



Licence

Environmental Protection Act 1986, Part V

Licensee: Shire of Carnarvon

Licence: L7065/1997/11

Registered office: 3 Francis Street
CARNARVON WA 6701

Premises address: Brown Range Waste Management Facility
Via Speedway Road
Browns Range
CARNARVON WA 6701
Being Lot 1210 on Plan 183666 and Lot 541 on Plan 69587 as depicted in Schedule 1.

Issue date: Thursday, 7 November 2013

Commencement date: Tuesday, 19 November 2013

Expiry date: Saturday, 18 November 2034

Prescribed premises categories

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
64	Class II putrescible landfill site: premises on which waste (as determined by reference to the waste types set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the CEO and as amended from time to time) is accepted for burial.	500 tonnes or more per year.	16,400 tonnes per annual period.
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	500 tonnes or more per year.	3,100 tonnes per annual period.
61	Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated, or irrigated.	100 tonnes or more per year.	1,478 tonnes per annual period.
57	Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored.	100 tyres or more.	1,000 tyres at any one time.



Conditions

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

Date signed : 05 January 2017

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Steve Checker

MANAGER LICENCING (WASTE INDUSTRIES)

Officer delegated under section 20

of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the Licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.



You must comply with your Licence. Non-compliance with your Licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non-payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

Brown Range Waste Management Facility is located on Lot 1210 on Plan 183666 and Lot 541 on Plan 69587, via Speedway Road, Brown Range, Carnarvon.

The premises is owned and managed by the Shire of Carnarvon as a Class II putrescible landfill, a liquid waste facility and for the storage of used tyres for reuse. The premises is located within a 'residential' zoned area, as defined within Town Planning Scheme No. 10.

In August 2004, a licence compliance inspection revealed that landfill operations were being conducted outside of the defined premises boundary. As a result, negotiations with Department of Lands were initiated to extend the premises boundary to assist with additional land area required for the Shire landfill operation. Lot 541 on Plan 69587 has been incorporated into the premises boundary, as confirmed by the Shire on 3 February 2016.

A desktop assessment of groundwater within the area (Groundwater bore Site Id. 7045), approximately 1.8 km north of the premises, shows standing water level at approximately 6.65 m. The Total Dissolved Solids from the monitoring bores (north and south) varies between approximately 1,300-5,800 mg/L (brackish to moderately saline). Groundwater in the area forms part of the Carnarvon superficial aquifer within the Gascoyne River Basin.

The landfill has been developed within the Carnarvon town planning scheme 'residential' zone and is approximately 1.4 km from the nearest occupied residential sensitive receptors. However, residential development is currently possible up to the landfill boundary as no buffer exists between the 'residential' zoned area and the landfill boundary. A power station exists approximately 370 m west of the new premises boundary and the trigonometrical station is approximately 139 m north-west. A desktop assessment identified a 'minor river' water catchment area within the premises (Nicol Bay). No surface water is present within or adjacent to the premises. The Shire has confirmed that the zoning of the landfill and potential separation distances may be considered within the finalisation of Local Planning Scheme No. 13 which is currently being undertaken.

The main potential emissions from the premises includes fugitive emissions in the form of dust and odour, and windblown waste as well as noise and leachates.

This Licence is the result of an amendment sought by the Licensee to include Category 62 (Solid waste depot) for the inclusion of storage of waste tyres for reuse.

The licences and works approvals issued for the Premises, since 12/07/2000, include:



Instrument Log		
Instrument	Issued	Description
L7065/1997/4	12/07/2000	Licence reissue
L7065/1997/5	20/06/2001	Licence reissue
L7065/1997/6	28/05/2002	Licence reissue
L7065/1997/7	28/07/2003	Licence reissue
L7065/1997/8	19/11/2004	Licence reissue
L7065/1997/9	02/11/2006	Licence reissue
L7065/1997/10	13/11/2008	Licence reissue
L7065/1997/11	07/11/2013	Licence reissue
L7065/1997/11	19/05/2016	Licence amendment to new format and change to premises boundary
L7065/1997/11	5/01/2017	Licence amendment to include Category 62

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise ultra vires or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise ultra vires or invalid.

END OF INTRODUCTION



Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the Environmental Protection Act 1986 apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Acceptance Criteria' has the meaning defined in Landfill Definitions;

'ACM' means asbestos containing material and has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009);

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

'annual period' means a 12 month period commencing 1 May until 30 April in the following year;

'Asbestos' means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'AS/NZS 2031' means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis*;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'Clean Fill' has the meaning defined in Landfill Definitions;

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

'CEO' for the purpose of correspondence and notification means;

Chief Executive Officer
Department Div. 3 Pt. V EP Act
Locked Bag 33
CLOISTERS SQUARE WA 6850
info@der.wa.gov.au;



'classified load' means waste loads that have been classified during acceptance and post acceptance based on the risk of waste containing Asbestos or ACM and through visual inspection. Classification of wastes loads shall be undertaken in accordance with the provisions outlined in Section 3.3 and 3.4 of DER Asbestos Guidelines (Attachment 1 & 2);

'Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website;

'construction and demolition waste' or **'C&D waste'** means materials in the waste stream which arise from construction, refurbishment or demolition activities and as defined within the *Landfill Waste Classification and Waste Definitions 1996* (as amended from time to time);

'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

'Crushed Recycled Road Base' means material that has been produced in accordance with and meets the specifications in the DER Asbestos Guidelines and the Institute of Public Works Engineering Australasia and the Western Australia Local Government Association *Specification for the supply of recycled road base*, May 2016;

'dangerous goods' has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

'DER Asbestos Guidelines' means document titled "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department of Environment and Conservation, as amended from time to time;

'Department' means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V of the *Environmental Protection Act 1986*;

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

'fugitive emissions' means all emissions not arising from point sources identified in Sections 2.2, 2.3, 2.4 and 2.5;

'green waste' means waste that originates from flora and which does not contain or has not been treated or coated with, preserving agents, biocides, fire retardants, paint, adhesives or binders;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'Hazardous waste' has the meaning defined in Landfill Definitions;

'Inert Waste Type 1' has the meaning defined in Landfill Definitions;

'Inert Waste Type 2' has the meaning defined in Landfill Definitions;

'Landfill Definitions' means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment as amended from time to time.

'Licence' means this Licence numbered L7065/1997/11 and issued under the Act;



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

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'Putrescible' has the meaning defined in Landfill Definitions;

'quarantined storage area or container' means a hardstand storage area or sealed-bottom container that is separate and isolated from authorised waste disposal areas and is capable of containing all non-conforming waste and its constituents, these areas must be clearly marked and their access restricted to authorised personnel;

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

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

'Special Waste Type 1' has the meaning defined in Landfill Definitions;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia; and

'windrows' means parallel rows where each row is no more than 3 metres high and no more than 4 metres wide and separated by a minimum of 3 metres of clear ground from any other row.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Licence.

1.2 General conditions

1.2.1 The Licensee shall operate and maintain all water tankers, water sprays, sprays, water tanks, firefighting equipment and monitoring bores to the manufacturer's specification.

1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of waste (as defined in table 1.3.1) outside an engineered containment system.

1.2.3 The Licensee must ensure that the proposed Works specified in Column 1 of Table 1.2.1 are designed and constructed to meet or exceed the specifications in Column 2 of Table 1.2.1 for the infrastructure in each row of Table 1.2.1.

1.2.4 The Licensee must not depart from the specifications in Table 1.2.1 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 1.2.1: Works specifications	
Column 1 Infrastructure	Column 2 Specifications (design and construction)
1) Installation of fixtures (crusher, shredder, chipper and baler plants)	The Licensee must ensure that the fixtures: <ul style="list-style-type: none"> (a) are installed for the purposes of recycling permitted waste types (as defined within the Licence) accepted to the premises for: <ul style="list-style-type: none"> (i) shredding/ chipping of green waste only; (ii) crushing of C&D waste only; and (iii) baling of recycled tyres, vehicle wrecks, paper, cardboard and used recyclable plastics only. (b) are located within the premises boundary within an area not accessible to the general public; and (c) used for the purposes of crushing, are screened with any conveyor belt systems covered to reduce dust particulates generated, as a result of the crushing process.

1.2.5 If any departures from the specifications in Table 1.2.1 occur, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition 1.2.4 at the same time as the certifications under Condition 1.2.7.

1.2.6 The Licensee must submit a construction compliance document to the CEO, within one month, following the construction of the Works and prior to operating the new works at the premises.

1.2.7 The Licensee must ensure the construction compliance document:

- (a) is certified that each item of infrastructure specified in Condition 1.2.4, Table 1.2.1 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.

1.3 Premises operation

1.3.1 The Licensee shall only accept waste on to the Premises if:

- (a) it is of a type listed in Table 1.3.1;
- (b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
- (c) it meets any specification listed in Table 1.3.1.

