Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L6772/1997/13
Licence Holder	Waste Stream Management Pty Ltd
ACN	069 513 346
File Number	DER2016/000613-1
Premises	Waste Stream Management 2 Ratcliffe Road KWINANA BEACH WA 6167 Legal description – Lot 434 on Deposited Plan 220492 Certificate of Title Volume 3114 Folio 992; Part of Lot 304 on Diagram 72808 Certificate of Title Volume 1795 Folio 919; and Lot 303 on Diagram 72808 Certificate of Title Volume 1795 Folio 918. As defined by the coordinates in Schedule 2 of the Revised Licence
Date of Report	20 September 2022
Decision	Revised licence granted

Jarrod Abrahams Digitally signed by Jarrod Abrahams Date: 2022.09.20 16:59:21 +08'00'

MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L6772/1997/13 is held by Waste Stream Management Pty Ltd (Licence Holder) for the Waste Stream Management inert landfill and recycling facility (the Premises), located at 2 Ratcliffe Road, Kwinana Beach.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L6772/1997/13 has been granted. The Revised Licence issued as a result of this amendment supersedes the existing Licence previously granted in relation to the Premises.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the Department of Water and Environmental Regulation (the department/ DWER) has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 13 January 2022, the Licence Holder submitted an application to the department to amend Licence L6772/1997/13 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The application outlines the full scope of activities currently being undertaken at the Premises. The reason for the application is to update the Premises' risk assessment and conditions in the licence to better reflect current waste acceptance and processing activities at the Premises. Submission of the amendment was requested by DWER's Compliance and Enforcement Directorate following two inspections in January and February 2021. The inspections noted the following:

- Mixed waste was being accepted at the Premises for offsite removal, contrary to authorisations under the licence;
- New crushing, shredding and screening plant was being used on the Premises which differed from that previously assessed;
- Processed fines of mixed wood and plastic waste was being stockpiled on the Premises pending final disposal to a waste to energy plant that is yet to commence operations.

As part of assessing the amendment application, DWER has aligned the format and content of the licence with the current Part V licensing approach. This will incorporate changes such as the inclusion of an infrastructure and equipment table, and the inclusion of specific management conditions in-place of references to management plans.

This amendment is limited only to updating the assessment and conditions of the licence to ensure all primary activities and their related processes have been assessed. No changes to the existing throughput and/or design capacities for the various licence categories have been requested by the Licence Holder. The amendments as they relate to the categories of the licence are shown in Table 1 below.

Table 1: L6772/1997/13 prescribed premises categories and capacities.

Category	Existing approved throughput capacity	Description of proposed amendment
13	90,000 tonnes per annual period	Inclusion of construction and demolition waste (C&D Waste) crushing and screening equipment
61A	100,000 tonnes per annual period	Processing via crushing, shredding and screening of mixed demolition waste containing inert waste with a higher proportion of timber and plastics
62	90,000 tonnes per annual period	No change
63	500,000 tonnes per annual period	No change
70	50,000 tonnes per annual period	No change

2.3 Premises summary

The Premises is located approximately 30 km south of the Perth central business district, 2.75 km northwest from the Kwinana town centre, 3.1 km from Cockburn Sound to the west, 620 m northwest from the Medina residential area and immediately adjacent to the Kwinana Motorplex. The Premises has been operating since 1997.

The Premises is approximately 29 ha in size and located on land leased from the City of Kwinana. Landfilling activities ceased on Lot 304 in 2008 which is currently being rehabilitated with vegetation (minor filling and/or capping works may be required/progressed on Lot 304 to reach final profile levels and closure requirements). Licensed activities related to Category 13 and 62 occur on the lot, however Class I Landfill activities are now restricted to Lot 434.

The primary activities on the Premises include screening of material extracted on site (Category 70), acceptance and crushing of C&D Waste (Category 13 and 62), acceptance and processing of mixed demolition waste (Category 61A), and acceptance and burial of Class I inert waste and Special Waste Type 1 by landfilling (Category 63). These activities are comprised of:

- Waste acceptance at the gatehouse and weighbridge;
- Stockpiling of mixed demolition waste for processing;
- Stockpiling of C&D waste for processing;
- Processing of C&D waste by crushing, screening and density separation to create a recycled product for sale and transport;
- Manual and mechanical sorting of mixed demolition waste;
- Processing of mixed demolition wastes by screening, crushing and shredding to create a sand product and a mixture of fine shredded plastic and timber;
- Stockpiling of shredded timber and plastic for offsite disposal to a waste to energy plant;
- Stockpiling of processed sand;
- Temporary storage of unauthorised waste for offsite removal to an appropriate facility; and
- Screening of limestone quarried onsite to create a saleable product.

The waste types authorised for acceptance at the Premises are contained in Table 2 below.

Table 2: Wastes accepted at the Premises

Waste types	Waste components
Inert Waste Type 1	– C&D Waste – Asphalt – Uncontaminated glass (as a component of mixed demolition waste loads)
Inert Waste Type 2	– Tyres (accepted incidentally) (limited to storing 99 tyres on site any one time) – Non-biodegradable plastic (as a component of mixed C&D waste loads)
Special Waste Type 1	– Asbestos – Asbestos containing materials (ACM) – Asbestos contaminated soils
Putrescible Waste	– Green Waste – Untreated or non-chemically treated timber (as a component of mixed demolition waste loads)

2.3.1 Pre-acceptance

The Licence Holder implements the following pre-acceptance procedures:

- Advising that asbestos or potentially asbestos contaminated material is only accepted for landfilling during telephone enquiries and through information included on other documentation such as price lists, brochures and the company website;
- Ensuring a “no asbestos” clause is included in any contracts with C&D Waste suppliers; and
- Installing a clearly visible sign with directions for asbestos waste acceptance at the entry to the facility (see Figure 1 below).

Figure 1: Asbestos entry signage

2.3.2 Waste acceptance

Waste loads arriving at the Premises enter via the office and weighbridge area located on Lot 303, which acts as the initial inspection and acceptance point. The company name, vehicle registration number, driver's name, waste quantity and type for each load arriving at the Premises is recorded on the site register.

For waste loads intended for recycling, the delivery driver is required to sign a declaration or provide a warranty on a load specific basis that confirms their waste is free from asbestos. If the load provider is unwilling to provide the declaration or warranty, acceptance to the Premises is refused.

Visual inspection occurs via a fixed closed-circuit television (CCTV) feed located at the weighbridge, which displays the top of the waste load. Visual inspection by the CCTV camera is only preliminary, as the entire load is not able to be viewed at this point. The load is observed to determine if any asbestos material or unauthorised wastes can be identified. Following the visual inspection, the delivery vehicle is either:

- Directed to the landfill tipping area for Special Waste Type 1 (asbestos);
- Directed to the recycling tipping area for mixed demolition waste loads that can be processed;
- Directed to the C&D Waste processing and storage area;
- For wastes unauthorised for acceptance at the Premises, the load is rejected and the driver is turned away with advice on an appropriate alternate disposal location; or
- Where asbestos material or potential asbestos material is visually identified, the load is rejected and the details of the load are recorded on a register of all rejected loads. The record includes at a minimum; the waste producer, waste carrier, registration number of the vehicle and the date of the rejection.

Figure 2: Weighbridge CCTV inspection system

Waste loads (excluding declared loads of asbestos) are classified as either low or high risk for the potential presence of asbestos, in accordance with the *Guideline: Managing asbestos at construction and demolition waste recycling facilities* (DWER 2021) and the Licence Holder's asbestos management plan.

Asbestos waste material from building remediation, construction and demolition sites and fencing contractors is accepted at the Premises for burial. Asbestos waste materials are required to be accepted in enclosed high-density polyethylene sheeting (HDPE), bins or containers, depending on the nature of the asbestos waste. Where asbestos waste material that is not appropriately enclosed or contained is delivered to the Premises, the material is wetted down and wrapped in HDPE or otherwise enclosed before acceptance.

2.3.3 Landfill operations

Post-acceptance inspection

Wastes accepted onto the Premises that are unable to be processed for later recycling or reuse are directed to the tipping area of the active Class I cell, currently located in the southeast corner of Lot 434. These wastes are primarily comprised of Special Waste Type 1 (asbestos) and only minor quantities of non-recyclable plastic waste and other inert waste. Clean Fill accepted at the Premises is set aside for use as cover material.

The Licence Holder conducts a further inspection of the waste load during the tipping process to determine if any unauthorised waste is present that was not detected during the initial inspection at the gatehouse. Where large quantities of unauthorised waste are observed in the load, the driver is directed to reload their truck to dispose of the material at an appropriate facility. If the waste is unable to be reloaded in the delivery vehicle, it is removed from the landfill by the Licence Holder for storage in a segregated non-compliant waste area. Where only minor quantities of unauthorised waste are observed in the load, this material is removed by the Licence Holder for storage in the non-compliant waste area. The daily register is updated where unauthorised wastes are encountered.

Burial process

After a waste load has been tipped, inspected and any unauthorised material has been removed, the waste is pushed and spread out over the landfill area. Heavy machinery is then tracked over the waste to compact material into the landfill. Water is sometimes added to the waste to assist in compaction and dust suppression.

Where the Licence Holder considers it required, the waste is then covered with at least 150 mm of cover material stockpiled onsite. If strong westerly wind conditions are likely to cause dust emissions from the cover material, the application of cover occurs after the wind strength has dropped, changed direction or at the end of the day. If the windy conditions remain at the end of the day, the cover material and application area are wet down.

Asbestos waste is checked and covered at least twice during operating hours, before a final check to ensure the waste is covered at the end of the day.

Type 1 Inert Waste and Clean Fill is used as cover material at the Premises and dust suppression is achieved using water carts.

2.3.4 Mixed demolition waste recycling operations

Post-acceptance inspection and stockpiling

Mixed demolition waste loads accepted through the gatehouse that can be processed for recycling are directed to the unprocessed waste stockpile located at the Mixed Waste Processing Area (Figure 3: Left Pane).

