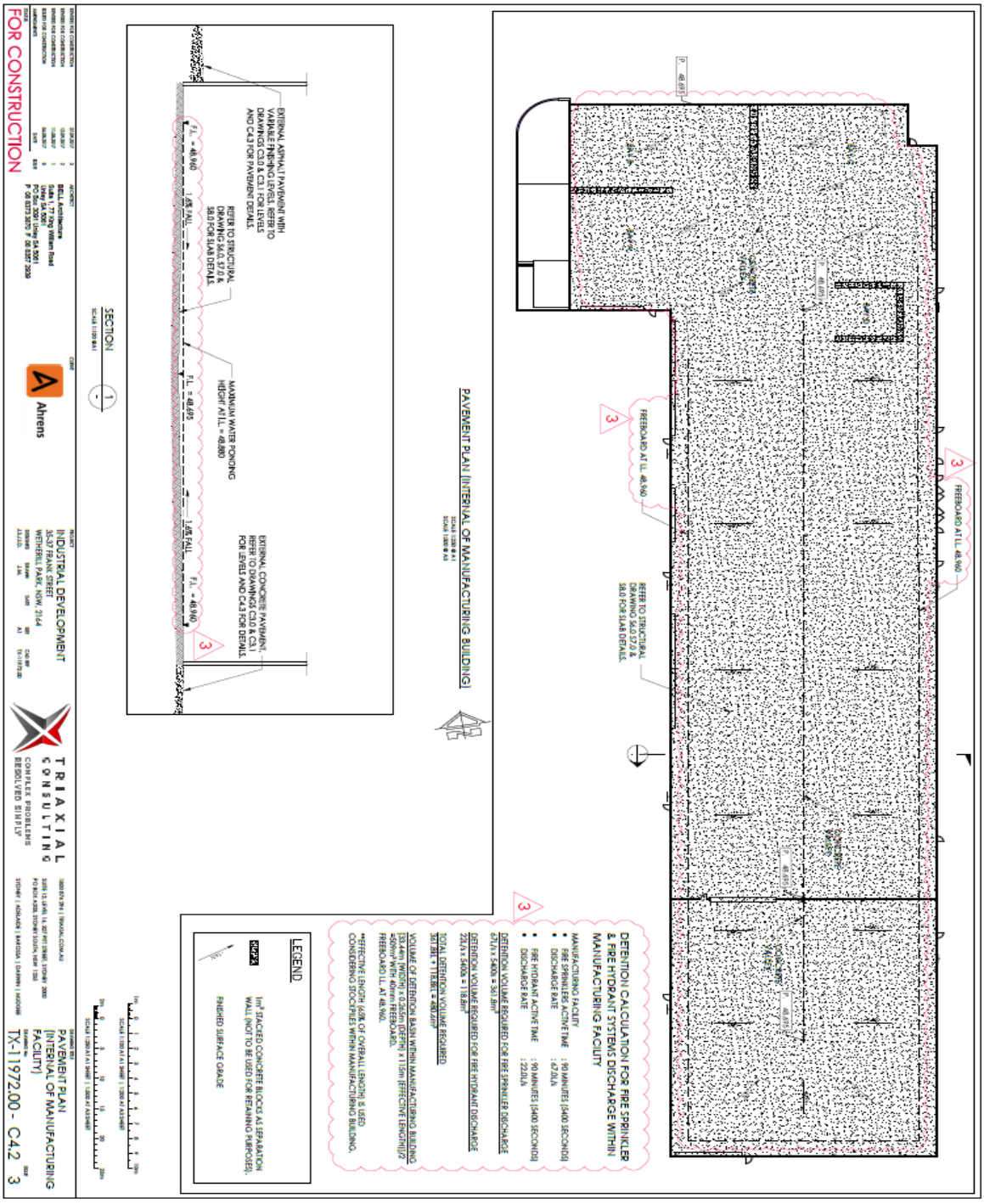
8. References

Nexus Environmental Planning Pty Ltd (2016) Environmental Impact Statement titled ‘Waste and Resource Management Facility’ SSD 15-7256, ResourceCo Pty Ltd, 35-37 Frank Street, Wetherill Park

Nexus Environmental Planning Pty Ltd (2016) Response to Submissions titled ‘Response to Submissions Waste and Resource Management Facility’ SSD 15-7256, ResourceCo Pty Ltd, 35-37 Frank Street, Wetherill Park

Appendices

Appendix A – Leachate and fire water management plan drawing



Appendix B – Stormwater management plan drawings