Table 1.3.1: Waste acceptance			
Waste type	Waste code	Quantity limit	Specification¹
Clean Fill	N/A	Combined total of 16,400 tonnes per annual period	<ul style="list-style-type: none"> • None specified.
Inert Waste Type 1	N220		<ul style="list-style-type: none"> • C&D waste, concrete, metal, brick, road base and processed timber (treated wood) only.
Inert Waste Type 2	T140		<ul style="list-style-type: none"> • Tyres and plastic only; • Maximum of 1,000 accepted for storage at any given time.
Special Waste Type 1	N/A		<ul style="list-style-type: none"> • Asbestos and asbestos cement products or asbestos containing



Table 1.3.1: Waste acceptance

			material (ACM) as defined by the Landfill Definitions.
Special Waste Type 2	N/A		• Biomedical / clinical waste.
Putrescible waste	N/A		• None specified.
Putrescible and Organic wastes			
Septage waste	K210	Combined total of 1,478 t/annual period	Tankered into the premises and discharged into the septage ponds via the receival point.
Sewage waste	K130		
Grease waste	K110		

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing¹

Waste type	Process	Process limit/ specifications
1) All waste types	Receipt, handling and storage prior to disposal or recycling	(a) No waste is placed closer than 35 metres to the premises boundary; (b) The tipping area is restricted to a maximum linear length of 30 metres; (c) Stormwater is to be directed away from the tipping area; (d) There is enough cover material available to cover waste at least twice; (e) The tipping area is no greater than two metres in height; (f) Waste is totally covered with cover material so that no waste is left exposed, except Inert type 1 waste and clean fill; (g) Maintain an undisturbed separation distance of at least 3m between the waste and the highest level of the water table aquifer; (h) No burning of any waste is permitted; and (i) Recycled waste to be stored within a shed prior to reuse and disposal offsite; (j) Any recycling of a permitted waste type is to be undertaken through the use of fixtures for crushing, baling, shredding or chipping only, as defined within the process limit specifications for that specific waste type; (k) Any fixtures used for crushing, shredding or chipping will be adequately screened and with any conveyors covered to reduce dust particulate lift off. (l) The crushing, shredding, chipping, or baling of any permitted waste type must only occur as follows: (i) Between Monday to Friday (inclusive);



Table 1.3.2: Waste processing ¹		
		<ul style="list-style-type: none"> (ii) Between the hours of 7am to 5pm; (iii) By staff trained in the use of the equipment being utilised; and (iv) Only one fixture in operation at any given time.
2) Clean Fill		None specified.
3) Inert Waste Type 1 (C&D waste, concrete, treated timber, metal, road base and vehicle wrecks)		<ul style="list-style-type: none"> (a) Recycling of vehicle wrecks and C&D waste is permitted; (b) Inert waste Type 1 stored within designated disposal area; (c) Vehicle wrecks may be stored and/ or compacted prior to disposal offsite; (d) Vehicle wrecks to be stored within a designated storage area with a five metre fire break maintained around the storage area; (e) Processing/ recycling of C&D waste permitted by crushing for reuse offsite; (f) Concrete/ masonry/ bricks crushed and stored for shire reuse on local road works.
4) Special Waste Type 1 (Asbestos Waste)		<ul style="list-style-type: none"> (a) To be disposed of within a designated area for burial; (b) The disposal area(s) for any more than one cubic metre of asbestos material is defined by grid references on the site plan; (c) A copy of the site plan marked with the locations used for asbestos disposal should be kept as a permanent record and made available for viewing; (d) A representative of the licensee is available to witness the burial of the asbestos waste; and (e) Any disposal of asbestos is to be recorded in the asbestos register within 2 hours of burial to attest that it has been buried in accordance with these procedures.
5) Special Waste Type 2 (Biomedical/ clinical)		<ul style="list-style-type: none"> (a) Ensure that the original waste transport certificate is signed and note any discrepancies between waste declared and waste received; (b) A record of the waste transport certificate to be kept for at least three years; (c) Define the disposal area(s) by grid references on a site plan; (d) Ensure the disposal areas are not excavated or uncovered during subsequent landfill operations; (e) Restrict access to the landfill site where the waste is buried to authorised personnel only; and (f) Make any information that is recorded available for viewing or copying during any inspection of the premises.
6) Inert Waste Type 2 (Tyres & Plastics)	Receipt, handling and storage prior to disposal	<ul style="list-style-type: none"> (a) All inert waste type 2 shall be stored and/ or buried within the waste receival area; (b) Tyres must be stored in tyre windrows with at least three metres separating each windrow; (c) Tyres to be stored in piles of up to 100 units with a 6



Table 1.3.2: Waste processing ¹		
		<p>m separation distance between piles, in windrows.</p> <p>(d) Tyres and plastics are to be buried in the designated disposal area as soon as practicable or stored for baling and reuse prior to disposal offsite;</p> <p>(e) No more than 1,000 tyres shall be stored at the premises at any given time.</p>
7) Putrescible waste	Receipt, handling and storage prior to disposal or off-site recycling.	<p>Putrescible wastes must be:</p> <p>(a) buried and covered daily within a designated area within the landfill, excluding cardboard, paper and recyclable used light plastics for reuse;</p> <p>(b) Paper, cardboard, light plastics to be recycled, and:</p> <ul style="list-style-type: none"> • stored within a designated storage area for shredding and/ or baling for reuse offsite; • stored for no longer than eight weeks prior to disposal offsite for reuse; and • stored within a designated, enclosed waste receival area for sorting prior reuse or final disposal within the landfill; • baled cardboard, paper and light plastics may be stored within an enclosed shed prior to discharge for reuse offsite. <p>Green waste must be stored as follows:</p> <p>(a) All mulch and greenwaste shall be stored in windrows;</p> <p>(b) Stored at least 100 m away from the designated tyre storage area;</p> <p>(c) Stored to a height of no more than 2 m;</p> <p>(d) Processing/ recycling of green waste permitted through the use of a shredder or chipper for reuse offsite;</p> <p>(e) A five metre fire break shall be maintained around the green waste storage area.</p>
8) Septage wastes (including tankered waste from sewage systems and grease traps)	Physical, biological and chemical treatment	<p>(a) pH to be maintained between 6.5 to 8;</p> <p>(b) Discharge liquid waste to the anaerobic pond(s) in a manner that does not disrupt the anaerobic crust;</p> <p>(c) Maintain trapped overflows between the treatment pond(s) to reduce the potential for carry-over of floating material;</p> <p>(d) Dispose of sludge removed from the septage ponds in a manner approved by the CEO; and</p> <p>(e) No waste other than septage and grease trap waste shall be disposed of into the septage ponds;</p> <p>(f) Liquid waste to be disposed of to the clay-lined ponds only.</p>
9) Sewage sludge	Storage	<p>(a) Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10^{-9} m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system.</p>

Note 1: Additional requirements for the management of tyres is set out in Part 6 of the *Environmental Protection Regulations 1987*.



1.3.4 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.3: Cover requirements¹			
Waste Type	Cover Material	Depth	Timescales
Putrescible Wastes	Inert waste type 1, clean fill soil or clay	150 mm	As soon as practicable and not later than the end of the working day.
		1,000 mm	Within 3 months of achieving final waste contours.
Special Waste Type 1 & 2	Type 1 inert waste or clean fill	1,000 mm	By the end of the working day in which the asbestos waste was deposited.
Inert Waste Type 2		100 mm	Plastic waste with the potential to become windblown to be completely covered by the end of the working day in which the waste was deposited. Tyres shall be covered as soon as practicable after disposal within a trench where recycling is not being undertaken.
		2,000 mm	Within 3 months of achieving final waste contours over tyre burial cell/s.
Inert Waste Type 1	No cover required.		
Clean fill			

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

1.3.5 The Licensee shall install and maintain a capping system on each waste cell in accordance with the requirements of Table 1.3.4.

Table 1.3.4: Capping requirements		
Cell Number(s)	Specification	Timescales
All areas	Minimum of 300 mm of clay with a permeability of $<1 \times 10^{-9}$ m/sec or equivalent, overlaid with additional soil cover for the establishment of a vegetative cover.	Each cell to be capped within 6 months of achieving final waste contours.

1.3.6 The Licensee shall implement the following security measures at the site:

- erect and maintain suitable fencing to prevent unauthorised access to the site;
- ensure that any entrance gates to the premises are securely locked when the premises are unattended; and
- undertake regular inspections of all security measures and repair damage as soon as practicable.

1.3.7 The Licensee shall install and maintain a sign at the entrance to the Premises which clearly displays the following information;

- hours of operation;
- contact telephone number;



- (c) warning indicating penalties for people lighting fires; and
- (d) list of materials accepted for recycling and the location of where they can be deposited on the premises.

1.3.8 The Licensee shall implement control measures to prevent infestations of pests, flies and vermin at the Premises.

1.3.9 The Licensee shall manage the septage treatment ponds such that:

- (a) overtopping of the ponds does not occur;
- (b) a minimum freeboard of 300 mm is maintained at all times;
- (c) stormwater runoff is prevented from entering the ponds; and
- (d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the ponds.

1.3.10 The Licensee shall take all reasonable and practical measures to ensure that no windblown waste escapes from the Premises and that windblown waste is collected on at least a weekly basis and returned to the tipping area.

1.3.11 The licensee shall ensure that there are appropriate procedures and equipment in place at the premises for extinguishing any unauthorised fires.

1.3.12 The Licensee shall ensure that the asbestos content of any recycled output originating from construction and demolition (C&D) waste does not exceed the contamination limits specified in Table 1.3.5.