Where large quantities of unauthorised waste are observed in the load, the driver is directed to reload their truck to dispose of the material at an appropriate facility. If the waste is unable to be reloaded in the delivery vehicle, it is removed from the load by the Licence Holder to a temporary stockpile located adjacent to the tipping area and then loaded into storage containers for offsite removal (Figure 3: Right Pane). If waste material is encountered that is authorised for acceptance at the Premises but not suitable for recycling, this material is either relocated to the landfill or to storage containers for offsite removal. Once the loads have been inspected and unsuitable material is removed, the waste is pushed up into the unprocessed waste stockpile by a dozer.

Figure 3: Tipped loads for sorting (left). Un-processable waste and container (right)

Waste processing

Waste material is removed from the unprocessed waste stockpile and fed into a mobile screening unit with a 1.52 m x 4.88 m screenbox (McCloskey R155). The screen provides an initial 3-fraction separation of waste into mid and over size grades and removes the fine sand portion (Figure 4: Left Pane). The sand and waste are output into stockpiles below the screen.

Mid and oversize waste outputs from the first screen are then loaded into a second mobile screening unit with a 1.83 m x 6.10 m screenbox (McCloskey R230). The second screen provides a further 3-fraction separation into mid and oversize grades and removes more of the fine sand component (Figure 4: Right Pane). The fine sands and midsize waste are output to stockpiles adjacent to the screen, while the oversize material, consisting primarily of plastic, wood, concrete/brick rubble and metals, feeds directly to the shredding and crushing stage of the process.

Figure 4: 1st screen and outputs (left). 2nd screen and fines output (right)

The oversize material is fed directly into an enclosed mobile hammermill shredder (Thor 1519K) for size reduction via crushing and shredding (Figure 5: Left Pane). The enclosed portion of the hammermill shredder is attached to an extraction system that removes and contains dust emissions. The crushed and shredded waste mixture outputs to a conveyor, after which the metal component is recovered by a magnet and the remaining waste is fed directly to the third screening stage of the process. The metal passes along a stacker conveyor that deposits the shredded metal into a skip bin.

The third screening stage provides a 3-fraction separation for the crushed and shredded waste mixture, with material input to a mobile screening unit with a 1.83 m x 6.10 m screenbox (McCloskey R230). The screen outputs oversized material to a stockpile for reprocessing back through the system (Figure 5: Right Pane). Fine shredded material is output directly to a water density separator (Doppstadt HDS-S) which further separates the fines into a very fine and coarse component (Figure 6: Left Pane). Midsize material is output to a conveyor that feeds a different water density separator (Doppstadt HDS-S) which separates the material into heavy brick/concrete rubble and a lighter mixed wood and plastic component (Figure 6: Right Pane).

Figure 5: Hammermill shredder (left). 3rd screen and outputs (right)

Figure 6: Fines density separator (left). Mid-size density separator (right)

Recovered sand fill is tested for asbestos and stored in a large stockpile located in the north of Lot 434 (Figure 7: Left Pane). Wood and plastic waste outputs that are suitable as waste to energy plant feedstock are stored in stockpiles, pending removal offsite (Figure 7: Right Pane). The shredded metal outputs are stored in a skip bin until a suitable quantity is available for offsite disposal to a scrap metal yard.

Figure 7: Separated sand stockpile (left). Mixed fine shredded plastic and wood (right)

2.3.5 Construction and demolition waste recycling operations

Post-acceptance inspection and stockpiling

Once a load has been accepted at the gate, the driver is directed to the C&D Waste tipping area for unloading and post-acceptance inspection. The load is dampened prior to unloading and maintained in a damp state throughout the tipping and inspection process. The post-acceptance inspection procedure differs depending on whether the load was classified as low or high risk at initial acceptance:

- Low risk loads are visually inspected while the waste is being unloaded to determine the presence of any hidden asbestos material not detected during initial acceptance. If suspected asbestos containing material (ACM) is detected, the load is reclassified as high risk and inspected in accordance with the high-risk load inspection process.
- High risk loads are unloaded and spread over a large area to allow a more comprehensive visual inspection of all the waste material to be undertaken. The waste is spread to a depth of less than 30 cm and turned using heavy machinery. Larger sections of concrete or debris are inverted to allow a visual check for any embedded or underlying potential asbestos material.

Depending on the outcomes of the inspection, the following actions are taken:

- If suspect ACM is detected and able to be easily removed by hand, the suspect material is removed from the load. The removed material is either isolated and covered for asbestos testing or assumed to be ACM and redirected to the landfill. Following testing of representative samples, the material is ether redirected to the landfill as confirmed ACM or added to the waste processing stockpile.
- Where suspected asbestos containing material (ACM) is detected and cannot easily be removed by hand, the load is also isolated, kept damp, contained and redirected for burial at the landfill area.
- If suspected fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load is isolated, kept damp and contained, after which it is redirected for burial at the landfill area.
- If no asbestos material is detected during the post-acceptance inspection, the waste load is transported to the relevant stockpile to await further processing.

Records are kept for the post-acceptance process to ensure that any loads found to contain suspected asbestos material can be traced back to the originating source.

Waste processing

The Licence Holder engages a third party to undertake crushing and screening of C&D Waste material on their behalf within a specified area spanning across Lots 434 and 304. C&D Waste loads that have been inspected and considered suitable for further processing are deposited into a large stockpile of inspected waste.

Figure 8: Unprocessed C&D Waste stockpile

C&D Waste is removed from the unprocessed waste stockpile and fed into a mobile jaw crusher (McCloskey J50). The crushed output feeds directly to a mobile screening unit (Terex 693) that provides a 3-fraction separation of waste into fine, mid and over size grades. Fines and midsize material are deposited to a temporary stockpile located adjacent to the screening unit. Oversize material is fed directly to a mobile density separator (Kiverco DS150) to separate dense rock and metals from residual waste material (Figure 9: Left Pane). The rock and metals output to a stacker conveyor where metals are removed via magnet and the rock outputs back to the jaw crusher for re-processing. Residual wastes output to a temporary stockpile located adjacent to the density separator (Figure 9: Right Pane).

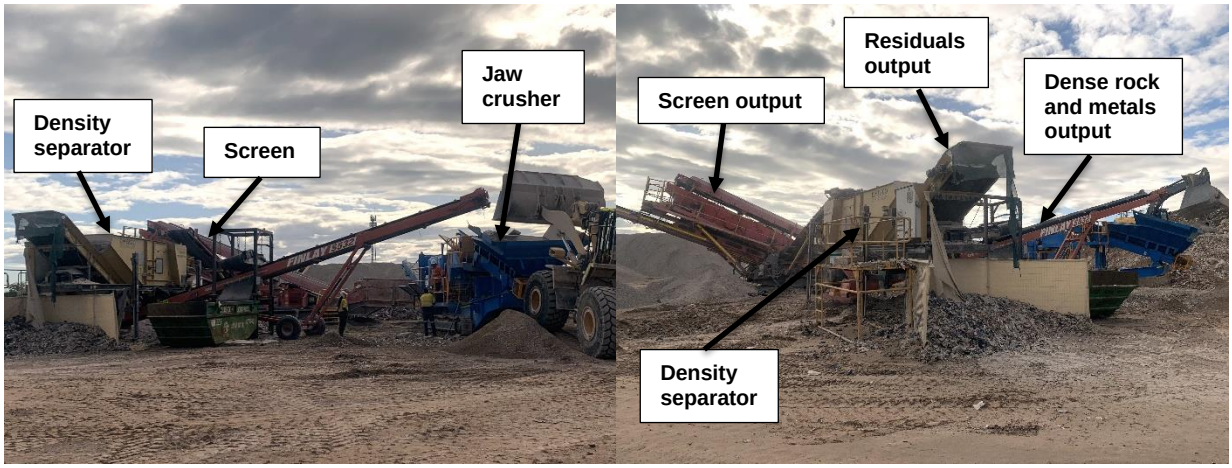


Figure 9: C&D Waste processing train (left). C&D Waste process train outputs (right)

The process results in the production of recycled road base, drainage aggregate and sand for sale (Figure 10). Metals are placed in a skip bin for removal offsite to a scrap metal yard.

Figure 10: Recycled output stockpiles (left). Road-base output (right)

Recycled output inspection and sampling

Recycled outputs resulting from the C&D Waste material undergo validation testing for the potential presence of asbestos. The testing procedures differ depending on whether the recycled output is considered drainage rock, sand or road-base. However, all recycled outputs are required to not exceed 0.001% asbestos weight for weight (w/w).

Recycled drainage rock and recycled road-base is visually inspected in a systematic grid fashion over any new recycled output stockpile to identify any suspect asbestos material. Further sampling of recycled drainage rock is only undertaken where laboratory analysis is required to determine whether a suspect fragment contains asbestos.

Sampling of recycled road-base and screened sand for further analysis is undertaken over the whole stockpile surface or at regular intervals during construction of the stockpile. Samples are taken at a minimum rate of 40 locations per 4,000 tonnes or 14 samples per 1000 m^3 of recycled output.

The samples are divided into two size fractions (>7 mm and <7 mm) in the field by sieving though a 7 mm screen or spread out for inspection on a contrasting colour fabric. The >7 mm fraction is examined for any suspect asbestos material and retained to calculate the level of contamination. The <7 mm fraction is required to be a minimum of 500 mL, and is wetted, prior to submission for laboratory analysis.

Where the visual inspection, sieve sample or laboratory analytical results identify asbestos above or potentially above the 0.001% w/w criteria, then the stockpile or production batch is deemed potentially contaminated and is either disposed of as asbestos waste or subjected to further remediation. A record is kept regarding whether the stockpile was disposed or remediated. An investigation is also undertaken to determine the likely cause of the exceedance and to prevent reoccurrence.

Recycled outputs are only supplied to customers from stockpiles that have been validated as containing less than 0.001% w/w asbestos.

2.3.6 Non-compliant waste

Non-compliant waste identified during inspection and handling at the tipping areas is segregated from other wastes and removed from the Premises, generally within one week. Non-compliant waste is temporarily stockpiled adjacent to tipping area, before being deposited into 30 m^3 waste storage containers.

2.3.7 Infrastructure and equipment

The application states that the following infrastructure and equipment is present on the Premises.

