



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Eastern Metropolitan Regional Council

**Licence:** L8889/2015/1

**Registered office:** 226 Great Eastern Highway  
BELMONT WA 6104

**Premises address:** Red Hill Waste Management Facility  
Lot 1 on Diagram 15239, Lot 2 on Diagram 68630 and Lot 11 on Diagram 69105  
Toodyay Road Red Hill and Part of Lot 12 on Plan 26468 Toodyay Road  
Gidgegannup  
(as depicted in Schedule 1)

**Issue date:** Tuesday, 19 May 2015

**Commencement date:** Tuesday, 19 May 2015

**Expiry date:** Thursday, 18 May 2017

**Prescribed premises category**

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
12	Screening, etc. of material	50 000 tonnes or more per year	50 000 tonnes per annual period
62	Solid waste depot	500 tonnes or more per year	10,000 tonnes per annual period
64	Class II or III putrescible landfill site	20 tonnes or more per year	350,000 tonnes per annual period
65	Class IV secure landfill site	Not Applicable	Not Applicable
67A	Compost manufacturing and soil blending	1000 tonnes or more per year	50 000 tonnes per annual period

**Conditions**

This Licence is subject to the conditions set out in the attached pages.

Date signed: 17 March 2016

.....  
**Caron Goodbourn**

A/Manager Licensing (Waste Industries)  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*



## DEFINITIONS

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 January until 31 December in the same year;

'approved' and 'approval' means approved and approval in writing, respectively;

'clean fill', 'type I inert wastes', 'type 1 special wastes', 'type 2 special wastes', 'type 2 inert wastes', 'putrescible wastes', 'clinical waste' and 'other wastes that comply with Class III and Class IV landfill' means waste as defined in the document titled 'Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)';

'cover material' means subsoil or other approved inert waste or proprietary alternative daily cover (ADC) treatments or other materials that satisfies the requirement to mitigate against any environmental health impacts;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;  
Chief Executive Officer  
Department Administering Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au);

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'garden waste or green waste' means biodegradable waste comprising plants and their component parts such as flower cuttings, hedge trimmings, branches, grass, leaves, plants, seeds, shrub and tree loppings, tree trunks, tree stumps and similar materials and includes any mixture of those materials;

'General Ward Wastes' means hospital wastes as defined in the Clinical and Related Waste Management Policy (Department of Health) and includes:

- Dressings not saturated with blood/body fluids
- Sanitary napkins
- Disposable nappies
- Incontinence pads
- Colostomy bags
- Drained urine bags
- Drained dialysis waste (including tubing, bags, dialysers)
- Gowns, gloves, masks
- IV flasks and tubing without sharps
- Oxygen tubing/masks/nebulisers
- Suction tubing
- Disposable kidney dishes/bowls/receptacles
- Emesis bags
- Enteral feeding bags and tubing

'Greenwaste Facility' means the 50,000m<sup>2</sup> five (5) hectare hardstand greenwaste processing area that includes open windrow composting and mulching of source separated greenwaste as depicted in Schedule 1 at the premises;



'hardstand' means material or a layer or a barrier with a permeability or hydraulic conductivity of  $10^{-9}$  metres per second or less at unity hydraulic gradient;

'internal buffer' means a distance from the boundary of the premises to any area on the premises used for disposal of non-recyclable waste;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'municipal waste' means waste collected at the kerbside by the local authority collection vehicle or its contractor;

'NATA' means National Association of Testing Authorities;

'premises' for the purpose of this licence means Red Hill Waste Management Facility, Lot 1 on Diagram 15239, Lot 2 on Diagram 68630 & Lot 11 on Diagram 69105 Toodyay Road Red Hill, and Lot 12 on Plan 26468 Toodyay Road Gidgegannup as shown in Schedule 1;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'Windrows' means parallel rows of mulched or unmulched green waste where each row is no more than three (3) metres high and no more than four (4) metres wide and separated by at least five (5) metres of clear ground from any other row or from any other combustible waste; and

'Works' means construction of the greenwaste facility and all associated infrastructure and work within the Premises for the Red Hill Waste Management Facility Relocation of Greenwaste Processing Area in accordance with the requirements of this Licence.

## GENERAL CONDITIONS

### WASTE ACCEPTANCE AND MANAGEMENT

G1(a) The licensee shall accept and bury only the following types of waste at the premises:

- (i) clean fill;
- (ii) type 1 inert wastes;
- (iii) type 2 inert wastes;
- (iv) putrescible wastes;
- (v) type 1 special wastes;
- (vi) type 2 special wastes; biomedical wastes which do not require incineration and general ward wastes; and
- (vii) other wastes that comply with the Class III and Class IV criteria in the document titled 'Landfill Waste Classification and Waste Definitions' 1996 (as amended December 2009).

G1(b) The licensee is approved to accept and bury waste in the Class IV landfill for which the leachable concentrations in the waste have been assessed according to the ASLP using a leaching solution of deionised water, provided the waste complies with licence condition G1(a)(vii).

G2(c) The licensee shall ensure the following procedures are in place for managing contaminated solid wastes:

- (i) any load shall be inspected and identify the potential contaminated solid wastes;



- (ii) where such loads are identified, record the nature of the load, the delivery vehicle's registration number, driver's name and volume delivered; and
- (iii) any identified contaminated solid waste shall be accompanied by documentary evidence that it meets the requirements of licence condition G1(a), from a NATA accredited laboratory.

#### ASBESTOS WASTE

G2 The licensee shall ensure the following procedures are in place for managing asbestos wastes:

- (i) before entry to the premises, any asbestos material is wrapped in heavy duty plastic;
- (ii) the disposal area(s) for any more than one cubic metre of asbestos material is defined by use of a satellite geographical positioning system or grid references on the premises plan;
- (iii) a copy of the premises plan marked with the locations used for asbestos disposal as described in G2(ii) above, should be kept as a permanent record;
- (iv) a representative of the licensee is available to witness the burial of the asbestos waste under 150mm of fill or putrescible waste as soon as practical after placement in the landfill and sign a bound, numbered register, a numbered file register or record keeping equivalent within 2 hours of the burial to attest that it has been buried in accordance with these procedures.

#### MONITORING AND REPORTING

G3(a) The licensee shall ensure all waste accepted at the landfill is weighed and categorised prior to disposal according to the National Waste Classification System and be reported to the CEO in accordance with condition G3(b).