Table 1.3.5: Recycled output contamination limits		
Output	Parameter	Limit¹
Recycled drainage rock	Asbestos (in any form)	0.001% w/w
Recycled sand		
Recycled road base		

Note 1: DER Asbestos Guidelines

2 Monitoring

2.1 General monitoring

2.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

2.1.2 The Licensee shall ensure that annual monitoring is undertaken at least 9 months apart.

2.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

2.2 Monitoring of inputs and outputs



2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Table 2.2.1: Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Averaging period	Frequency
Waste Inputs	Inert Waste Type 1, Inert Waste Type 2, Special Waste Type 1, Clean Fill, Putrescible wastes and Septage waste.	Kg/ tonnes (where a weighbridge is present);	N/A	Each load arriving at the Premises
Waste Outputs	Waste type as defined in the Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009).	m ³ (where no weighbridge is present).		Each load leaving or rejected from the Premises

2.3 Process monitoring

2.3.1 The Licensee must visually inspect all loads of C&D material when they arrive at the Premises prior to unloading and during unloading to determine the risk of a load containing Asbestos or ACM and each load shall be classified in accordance with the risk classification procedure outlined in Attachment 1 (Classified Load).

2.3.2 Where the inspection of C&D material confirms that material does contain asbestos or ACM, the Licensee must:

- (a) reject the waste material for the purposes of acceptance for recycling or reuse;
- (b) maintain accurate records of all rejected loads on the Premises and the documentation must be made available to DER officers upon request; and
- (c) record the details of the material source, material carrier, registration number of the vehicle and date of rejection.

2.3.3 The Licensee must ensure that Classified Loads of C&D waste are isolated, kept damp and appropriately contained in accordance with DER Asbestos Guidelines.

2.3.4 The Licensee must ensure that Classified Loads identified as “high risk” continue to be managed in accordance with the high risk procedure as outlined in section 3.4 of the DER Asbestos Guidelines (Attachment 2).

2.3.5 The Licensee must, as a minimum maintain records of all accepted load inspections and of any accepted loads which have been determined as Classified Loads or as “high risk” loads.

2.3.6 The Licensee must continue to visually inspect material on the Premises at all stages of the storage, sorting and crushing process of C&D waste. Suspect asbestos identified at any stage of the process must be handled in accordance with Conditions 2.3.2-2.3.7 of this Licence.

2.3.7 The Licensee must maintain C&D waste material on the Premises in at least three separate stockpiles areas for unprocessed material, processed material tested for ACM and:

- (a) unprocessed material and processed material areas must be kept clearly separated at a minimum 3 m distance;



- (b) processed material tested for ACM and processed material awaiting testing for ACM must be clearly separated by a minimum 3m distance or clearly delineated and separated with impermeable barriers; and
- (c) clearly visible and legible signage must be erected on individual stockpiles to clearly identify and delineate tested processed material, untested processed material and unprocessed material.

2.3.8 The Licensee must ensure that testing of all finished products used in the construction of infrastructure on the Premises or supplied for re-use must be undertaken in accordance with the product testing procedures as outlined in section 4.3 of the DER Asbestos Testing Guidelines (Attachment 3).

2.3.9 The Licensee must ensure that finished products used in the construction of infrastructure on the Premises or supplied for re-use are only used or supplied to customers from stockpiles that have been sampled and tested in accordance with section 4.3 of the DER Asbestos Guidelines (Attachment 3) and shown to conform to the product specification of 0.001% asbestos weight for weight (w/w) for asbestos content (in any form) within any recycled products.

2.3.10 The Licensee must retain all asbestos testing records.

2.4 Ambient environmental quality monitoring

2.4.1 The Licensee shall undertake the monitoring in Table 2.4.1 according to the specifications in that table.

Table 2.4.1: Monitoring of groundwater				
Emission point reference	Parameter	Units	Averaging period	Frequency
Monitoring bores ('North' and 'South')	Electrical conductivity	L/s m ³ /day	Spot sample	Annually
	Nitrate-nitrogen	mg/L		
	Total nitrogen	g/day		
	Manganese			
	Chloride			
	Total potassium			
	Zinc			
	Chromium			
	Copper			
	Nickel			
	Lead			
	Total dissolved solids			
	Ammonia-nitrogen			
	Cadmium			
	Standing water level (SWL)	mBGL		
pH ¹	-			

Note 1: In-situ non-NATA accredited analysis permitted.

2.4.2 The Licensee shall ensure that all monitoring bores are maintained and operational for the purposes of monitoring groundwater.



3 Improvements

3.1 Improvement Program

3.1.1 The Licensee shall complete the improvements in Table 3.1.1 by the date specified.

Table 3.1.1: Improvement Program		
Improvement Reference	Improvement	Date of completion
IR1	The Licensee should determine the groundwater directional flow at the premises, and ensure that there is at least one monitoring bore upstream and two downstream of the premises.	31/03/2017

4 Information

4.1 Records

- 4.1.1 All information and records required by the Licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 4.1.2 The Licensee must submit to the CEO within 62 days after the end of the annual period, a Compliance Report indicating the extent to which the Licensee has complied with the Condition of this Licence for the annual period.
- 4.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.
- 4.1.4 The Licensee shall maintain a register of Special Waste Type 1 and 2 disposed of at the Premises and shall include a plan showing the position of Special Waste Type 1 and 2 disposed of at the Premises.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 62 calendar days after the end of the annual period (1 July). The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	Summary of any failure or malfunction of any pollution	None specified



	control equipment and any environmental incidents that have occurred during the annual period, and any action taken	
-	Summary of the following: (a) the number and severity of any fires on site; (b) the measures taken to suppress dust; (c) the measures taken to control windblown waste; and (d) any changes to site boundaries, internal buffer zones, asbestos waste disposal areas, location of groundwater monitoring bores and surface drainage channels; and (e) any issues raised by DER (e.g. arising from inspections) during the reporting period should also be summarised together with details on how these have been addressed/rectified or, if the required work has yet to be completed, how and when they will be rectified/completed.	None specified
1.3.8	Summary of the measures taken to control vermin and pests.	None specified
1.3.12	Summary of recycled output asbestos testing	None specified
2.2.1	Summary of inputs and outputs	None specified
2.3.1	Summary of Classified Loads	None specified
2.3.2 (b) & (c)	Summary of rejected loads and carrier information	None specified
2.4.1	Summary of groundwater monitoring	None specified
4.1.3	Complaints summary	None specified
4.1.4	Summary of Special Waste Type 1 and 2 received	None specified

Note 1: Forms are in Schedule 2

4.2.2 The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements			
Condition or table (if relevant)	Parameter	Reporting date	Format or form
-	Any unauthorised fire.	Within 7 working days of the fire occurrence.	A report that details: <ul style="list-style-type: none"> the date, time and location of the fire; the cause or suspected cause of the fire; and date, time and actions undertaken to extinguish the fire.

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²



Table 4.3.1: Notification requirements

-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
1.2.1, 1.3.12	Any descriptive or numerical limit exceedences as defined within the licence.	Within 5 working days of identifying and verifying the limit exceedence.	Written

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

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





Schedule 2: Notification form

Licence: L7065/1997/11 Licensee:
 Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
 Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	



Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Shire of Carnarvon	
Date	





Attachment 1: Section 3.3 of DER Asbestos Guidelines (page 10-11)

- Ensuring a “no asbestos” clause is included in any contracts with C&D waste suppliers;
- Installing a clearly visible sign saying “No Asbestos” is present at the entry to the facility;
- Establishing a system to record the details of loads arriving/received at the site which have been found to contain asbestos.

DEC has a supply of brochures that outline the rules on disposal of asbestos loads that can be handed to customers. Please contact DEC’s Waste Management Branch on (08) 6467 5323 for copies.

3.3 Acceptance procedures

When waste arrives at the recycling facility, acceptance procedures must serve to confirm that the characteristics of the waste are consistent with the waste types permitted by the Part V licence and to determine the risk of the load containing asbestos.

To follow on from the pre-acceptance procedures, all persons bringing waste onto the premises must be asked to sign a declaration or provide a ‘customer warranty’ on a vehicle load specific basis confirming that their load is free from asbestos. The associated documentation should be retained on the premises and be available for DEC to inspect. Where an individual is not prepared to sign this disclaimer or provide such a warranty the load shall be refused entry.

All loads must be visually inspected when they arrive at the recycling site. Where the inspection identifies that the wastes are not permitted by the licence and/or asbestos is visually identified in the load it shall be rejected for acceptance. A record of all rejected loads must be maintained on the premises and be available for DEC to inspect. As a minimum, a record must be made of the waste producer, waste carrier, registration number of the vehicle and the date of rejection.

The risk of a load containing asbestos is related to the type and source of the waste. In general, buildings and structures constructed after 1990 are unlikely to have asbestos containing materials within them, whereas buildings and structures constructed before this date may have been built using asbestos containing materials.

Because large buildings and structures undergo regulated asbestos removal programs and inspections before they are demolished the probability of asbestos being present in the demolition debris should be low. However, a risk of contamination can remain from asbestos formwork embedded or attached to concrete columns that cannot be readily identified through the asbestos clearance certification process and from asbestos piping from reclaimed road, car park areas and water supply systems.

It is also common for mixed waste from unknown sources, particularly those in skip bins or from small-scale demolition or refurbishment activities to contain amounts of asbestos waste. These sources must be considered high risk.

To determine the risk of an incoming load containing asbestos the gatehouse operator shall establish:

- The source of the load including the site location and if possible the age of any building or structure from which the C&D waste originated;



- The content/waste types within the load; and
- The type of load.