Infrastructure		Description	Location
1.	Thor 1519K Mobile Hammermill Shredder	Mobile shredder	Mixed Waste Recycling Area
2.	McCloskey Screener R230-1	Mobile screen	
3.	McCloskey Screener R230-2	Mobile screen	
4.	Anaconda TR7542-1 Stacker	Conveyor	
5.	Anaconda TR7542-2 Stacker	Conveyor	
6.	Edge TS8048 Stacker	Conveyor	
7.	Doppstadt HDS-S-1 Density Separator	Semi-mobile separator	
8.	Doppstadt HDS-S-2 Density Separator	Semi-mobile separator	
9.	Mogensen SRSL 915/1220 Screen	Vibratory screen	
10.	Doosan Excavator DX255LC	General heavy machinery	Mobile plant
11.	Doosan Loader DL420-1	General heavy machinery	
12.	Doosan Loader DL420-2	General heavy machinery	
13.	Doosan Excavator DX140LC	General heavy machinery	
14.	Cat D8T Dozer	General heavy machinery	
15.	Cat 973C Crawler Loader	General heavy machinery	
16.	Case 420 Bobcat	General heavy machinery	
17.	Cat 740 Dump Truck	General heavy machinery	
18.	McCloskey J50 Jaw Crusher	Mobile crusher	C&D Waste Recycling Area
19.	Terex 693 Screen	Mobile screen	
20.	Kiverco DS150 Density Separator	Mobile density separator	
21.	Komatsu WA470 Loader	General heavy machinery	
22.	Kobelco 20tn Excavator	General heavy machinery	
23.	Ford Louiville Water Truck	Dust suppression	All
24.	Mitsubishi Fuso FM600 Water Truck	Dust suppression	

2.4 Incidents and complaints

2.4.1 2021 fire event

On 4 January 2021, a bushfire that commenced the preceding day in surrounding vegetation extended onto the Premises and ignited stockpiles of waste being stored pending processing. The majority of waste burnt as a result of the fire was unprocessed mixed waste containing timber and plastics.

In an effort to contain the fire and address smoke emissions, the burning waste stockpiles were covered with sand to smother the fire. This was ineffective at extinguishing the fire completely and an underground fire continued to burn. It was considered that further intrusive disturbance may encourage oxygen to re-energise existing hotspots and the use of water as a fire suppressant may result in a contamination pathway to local groundwater. As a result, it was determined that the underground fire would be left in-situ and monitored by the Licence Holder.

The Licence Holder conducted daily visual inspection of the area to record locations where odour or smoke emissions were detected. Further sand material was added to the locations if required. Thermal aerial monitoring was conducted monthly to record the location of hotspots within the waste mass. The monitoring showed that the size and number of hotspots was reducing over time.

2.4.2 Inspections

November 2019

Officers from the department's Compliance and Enforcement Directorate conducted an inspection of the Premises on 12 November 2019. The following issues were identified:

Table 3: Material issues identified during the inspection

Issue	Non-compliant condition
During the inspection, DWER officers observed two hydrocarbon spills that had not been immediately recovered, removed and disposed of as required. The first hydrocarbon spill was observed on the asbestos burial area. The second hydrocarbon spill was observed next to a skip in the skip bin storage area.	1.2.2
DWER officers observed waste that did not meet waste acceptance criteria listed in the licence. Officers confirmed with the Licence Holder that hydrocarbon waste and liquid waste had been accepted onto the Premises. Officers observed intermediate bulk containers stored opposite the skip bin lay down area.	1.3.1
DWER officers witnessed that waste which did not meet licence requirements was being accepted and landfilled. DWER officers also witnessed that non-conforming waste was not 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.	1.3.2
DWER officers observed asbestos and asbestos containing materials (Special Waste Type 1) was not being accepted and landfilled in accordance with licence conditions	1.3.3

Issue	Non-compliant condition
DWER officers observed Special Waste Type 1 and Inert Waste Type 2 was covered with material other than Type 1 Inert Waste or soil.	1.3.5
DWER officers observed that a warning sign indicating the penalties for people lighting fires was not clearly displayed at the entrance to the Premises.	1.3.12
DWER officers noted aluminium in groundwater had not been monitored in accordance with licence conditions.	2.3.1

It was determined that the Licence Holder had contravened seven licence conditions, resulting in potential offences under section 58 of the EP Act. Following the inspection, the department worked with the Licence Holder to rectify the non-compliances. On 6 March 2020, the Licence Holder demonstrated they were now in compliance with the seven conditions. The Licence Holder was issued a letter of warning in relation to the matters.

January and February 2021

Following the January 2021 fire event, two unscheduled inspections of the Premises were undertaken by officers from the department. The inspections noted issues with the storage of waste and dust emissions from the Premises. The inspection findings are summarised below:

Table 4: Material issues identified during the inspections

Issue	Non-compliant condition
Mixed inert and putrescible waste loads were being accepted at the Premises, due to the substantial presence of timber in the loads.	Condition 1.3.1 Table 1.3.1
Putrescible (timber) waste derived from the mixed loads was being processed at the Premises via shredding.	Condition 1.3.3 Table 1.3.3
Inert Waste Type 2 and processed putrescible waste (shredded timber) was being stockpiled on site.	Condition 1.3.3 Table 1.3.3
Installation and operation of a new crushing, shredding and screening plant with a segregation unit had occurred without authorisation via a licence amendment or works approval.	Condition 1.3.3 Table 1.3.3

As a result of the non-compliances the Licence Holder was requested to submit a licence amendment application, which is the subject of this assessment.

2.4.3 Local government complaints

Through consultation with the City of Kwinana on this application, the following complaints have been noted in relation to the Premises:

Table 5: Summary of complaints received by the City of Kwinana

Date	Complaint summary
20 February 2021	Complaint about dust issues at the Premises.
15 February 2021	Complaint about dust lift off from the landfill site.
8 February 2021	Complaint about dust management issues at the Premises.

Date	Complaint summary
2 February 2021	Complaint about dust emissions from the tip making it hard to see from Rockingham Rd and Thomas Rd at around 3pm.
22 January 2021	Complaint about dust emissions with no controls being implemented.
15 January 2021	Complaint about odour on Thomas Rd towards Rockingham.
22 March 2018	Complaint about black smoke and odour coming from the back of the Premises.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during Premises operation which have been considered in this Amendment Report are detailed in Table 6 below. Table 6 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 6: Licence Holder controls

Emission	Sources	Potential pathways	Proposed or existing controls
Noise	Crushing and screening of abstracted sand and limestone Crushing and screening of inert waste Crushing, shredding and screening of mixed demolition waste Waste load tipping and loading Vehicle and machinery movements	Air/windborne pathway	– Operations limited to Monday to Friday, 06:30 to 17:00 and 07:00 to 12:30 on Saturdays. – Complaints register.

Emission	Sources	Potential pathways	Proposed or existing controls
Odour	Green Waste Non-conforming waste	Air/windborne pathway	– Non-conforming wastes are segregated and removed offsite.
Dust	Crushing and screening of extracted sand and limestone Crushing and screening of C&D Waste Crushing, shredding and screening of mixed demolition waste Stockpile lift-off Tipping and loading Application of landfill cover Vehicle and machinery movements	Air/windborne pathway	– Exposed sections of storage bins will be watered regularly where there is a risk of dust emissions. – Dust generating activities will cease during periods of high wind conditions until further mitigations are implemented or conditions improve. – Trucks transporting loose loads of aggregate are required to be covered. – Dust suppression frequency will be increased during dry and windy conditions. – Paved areas will be wet down during dry and windy conditions. – Stockpiles and handling areas will be maintained in a damp state by use of water carts. – Vehicle traffic speeds will be limited to less than 10 km/hr. – Wind fences and wind breaks will be maintained in good condition. – Visual inspection for dust generation or adverse conditions. – During windy conditions waste loads will be wet down prior to and during unloading by a water cart.
Asbestos fibres	Acceptance and landfilling of Special Waste Type 1 Acceptance, sorting, processing and storage of waste with the potential to contain asbestos	Air/windborne pathway	– Asbestos waste is received wrapped or contained. – Waste register. – Inspection and testing protocols in accordance with an Asbestos Management Plan
Leachate	Non-conforming waste	Infiltration through soil to groundwater	– Spills are cleaned up immediately. – All loads of solid waste are inspected. – Groundwater monitoring. – Daily cover of landfill material. – 1.2 m separation from groundwater.

Emission	Sources	Potential pathways	Proposed or existing controls
Contaminated stormwater	Non-conforming waste Hydrocarbon storage	Contact with waste and overland flow	– Accumulated stormwater is prevented from discharging from the Premises. – Spills are cleaned up immediately. – All loads of solid waste are inspected. – Hydrocarbon storage within an engineered containment area. – Daily cover of landfill material. – Groundwater monitoring.
Hydrocarbons	Fuel storage Refueling of vehicles, machinery and generators	Infiltration through soil to groundwater	– Storage within an engineered containment area.
Fire related emissions	Waste fire	Air/windborne and leachate	– Security fencing. – Daily inspection of security measures. – Daily waste cover. – Water cart and water storage tank. – Fire Management Plan.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 7 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 7: Sensitive human and environmental receptors and distance from prescribed activity

Receptors	Distance from prescribed activity
Human receptors	
Nearest sensitive receptor – Medina residential area	Approximately 650 m southeast of the Premises boundary
Public open space – Thomas Oval	Approximately 690 m south of the Premises boundary
Kwinana Motorplex	Immediately adjacent to the western Premises boundary

Receptors	Distance from prescribed activity
Industrial receptor – ALCOA historical residue lagoons	Immediately adjacent to the northern Premises boundary
Industrial receptor – Limestone quarry	Approximately 340 m northeast of the Premises boundary
Industrial receptor – Scrap metal recycling premises	Approximately 400 m west of the Premises boundary
Environmental receptors	
Underlying groundwater – Perth Superficial Swan	Regional groundwater flow is westerly towards Cockburn Sound, with groundwater flow at the Premises inferred to be in a north-northwest direction. Groundwater levels vary between approximately 0.5 to 1.4 m AHD across the Premises. Depth to groundwater varies between 1 mbgl to 26 mbgl depending on location within the site and the extent of excavations or filling. Groundwater abstracted downgradient of the Premises is for non-potable use.
Marine receptor – Cockburn Sound	Approximately 1.9 km west of the Premises boundary. The Premises is located within the State Environmental (Cockburn Sound) Policy 2015 area.
Bush Forever Site – 349: Leda and Adjacent Bushland, Leda	Approximately 115 m south of the Premises boundary
Threatened Ecological Community (TEC) – Tuart woodlands and forests of the Swan Coastal Plain	There are several patches located in the surrounding area with the nearest occurrence approximately 130 m upgradient of the Premises boundary. The buffer zones for the TEC occurrences extend onto the eastern half of the Premises.