G3(b) The licensee shall submit to the CEO, by 31 March each year, an annual monitoring report detailing the measures or actions taken to prevent off-site impacts or pollution from the site over the previous calendar year. The monitoring report shall provide information on the following matters and in each case shall provide an assessment of the effectiveness of the measure and also what actions are proposed to increase effectiveness:

- (i) the effectiveness of measures taken to control pests and vermin;
- (ii) the effectiveness of fire breaks and the details of any fires on the premises;
- (iii) the effectiveness of dust suppression measures;
- (iv) the effectiveness of measures to control windblown waste;
- (v) the number and type of complaints received and action taken;
- (vi) average compaction rates;
- (vii) any changes to premises boundaries, internal buffer zones, groundwater contours, asbestos and clinical waste disposal areas, location of groundwater monitoring bores, surface drainage channels and on-site or off-site impacts or pollution; and.
- (viii) final cell contours.



- G3(c) The licensee shall keep a written record of all complaints received concerning the environmental impact of the premises. The record must be in a bound volume or a file register or other record keeping equivalent with numbered pages and must record the following:
- (i) date and time of complaint;
  - (ii) location from which the complaint arose;
  - (iii) general description nature of complaint;
  - (iv) wind direction and temperature at the time of the complaint;
  - (v) likely source of the complaint; and
  - (vi) action taken by the licensee.

#### ANNUAL AUDIT COMPLIANCE REPORT

- G4 The licensee shall by 31 March in each year, provide to the CEO an Annual Audit Compliance Report in the form in Schedule 2 to this licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the licensee has complied with the conditions of this licence, and any previous licence issued under Part V of the Act for the premises, during the period beginning 1 January the previous year and ending on 31 December in that year.

#### DEPOSITION OF WASTE

- G5(a) The licensee shall ensure waste is spread and compacted at regular intervals to optimise compaction of the type of waste being landfilled.
- G5(b) The licensee shall ensure the tipping face is at no time greater than two metres in vertical height.
- G5(c) The licensee shall ensure waste shall be compacted to a minimum of 850kg/m<sup>3</sup> with a purpose-built compactor.
- G5(d) The licensee shall ensure that all waste material is covered, with cover material, at the end of each day.
- G5(e) The licensee shall ensure a stockpile containing sufficient cover material to allow waste to be covered in accordance with the terms of this licence for a period of two weeks.
- G5(f) The licensee shall restrict the tipping area to a maximum linear length of 50 metres.

#### FENCING

- G6(a) The licensee shall maintain a security fence around the perimeter of the premises or around the tipping face to effectively control wind blown waste and restrict access to the site. It shall be 1.8 metres high topped with three barbed wire strands. The site shall have one only public access point and this shall be equipped with a lockable gate. The gate shall be securely locked when the site is unattended.
- G6(b) The licensee shall ensure that weekly inspections of the fence and gates referred to in condition G6(a) are undertaken and that any damage to the fence is repaired within two working days of its discovery.

#### WIND BLOWN WASTE

- G7(a) The licensee shall contain windblown waste within the boundaries of the premises by maintaining fences, installing litter screens and regularly compacting waste.
- G7(b) The licensee shall ensure windblown waste is removed from fences, and access roads on a daily basis.



#### WHEEL WASH DOWN FACILITIES

- G8 The licensee shall ensure, where a vehicle has the potential to track waste or matter from the landfill offsite, it is washed down prior to departing the premises.

#### GREENWASTE FACILITY

- G9(a) The licensee shall ensure that greenwaste is stored at the premises only for the purpose of mulching or composting for onsite use, or for removal from the premises.
- G9(b) The licensee shall ensure all material to be composted or being composted is stored and processed on the Greenwaste Facility hardstand pad.
- G9(c) The licensee shall ensure the base of the Greenwaste Facility hardstand is bunded to divert stormwater run-off from the Greenwaste Facility.
- G9(d) The licensee shall ensure all water from the Greenwaste Facility hardstand drains into the leachate pond at the Greenwaste Facility.
- G9(e) The licensee shall ensure that all mulched green waste stored on the Greenwaste Facility is stored in windrows.
- G9(f) The licensee shall ensure any Greenwaste Facility storage area is 25m from the premises boundary and 25m from any area being used for land filling operations.
- G9(g) Subject to the Conditions of this Licence, the Licensee must construct the Works in accordance with the document listed in Table 1.

**Table 1: Construction Requirements<sup>1</sup>**

Document	Parts	Date of Document
EMRC Red Hill Waste Management Facility Relocation of Greenwaste Processing Area Additional Information to Licence Application (L8889/2015/1)	All, including Drawings	November 2015

Note 1: Where the details and commitments of the documents listed in condition 1.2.3 are inconsistent with any other condition of this Works Approval, the Conditions of this Works Approval shall prevail.

- G9(h) The Licensee must ensure that the proposed Works specified in Column 1 of Table 2 meets or exceeds the specifications in Column 2 of Table 2 for the infrastructure in each row of Table 2.





- G9(i) The Licensee must not depart from the specifications in Table 2 except:
- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
  - (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;
- and all other Conditions in this Licence are still satisfied.

Table 2: Works specifications	
Column 1 Infrastructure	Column 2 Specifications (design and construction)
Greenwaste Facility	<p><b>The Greenwaste Facility must be designed and constructed so as to meet the following specifications:</b></p> <ul style="list-style-type: none"><li>(a) Be constructed and located on the southern end of Lot 12 on Plan 26468 as depicted in Schedule 1 of the Licence;</li><li>(b) The hardstand pad must be constructed to meet or exceed a permeability or hydraulic conductivity of <math>10^{-9}</math> metres per second or less at unity hydraulic gradient and be of minimum depth of 1m and maximum depth of 5m to suit the topography at the facility;</li><li>(c) The hardstand pad must include the leachate pond;</li><li>(d) The leachate pond will be constructed to the following dimensions;<ul style="list-style-type: none"><li>• 80m long x 70m wide and 3.5m depth</li></ul></li><li>(e) The hardstand pad is to be bunded around the perimeter of the entire Greenwaste Facility and windrow stockpile areas will also be bunded;</li><li>(f) All bunds at the greenwaste facility will be at least 500mm in height and width;</li><li>(g) The hardstand will be graded with a 2% fall to enable adequate drainage to report to the dedicated Greenwaste Facility leachate pond;</li><li>(h) The Greenwaste Facility hardstand area including the bunds must not exceed 50,000m<sup>2</sup> or five (5) hectares in size;</li></ul>

- G9(j) If Condition G9(i) applies, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition G9(i) at the same time as the certifications under Condition G9(l).
- G9(k) The Licensee must submit a construction compliance document to the CEO, following the construction of the Works and prior to operating the Greenwaste Facility.
- G9(l) The Licensee must ensure the construction compliance document:
- (a) is certified by a suitably qualified professional engineer or builder that each item of infrastructure specified in Condition G9(i), Table 2 has been constructed in accordance with the Conditions of the Licence with no material defects; and
  - (b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.
- G9(m) Operation of the Greenwaste Facility is only permitted after the Licensee has submitted the compliance document required by condition G9(k) that meets the requirements of condition G9(l).
- G9(n) The Greenwaste Facility leachate pond must maintain a minimum top of embankment freeboard of 300mm.