Where the source of the load can clearly be determined to be a building or structure constructed after 1990 then the load can be considered to represent a low risk of asbestos contamination and managed as outlined in the following section. Where the waste originates from a building constructed before 1990 or there is uncertainty over this issue, the risks associated with asbestos in the load must be established in line with the Risk Classification Matrix below.

Once classified, each load must be directed to the appropriate area for unloading and further inspection in line with the following sections.

Risk Classification Matrix			
Material Type	Type of load		
	Commercial	Public, utes, cars and trailers*	Skip bins
Clean Concrete (without formwork)	Low	High	High
Clean Brick	Low	High	High
Clean Bitumen / Asphalt	Low	High	High
Mixed Construction waste	High	High	High
Mixed Demolition waste	High	High	High

* if it is possible to view the entire load of incoming C & D material (eg a small trailer with a shallow load, then consideration may be given to classifying these loads as low risk
 (Risk Matrix Classification adapted from WorkSafe Victoria 2006 and WMAA 2009)

3.4 Load inspection after acceptance

Each accepted and classified load shall be directed to an unloading area at the site which is appropriately designed and constructed to ensure the waste will not mix with other waste. Where feasible, separate unloading areas shall be provided for low risk and high risk wastes.

All loads shall be dampened prior to unloading and maintained in a dampened state throughout the inspection process. Operators will need to ensure there are adequate facilities on the premises to achieve this.

Low risk load procedure

Loads classified as "low risk", must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified.

If suspect fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as "high risk" and continue to be processed in accordance with the high risk procedure below. Where the visual inspection confirms that the



Attachment 2: Section 3.4 of DER Asbestos Guidelines (page 11 - 12)

- The content/waste types within the load; and
- The type of load.

Where the source of the load can clearly be determined to be a building or structure constructed after 1990 then the load can be considered to represent a low risk of asbestos contamination and managed as outlined in the following section. Where the waste originates from a building constructed before 1990 or there is uncertainty over this issue, the risks associated with asbestos in the load must be established in line with the Risk Classification Matrix below.

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Loads classified as "low risk", must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified.

If suspect fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as "high risk" and continue to be processed in accordance with the high risk procedure below. Where the visual inspection confirms that the



load is clear of suspect ACM, FA and AF, the load may then be added to the waste stockpiles awaiting further processing eg crushing and screening.

High risk load procedure

Loads classified as "high risk" must be unloaded and spread over a sufficiently large area to enable a comprehensive visual inspection of all sides of the material to be undertaken. One method of achieving this is to spread the material to a depth of less than 30cm and to turn over the material with the use of an excavator or similar. Where appropriate, larger sections of concrete should be inverted to permit a visual check for embedded or underlying asbestos product debris.

If suspect FA or AF are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, and redirected to an appropriately authorised disposal facility.

Where suspect ACM is identified within a load and is not capable of being easily removed by hand, the load must be rejected and should be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, and redirected to an appropriately authorised disposal facility.

Where suspected ACM fragments capable of being easily removed by hand are identified in a load, the suspect ACM must be removed from the load and either:

1. Appropriately isolated and covered for asbestos testing. If testing of representative samples confirms the material is ACM it must be redirected to an appropriately authorised disposal facility. If testing confirms the material is not ACM the waste can be added to the stockpile awaiting further processing; or
2. Assumed to be ACM and redirected to an appropriately authorised disposal facility.

All suspected or assumed ACM must be segregated. Material must be clearly labelled, kept secure and sufficiently contained to prevent the release of asbestos including wind blown fibres.

Once all suspected or assumed ACM has been removed from a load in line with the above procedure the residual waste can be added to the stockpile awaiting further processing.

Records must be kept to ensure that the process from receipt of C&D material to the completion of the unloading procedure is auditable and that any loads found to contain suspect asbestos can be traced back to the customer and originating site. Through Part V licence conditions, DEC will require records of loads found to contain asbestos and action taken by the C&D recycler to address this issue with the customer, to be submitted on a regular basis. DEC will take follow up action with customers delivering asbestos containing waste to the premises as necessary.



Attachment 3: Section 4.3 of DER Asbestos Guidelines (page 15 - 20)

4 Monitoring and Testing

Monitoring must be undertaken to confirm that risk management measures are effectively meeting their objectives. This shall include qualitative and quantitative monitoring and product testing.

4.1 Qualitative monitoring

Site operatives must undertake visual inspections whilst the facility is operational to ensure that fugitive emissions of dust are being adequately controlled and are not being carried outside of the premises. Where fugitive dust releases are identified their source must be investigated and all reasonable and practicable measures implemented to prevent or minimise the release.

Where risk management measures are ineffective or likely to be ineffective at preventing visible dust crossing the site boundary, for example during adverse weather conditions, waste processing activities must cease until additional measures have been put in place to prevent the discharge or until the adverse weather conditions have passed.

4.2 Quantitative environmental monitoring

On some sites it may be necessary for ambient dust or asbestos fibre air monitoring to be undertaken to provide further confidence in risk management measures. Such monitoring may be required where recycling sites are located in close proximity to sensitive receptors, are within a relevant Environmental Protection Policy area or have a poor compliance history relating to fugitive dust control. Where quantitative dust monitoring is not proposed, the proponent/operator must provide a risk based justification as to why it is not considered necessary at their premises.

Dust monitoring provides a useful surrogate measure to evaluate the potential generation and distribution of airborne dust and asbestos fibres and will normally be sufficient on most sites. Dust monitoring equipment must demonstrate that dust levels are kept as low as reasonably possible. Tapered Element Oscillating Microbalance (TEOM) (or equivalent) equipment is preferred to provide continuous and accurate perimeter air monitoring for community protection. Any site perimeter monitoring for this purpose should be conducted to ensure compliance with the National Environmental Protection Measure (NEPM) ambient air 24 hour PM_{10} goal of $50 \mu g/m^3$.

Where air quality monitoring is required, an air quality monitoring and reporting strategy must be developed by a person suitably experienced in dust/asbestos sampling and exposure assessment and any associated analysis be undertaken by a laboratory accredited by NATA for this purpose.

4.3 Product testing and supply

To ensure that recycled products have been produced to the required specification in relation to asbestos content it is necessary for product testing to be undertaken. The testing procedures detailed in this section have application for the three main recycled products:

1. Recycled drainage rock 20-27mm;



2. Recycled sand, screened to <10mm; and
3. Recycled road-base, <19mm.

The testing must be documented as outlined under Section 5.3.

Product specification

To ensure the health of those using or coming into contact with recycled C&D products is protected, the asbestos content (in any form) of any recycled products must not exceed 0.001% asbestos weight for weight (w/w).

Inspection and sampling requirements

All types of recycled product must be inspected and/or sampled and tested for ACM, FA and AF, as outlined below. Inspections and sampling may be undertaken by staff employed by the licensee as long as they have received the required asbestos training for operational staff set out in section 5.2.

ACM and FA are subject to visual inspection and sampling procedures since they are larger in size (>7mm) and AF (<7mm) is assessed by submitting samples for laboratory analysis.

Recycled products may be sampled from conveyors or stockpiles. Whichever approach is adopted, the operator will need to ensure that they have appropriate systems in place to allow them to identify where in the product stockpiles each sample is from to allow further testing or separation to occur if required.

Stockpile inspection and sampling

In the case of recycled drainage rock and recycled road-base a visual inspection should be undertaken in a systematic grid fashion over the any new stockpile material to identify any suspect asbestos material.

No sampling is required for recycled drainage rock, other than to determine by laboratory analysis if necessary whether a suspect fragment is asbestos.

For recycled road-base and screened sand, sampling is necessary and must be spread evenly over the whole stockpile surface or samples may be taken at regular intervals (as per conveyor sampling) during construction of the stockpile. Suspect asbestos material or areas must be targeted for sampling.

Sampling of road base and screened sand products must occur at a minimum rate of 40 locations per 4000 tonnes or 14 samples per 1000m³ of product.

Conveyor sampling

Sampling of road base and screened sand products must occur at a minimum rate of 1 sample per 70m³ of a product output. Suspect asbestos material or areas must be targeted for sampling.



Sample treatment

Each sample collected must be at least 10 litres in volume and then be divided into 2 size fractions (>7mm and <7mm) in the field by sieving through a 7mm screen or spread out for inspection on a contrasting colour fabric. The >7mm fraction should be examined for any suspect asbestos material and this be retained to calculate the level of contamination.

The <7mm fraction will need to be a minimum 500 ml, be wetted, and submitted for laboratory analysis. This sample size is considered necessary to improve the limit of detection for asbestos in the analysis procedure.

Reduced Sampling Criteria

Once premises have demonstrated that their procedures are able to consistently produce recycled product that meets the product specification and undertake their activities to a high standard, DEC may authorise a reduced product testing rate including down to 5 locations per 4000 tonnes (1 sample per 600m³) of product.

The criteria that DEC will use to consider and determine a reduction in product sampling frequency are:

1. Activities at the premises have been validated through a DEC inspection or audit to comply with these guidelines;
2. DEC has confirmed through an inspection or audit that the conditions of the Part V licence are being met;
3. DEC has not undertaken any enforcement action in relation to the activities at the premises in the last 6 months;
4. Product testing has demonstrated that the product specification has been consistently achieved at the premises for a continuous 6 month period;
5. The presence of mitigating factors such as best practice management measures, high control of source material or use of the product for low risk purposes;
6. The quantity of waste processed in the last 6 months and the different sources/types of material processed at the premises; and
7. DoH has agreed to the reduction in product sampling rate at the premises.