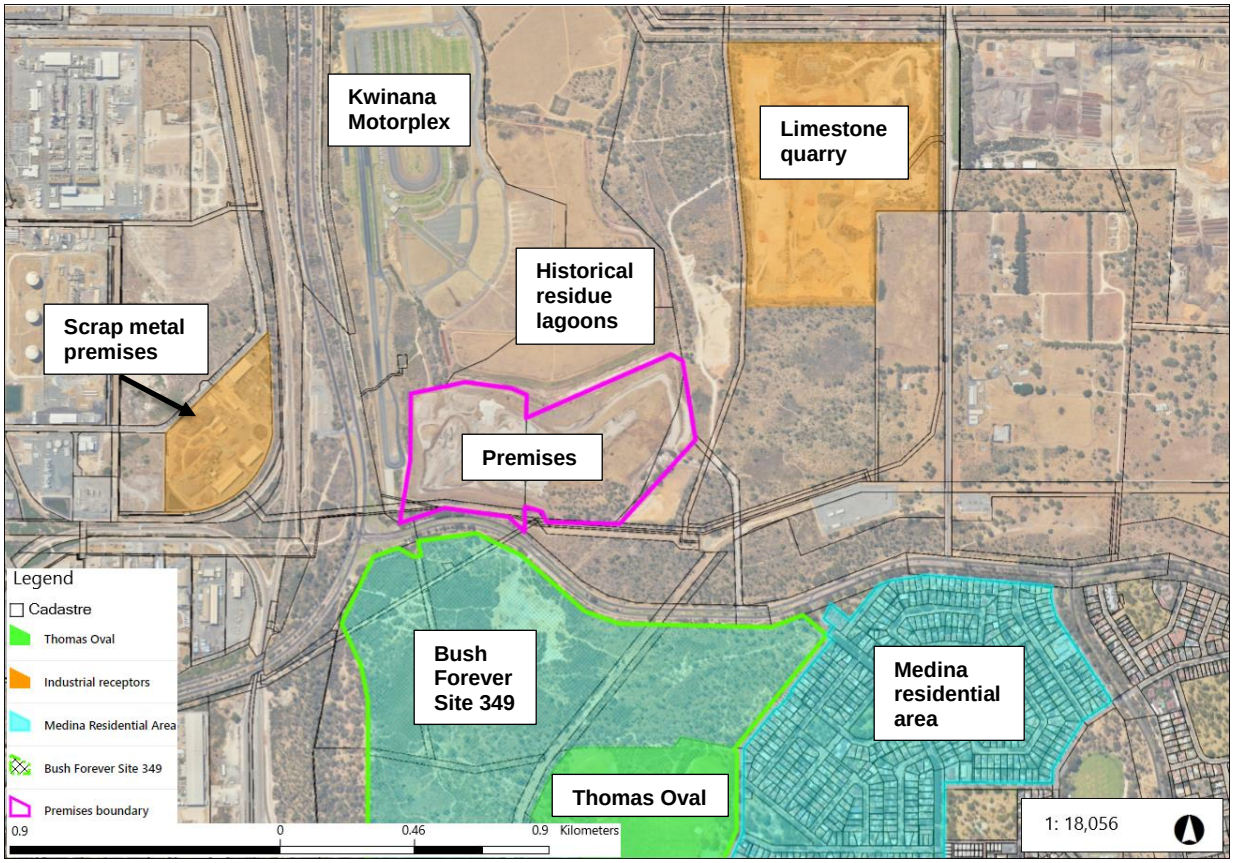


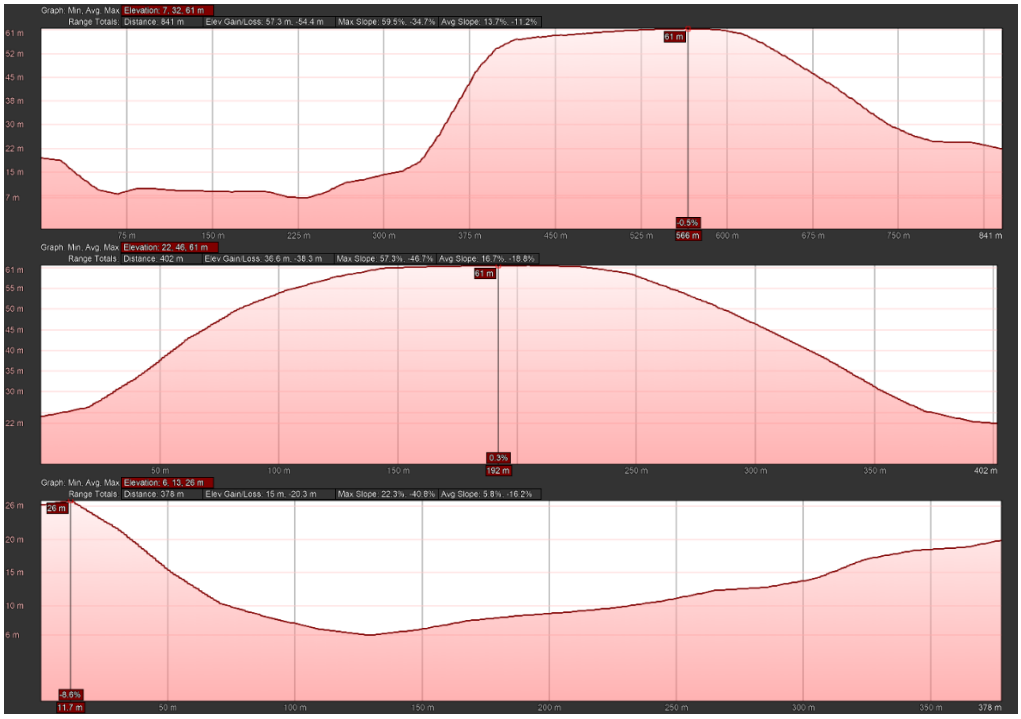
Figure 11: Receptors surrounding the Premises

3.1.3 Pathways

Information relating to pathways and site characteristics at the Premises are provided in Table 8 below.

Table 8: Potential pathways and environmental conditions relevant to the Premises

Aspect	Details
Geology	The Premises consists predominantly of sand of the Safety Bay Sands, overlying primarily lithified calcarenites of the Tamala Limestone formation. The sand and limestone of the underlying formation would be highly permeable. An unconfined aquifer system is present within the underlying formation to a depth of 15 – 20 m below sea level.
Meteorology	The nearest Bureau of Meteorology weather station is the Jandakot Aero monitoring station (No. 009172). The station provides the following information, based on records from 1989 to 2021: • The prevailing wind directions are easterly and north-easterly in the morning (9am), changing direction to south-westerly and westerly in the afternoon (3pm). Wind speeds are typically gentle to moderate in the morning and moderate in the afternoons, according to the Beaufort Wind Scale. • The majority of rainfall occurs between May and October, with larger volumes falling in the winter months and peaking in July. • The average annual rainfall is 766.3 mm.

Aspect	Details
Topography	The Premises topography is highly variable, depending on the extent of cut and fill activities. The eastern portion of the Premises contains the area of landfill that is predominately completed, ranging from approximately 61 mAHD at the highest point and decreasing down to 22 mAHD at the eastern boundary. The western portion lies between approximately 6 mAHD and 26 mAHD at the northern boundary. The approximate elevation profile across the Premises as estimated by the Google Earth digital elevation model is contained in Figure 12 below. Regional topography indicates a generally declining slope from east of the Premises heading west towards the ocean.  **Figure 12: Premises W-E elevation profile (top). Lot 434 N-S elevation profile (middle). Lot 304 N-S elevation profile (bottom)**

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls. Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 9.