## AIR POLLUTION CONTROL CONDITIONS

### BURNING OF WASTE

- A1(a) The licensee shall not permit the burning of waste (including tree loppings and garden waste).
- A1(b) The licensee shall ensure an adequate water supply and a means of distribution be provided at all times to extinguish a fire at any part of the premises.
- A1(c) In the event of a fire on the premises, the licensee must advise the CEO within two hours of the fire being discovered.

### LANDFILL GAS CONTROL

- A3(a) The licensee shall install a capping system on each putrescible waste cell immediately after the final contours have been reached with the following requirements:
- (i) immediately cap the cell with a permeable layer contoured to allow gas migration to extraction ports;
  - (ii) cap with 300 mm of clay with a hydraulic conductivity (K) of at least  $1 \times 10^{-7}$  m/s; and
  - (iii) install a protective capping cover.
- A3(b) The licensee shall install a collection system for landfill gas for the each of the cells referred to in Condition A3(a).

## WATER POLLUTION CONTROL CONDITIONS

### WASTEWATER DISPOSAL

- W1 Wastewater emanating from, or water that has come into contact with, waste contaminated areas including stormwater and vehicle washdown areas the licensee shall either:
- (i) discharge to sewer either directly or via sealed sump(s); or
  - (ii) drain into lined evaporation ponds designed to contain 100 year storm events; or
  - (iii) drain into the leachate control system.

### STORMWATER AND STORMWATER DRAINS

- W2(a) The licensee shall ensure stormwater is diverted from the filled areas of the site to dedicated stormwater drains.
- W2(b) The licensee shall ensure stormwater drains are kept clear of any waste to allow effective draining.

### PROTECTION OF GROUND AND SURFACE WATERS

- W3(a) The licensee shall maintain an undisturbed separation distance of at least three metres below the base of the deepest excavation and the highest level of the surface of the groundwater.
- W3(b) The licensee shall maintain a minimum distance of at least 100 metres from the waste disposal site to any superficial water body.





## SCHEDULE 1

### Red Hill Waste Management Facility – Plan of Premises

The Premises is shown in the map below. The red line depicts the Premises boundary.





## Red Hill Waste Management Facility – Location of Greenwaste Facility

The Premises is shown in the map below. The black line depicts the new Greenwaste Facility.





## SCHEDULE 2

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

# ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

## SECTION A

### LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



## SECTION B

### DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:





## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Eastern Metropolitan Regional Council

**Licence:** L8889/2015/1

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**Registered office:** 22 Great Eastern Highway  
BELMONT WA 6104

**Premises address:** Red Hill Waste Management Facility  
Lot 1 on Diagram 15239, Lot 2 on Diagram 68630 and Lot 11 on Diagram  
69105 Toodyay Road Red Hill and Part of Lot 12 on Plan 26468 Toodyay  
Road Gidgegannup

**Issue date:** Thursday, 19 May 2015

**Commencement date:** Tuesday, 19 May 2015

**Expiry date:** Thursday, 18 May 2017

**Date of Amendment:** Thursday, 17 March 2016

### Decision

Based on the assessment detailed in this document the Department of Environment Regulation (the DER), has decided to issue a works approval. The DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Works Approval and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Damian Thomas  
Licensing Officer

Decision Document authorised by: Caron Goodbourn  
Delegated Officer





## Contents

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## 1 Purpose of this Document

This decision document explains how the DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



## 2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	12	50,000 tonnes per annual period
	62	10,000 tonnes per annual period
	64	350,000 tonnes per annual period
	65	Not Applicable
67A	50,000 tonnes per annual year	
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	Not applicable	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



Is the Premises within an Environmental Protection Policy (EPP) Area Yes ☒ No ☐  
Lot 239 is located within the *Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992* area

Is the Premises subject to any EPP requirements? Yes ☐ No ☒



### 3 Executive summary of proposal and assessment

The licence amendment application has been submitted by Eastern Metropolitan Regional Council (EMRC) (Applicant) for the construction of a Greenwaste processing hardstand pad and thus relocation of existing Greenwaste processing operations at the Red Hill Waste Management Facility (RWMF). The RWMF is situated on Lot 1, Lot 2 and Lot 11 Toodyay Road Red Hill and Lot 12 Toodyay Road Gidgegannup Western Australia. The EMRC is currently licensed under Licence L8889/2015/1 to operate the RWMF and the construction of a Greenwaste processing hardstand pad requires a works approval under section 53 of the *Environmental Protection Act 1986* (the Act). This application is to give effect to section 53 of the Act via a licence amendment.

The RWMF has a total area of 352 hectares and receives around 250-350,000 tonnes of waste per annual period. The licence includes the operation of a landfill for the acceptance and burial of waste classified as Class II, III and IV waste, as specified in the Department of Environment and Conservation (DEC) guideline *Landfill Waste Classification and Waste Definitions 1996*, as amended from time to time. The facility generates 4MW of electricity from landfill gas and Greenwaste is accepted and processed on site.

The RWMF greenwaste processing facility (GF) includes open windrow composting and mulching of source separated greenwaste and is licensed under Category 67A to undertake compost manufacturing and soil blending. The GP area occupies 50,000 m<sup>2</sup> (5 hectares) at the premises. Approximately 10,000 m<sup>3</sup> of greenwaste is processed annually into mulch and soil conditioner and sold to various markets such as recent Gateway WA project. EMRC obtained Australian Standard Certification AS4454 for mulching and composting activities in October 2009 and maintains this certification.