All requests for a reduced product sampling rate must be submitted in writing to the relevant DEC Industry Regulation Regional Leader for the Premises, details of which can be found in the interpretation section of the Part V licence for the Premises.

DEC will refer all requests to the DoH and operators must ensure that all requests include sufficient evidence, particularly in relation to product testing, to support compliance with the above criteria.

Proponents should note however, that despite a premises meeting the above reduced sampling criteria, there may be occasions where a reduced sampling rate is not approved by DEC. This



may occur for example where the site is close to sensitive receptors, contentious and/or there is a need to provide public confidence in the activities at the site.

Where a reduced sampling rate is approved at a premises, DEC will provide written notification of the approval and will continue to closely monitor that premises to ensure it remains compliant with the reduced sampling criteria. DEC's monitoring of the premises will be further supported by the annual process audits required by section 5.1 and the results of the product sampling.

DEC will withdraw the approval to implement a reduced sampling frequency where the reduced sampling criteria are not being met on an on-going basis. Where DEC withdraws approval for a reduced sampling frequency, proponents will be provided with the reasons for the withdrawal.

In the event that approval for a reduced sampling rate is withdrawn by DEC, proponents will be required to make a new reduced sampling frequency request and demonstrate that they have:

1. Implemented appropriate measures to prevent a re-occurrence of the non-compliance that caused the previous agreement for a reduced sampling frequency to be withdrawn; and that
2. The product specification (sampled at the 40 samples per 4000 tonnes rate) has been consistently met for a 6 month period following the implementation of the measures identified in 1. above.

Sample Analysis Method

>7mm sample fractions

Asbestos concentrations (ACM and FA) should be calculated in accordance with the methods detailed in section 4.1.7 of Department of Health (DoH), 2009, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. As detailed in the DoH Guidelines, averaging asbestos levels across the stockpile is not appropriate and asbestos levels within each sample should be reported.

<7mm sample fractions

Each <7mm sample fraction must be analysed for FA and AF.

Asbestos analysis must be undertaken by an independent NATA certified laboratory and comply with Australian *Standard Method for the Qualitative Identification of asbestos in bulk samples* (AS4964-2004) or be demonstrated to be able to achieve the equivalent level of results to this Australian Standard.

AS4964-2004 is currently the only method in Australia that has NATA certification, however the practicable level of detection for this standard polarized light microscopy method (PLM) and dispersion staining (DS) is 0.01%w/w. It is possible however, to measure asbestos contamination at or lower than 0.001%w/w where an increased sample size used, however DEC recognises that any reporting of concentrations below 0.01%w/w will be outside the conditions set by NATA.



Therefore, to determine whether recycled products meet the product specification for asbestos content, samples must be a minimum of 500mL in size. Proponents must adopt one of the following analytical approaches:

1. Detected/non-detected – where any quantity of asbestos is detected by the PLM method it must be assumed, without further analysis, to be in concentrations above the product specification limit of 0.001%w/w. A weight of evidence approach may be adopted i.e. the frequency and occurrence of other positive results in the stockpile can be taken into account, to determine whether the stockpile being assessed is considered to meet the product specification or not; or
2. Where any quantity of asbestos is detected by the PLM method, the sample is subject to further testing in the form of a semi-quantitative method with a lower level of detection for asbestos. A number of laboratories have developed such semi-quantitative methods for the analysis of low levels of asbestos. Techniques include:
 - The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
 - Measuring the width and length (ie volume) of individual fibre by Phase Contrast Microscopy (PCM) and calculating the weight of fibres in the extracted sub-sample.

The use of either of these methods is considered acceptable to DEC.

Whatever analysis methods are adopted by an operator, DEC expects a number of assessment based statements to be included in all laboratory analytical reports. These include:

- Details of the sample size;
- A Statement of Limit of Detection of the analysis;
- Results in relation to asbestos detected or not – note that AS4964-2004 allows for a nil detection if the asbestos is less than a certain concentration and is non-respirable however DEC would consider a positive result to exceed the 0.001% w/w limit;
- Description of any asbestos detected; and
- Estimate of the concentration of asbestos detected if practical to do so.

Interpreting Inspection and Sampling Results

If the visual inspection, sieve sample or analytical results identify asbestos above or possibly above the 0.001%w/w criteria then that stockpile or product process should be deemed potentially contaminated and considered for off-site disposal as asbestos waste, or subject to further actions to remediate it or to demonstrate its acceptability by further assessment. A record should be made of the decision making and action taken eg off-site disposal, further assessment undertaken etc, in relation to that stockpile.

In addition to the above, where asbestos is identified above or possibly above the 0.001%w/w criteria, an investigation into the likely cause for the presence of asbestos in the product should be undertaken and measures implemented to prevent a reoccurrence. A record of the



investigation and its findings together with the details of any preventative measures implemented at the site should be made.

As a guide, in the case of recycled drainage rock identification of a piece of ACM or FA per 10m² of surface would be deemed to exceed the specification for that area, and for the whole stockpile if repeated in 2 or more other separate areas. A single fragment exceedance can be considered an isolated occurrence in the absence of other contamination evidence and the stockpile allowed for beneficial use. If there is multiple contamination only of a localised area then that area can be excavated to the extent of any visible asbestos and then the remainder of the stockpile considered to be suitable for use.

For laboratory analysis it is important that each result be considered on its own merits in regard to the asbestos control specification and that there is no averaging across samples. In the case of a single exceedance at a level less than 0.01% w/w, the stockpile (nominally 4000 tonnes) may not be deemed contaminated if repeat samples of immediately adjacent areas do not demonstrate specification exceedances.

The same approach as indicated in the preceding paragraph can be applied to the results of the >7mm sieve sampling in regard to the recycled sand material and roadbase. In this case a 1cm³ fragment of ACM or FA would be deemed to exceed the specification for a 10L sample.

It should be noted that specification exceedances in regard to different assessment methods for the same type of stockpile should not be viewed in isolation from each other.

Product Supply

Recycled products should only be supplied to customers from stockpiles that have been sampled and tested in accordance with section 4.3 and shown to conform to the product specification.



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1 Purpose of this Document

This Decision Document explains how the Chief Executive Officer's (CEO) Delegate has assessed and determined the application and provides a record of the CEO Delegate's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to the CEO Delegate'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	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>64 – Class II Putrescible landfill site</td> <td>16,400 tonnes per annual period</td> </tr> <tr> <td>62 – Solid waste depot</td> <td>3,100 tonnes per annual period</td> </tr> <tr> <td>61 – Liquid waste facility</td> <td>1,478 tonnes per annual period</td> </tr> <tr> <td>57 – Used tyre storage</td> <td>1,000 at any one time</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	64 – Class II Putrescible landfill site	16,400 tonnes per annual period	62 – Solid waste depot	3,100 tonnes per annual period	61 – Liquid waste facility	1,478 tonnes per annual period	57 – Used tyre storage	1,000 at any one time
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	64 – Class II Putrescible landfill site	16,400 tonnes per annual period									
	62 – Solid waste depot	3,100 tonnes per annual period									
	61 – Liquid waste facility	1,478 tonnes per annual period									
57 – Used tyre storage	1,000 at any one time										
Application verified	Date: (Invoice sent 17 October 2016)										
Application fee paid	Date: 22/11/2016										
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	N/A										
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 <input type="checkbox"/> No <input checked="" type="checkbox"/>											
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>											



3 Executive summary of proposal and assessment

The Licensee has applied for an amendment for the inclusion of Category 62 – Solid waste depot on the Licence to recycle the following waste types that are currently approved for disposal at the premises under Licence L7065/1997/11:

- Green waste: to be stored for shredding/ chipping and reuse offsite.
- Discarded vehicles: to be stored for later disposal through a recycle company when volumes are sufficiently adequate to be feasible for collection.
- Paper, cardboard, recyclable plastics: these waste types will be shredded and baled for reuse offsite to a recycle company. Recycled product will be stored within an enclosed shed within the premises;
- C&D waste: includes concrete, brick, metal, treated timber (masonry waste) and/ or road base to be crushed for reuse offsite.

The premises receives waste from the extended regional area to assist in the management of waste generated in smaller regional areas. The Licensee proposes to reuse specific waste types at the landfill as a means of reducing the volume of waste buried for final disposal. The amended licence allow for the options of both trench burial disposal of waste types received and recycling/reuse of specified/ permitted waste types at the landfill.

Location and siting

The Brown Range Waste Management Facility is located on Lot 1210 on Plan 183666 and Lot 541 on Plan 69587, via Speedway Road, Brown Range, Carnarvon.

The landfill has been developed within an area zoned 'residential' under Carnarvon Town Planning Scheme No. 10 which has not been developed for residential purposes. The landfill is approximately 1.4 km from the nearest current residence. The Shire of Carnarvon have advised DER that the current zoning of the landfill and surrounds is a legacy issue expected to be resolved with the establishment of appropriate buffers under the upcoming Carnarvon Town Planning Scheme No. 13. A power station exists approximately 370 m west of the new premises boundary.