The Revised Licence L6772/1997/13 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. waste acceptance and storage, landfilling and recycling reprocessing activities. The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 9. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Waste handling, sorting and processing Crushing and screening of extracted sand and limestone Processing of mixed demolition waste via crushing, shredding and screening Processing of green waste via shredding Processing of C&D Waste via crushing and screening Stockpile lift-off Tipping and loading Application of landfill cover Vehicle and machinery movements	Dust	Air/windborne pathway causing impacts to health and amenity	Medina residential area (650 m southeast) Thomas Oval (690 m south) Kwinana Motorplex	Refer to Section 3.1.1	C = Moderate L = Possible **Medium Risk**	N	10: Table 3 (Category 61A process limits) 15 (general dust management) **8: Table 2 (C&D Waste processing plant requirements)** **8: Table 2 (Mixed waste processing plant requirements)** **8: Table 2 (Water cart requirements)** **16 (dust management of stockpiles)** **17 (dust management of product loads)**	Based on the siting of the Premises and history of complaints relating to dust emissions, the risk event is considered to have a mid-level impact to amenity and could occur at some time. A comparison of the dust controls used at similar C&D Waste processing facilities was undertaken which noted that many of the common controls for these types of facilities, such as fixed sprinklers or misting systems at the dust emission points of processing equipment, have not been specified by the Licence Holder. Given that the Premises is located closer to sensitive receptors than many of the reviewed facilities and the licence contains minimal conditions relating to dust emissions, the Delegated Officer has resolved that additional regulatory controls are required. The Delegated Officer also notes that the Dust Management Plan (DMP) is outdated in consideration of the current waste handling and processing activities at the Premises. The Delegated Officer has specified a condition requiring an updated DMP to be submitted to the department.
Acceptance, handling and sorting of C&D Waste with the potential to contain asbestos or ACM Processing of C&D Waste with the potential to contain asbestos or ACM via crushing and screening Acceptance, handling and sorting of mixed inert waste with the potential to contain asbestos or ACM Processing of mixed inert waste with the potential to contain asbestos or ACM via crushing and screening Stockpiling of recycled products with the potential to contain asbestos or ACM Acceptance, handling and disposal by landfilling of Special Waste Type 1	Asbestos fibres	Air/windborne pathway causing impacts to health	Medina residential area (650 m southeast) Thomas Oval (690 m south) Kwinana Motorplex Limestone quarry (340 m northeast) Scrap metal recycler (400 m west)	Refer to Section 3.1.1	C = Severe L = Unlikely **High Risk**	Y	4, 5, 6, 7 (load risk classification) 12 (load inspection) 13 (stockpile management) 5 (general dust management) 26, 27, 28 (asbestos testing) 33, 34 (asbestos records and reporting)	Based on the siting of the Premises and existing Licence Holder Controls, the risk event is considered to have high-level or ongoing health impacts and will probably not occur in most circumstances. The existing licence condition relating to the risk event requires operations to be undertaken in accordance with an Asbestos Management Plan (*Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013*). The Department no longer directly conditions operations to occur in accordance with management plans. This is due to the limited enforceability of this approach and requirements for compliance being unclear. The key controls from the Licence Holder's Asbestos Management Plan have been included as regulatory controls within the licence, with these controls also conforming to the DWER Asbestos Guidelines (DWER 2021).
Temporary storage of non-conforming waste prior to removal from the Premises Disposal by landfilling of non-conforming waste hidden within waste loads Spills	Leachate	Infiltration through soil to groundwater causing impacts to groundwater quality	Underlying groundwater (1 - 26 mBGL)	Refer to Section 3.1.1	C = Minor L = Unlikely **Medium Risk**	N	**20**	Based on the types of waste accepted at the Premises, inspection processes and existing licence conditions, the risk event is considered to have a minimal offsite impact and will probably not occur in most circumstances. Existing licence conditions that limit acceptable waste types and require containment of non-conforming waste are considered sufficient. The Delegated Officer notes that a condition requiring the storage of spill clean-up material within an impermeable container is missing from the licence. This has been specified as a regulatory control.
Fuel storage Refueling of vehicles, machinery and generators	Hydrocarbons	Infiltration through soil to groundwater causing impacts to groundwater quality	Underlying groundwater (1 - 26 mBGL)	Refer to Section 3.1.1	C = Minor L = Rare **Low Risk**	Y	No additional regulatory controls are required	Based on the siting of the Premises and low storage volumes, the risk event is considered to have a minimal offsite impact and may only occur in exceptional circumstances. Existing licence conditions specify the requirements for fuel hydrocarbon storage.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Contact with waste and product stockpiles Contact with non-conforming waste Contact with hydrocarbon and fuel storage Spills	Contaminated stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Bush Forever Site 349 (115 m south)	Refer to Section 3.1.1	C = Minor L = Unlikely **Medium Risk**	N	**<u>20</u>**	Based on the types of waste accepted at the Premises and existing licence conditions, the risk event is considered to have a minimal offsite impact and will probably not occur in most circumstances. Existing licence conditions that limit acceptable waste types, require containment of non-conforming waste and specify actions for contaminated stormwater are considered sufficient. The Delegated Officer notes that a condition requiring the storage of spill clean-up material within an impermeable container is missing from the licence. This has been specified as a regulatory control.
Acceptance, processing and storage of putrescible waste (green waste and untreated timber)	Odour	Air/windborne pathway causing impacts to amenity	Medina residential area (650 m southeast) Thomas Oval (690 m south)	Refer to Section 3.1.1	C = Slight L = Unlikely **Low Risk**	Y	No additional regulatory controls are required	Based on the siting of the Premises, level of odour emissions expected from green waste and untreated timber and existing licence conditions, the risk event is considered to have a low-level impact to amenity and will probably not occur in most circumstances. Existing licence conditions limit the storage of unprocessed green waste and mulched green waste to 250 m^3 and 1,250 m^3 respectively.
Waste load tipping and loading Mechanical sorting of waste Processing of mixed demolition waste via crushing, shredding and screening Processing of green waste via shredding Processing of C&D Waste via crushing and screening Crushing and screening of extracted sand and limestone Vehicle and machinery movements	Noise	Air/windborne pathway causing impacts to amenity	Medina residential area (650 m southeast) Thomas Oval (690 m south)	Refer to Section 3.1.1	C = Minor L = Unlikely **Medium Risk**	Y	No additional regulatory controls are required	Based on the siting of the Premises and no history of complaints relating to noise emissions, the risk event is considered to have a low-level impact to amenity and will probably not occur in most circumstances. Noise emissions are subject to the *Environmental Protection (Noise) Regulations 1997*.
Abnormal operations (waste fire)	Smoke and particulates	Air/windborne pathway causing impacts to health and amenity	Medina residential area (650 m southeast) Thomas Oval (690 m south) Kwinana Motorplex Limestone quarry (340 m northeast) Scrap metal recycler (400 m west)	Refer to Section 3.1.1	C = Major L = Rare **Medium Risk**	Y	Condition 8: Table 2 (Fencing and security gates requirements) **<u>Condition 3</u>** **<u>Condition 23</u>**	Due to the volume of waste material located at the Premises, the Delegated Officer considers that the risk event has the potential to cause a high impact to amenity but may only occur in exceptional circumstances. The Licence Holder's controls are generally considered sufficient, however additional regulatory controls for the reporting of fire events and the removal of non-conforming waste within particular timeframes have been specified in the Revised Licence.
	Firefighting runoff	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality Infiltration through soil to groundwater causing impacts to groundwater quality	Bush Forever Site 349 (115 m south) Underlying groundwater (1 - 26 mBGL)					

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **<u>Bold and underline text</u>** depicts additional regulatory controls imposed by department.

4. Consultation

Table 10 provides a summary of the consultation undertaken by the department.

Table 10: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal (11 April 2022)	The City of Kwinana replied on 29 April 2022. Refer to Appendix 1.	Refer to Appendix 1.
Department of Planning, Lands and Heritage (DPLH) advised of proposal (11 April 2022)	DPLH replied on 13 May 2022. Refer to Appendix 1.	Refer to Appendix 1.
Licence Holder was provided with draft amendment on 18 August 2022	A confirmation that the Licence Holder did not have any comments on the draft amendment was provided on 16 September 2022	N/A

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

It is noted in the consultation table in Appendix 1 that DPLH have made several comments in relation to the Landfill Development Plan. DWER recommends that the Licence Holder consults with DPLH and the City of Kwinana on the Landfill Development Plan prior to submission to DWER (in accordance with the revised conditions imposed via this amendment package).

5.1 Summary of amendments

Table 11 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process. Additions to the Revised Licence are shown through red text and deletions are shown through red strikethrough text.

Table 11: Summary of licence amendments

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td><u>Revised</u>
1: Table 1
<u>Existing</u>
4: Table 1</td><td>Due to waste types being accepted across multiple categories, the waste acceptance table has been amended to include a corresponding category column for the relevant waste types. Existing acceptance specifications for waste types have been duplicated where required.
Additional changes to the table have been made for consistency with other conditions in the licence and current terminology.
<table>
<tr><th>Waste type</th><th>Category</th><th>Rate at which waste is received</th><th>Acceptance specification[1]</th></tr>
<tr><td>Inert Waste Type 1</td><td rowspan="3">61A</td><td rowspan="3">100,000 tonnes per annual period</td><td>(a) Must not contain any visible asbestos or ACM.</td></tr>
<tr><td>Inert Waste Type 2</td><td>(a) Non-biodegradable plastic only.</td></tr>
<tr><td>Putrescible ~~Green~~</td><td>(a) Green waste and non-chemically treated</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td></td><td>
<table>
<tr><td>Waste</td><td></td><td></td><td>timber only.</td></tr>
<tr><td>Clean Fill</td><td rowspan="2">62</td><td rowspan="2">90,000 tonnes per annual period</td><td>None specified.</td></tr>
<tr><td>Inert Waste Type 1</td><td>(a) Must not contain any visible asbestos or ACM.</td></tr>
<tr><td>Clean Fill</td><td rowspan="4">63</td><td rowspan="4">500,000 tonnes per annual period</td><td>None specified.</td></tr>
<tr><td>Inert Waste Type 1</td><td>(a) Must not contain any visible asbestos or ACM.</td></tr>
<tr><td>Inert Waste Type 2</td><td>(a) Tyres and non-biodegradable plastic only.</td></tr>
<tr><td>Special Waste Type 1 (asbestos)</td><td>(a) Must be wrapped in heavy duty plastic or otherwise contained in a manner that prevents asbestos fibres entering the atmosphere; and
(b) Must only be accepted for burial. ~~received for disposal at the designated Asbestos Disposal Area; and~~
~~(c) Must not be permitted to be accepted within areas of the premises where activities related to Category 62 (solid waste depot) or Category 13 (crushing of building material) are undertaken.~~</td></tr>
</table>
</td></tr>
<tr><td><u>Revised</u>
2
<u>Existing</u>
N/A</td><td>The following condition relating to pre-acceptance inspections and rejection of unauthorised waste and recording details has been added:
During pre-inspection of waste loads at the gatehouse, where waste does not meet the waste acceptance criteria set out in condition 1, the licence holder must:
(a) reject the waste; and
(b) record the details of the:
(i) waste (type and description);
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date that the waste load was rejected; and
(c) maintain accurate and auditable records of all waste loads rejected from the premises.</td></tr>
<tr><td><u>Revised</u>
3
<u>Existing</u>
5</td><td>Condition wording update to reflect post-acceptance phase. The phrase ‘as soon as practicable’ was also removed from the condition relating to removal of unauthorised waste from the Premises. A timeframe was specified in accordance with the application supporting documentation.
After acceptance of waste onto the premises (via the gatehouse), the licence holder must ensure that where waste does not meet the waste acceptance criteria set out in condition 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~~ within 1 week of any quantity exceeding 30 m^3.</td></tr>
<tr><td><u>Revised</u>
4
<u>Existing</u>
13 (AMP)</td><td>The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
Excluding where waste is accepted for burial, the licence holder must obtain a signed declaration from the supplier of the waste with each delivery that:
(a) specifies the details of the:
(i) waste (type and description);</td></tr>
</table>