Feedstock for the GF comes from the City of Bayswater which provides a fortnightly city-wide 240l MGB garden waste collection service. Contamination levels are around 10% household wastes and this limits marketability. Contaminants (plastic bags, glass and pot-plants etc) are removed from the feedstock and disposed to landfill. Material accepted in the greenwaste MGB includes grass clippings, leaves, small pruning's flowers, bedding plants, weeds and branches less than 30mm in diameter. This feedstock is high in nitrogen and has levels of sand which passes through to the final product. Clean greenwaste is received from member Council parks and garden activities, kerb-side collections and residents disposing at the Red Hill transfer station. All types of source separated greenwaste are accepted at the site, but greenwaste must be less than 1.5m long and have a maximum diameter of 300mm.

Processing greenwaste at the GF involves an open-windrow (aerobic) composting system. Aerobic composting requires oxygen and moisture to transform organic matter into valuable product. Oxygen is added by turning the windrows with a front-end loader. A water cart is used to add water to the windrows. The oxygen and moisture generate heat which is necessary for killing unwanted organisms such as weed seeds, pathogens and diseases. Temperatures are regularly taken and recorded to ensure the appropriate heat levels are generated and maintained for suitable periods of time. Bayswater MGB greenwaste is weighed as it arrives on site and is placed directly into windrows. It is watered, aerated and screened to remove particles greater than 12mm to produce soil conditioner. This product is branded "Soil Compost". Clean greenwaste is weighed as it arrives on site and it is stockpiled for six to eight weeks, shredded to a normal size of 50mm or smaller, placed into windrows, watered and aerated to produce fine mulch branded "Mulch Compost".

Due to the proposed construction of a new landfill cell at the location of the current GF, an alternate location for the GF is now required. The new GF will be constructed and operated at an area to the south of Lot 12 as shown in Figure 1.

The maximum production and design capacity for the GF will be 50,000 tonnes.



Decision Document is based on an assessment of the Applicant's Form P4 application for DER Licence amendment dated 11 November 2015 and Red Hill Waste Management Facility Relocation of Greenwaste Processing Area Additional Information to Licence Amendment Application (L8889/2015/1) dated November 2015. The licence will be fully reviewed within the next 12 months (and subsequently amended into a new format) so for the purposes of this amendment the licence will only include conditions relevant to the application to construct and relocate the GF and will remain in its current licence format.

This Decision Document identifies the risks of the Application and the proposed controls for these risks. In Summary:

- The Works Approval will be granted subject to the controls and likely conditions for the Licence described in section 4 of this draft Decision Document; and
- The Applicant may operate the new GF processing area once they have complied with the licence condition that will require a Compliance certificate be submitted to the CEO prior to operation of the GF, advising that the works have complied with licence conditions.

### Location and siting

The PTRF premises location current features are:

- Geology: RWMF lies to the east of the Darling Fault, on part of the Darling Scarp, where the land slopes generally towards the southwest. The geology of the region is typical for that of the Yilgarn Craton, being dominated by granitic basement rocks with occasional intrusive dolerite dykes, weathered basement and weathered duplex soils. The latter consist broadly of ferruginous and lateritic gravels or lateritic hardpans, underlain by white and cream clays (referred to generally as the pallid zone) and with saprolite grits (clayey gravels and clays) overlying saprolite (weathered basement) and fractured granite bedrock. The granite has been intruded by sub vertical, northeast /southwest trending dolerite dykes.
- Land use: The site is an existing landfill. The site is zoned as 'Resource' under the Town Planning Scheme, and 'Rural' under the Metropolitan Regional Scheme;
- Topography: The current topography varies between 250m AHD to 300m AHD, but has been extensively modified by excavations for the landfill.

The DER (2015) *Guidance Statement: Separation distances (Draft released for consultation)* identifies that separation distances for Category 12 Screening etc is 1,000m for noise and dust, Category 62 Solid waste facilities for noise, dust and odour emissions is 200m, Category 64 Putrescible landfill and Category 65 Class IV secure landfill is 1,000m for gaseous, noise, dust and odour and Category 67A outdoor uncovered above 35,000 tonnes per annum is case by case. The most representative prescribed premises category for this licence amendment application is Category 67A so the separation distance is on a case by case basis as the production and design capacity for this category is 50,000 tonnes per annual period (year).

Potential sensitive receptors in the vicinity of the SF premises are:

- Groundwater: The depth to the water table has been inferred to be approximately 4.5m bgl based on a long-section produced by EMRC. The regional groundwater table occurs within the fractured weathered bedrock, often semi-confined by pallid zone clays. The direction of groundwater flow is inferred towards the south-southwest in the vicinity of the GF, which is consistent with the remainder of the landfill facility. Perched water has also been identified in the ferruginous zone above a relatively impermeable layer of kaolinitic clays. A groundwater study of the site has suggested that the perched aquifer has limited lateral extent. Logs from bores closest to the GF cell do not show a perched aquifer. EMRC have advised that the Stage 15 cell area which is adjacent to the GF has been excavated and no groundwater encountered.
- Surface water: The following surface water features are located within 1km radius of Stage 15:
  - Christmas Tree Creek flows in a westerly direction parallel to the southern boundary (approximately 400m south of the site boundary). The John Forrest National Park



exists in the middle of the catchment area of the creek. Christmas Tree Creek is a tributary of the Jane Brook 6km downstream and is a tributary to the Swan River.

- Susannah Brook is an ephemeral stream that drains from the Darling Scarp in a westerly direction into the upper reaches of the Swan River. At its closest point it is located approximately 400m north of the premises boundary.
- Strelley Brook is a small tributary of Jane Brook, located approximately 1km to the west of GF.
- Existing residences and landowners: A number of sensitive receptors have been identified in the vicinity of the RWMF, including but may not be limited to:
  - The nearest residence to the RWMF is approximately 400m north of the closest boundary of Lot 12 and is separated by Toodyay Road and bushland.
  - Residences in the surrounding area: The nearest residences to the GF are approximately 800m to the north and 800m to the south.
  - Christmas Tree Creek which is approximately 700m south of the GF.