A desktop assessment of groundwater within the area (Groundwater bore Site Id. 7045), approximately 1.75 km north of the premises, shows standing water level at approximately 6.65m. The Total Dissolved Solids from the monitoring bores ('north' and 'south') varies between approximately 1,300-5,800 mg/L (brackish to moderately saline). Groundwater in the area forms part of the Gascoyne River Basin catchment. The desktop assessment identified a 'minor river' water catchment area within the premises (Nicol Bay). No surface water has been observed within or adjacent to the premises.

The closest receptor is the Mungullah Power Station (R2385/2014/1), which is approximately 370 m west of the premises and the closest sensitive residential receptor is approximately 1.4 km north of the premises. The premises does not adjoin onto any other activity or sensitive receptor and is considered isolated.

In August 2004, a licence compliance inspection revealed that landfill operations were being conducted outside of the defined premises boundary. As a result, negotiations with Department of Lands were initiated to extend the premises boundary to assist with additional land area required for the Shire landfill operation. Lot 541 on Plan 69587 has been incorporated into the premises boundary, as confirmed by the Shire on 3 February 2016.

Primary activities

The premises is owned and managed by the Shire of Carnarvon which operates a Class II putrescible landfill, a liquid waste facility and the storage of used tyres for reuse. The landfill currently operates Categories 64 (Class II Putrescible landfill), 61 (Liquid waste facility) and 57 (Used tyre storage).



The waste types to be recycled will be processed through the use of crushing, shredding, chipping and baling plants (fixtures) to be located within the premises boundary and operated on an 'ad hoc' basis by Shire staff, depending on supply of waste received and the demand for recycled product. The fixtures will be located away from the general public access areas of the landfill, and operated under specific wind conditions.

Contributory activities

The proponent has advised that construction and demolition waste (C&D waste) will be crushed for recycling onsite, but that volumes will be significantly under the 1,000 tonne per year threshold for Category 13 (Crushing of building material). The Delegated Officer considers that the emissions from this activity will contribute to existing emissions from licensed operations (primarily dust and noise) and has therefore assessed it as a contributory activity in accordance with DER's *Guidance Statement: Licensing and Works Approval Processes*.

Potential emissions

The main potential emissions from the premises includes fugitive emissions in the form of dust, odour and windblown waste as well as leachate.

As a result of the proposed recycling activities under Category 62, noise emission risk is considered to increase at the premises. No noise modelling or assessment has been submitted with the application for consideration, however process limits/ specifications have been incorporated into the Licence to address potential noise emission risks.

The Decision Document includes a full assessment of all potential emissions and discharges from the premises current operation and proposed activities.

Consultation

The Shire of Carnarvon has not submitted any information in relation to any consultation undertaken with potential interested or affected parties as a result of the proposed changes to the operation of the landfill. The proposed activities are not considered to trigger any requirements for consultation with either Department of Water or Department of Health.



4 Decision table

The overarching legislative framework of this assessment is the *Environmental Protection Act 1986* (EP Act) and the *Environmental Protection Regulations 1987* (EP Regulations). DER Guidance Statements which inform the assessment in accordance with the legislation include:

- DER Guidance Statement: Regulatory Principles (July 2015)*
- DER Guidance Statement: Setting Conditions (October 2015)*
- DER Guidance Statement: Licence and works approvals process (September 2015)*
- DER Guidance Statement: Setting Conditions (October 2015)*
- DER Guidance Statement: Land Use Planning (October 2015)*
- DER Guidance Statement: Licence Duration (November 2015)*

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 L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Front page	-	An application for a licence amendment under Section 59 of the <i>Environmental Protection Act 1986</i> was received by DER on 16 September 2016, for the inclusion of Category 62 within the premises Licence L7065/1997/11. The prescribed premises category table has been updated to include Category 62 – Solid waste depot with a maximum annual throughput capacity of 3,100 tonnes per year.	Application supporting documentation.
Interpretation	L1.1.1-L1.1.4	Conditions 1.1.1–1.1.4 require that terminology used within the Licence is referenced to the appropriate definitions where applicable and that any reference to a standard or guideline is to the most current version of that standard or guideline. Definitions have been updated to align to the new format licence conversion undertaken through this amendment process.	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Operation is subject to the general provisions of the <i>Environmental Protection Act 1986</i> .	
General conditions	L1.2.3-L1.2.7	<p>Conditions 1.2.1 and 1.2.2 relating to application and interpretation of the Licence have been retained within the Licence as the Delegated Officer considers these conditions still relevant for the ongoing operation under the prescribed premises categories.</p> <p>Additional conditions 1.2.3 to 1.2.7 have been incorporated into the Licence regarding requirements for the installation of the fixtures and construction specifications, with the submission of a compliance report on completion of works. The installation of the fixtures is as a result of the inclusion of Category 62 – Solid waste depot for reuse of recycled permitted waste types and for the contributory activity, crushing of C&D waste.</p> <p>See Appendix 1 of the Decision Document for the risk assessment for 'Premises operation'.</p>	
Premises operation	L1.3.1 L1.3.3 L1.3.12 L2.5.1	<p>Operation See Appendix 1 of the Decision Document for the risk assessment for 'Premises operation'.</p>	<p>Application supporting documentation.</p> <p><i>Environmental Protection (Rural Landfill) Regulations 2002.</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p> <p><i>Environmental Protection</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			<i>(Controlled Waste) Regulations 2004.</i>
Monitoring general	L2.1	<p>Conditions 2.1.1 to 2.1.3 have been retained within the Licence. These conditions stipulate standards by which monitoring should be undertaken and the need for calibration of monitoring equipment and relate to monitoring undertaken within Section 2.4 'Ambient environmental quality monitoring' of the Licence. The Delegated Officer considers these conditions still relevant and appropriate regulatory controls required for the ongoing monitoring of operations at the premises under the prescribed premises categories (Pg. 1 of the Licence L7065/1997/11).</p> <p>See risk assessment under 'Ambient Environmental Quality Monitoring' of the Decision table within the Decision Document, below.</p>	
Monitoring of inputs and outputs	L2.2.1	<p>Condition 2.2.1, which requires the ongoing monitoring of waste type volumes received or leaving/ rejected from the premises, has been retained within the Licence. The Delegated Officer considers this condition to be a relevant and appropriate regulatory control required for the determination and demonstration of compliance. (Pg. 1 of the Licence L7065/1997/11).</p>	
Process monitoring	L2.3.1-L2.3.11	<p><u>Emission Description</u></p> <p><i>Emission:</i> Asbestos particulate emissions as a result of the crushing and processing of C&D waste.</p> <p><i>Impact:</i> Dust emissions that may contain asbestos particulates as a result of processing C&D waste which may cause interference with the health and welfare of surrounding localised area, or further afield through the reuse of asbestos contaminated recycled C&D material outside of the premises boundary. Potential contamination of surrounding land/ air from accidental asbestos release via C&D waste recycling.</p> <p><i>Controls:</i> The premises is isolated and the Shire propose to operate the mobile plant</p>	<p>Guidelines for managing asbestos at construction and demolition waste recycling facilities.</p> <p>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, Department of Health,</p>



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>equipment on an ad-hoc basis during daytime working hours.</p> <p>These activities are expected to cause intermittent, low intensity, localised dust dispersal around the premises.</p> <p>The premises is isolated and has no sensitive receptors adjacent to or in close proximity to the landfill. The closest occupied commercial receptor is the power station which is approximately 370 m west of the premises, and the closest occupied sensitive residential receptor is approximately 1.4 km north of the premises. However, the landfill is located within a 'residential' zoned area, as defined within Town Planning Scheme No. 10, and residential development is currently possible up to the landfill boundary as no buffer exists between the 'residential' zoned area and the landfill boundary. In addition, an area of land approximately 293 m north west of the landfill has been designated as a 'public purpose – school site'.</p> <p>No complaints of dust have been received historically as a result of the premises operations.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Medium</p> <p><u>Regulatory Controls</u> Additional controls have been included within the Licence to manage the additional processing of C&D waste type at the premises as a result of the inclusion of Category 62 within the Licence.</p> <p>Condition 1.3.3, Table 1.3.2, 'Waste processing' 4) 'Special Waste Type 1' process limits/ specification details have been updated as follows:</p>	2009.