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td></td><td>
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date of delivery;
(b) sets out the quantity being delivered; and
(c) declares that the load does not contain any asbestos or ACM.
</td></tr>
<tr><td><u>Revised</u>
5
<u>Existing</u>
13 (AMP)</td><td>
The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
The licence holder must ensure water is routinely applied to each load of waste entering the premises, to ensure all loads are wetted prior to unloading, and maintained in a damp state throughout the inspection process.
</td></tr>
<tr><td><u>Revised</u>
6
<u>Existing</u>
13 (AMP)</td><td>
The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
The licence holder must:
(a) visually inspect all loads of waste on arrival at the premises prior to acceptance, to determine the risk of a load containing asbestos and/or ACM; and
(b) Excluding where waste is accepted for burial, classify each load as either a 'low risk load' or a 'high risk load', in accordance with the risk classification procedure provided in Schedule 3: Asbestos risk classification procedure.
</td></tr>
<tr><td><u>Revised</u>
7
<u>Existing</u>
13 (AMP)</td><td>
The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
Excluding where waste is accepted for burial, upon acceptance of waste, the licence holder must direct each classified load to an unloading area where the classified load will not mix with other waste prior to further inspection.
</td></tr>
<tr><td><u>Revised</u>
8: Table 2
<u>Existing</u>
N/A</td><td>
In accordance with the current licencing format, a condition and table relating to infrastructure and equipment used for processing waste or controlling and monitoring emissions and discharges was added. The condition reads as follows:
The licence holder must ensure that the site infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.
The associated table is structured as follows and has the following requirements, some of which were already required through the Existing Licence:
<table>
<tr><th>Site infrastructure and equipment</th><th>Operational requirement</th><th>Infrastructure location</th></tr>
<tr><td>Inert Landfill</td><td>(a) The separation distance between the base of the landfill and the highest groundwater level must be greater than 1.2 m; and
(b) Rehabilitation of a cell or phase must take place within 6 months after disposal in that cell or phase has been completed.</td><td>Active Landfilling Area</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Condition no.</th><th colspan="3">Proposed amendments</th></tr>
<tr><td></td><td>C&D Waste processing plant comprised of:
(a) mobile jaw crusher;
(b) mobile screener;
(c) mobile density separator; and
(d) stacker conveyors.</td><td>(a) Must only be operated when all material passing through the site infrastructure and equipment is dampened to prevent dust lift off.</td><td>C&D Waste Processing Area</td></tr>
<tr><td></td><td>Mixed waste processing plant comprised of:
(a) mobile hammermill shredder;
(b) 4 x mobile screeners;
(c) 2 x water density separators; and
(d) stacker conveyors</td><td>(a) Must only be operated when all material passing through the site infrastructure and equipment is dampened to prevent dust lift off; and
(b) A dust extraction system must be operational at all times when the mobile hammermill shredder is operating.</td><td>Mixed Waste Processing Area</td></tr>
<tr><td></td><td>Water carts</td><td>(a) Must be capable of wetting the top of all stockpiles on the premises;
(b) Must be made available at all times for the purposes of dust suppression when any earthmoving, shredding, crushing, screening, or cartage activities are occurring; and
(c) Must be operated when visible dust is being generated.</td><td>N/A</td></tr>
<tr><td></td><td>Fuel and hydrocarbon storage facility</td><td>(a) Must be bunded to contain at least 110 % of the volume of the stored hydrocarbons and be provided with sufficient capacity to ensure hydrocarbons are not discharged beyond the bund during rainfall events;
(b) The facility floor and bunding must have a permeability of less than 1 x 10^{-9} m/s; and
(c) Fuel and liquid hydrocarbons must be stored within the facility.</td><td>Workshop and Fuel Storage as depicted on Figure 2</td></tr>
<tr><td></td><td>Fencing and security gates</td><td>(a) Suitable fencing must be erected and maintained to prevent unauthorised access to the premises;
(b) Entrance gates to the premises must be securely locked when the premises is unattended; and
(c) Weekly inspections of all security measures must be undertaken and any damage must be repaired ~~as soon as practicable~~ within five working days of its discovery.</td><td>N/A</td></tr>
<tr><td></td><td>Signage</td><td>(a) A sign at the entrance to the premises must be erected and maintained which clearly displays the following information:
(i) hours of operation;
(ii) contact telephone number;
(iii) a warning indicating penalties for people lighting fires; and
(iv) a list of materials accepted for recycling and the location of where they can be deposited on the premises.
(b) Clear visible signage must be erected and maintained that specifies “No Asbestos” at all entries to the Mixed Waste Processing Area and the C&D Waste Processing Area.</td><td>N/A</td></tr>
<tr><td></td><td>Nested groundwater monitoring bores
(TMP1, TMP2, TMP3, TMP4, TMP5 and TMP6)</td><td>(a) Must be maintained free from blockages and in good working order to allow representative shallow, intermediate and deep groundwater samples to be clloected.</td><td>As defined by the coordinates in Schedule 2: Table 16</td></tr>
<tr><td><u>Revised</u>
10: Table 3
<u>Existing</u>
6: Table 2</td><td colspan="3">Due to waste types being processed across multiple categories, the waste processing table has been amended to include a corresponding category column for the relevant waste types. Existing specifications for waste types have been duplicated where required. Requirements for the Category 61A processing activities for mixed inert waste have been included in the table. Restrictions on storage within Lot 303 have been removed from the table (see Condition 9). Additional changes to the table have been made for consistency with other conditions in the licence and current terminology.</td></tr>
</table>

Condition no.	Proposed amendments			
	Category	**Waste type**	**Processes**	**Process limits and/or specifications[1]**
	61A	Inert Waste Type 1; Inert Waste Type 2; and Putrescible Waste	Receipt, handling, storage and mechanical treatment via screening, shredding, crushing and density separation	(a) Must not contain any visible asbestos or ACM; (b) Must not contain any chemically treated timber; (c) Must only occur within the Mixed Inert Waste Recycling Area; and (d) Inert waste must be maintained in a damp state during mechanical treatment.
		Putrescible ~~Green~~ Waste	Receipt, handling, storage and mechanical treatment via shredding, prior to disposal or re-use ~~Receipt, handling and storage prior to disposal or re-use~~	(a) Must be comprised of Green Waste only; (b) No more than 250 m^3 of unprocessed Green Waste shall be stored at the premises at any one time; (c) No more than 1,250 m^3 of mulched Green Waste shall be stored at the premises at any one time; (d) Storage of processed and unprocessed Green Waste must occur on a base of compacted limestone; (e) Processed Green Waste must be stored in windrows; (f) Temperatures within processed Green Waste windrows must be monitored and managed to prevent self-combustion; and (g) A 5 m fire break must be maintained around processed and unprocessed Green Waste storage areas.
	62	Clean Fill; and Inert Waste Type 1	Receipt, handling and storage of waste, prior to mechanical treatment ~~crushing and screening~~	(a) Must not contain any visible asbestos or ACM.
	13		Mechanical treatment ~~consisting only of~~ via crushing, screening and density separation, prior to associated storage	(a) Must not contain any visible asbestos or ACM; and (b) Must only occur within the C&D Waste Storage and Processing Area.
			~~Storage of crushed materials~~	~~(a) Material must only be stored within the Recycled Product Storage Area.~~
	63	Clean Fill; Inert Waste Type 1; and Inert Waste Type 2	Receipt, handling, storage and disposal by landfilling	(a) Disposal by landfilling must only take place within the Active Landfilling Area; (b) Waste must be levelled and compacted by the end of the working day in which it was deposited; (c) Waste must be placed and compacted to ensure all faces are stable and capable of retaining rehabilitation material; and (d) No more than 99 tyres shall be stored at the premises at any one time.

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>Special Waste Type 1 (asbestos)</td><td>Receipt, handling, containment and disposal by landfilling</td><td>(a) Disposal by landfilling must only take place within the designated Asbestos Disposal Area;
(b) Asbestos or ACM must not be disposed within two m of the final tipping surface of the landfill; and
(c) Asbestos or ACM must remain undisturbed following disposal.</td></tr>
</table>
</td></tr>
<tr><td>Revised
11: Table 4
Existing
8: Table 3</td><td>
The phrase as soon as practicable has been removed from cover timeframes and replaced with more certain terminology.
<table>
<tr><th>Waste type</th><th>Material</th><th>Depth</th><th>Timescale</th></tr>
<tr><td>Inert Waste Type 1</td><td colspan="3">No cover required</td></tr>
<tr><td>Inert Waste Type 2</td><td rowspan="3">Inert Waste Type 1 or Clean Fill</td><td>100 mm</td><td>(a) By the end of the working day in which the waste was deposited.
(b) Plastic waste with the potential to become windblown must be covered ~~as soon as practicable after deposit~~ immediately after being levelled and compacted.</td></tr>
<tr><td rowspan="2">Special Waste Type 1</td><td>300 mm</td><td>(a) ~~As soon as practicable~~ Within 3 hours after deposit and prior to compaction.</td></tr>
<tr><td>1,000 mm</td><td>(a) By the end of the working day in which the asbestos waste was deposited.</td></tr>
</table>
</td></tr>
<tr><td>Revised
12
Existing
13 (AMP)</td><td>
The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
The licence holder must:
(a) visually inspect each ‘low risk load’ while the material is being unloaded, and continue to do so at all stages of the storage, sorting, and screening process, to determine whether any asbestos and/or ACM can be identified;
(b) where asbestos and/or ACM is suspected or identified in a ‘low risk load’, reclassify that load as a ‘high risk load’; and
(c) visually inspect and handle each ‘high risk load’ in accordance with the procedure provided in Schedule 4: High risk load procedure.
</td></tr>
<tr><td>Revised
13
Existing
13 (AMP)</td><td>
The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.
Within the C&D Waste Processing Area, the licence holder must ensure that:
(a) materials are maintained in at least three separate stockpiles for unprocessed waste, recycled products tested for asbestos or ACM, and recycled products awaiting testing for asbestos or ACM;
(b) unprocessed waste and recycled products stockpiles are kept clearly separated at a minimum three (3) metre distance from the base of the stockpile or separated by impermeable barriers;
(c) recycled products tested for asbestos or ACM and recycled products awaiting testing for asbestos or ACM are clearly separated by a minimum three (3) metre distance from the base of the stockpile or separated by impermeable barriers; and
(d) clearly visible and legible signage is erected on individual stockpiles to clearly identify and delineate tested recycled products, untested recycled products, and unprocessed waste.
</td></tr>
</table>