### Proposed works

The Applicant proposes the following works at the GF:

- The construction of the GF hardstand will be carried out to similar specifications as the current GF hardstand. The hardstand will be constructed from compacted clay and will have a minimum depth of 1m rising to a maximum depth of 5m due to natural topography. The hardstand will be graded with a 2% fall to enable adequate drainage to a dedicated leachate pond. A perimeter bund will be constructed around the entire GF processing area whilst the greenwaste stockpile areas will have separate internal bunding. Concept plans are shown in Figure 2, 3, 4 and 5.

### Potential emissions

Potential emissions as a result of the works and operation of the works at the GF are:

- Discharges to Land: Potential emissions to land (leachate) may arise from the Operation of the GF;
- Dust: Potential emissions may arise from the Construction and Operation of the GF; and
- Noise: Potential emissions may arise from the construction and operation of the GF.

Further details of emissions and regulatory controls for the GF are detailed within section 4 of the Decision Table.

### Occupation and planning approval

The Premises is currently occupied by the Applicant.

As the proposed works are considered public works, under section 6 of the Planning and Development Act 2005 works classified as public works do not require development approval. Therefore no planning approval is required.

### Approval of works

This Decision Document and the Licence specifies the assessment of the Application and regulatory requirements for the GF works to proceed.

## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.





DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	G9(g) – G9(l)	<p>The Approved Premises production or design capacity on the front page of the Licence has been changed for categories 62 and 64 to reflect the production or design capacity approved through W5684.</p> <p><b>Construction</b> The Applicant has applied for a licence amendment to allow construction and operation of the GF at the RWMF.</p> <p>Condition G9(g) has been added to the licence to allow construction of the GF according to the submitted application.</p> <p>Condition G9(h) has been added to the licence to ensure the GF is constructed according to the application. Condition G9(h) refers to specific design and construction criteria that must be met during construction of the GF. The Applicant committed to constructing the GF at the southern end of Lot 12, construct a hardstand pad with a leachate pond of 80m length x 70m width x 3.5 depth, the GF will be bunded with the bund height and width of 500mm, the GF hardstand pad depth will be a minimum of 1m and maximum of 5m to suit topography and be graded with a 2% fall to direct drainage to the leachate pond. DER has imposed a maximum size for the GF of 50,000m<sup>3</sup> or 5 hectares as there was no prescriptive size dimensions provided in the application outside a nominal width of 360m and given the licence amendment application does not indicate permeability of the GF hardstand, DER has imposed a requirement that the permeability of the GF (including the leachate pond) be at least 10<sup>-9</sup> m/s which means the GF pad and leachate pond is considered lined.</p> <p>Condition G9(i) outlines the specifications that the GF must be constructed to.</p>	<p>Application supporting documentation</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>L8889/2015/1</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	G9(m) G9(n) W4(a) – W4(d)	<p>Condition G9(j) stipulates that the Licensee must notify the CEO if there are any departures from the specified construction requirements.</p> <p>Condition G9(k) requires the Licensee to submit a construction compliance report with specified information in condition G9(l) that must be signed by a person who is authorised to represent the Licensee. Once condition G9(k) and G9(l) have been complied with the Licensee can operate the GF as long as they meet compliance with Licence L8585/2011/1</p> <p><b>Operation</b> Condition G9(m) has been drafted to allow operation of the GF post construction and submission of the compliance certificate.</p> <p>Condition G9(n) has been added to the licence to ensure that a freeboard of 300mm is maintained at all times at the GF leachate pond to avoid overtopping.</p> <p>Conditions W4 (a) – W4 (d) have been removed from the licence in line with DER Redundant Conditions Guidance Statement.</p>	
<b>Fugitive emissions</b>	N/A	<p><b>Construction</b> <u>Emission description:</u> <i>Emission:</i> Dust arising from construction of the GF and associated machinery movement. <i>Impact:</i> Reduced local air quality from airborne particulates is possible. The closest receptors are 800m from the premises. <i>Controls:</i> The site implements several dust suppression strategies including:</p> <ul style="list-style-type: none"> <li>• use of water trucks on unsealed roads and potentially dusty loads;</li> <li>• wheel wash;</li> <li>• vegetation screens; and</li> <li>• stabilisation of exposed areas.</li> </ul>	<p>Section 49 of the <i>Environmental Protection Act 1986</i></p> <p>L8889/2015/1</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	A2(a) & A2(b)	<p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> It is not expected that dust emissions will be generated when the GF is constructed. It is considered that the provisions of Section 49 of the <i>Environmental Protection Act 1986</i> are sufficient to regulate dust emissions during construction.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><b>Operation</b> <u>Emission description:</u> <i>Emission:</i> Dust arising from shredding greenwaste, turning the greenwaste / mulch windrows and operation of the GF (Loader and vehicle movements etc). <i>Impact:</i> Reduced local air quality from airborne particulates is possible. The closest receptors are 800m from the premises. <i>Controls:</i> The site implements several dust suppression strategies including:</p> <ul style="list-style-type: none"><li>• use of water trucks on unsealed roads and potentially dusty loads and wetting of greenwaste prior to shredding if required;</li><li>• wheel wash;</li><li>• vegetation screens; and</li><li>• stabilisation of exposed areas.</li></ul> <p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	G9(a) – G9(e) W1 G9(n)	<p><i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> Previous licence condition A2 (a) and A2 (b) have been removed from the licence. It is considered that the provisions of Section 49 of the <i>Environmental Protection Act 1986</i> are sufficient to regulate dust emissions during operation.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Emission description:</u> <i>Emission:</i> Leachate arising from decomposition of greenwaste and mulch at the GF. <i>Impact:</i> Contamination of surrounding land, groundwater and surface water drainage systems. Potential impacts on ecology of groundwater and surface water from the addition of nutrients. <i>Controls:</i> The GF strategies to mitigate impacts including:</p> <ul style="list-style-type: none"><li>• hardstand pad permeability of at least <math>10^{-9}</math> m/s which is clay lined;</li><li>• hardstand pad minimum depth of 1m and maximum depth of 5m due to existing topography;</li><li>• hardstand bunded which is 500mm high and wide;</li><li>• hardstand is graded with 2% falls so all leachate is directed to a leachate pond within that hardstand pad; and</li><li>• construction of a dedicated leachate pond at the GF.</li></ul>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> Licence condition G9(a) to G9(e) are sufficient to regulate the greenwaste processing area in regards to possible leachate emissions at the GF. G9 (n) has been added to the licence to ensure a freeboard of 300mm is not exceeded in the GF leachate pond at all times.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	
Odour	N/A  N/A	<p><b>Construction</b> There will be no odour emissions during construction.</p> <p><b>Operation</b> <u>Emission description:</u> <i>Emission:</i> Odour arising from compositing greenwaste at the GF. <i>Impact:</i> unreasonable odour that may interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises. The closest receptors are 800m from the premises. <i>Controls:</i> There is no putrescible waste except greenwaste that is accepted for processing at the GF. Greenwaste does not generally produce odour.</p> <p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant</p>	Section 49 of the <i>Environmental Protection Act 1986</i>  L8889/2015/1