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul style="list-style-type: none"> Inclusion of a) <i>'To be disposed of within a designated area for burial'</i>; Removal of previous b) <i>'Must comply with Asbestos Management Plan for the premises'</i> as the Delegated Officer does not consider it appropriate to require compliance with the entirety of external guideline documents. The Delegated Officer considers the requirements within Condition 1.3.3 are adequate for managing the risks associated with the disposal of known asbestos waste and are consistent with controls on similar sites. <p>Additional condition 1.3.12 defines asbestos contamination limits for use when testing any recycled product generated from C&D waste. This condition will assist in reducing the potential for asbestos contamination offsite through the use of recycled C&D waste. Additional conditions supporting improved management of Asbestos from recycled C&D waste has been further defined within section 2.3 'Process monitoring'.</p> <p>Conditions 2.3.1 – 2.3.10 and Condition 1.3.12 are derived from DER asbestos guidelines (Attachments 1-3 of the Licence) and relate directly to the management and processing of C&D waste and the management of potential asbestos contamination. These conditions are considered necessary by the Delegated Officer to mitigate risks to public health from exposure to airborne asbestos fibres.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Medium</p>	
Ambient environmental quality monitoring	L2.4.1 L2.4.2	See Appendix 2 of the Decision Document for the risk assessment for 'Ambient environmental quality monitoring'.	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Odour emissions	-	<p><u>Emission Description</u></p> <p><i>Emission:</i> Odour emissions from landfilling operations through the additional handling of waste types received to the premises.</p> <p><i>Impact:</i> Nuisance odour emissions, interference with the health and welfare of surrounding communities.</p> <p><i>Controls:</i> The proponent compacts and covers waste received daily. The Shire has a complaints management system in place for the effective reporting and recording of issues related to the operation of the premises which assists in continuous improvement and management of the premises operation. No additional volumes of waste are being received to the premises as a result of the additional category 62 inclusion.</p> <p>DER has no record of odour complaints for the premises.</p> <p>The careful reuse of certain waste streams (green waste and inert type 1 and 2) has been proposed which will reduce waste volumes at the premises, and assist in supplying a useful source of materials for reuse within the Shire.</p> <p>The premises is isolated and has no sensitive receptors adjacent to or in close proximity to the landfill. The closest occupied commercial receptor is the power station which is approximately 370 m west of the premises, and the closest occupied sensitive residential receptor is approximately 1.4 km north of the premises. However, the landfill is located within a 'residential' zoned area, as defined within Town Planning Scheme No. 10, and residential development is currently possible up to the landfill boundary as no buffer exists between the 'residential' zoned area and the landfill boundary. In addition, an area of land approximately 293 m north west of the landfill has been designated as a 'public purpose – school site'. The Shire has confirmed (email, Robert Pringle – Planning Officer, Shire of Carnarvon, 18/11/2016) that the zoning of the landfill and potential separation distances may be considered within the finalisation of Local Planning Scheme 13 which is currently being</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>undertaken.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Slight <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> No additional regulatory controls have been proposed through this amendment process.</p> <p>The Delegated Officer considers that:</p> <ul style="list-style-type: none"> the additional handling of permitted waste types at the premises includes waste streams of a low odour generating potential (green waste, plastics, metal, timber, brick, road base, concrete, cardboard and paper); and low risk odour emissions are able to be adequately managed through section 49 of the <i>Environmental Protection Act 1986</i>. <p><u>Residual Risk</u> <i>Consequence:</i> Slight <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Noise emissions	L1.3.3 L1.3.3	<p><u>Emission Description</u> <i>Emission:</i> Noise emissions from the operation of mobile crushing, shredding/ chipping and baling plants used for the recycling of Putrescible (Green waste) and Inert Waste Type 1 & 2. <i>Impact:</i> Interference with the health and welfare of surrounding communities. <i>Controls:</i> The Shire has a complaints management system in place for the effective</p>	<i>Environmental Protection (Noise) Regulations 1997.</i>



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>reporting and recording of issues related to the operation of the premises which assists in continuous improvement and management of the premises operation.</p> <p>The premises is isolated and has no sensitive receptors adjacent to or in close proximity to the landfill. The closest occupied commercial receptor is the power station which is approximately 370 m west of the premises, and the closest occupied sensitive residential receptor is approximately 1.4 km north of the premises. However, the landfill is located within a 'residential' zoned area, as defined within Town Planning Scheme No. 10, and residential development is currently possible up to the landfill boundary as no buffer exists between the 'residential' zoned area and the landfill boundary. In addition, an area of land approximately 293 m north west of the landfill has been designated as a 'public purpose – school site'. The Shire has confirmed (email, Robert Pringle – Planning Officer, Shire of Carnarvon, 18/11/2016) that the zoning of the landfill and potential separation distances may be considered within the finalisation of Local Planning Scheme No. 13 which is currently being undertaken.</p> <p>The premises is located in a very low density, rural setting on the outskirts of the town of Carnarvon, and is considered isolated with no sensitive receptors adjacent to or in close proximity to the landfill.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Medium</p> <p><u>Regulatory Controls</u> Additional condition 1.3.3, Table 1.3.2, 1)(n) requires the management of noise emissions at the premises as a result of additional equipment used for the crushing, shredding/ chipping and baling of recycled waste types. Additional noise control</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>measures required by the Licensee include:</p> <p>(n) <i>The crushing, shredding, chipping, or baling of any permitted waste type must only occur as follows:</i></p> <p>(i) <i>Monday to Friday;</i></p> <p>(ii) <i>Between the hours of 7am to 5pm;</i></p> <p>(iii) <i>By trained staff;</i></p> <p>(iv) <i>Only one mobile plant in operation at any given time;</i></p> <p>(v) <i>Compliance to the Environmental Protection (Noise) Regulations 1997.</i></p> <p>The Licence has limited the number of fixtures in operation at any given time, the hours of operation and monitoring of wind direction and speed to assist in the management of noise emissions from activities at the premises. The noise impact of the fixtures, although considered low (with the implementation of the mitigation measures proposed and distance to occupied residential sensitive receptors) through the additional conditions, is still unknown.</p> <p>The Delegated Officer considers the additional regulatory controls appropriate to assist in mitigating the potential risk of noise from the operation of the fixtures as:</p> <ul style="list-style-type: none"> • The Shire of Carnarvon does not have a designated buffer/ separation distance stipulated around the landfill within the current Local Planning Scheme or the Town Planning Scheme No. 10; • The landfill is also located within a 'residential' zoned area; and • The landfill is located within a generally highly windy area with little protection from environmental factors. <p><u>Residual Risk</u> <i>Consequence:</i> Slight <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Improvements	L3.1.1	<p>Improvement conditions 'IR1-IR3' have been removed from the Licence as the Licensee has submitted the required plans as follows:</p> <ul style="list-style-type: none"> Condition 'IR1' removed: <i>"The Licensee shall submit to the CEO a 'Fire Management Plan' for the premises that defines, but is not limited to:</i> <ul style="list-style-type: none"> <i>Identification of appropriate fire fighting equipment that is available or stored on-site for controlling and/ or abating a fire at the premises;</i> <i>Identification of each persons roles and responsibilities for the prevention and management of any fire that occurs; and</i> <i>Identification of any memorandum of understandings that may be in place for the facilitation of the above procedures or protocols;</i> <p><i>The plan shall be implemented by the Licensee following submission."</i></p> <p>The Licensee submitted the Fire Management Plan to DER on 10 August 2016 (DER Reference A1146184).</p> Condition 'IR2' removed: <i>"The Licensee shall prepare and submit to the CEO an Asbestos Management Plan (AMP). As a minimum the AMP shall include:</i> <ul style="list-style-type: none"> <i>Standard operational procedures (SOP's) for the pre-acceptance and acceptance of waste and how any asbestos detected on site will be managed; and</i> <i>Identification of each person's roles and responsibilities under the AMP; and</i> <i>Premises map defining asbestos burial area; and</i> <i>Procedures for detailing incidents or emergencies associated with asbestos</i> 	<p>Australian Standard AS/NZS 5667.11 – Water Quality – Sampling – Guidance on the sampling of groundwaters.</p>



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>that are consistent with the DER Asbestos Guidelines.”</i></p> <p>and</p> <ul style="list-style-type: none"> Condition ‘IR3’ removed: <p><i>“The Licensee shall comply with the AMP.”</i></p> <p>The Licensee submitted the Asbestos Management Plan to DER on 13 October 2016 for implementation at the premises (DER Reference A1178127).</p> <p>Improvement condition ‘IR4’ has been renamed ‘IR1’ and is overdue. The Licensee is still required to fulfil this requirement. Groundwater directional flow and the placement of the groundwater monitoring bores in appropriate locations to assess potential impacts to groundwater from the landfill, is required.</p>	
Information	L4.1.2 L4.2.1 L4.3.1	<p>Condition 4.1.2 has had an administrative change to update the wording of the condition. The context of the condition remains the same as per the previous version of the condition.</p> <p>Conditions 4.1.3 and 4.1.4 have been retained within the Licence as the Delegated Officer considers these conditions still relevant and appropriate regulatory controls required for the ongoing operation of the prescribed premises categories. Condition 4.1.3 requires the management of a complaints management system for the premises. Condition 4.1.4 requires the maintenance of a register for the recording of all special waste type 1 & 2 disposed of at the premises.</p> <p>Condition 4.2.1, Table 4.2.1, has had an administrative change with the inclusion of additional reporting requirements in relation to the additional conditions 2.3 and 2.5</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>included within this amendment process.</p> <p>Condition 4.2.2 has been retained within the Licence as the Delegated Officer considers this condition still a relevant and appropriate regulatory control required for the ongoing operation of the prescribed premises categories. The condition requires the non-annual reporting of any unauthorised fire occurring at the premises.</p> <p>Condition 4.3.1 includes an additional notification requirement for the exceedences of any descriptive or numerical limit defined within the licence in relation to conditions 1.2.1 and 1.3.12.</p>	
Schedule 2	-	<p>An administrative change has been undertaken with the removal of the AACR template. The required AACR form has been updated and is now accessed online. The Licensee is able to utilise the form template for the Compliance report as per DER website www.der.wa.gov.au.</p> <p>Schedule 2 now contains only the template for notification requirements under Form 'N1'.</p>	
Licence Duration	N/A	<p>The Licence duration has not been amended as part of this amendment process. The expiry date is currently set at 18/11/2034.</p> <p>There are no known significant concerns or issues that would require an amendment to the Licence duration for the premises.</p>	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
25/11/2016	Draft application sent to Shire for comment	<p>Four comments were received back from Alan Hobbs (Environmental Health Officer) via email on 14/12/2016, included:</p> <p>BROWN RANGE.</p> <ol style="list-style-type: none"> 1. Delete all references to 'mobile' because funding requirements are for fixtures only. 2. Table 1.3.2 (7) Putrescible (b) *** Delete; because we will not be storing putrescible for Storing/sorting. 3. Attachment 1: Section 3.3, DER Asbestos Guidelines Acceptance procedures: All persons bringing C&D or mixed waste for recycling will be required to sign a 'declaration' (sample below) stating that the waste is free from products that contain asbestos. If a declaration is refused or not completed the waste will be classified as 'containing asbestos,' and processed accordingly. <p>Therefore the following items would not be applicable :-</p> <ul style="list-style-type: none"> • 1.3.12 & Table 1.3.5; 2.3.8, 2.3.9, 2.3.10, & 2.3.11 <ol style="list-style-type: none"> 4. Table 4.2.1 ...Delete Item 2.5 because this item is not included in the Licence Conditions. 	<p>Steve Checker, Manager Licensing (Waste Industries) contacted Alan Hobbs via telephone and confirmed the following responses to each comment:</p> <ol style="list-style-type: none"> 1. The word "mobile" has been changed to "fixtures"; 2. Table 1.3.2: No change. This condition allows for the interim, short term storage of the recycled material until removed off site for reuse/ recycling by the Shire; 3. No change. The responsibility to manage potential asbestos risk is required by the Shire as defined within the additional conditions. Any receipt of C&D waste to a prescribed premises is required to comply with these requirements through on site management processes. 4. Row deleted for item 2.5 – typographical error.