Condition no.	Proposed amendments
Revised 15 Existing N/A	The following condition was added to the licence as an additional regulatory control to address dust emissions from the Premises: *The licence holder must manage dust generation at the premises by:* *(a) wetting down unsealed roads and exposed areas with a water truck;* *(b) limiting all vehicle traffic within the premises to speeds of less than 10 km/hr; and* *(c) ceasing dust-generating activities during strong wind conditions.* An associated definition for *strong wind conditions* was also added.
Revised 16 Existing N/A	The following condition was added to the licence as an additional regulatory control to address dust emissions from the Premises. The condition also replaces a requirement from within the waste processing table that specifies *Dust control measures must be in place to prevent dust lift off.* *The licence holder must ensure that all recycled product and waste stockpiles are wetted down during operations at all times.*
Revised 17 Existing N/A	The following condition was added to the licence as an additional regulatory control to address dust emissions from the Premises: *The licence holder must ensure that all products to be removed from the premises are wetted down prior to loading.*
Revised 20 Existing N/A	The following condition relating to management of material used for spill clean-up was added to the licence as an additional regulatory control: *The licence holder must ensure that all material used for the recovery, removal, and/or disposal of environmentally hazardous materials is stored in an impermeable container prior to disposal at an appropriately authorised facility.*
Revised 24: Table 6 Existing 22: Table 5	The corresponding unit for standing water level within the ambient groundwater monitoring table was amended to also include metres below ground level (mBGL). *mAHD and mBGL*
Revised 27 Existing 13 (AMP)	The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan *Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013*. The condition aligns with the AMP and DWER Asbestos Guideline. *The licence holder must ensure that testing of all recycled products is undertaken in accordance with the product testing procedures specified in Schedule 5: Asbestos monitoring and testing.*
Revised 28 Existing 13 (AMP)	The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan *Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013*. The condition aligns with the AMP and DWER Asbestos Guideline. *The licence holder is not authorised to implement a reduced product testing rate as per the "Reduced sampling criteria" section of Schedule 5: Asbestos monitoring and testing.*
Revised 29 Existing	The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan *Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013*. The condition aligns with the AMP and DWER Asbestos Guideline.

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td>13 (AMP)</td><td>The licence holder must ensure that recycled products are only supplied to customers or used in the construction of infrastructure on the premises if they have been tested in accordance with condition 26 and must not exceed the product specification of 0.001% asbestos weight for weight (w/w) for asbestos content (in any form) within any recycled products.</td></tr>
<tr><td><u>Revised</u>
32
<u>Existing</u>
13 (AMP)</td><td>The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.

The licence holder must maintain accurate and auditable records of all loads that have been inspected and suspected or found to contain asbestos and/or ACM showing the source (person) and originating site (location), and actions taken to address the issue with the source of the load.</td></tr>
<tr><td><u>Revised</u>
33
<u>Existing</u>
13 (AMP)</td><td>The following condition was added to the licence to replace the condition requiring operations to take place in accordance with the Asbestos Management Plan Waste Stream Management Pty Ltd C&D Asbestos Management at WSM and ACH facility, Ratcliffe Rd, Medina, WA June 2013. The condition aligns with the AMP and DWER Asbestos Guideline.

The licence holder must maintain accurate and auditable records of all asbestos product testing undertaken in accordance with condition 26, including:

(a) details of the sample size;

(b) a statement of limit of detection of the analysis;

(c) results in relation to asbestos detected (positive result exceeding the 0.001% w/w limit) or not;

(d) a description of any asbestos detected; and

(e) an estimate of the concentration of asbestos detected.</td></tr>
<tr><td><u>Revised</u>
37
<u>Existing</u>
27</td><td>To align with current reporting standards, the submission date for the Annual Audit Compliance Report (AACR) was increased from 32 days to 90 days after the end of the annual period and listed as a specific date.

The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 28 September <s>32 days</s> after the end of that annual period an Annual Audit Compliance Report in the approved form.</td></tr>
<tr><td><u>Revised</u>
38
<u>Existing</u>
26</td><td>To align with current reporting standards, the submission date for the Annual Environmental Report (AER) was increased from 28 days to 90 days after the end of the annual period and listed as a specific date.

The licence holder must submit to the CEO by no later than 28 September <s>28 days</s> after the end of each annual period, an Annual Environmental Report (AER) for that annual period for the conditions listed in Table 7, and which provides information in accordance with the corresponding requirement set out in Table 7.</td></tr>
<tr><td><u>Revised</u>
38: Table 7
<u>Existing</u>
26: Table 6</td><td>Additional requirements for the Annual Environmental Report have been added to account for asbestos testing records and current departmental expectations for groundwater reporting.

<table>
<tr><th>Condition</th><th>Requirement</th></tr>
<tr><td>-</td><td>Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken</td></tr>
<tr><td>24</td><td>Any relevant information relating to the calibration of monitoring equipment during the annual period.</td></tr>
<tr><td>25</td><td>A summary of waste input and output data, including the quantities of each waste type</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>received, rejected or removed from the premises during the annual period.</td></tr>
<tr><td>26 and 34</td><td>A summary of asbestos validation testing of recycled products during the annual period.</td></tr>
<tr><td>29</td><td>Ambient Groundwater Monitoring for the annual period including;
(a) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file);
(b) a diagram with aerial image overlay showing all monitoring locations and depicting groundwater level contours, flow direction and hydraulic gradient;
(c) an interpretive summary and assessment of results against previous monitoring results;
(d) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites;
(e) trend graphs to provide a graphical representation of historical results and to support the interpretive summary; and
(f) the corresponding laboratory certificates of analysis.</td></tr>
<tr><td>32 and 33</td><td>A summary of asbestos management records for the annual period.</td></tr>
<tr><td>35</td><td>A summary of complaints received for the annual period.</td></tr>
</table>
</td></tr>
<tr><td><u>Revised</u>
39: Table 8
<u>Existing</u>
28: Table 7</td><td>The following requirement relating to notification of fire incidents was added to the licence as an additional regulatory control:
The licence holder must ensure that the parameters listed in Table 8 are notified to the CEO in accordance with the notification requirements of the table.
<table>
<tr><th>Parameter</th><th>Notification requirements</th><th>Format</th></tr>
<tr><td>Any:
(a) fire on the premises; or
(b) accident, malfunction or emergency which could result in the discharge of fire-fighting washwater or other wastes from the premises</td><td>Immediately</td><td>To the Pollution Watch hotline, via:
- pollutionwatch@dwer.wa.gov.au; and
- 1300 784 782</td></tr>
</table>
</td></tr>
<tr><td><u>Revised</u>
40: Table 9
<u>Existing</u>
16</td><td>The due date for the Landfill Development Plan has been extended, as the plan is unable to be finalised due to an ongoing appeal.
<s>30 September 2021</s>
31 December 2023
Additional requirements for the plan have been added to address stakeholder concerns regarding stability and form of the landfill.
(a) a plan and estimated timeframe for progressive filling of the current Active Landfilling Area;
(b) a map of the premises showing the licence holder's proposed staging for future landfill areas/cells on the premises for a timeframe of 10 years (to 30 June 2031);
(c) a contour map that depicts the existing contours, and top and side slopes of the landfill;
(d) details of final levels to be achieved for each landfilling area/cell, including a contour map that depicts proposed final contours, top and side slopes, and surface drainage features;
(e) details of the final waste embankment slopes and foundation stability;
(f) methods employed to clearly identify and delineate each landfill area/cell;
(g) landfilling area/cell closure timeframes and methods; and
(h) a comparison to the completion profile shown in the Kwinana Landfill Tipsite Landscape and Visual Impact Assessment and an explanation for any identified departures.</td></tr>
</table>

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td><u>Revised</u>
40: Table 8
<u>Existing</u>
N/A</td><td>The following requirement to submit a Dust Management Plan was added to the licence to address dust emissions from the Premises and the currency of existing information. The plan is required to be submitted by 30 June 2023.

An updated Dust Management Plan with respect to fugitive dust emissions from all activities on the premises, including but not limited to:

(a) A descriptive overview of the premises and activities that could result in fugitive dust emissions, with details about the different facilities, process areas and equipment;

(b) A fugitive dust source list that includes:

(i) each potential equipment or activity source of fugitive dust;

(ii) a unique identification number or designation for each source;

(iii) location of each source within the premises (or reference id on an included site map);

(iv) relevant factors influencing the generation of dust for each source (e.g. wind conditions, operational activities); and

(v) identification of the dust-generating material for each source (e.g. aggregate, mixed waste, road dust).