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> There are no licence conditions regulating odour on the licence. It is considered that the provisions of Section 49 of the <i>Environmental Protection Act 1986</i> are sufficient to regulate odour emissions during operations.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	
Noise	N/A	<p><b>Construction</b> <u>Emission description:</u> <i>Emission:</i> Noise arising from constructing the GF. <i>Impact:</i> Interference with the health, welfare, convenience, comfort or amenity of sensitive residential receptors, the closest resident is 800m from the premises. <i>Controls:</i> Noise is currently managed on site by:</p> <ul style="list-style-type: none"><li>operating only during the hours of 7am to 4pm on weekdays, 8am to 4pm on Saturdays and 10am to 4pm on Sundays; and</li><li>use of broadband 'clackers' on all site vehicles.</li></ul> <p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Likely <i>Risk Rating:</i> Moderate</p>	<i>Environmental Protection (Noise) Regulations 1997</i>





DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory controls:</u> It is considered that the provisions of <i>Environmental Protection (Noise) Regulations 1997</i> will be sufficient to regulate noise emissions during construction.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Likely <i>Risk Rating:</i> Moderate</p> <p><b>Operation</b> <u>Emission description:</u> <i>Emission:</i> Noise arising from operating the GF which includes the Loader, greenwaste Grinder and associated vehicle movements. <i>Impact:</i> Interference with the health, welfare, convenience, comfort or amenity of sensitive residential receptors, the closest residents are 800m north and south of the GF. <i>Controls:</i> Noise is currently managed on site by:</p> <ul style="list-style-type: none"><li>• operating only during the hours of 7am to 4pm on weekdays, 8am to 4pm on Saturdays and 10am to 4pm on Sundays;</li><li>• use of broadband 'clackers' on all site vehicles; and</li><li>• Separation distance and buffer zones which are vegetated.</li></ul> <p><u>Risk assessment:</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory controls:</u> The Applicant has a statutory requirement to comply with the requirements of the <i>Environmental Protection (Noise) Regulations 1997</i>. It is considered that the provisions of <i>Environmental Protection (Noise) Regulations 1997</i> will be sufficient to regulate noise</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		emissions during operation.  <u>Residual risk:</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate	
Licence duration	N/A	The Licence was originally granted for one year; until 18 May 2016. The expiry date has been extended by 12 months to enable adequate time to complete a licence review and issue the licence in the new format licence.	Department of Environment Regulation 2015, <i>Guidance statement: Licence duration</i>  General provisions of the <i>Environmental Protection Act 1986</i>

## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
15/02/2016	Proponent sent a copy of draft amendment	No comments and submitted signed waiver 14/03/2016	N/A