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



Appendix 1

The risk assessment for Section 1.3 'Premises operation' of the Licence, and as defined in the Decision table above, is included below:

Emission Description

Emission: Fugitive emissions (dust and odour) and windblown waste from landfilling operations. Dust emissions from soil disturbance from the construction of new cells or operations (crushing, baling or shredding/ chipping) is expected to cause intermittent, low intensity, localised dust dispersal around the premises.

Impact: Nuisance dust and odour emissions, and interference with the health and amenity of surrounding communities. Contamination of surrounding land. Potential impacts on the surrounding ecology/ flora.

Controls: The proponent compacts and covers waste received daily. Weekly waste collection is undertaken for windblown waste and returned to the tipping area for compaction and disposal. The Shire has a complaints management system in place for the reporting and recording of issues related to the operation of the premises which assists in continuous improvement and management of the premises operation. The fixtures will be housed within a shed when not in use and only operated intermittently when sufficient supplies have been stockpiled.

The premises is isolated and has no sensitive receptors adjacent to or in close proximity to the landfill. The closest occupied commercial receptor is the power station which is approximately 370 m west of the premises, and the closest occupied sensitive residential receptor is approximately 1.4 km north of the premises. However, the landfill is located within a 'residential' zoned area, as defined within Town Planning Scheme No. 10, and residential development is currently possible up to the landfill boundary as no buffer exists between the 'residential' zoned area and the landfill boundary. In addition, an area of land approximately 293 m North West of the landfill has been designated as a 'public purpose – school site'. The Shire has confirmed (email, Robert Pringle – Planning Officer, Shire of Carnarvon, 18/11/2016) that the zoning of the landfill and potential separation distances may be considered within the finalisation of Local Planning Scheme 13 which is currently being undertaken.

Assessment of DER's Incident and Complaints Management System (ICMS) identified that no complaints of dust or odour have historically been received for the premises.

Risk Assessment

Consequence: Moderate

Likelihood: Possible

Risk Rating: Medium

Regulatory Controls

Additional conditions have been included within the Licence to assist in appropriate regulatory controls for the recycling of permitted waste types through the use of mobile crushing, baling and/ or shredding/ chipping at the premises:

Conditions 1.2.3 to 1.2.7 have been included within the Licence to define the works specifications in relation to the installation of the fixtures for recycling of permitted waste types. On completion of installation, the Licensee is required to submit a compliance report confirming that all specifications have been incorporated into the operational systems at the premises, prior to operation.

Condition 1.3.1, Table 1.3.1, 'Waste acceptance' for 'Inert Waste Type 1' has been amended to include additional specifications to define the specific types of inert waste permitted to the premises.



Condition 1.3.3, Table 1.3.2, 'Waste processing' 1) 'all waste types' has been amended to remove process limit/ specification, as follows:

"(b) Waste is placed in a defined trench for burial or within an area enclosed by earthen bunds."

The inclusion of Category 62 permits the recycling of specific waste types received to the landfill as defined within Table 1.3.1 of the Licence. Each permitted waste type process limit/ specifications have been modified to better reflect the activities being undertaken at the premises as a result of the ability to now recycle wastes. The requirement therefore to bury all waste within trenches is not appropriate.

Condition 1.3.3, Table 1.3.2, 'Waste processing' now includes additional process limits/ specifications as follows:

- 1) 'All waste types' (j) – (n): allows for the use of fixtures for the purposes of crushing, shredding/ chipping or baling for specific waste types. Specifications 1)(l) and 1)(m) require measures to control dust emissions through the use of screens and conveyor covers;
- 3) 'Inert Waste Type 1' (a) – (f): allows for the storage and/ or compaction of vehicle wrecks and the storage and/ or specified processing (crushing) of Inert waste type 1;
- 6) 'Inert Waste Type 2' (d): allows for specified processing (baling) for tyres and plastics;
- 7) 'Putrescible waste' (a) and (b): allows for the recycling of cardboard and paper through shredding and/ or baling activities under specified process limits;
- 8) 'Putrescible waste – green waste' (d): allows for the shredding/ chipping of green waste for reuse purposes.

The additional process limits/ specifications are in relation to the receipt, handling and storage of permitted waste types for recycling at the premises as a result of the inclusion of Category 62 into the Licence. The amendment allows for appropriate cover of buried waste within trenches and allows recycling/ reuse of permitted wastes, as defined within the application supporting documentation submitted.

Condition 1.3.4, Table 1.3.3, has been amended to define that where tyres are not utilised for recycling that they are disposed of within a trench and covered appropriately. The amendment allows for the options of both trench burial disposal and recycling/reuse at the landfill.

Conditions 1.3.5 to 1.3.11 have been retained within the Licence. The Delegated Officer considers these conditions still relevant and appropriate regulatory controls required for the ongoing operation of the premises under the prescribed premises categories (Pg. 1 of the Licence L7065/1997/11).

Previous condition 1.3.12 has been removed from the Licence:

'The Licensee shall manage the premises in accordance with the 'Waste Management Plan'.

Regulatory requirements for the landfill are primarily defined by the conditions of the Licence. The Management Plan is considered a contributory, supportive document for internal use and management by the Shire of Carnarvon.

Residual Risk

Consequence: Minor

Likelihood: Possible

Risk Rating: Medium



Appendix 2

The risk assessment for Section 2.4 'Ambient environmental quality monitoring' of the Licence, and as defined in the Decision table above, is included below:

Emission Description

Emission: Leachates discharged from the burial of waste within the landfill.

Impact: Potential contamination of groundwater. Groundwater is associated with the Gascoyne River basin catchment area and is approximately 3-6 mBGL.

Controls: The opportunity to recycle waste types from the premises will assist in reducing the volume of waste disposed of to landfill and potentially reduce leachate creation at the premises. The Licensee drilled new bores, one north and one south of the premises during 2015, however it was not determined if the bores aligned to groundwater directional flow, however results from this monitoring will show as to whether any influence towards the Gascoyne River is occurring from leachate migration from the landfill.

A desktop assessment of two groundwater monitoring bores (1.75 km north and 2 km south of the premises boundary) identified that TDS varies between 2,430 mg/L (moderately saline) and 15,000 mg/L (highly saline), respectively. The Gascoyne River is located approximately 2.8 km north of the premises boundary.

The landfill does not consist of any lined cells for solid waste disposal, with the liquid waste ponds originally clay lined for the receipt of septage and grease trap waste only.

Annual mean evaporation rate for Carnarvon is approximately 2,764 mm and annual rainfall total is approximately 226 mm.

Risk Assessment

Consequence: Moderate

Likelihood: Possible

Risk Rating: Medium

Regulatory Controls

The premises operates as a Class II unlined putrescible landfill in support of the Shire of Carnarvon and regional areas.

The Delegated Officer considers that:

- Although annual evaporation rates are more than eleven times the annual rainfall rates, which will assist in reducing mobility of leachates towards groundwater;
- The landfill soil type has been described as 'sand dunes' (Department of Agriculture, Wells *et al*, 1992) which stretches north, adjoining the Gascoyne River riparian zone; and
- Depth to groundwater is very low (approximately 3-6 mBGL).

The potential for leachate migration via the soil profile to impact groundwater exists and regulatory controls for groundwater monitoring are considered appropriate. Conditions 2.4.1 and 2.4.2 have therefore been retained within the Licence as the Delegated Officer considers these conditions still relevant and appropriate regulatory controls required for the ongoing operation of the prescribed premises categories.

Improvement condition 'IR4' has been retained within the Licence to determine groundwater directional flow at the premises, respectively.

Residual Risk

Consequence: Moderate



Likelihood: Possible

Risk Rating: Medium