## 6 Risk Assessment

*Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management*

**Table 1: Emissions Risk Matrix**

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High







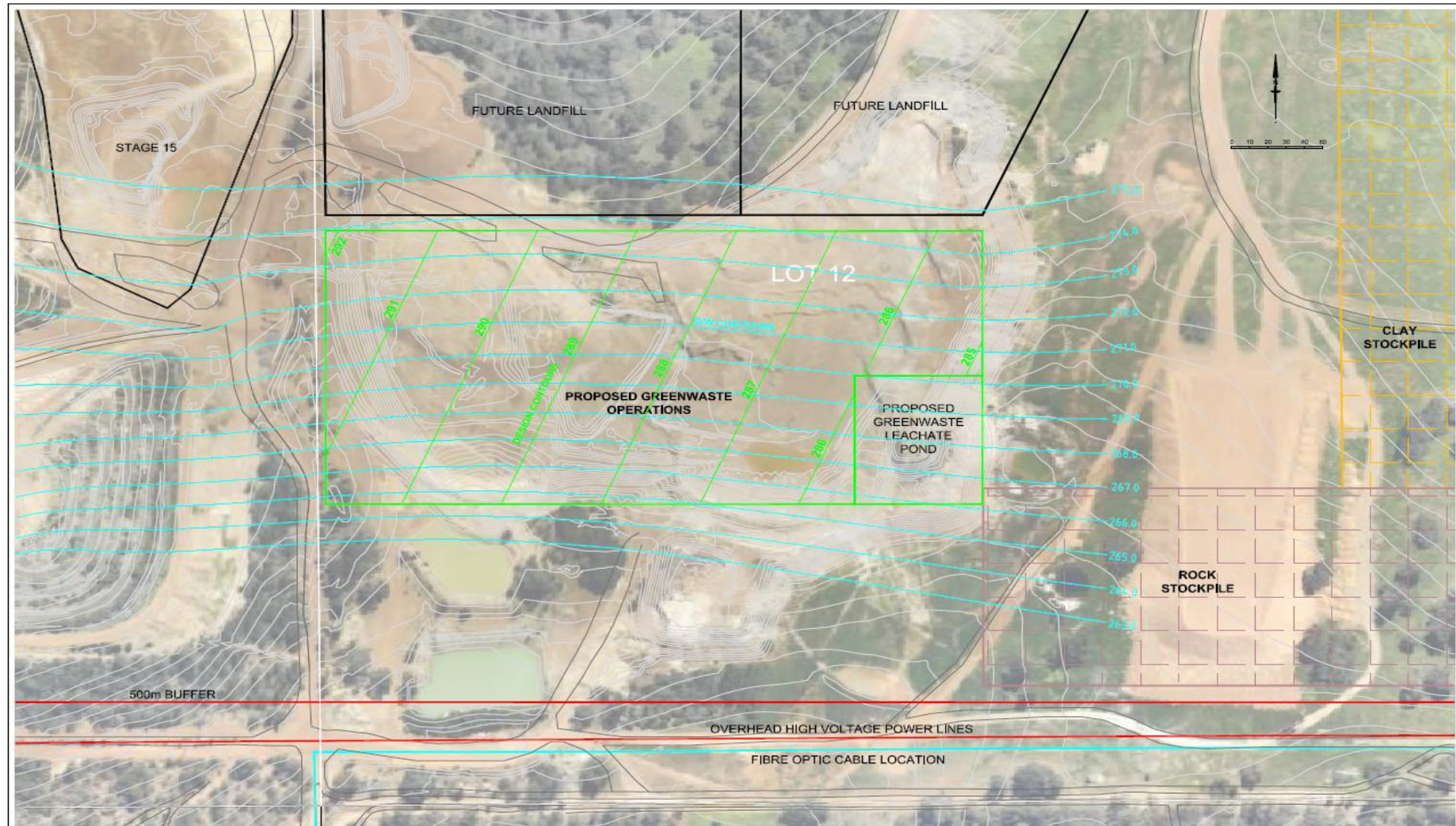


Figure 2 New Greenwaste Facility

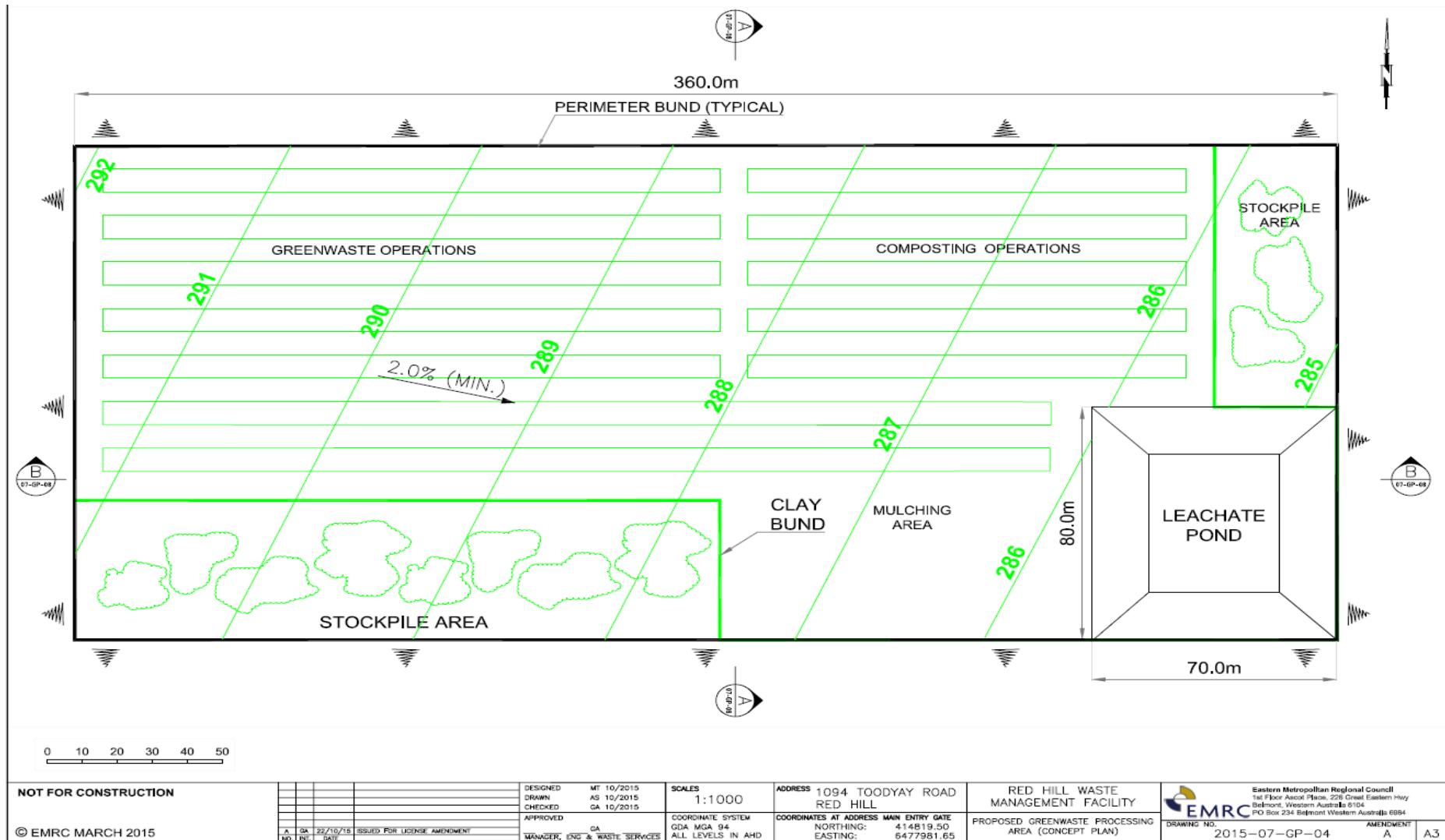


Figure 3 Greenwaste Facility layout



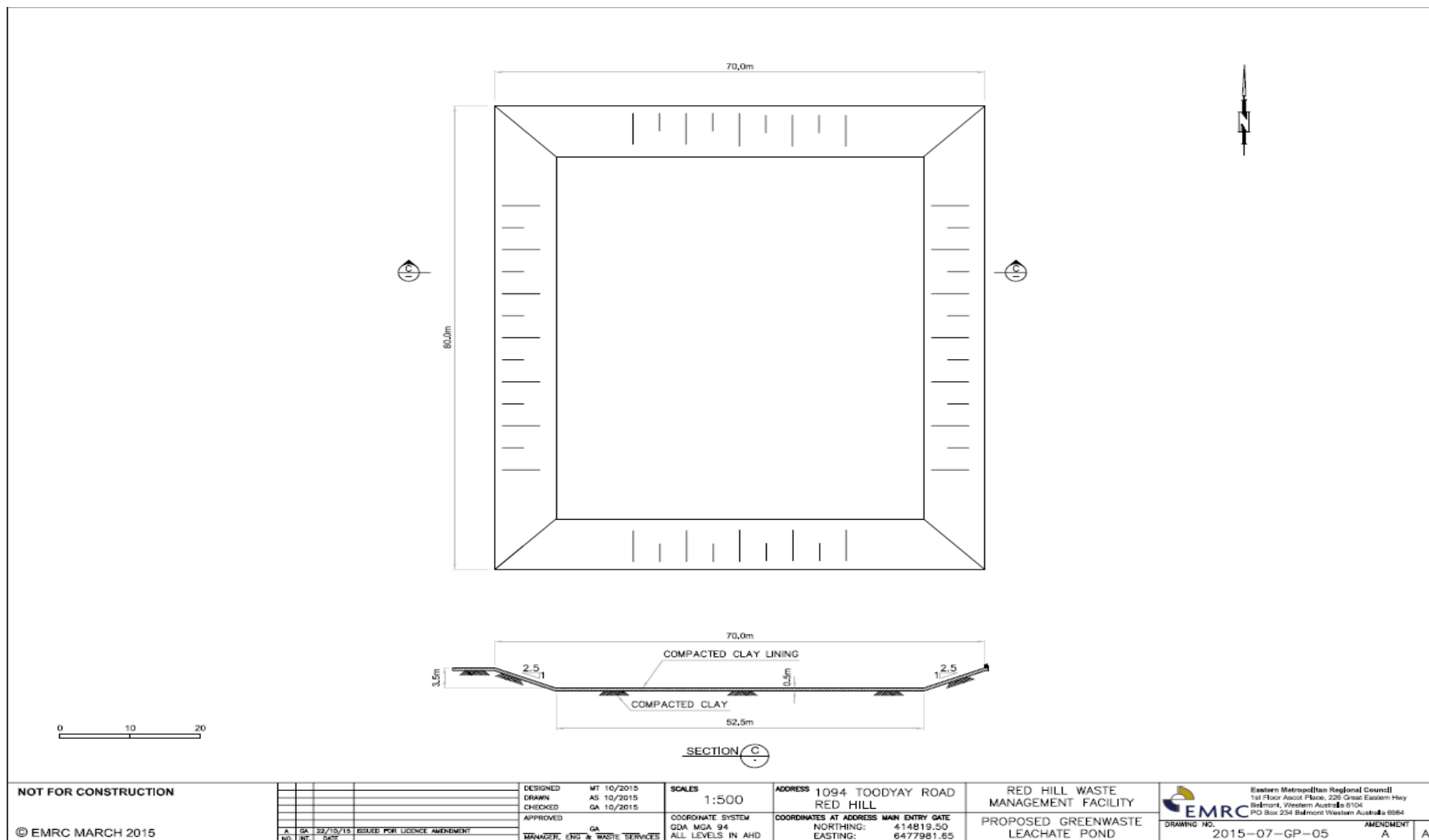


Figure 4 Greenwaste Leachate Pond

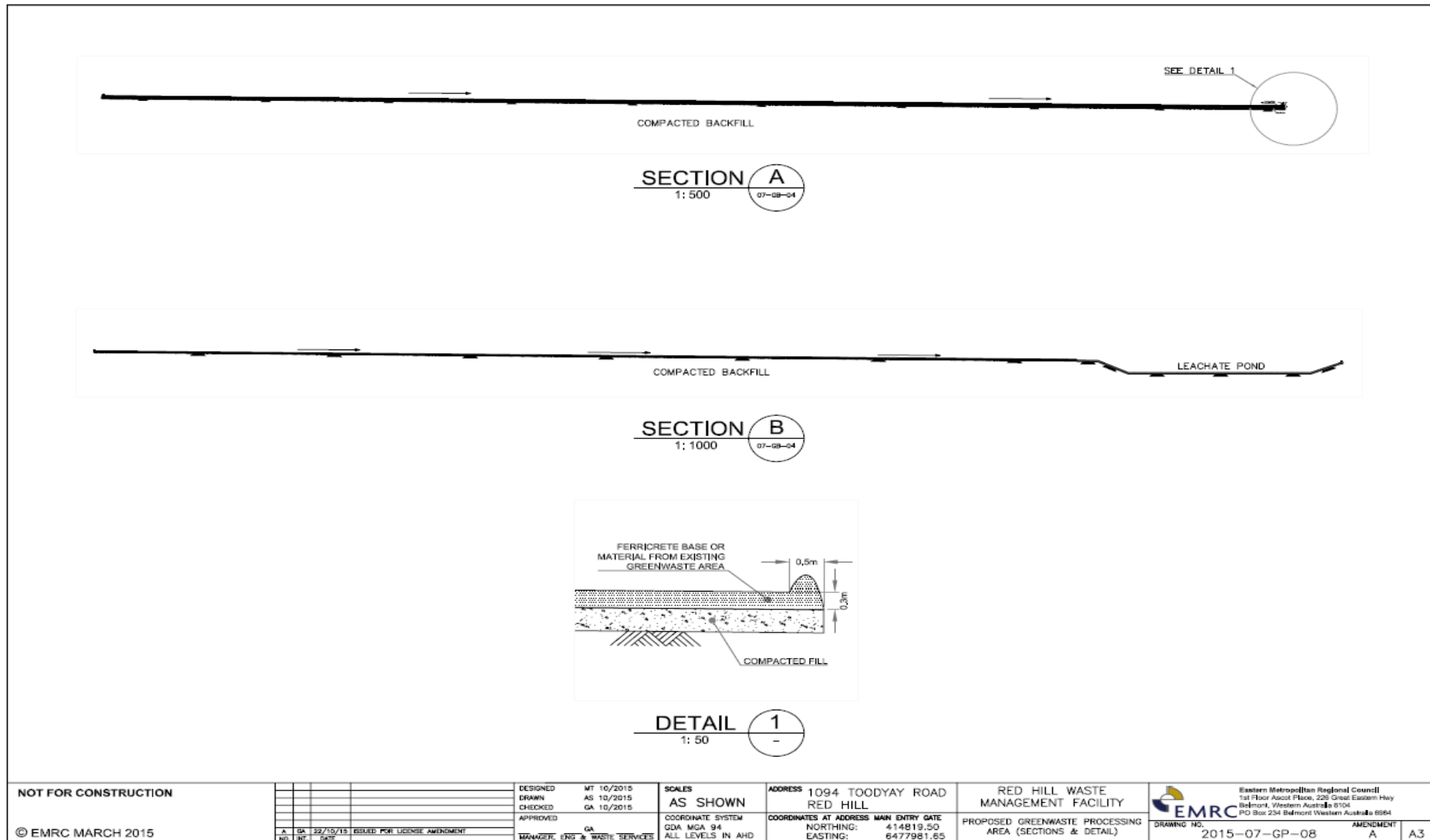


Figure 5 Greenwaste Facility cross-section