(c) The specific operational practices and control methods that will be implemented to address the identified fugitive dust sources and activities that considers;

(i) how the mitigation measures will address the specific mechanism that causes dust generation for each source;

(ii) what equipment/systems will be used;

(iii) under what frequency and conditions the mitigation measures will be applied;

(iv) who is responsible for implementing mitigation measures; and

(v) contingency measures if mitigation measures are insufficient or no longer efficient; and

(vi) the monitoring and maintenance that will be implemented to ensure mitigation measures are effective.</td></tr>
<tr><td><u>Revised</u>
Definitions: Table 10
<u>Existing</u>
Definitions: Table 8</td><td>The following changes to definitions and additional definitions were added to the licence:

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>ACM</td><td>means asbestos-containing material</td></tr>
<tr><td>asbestos</td><td>as defined in the Asbestos Guidelines ~~means as defined in the Environmental Protection (Controlled Waste) Regulations 2004.~~</td></tr>
<tr><td>asbestos-containing material</td><td>as defined in the DWER Asbestos Guidelines</td></tr>
<tr><td>asbestos fines or fibres</td><td>as defined in the Asbestos Guidelines ~~has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (Department of Health, 2009).~~</td></tr>
<tr><td>DWER Asbestos Guidelines</td><td>means the Guideline: Managing asbestos at construction and demolition waste recycling facilities published on the department's website</td></tr>
<tr><td>C&D Waste Processing Area</td><td>means the area shown in blue in Schedule 1: Figure 2 and defined by the coordinates in Schedule 2: Table 15 of this licence</td></tr>
<tr><td>construction and demolition waste</td><td>as defined in the Landfill Definitions</td></tr>
</table>
</td></tr>
</table>

Condition no.	Proposed amendments	
	damp	means moist to the touch
	delivery vehicle	means the vehicle that delivered the waste to the premises
	FA	means fibrous asbestos
	fibrous asbestos	as defined in the Asbestos Guidelines
	~~garden waste/~~ Green Waste	means biodegradable waste comprising plants and their component parts such as flower cuttings, hedge trimmings, branches, grass, leaves, plants, seeds, shrub and tree loppings, tree trunks, tree stumps and similar materials and includes any mixture of those materials
	Green Waste Storage Area	means any area where ~~garden waste or~~ Green Waste is stored pending processing, and/or any area where there is a mulched ~~garden waste or~~ Green Waste windrow
	high risk load	refers to loads classified as high risk in accordance with the Asbestos Guidelines Risk Classification Matrix included in Schedule 3: Asbestos risk classification procedure of this licence
	Kwinana Landfill Tipsite Landscape and Visual Impact Assessment	means the document titled *Kwinana Landfill Tipsite - Landscape and Visual Impact Assessment Report*, prepared by Ecoscape (Australia) Pty Ltd, dated September 2004
	Lot 303	means Lot 303 on Plan 72808 Certificate of Title Volume 1795 Folio 918
	low risk load	refers to loads classified as low risk in accordance with the Asbestos Guidelines Risk Classification Matrix included in Schedule 3: Asbestos risk classification procedure of this licence
	m	metres
	mAHD	metres relative to Australian height datum
	mBGL	metres below ground level
	Mixed Waste Processing Area	means the area shown in orange in Schedule 1: Figure 2 and defined by the coordinates in Schedule 2: Table 14 of this licence
	recycled product	refers to C&D Waste which has undergone crushing, processing or screening to create a useable recycled product and which is awaiting asbestos testing or has been tested and conforms to the specifications of this licence
	Recycled Product Storage Area	means the area shown in green in Schedule 1: Figure 2 and defined by the coordinates in Schedule 2: Table 12 of this licence
	strong wind conditions	means wind speeds of 38 km/hr or greater, or a Beaufort Scale rating of 6 or greater

5.1.1 Consolidation and conversion

Table 12 provides a summary of the licence conditions consolidated and converted in this amendment and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 12: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Prescribed Premises Category table	N/A	Revised to current licensing format where only the assessed capacity is shown.

Existing condition	Condition summary	Revised licence condition	Conversion notes
1	Pollution control and monitoring equipment	N/A	Redundant condition. Adequately covered by alternative existing conditions. Deleted from licence.
2	Recovery and removal of spills	20	Revised to current licensing format.
4 Table 1	Waste acceptance	1 Table 1	Revised to current licensing format. Category column added to table.
5	Removal of non-conforming waste	3	Revised to current licensing format. *As soon as practicable* term removed.
6 Table 2	Waste processing	10 Table 3	Revised to current licensing format. Category column added to table.
6 Table 2	Waste processing – Restrictions on storage within Lot 303	9	Included as a standalone condition to reduce repetition within waste processing table.
6 Table 2 [Special Waste Type 1:(iii)]	Waste processing – Register of asbestos loads	31	Revised to current licensing format and included as a standalone condition.
7(a)(b)	Landfill waste compaction and stability	10 Table 3 [Category 63 - Clean Fill, Inert Waste Types 1 and 2:(b)(c)]	Revised to current licensing format and incorporated into waste processing table for Category 63.
7(c)	Landfill rehabilitation	8 Table 2 [Inert Landfill:(b)]	Revised to current licensing format and incorporated into infrastructure and equipment table for the inert landfill.
8 Table 3	Landfill cover	11 Table 4	Revised to current licensing format. *As soon as practicable* term removed.
9	Security	8 Table 2 [Fencing and security gates]	Revised to current licensing format and incorporated into infrastructure and equipment table. *As soon as practicable* term removed.
10	Windblown waste	21	Revised to current licensing format.
11	Burning of waste	22	Revised to current licensing format.
12	Hydrocarbon storage	8 Table 2 [Fuel and hydrocarbon storage facility]	Revised to current licensing format and incorporated into infrastructure and equipment table.
13		4	

Existing condition	Condition summary	Revised licence condition	Conversion notes
	Operations in accordance with asbestos management plan	5	Condition removed as current licensing format no longer references management plans. Key controls from the management plan are included as specific conditions.
		6	
		7	
		12	
		13	
		27	
		28	
		29	
		32	
		33	
14	Buffer distances	14	Revised to current licensing format.
15	Entry signage	8 Table 2 [Signage]	Revised to current licensing format and incorporated into infrastructure and equipment table.
16	Landfill development plan	40 Table 9	Revised to condition and requirements table format.
17(a)(b)	Monitoring methodology	24 Table 6	Revised to current licensing format which incorporates method requirements in monitoring tables.
17(c)	NATA accreditation	26	Revised to current licensing format as a standalone condition.
18	Monitoring frequency	25	Revised to current licensing format.
19	Calibration of monitoring equipment	30	Revised to current licensing format.
20	Calibration report	N/A	Redundant condition. Reporting adequately covered by AACR condition. Deleted from licence.
21 Table 4	Monitoring of inputs and outputs	23 Table 5	Revised to current licensing format.
22 Table 5	Groundwater monitoring	24 Table 6	Revised to current licensing format which incorporates method requirements.
23	Record keeping	35	Revised to current licensing format.
		36	

Existing condition	Condition summary	Revised licence condition	Conversion notes
24	Operator awareness	N/A	Redundant condition. Removed from licence.
25	Complaints	34	Revised to current licensing format.
26 Table 6	AER	38 Table 7	Revised to current licensing format. Specific submission day listed and aligned with AACR date.
27	AACR	37	Revised to current licensing format. Specific submission day listed and aligned with AER date.
28 Table 7	Other reporting requirements	Notifications 39 Table 8	Revised to current licensing format.
Definitions Table 8	Definitions	Definitions Table 10	Revised to current licensing format. Redundant conditions not used in the licence were removed.
Schedule 1 Tables 9, 10, 11, 12, 13, 14	Premises boundary, defined areas and monitoring bore coordinates	Schedule 2 Tables 11, 12, 13, 14, 15, 16	Coordinates converted to GDA2020 MGA Zone 50

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. DWER 2021, *Guideline: Managing asbestos at construction and demolition waste recycling facilities*, Perth, Western Australia.
5. Kiverco DS150 Technical Specifications, accessed at: https://mycsamulder.es/wp-content/uploads/2021/09/KIVERCO-DS150-Separador-Densidad-ENG.pdf
6. McCloskey J50 Feature Sheet, accessed at: https://mccloskeyinternational.com/wp-content/uploads/2022/02/J50-Feature-Sheet-Feb-2022.pdf?j50-crusher.
7. McCloskey R155 Feature Sheet, accessed at: https://mccloskeyinternational.com/wp-content/uploads/2022/02/R155-Feature-Sheet-Feb-2022_digital.pdf?r105-screener.
8. McCloskey R230 Feature Sheet, accessed at: https://mccloskeyinternational.com/wp-content/uploads/2022/02/R230-Feature-Sheet-Feb-2022_digital.pdf?r230-screener.
9. Thor 1519K Feature Sheet, accessed at: http://www.zbgroup.es/media/uploads/subsubcategorias/documentos/THOR_MOBILE_HAMMERMILL_SHREDDER_UNITS_(ZB_GROUP)_USA.pdf.
10. Terex 693 Feature Sheet, accessed at: https://www.finlay.com.au/wp-content/uploads/2020/10/Terex-693-Inclined-Screen.pdf.

Appendix 1: Stakeholder consultation

Stakeholder	Comments received	Department's response
City of Kwinana	In January 2021, City Authorised Officers received dust complaints against Waste Stream Management Pty Ltd which resulted in a site visit with DWER Compliance Officers. At the time of the visit, there was clear observations of dust emissions without adequate control. The front office site reticulation areas were burnt and needed repair and sole use of water trucks was not sufficient to manage the dust issue. The information provided in the licence amendment document (December 2021) refers to the previous operational Environmental Management Plan (2010). The current licence conditions lacked references to the Management Plan and there is no direct condition to require Waste Stream Management Pty Ltd to manage dust emissions. The licence amendment document lack detailed information about dust monitoring, complaint management and permanent measures to prevent release of dust from premises. We request that the management plan be updated and that DWER enforces dust control requirements including a requirement for the use of permanent sprinklers/reticulation system on the premises as well as setting limitations on stockpile heights. The City therefore would like to make your Department aware of our concerns we have previously received to ensure future amendments to the conditions of the above licence adequately prevents any further release of unnecessary dust emissions.	The Delegated Officer has considered the concerns raised by the City of Kwinana in relation to complaints of dust emissions from the Premises. DWER sought further information regarding the complaints which is summarised in Section 2.4.3. In consideration of the risk assessment outcome for dust emissions contained in Section 3.2, the Delegated Officer considered that further controls were required in relation to the management of dust from the Premises. These conditions have been specified in the Revised Licence. Refer to Table 9 for the corresponding condition numbers.
DPLH	The Department and the Western Australian Planning Commission (WAPC) have an interest in the proposed licence amendment due to the following: • Lot 434 is a Crown Reserve (Reserve 26572) managed by the Department, vested to the City of Kwinana (City) and subject to a lease agreement between the City as Management Body (Lessor) and Waste Stream Management Pty Ltd (Lessee), for a term of 21 years, due to expire 20 December 2023. • The WAPC control Lot 303 (CT 1795/918) and Lot 304 (CT 1795/919), both of which are currently leased to the City, with the City sub-leasing this land to Waste Stream Management Pty Ltd. • Lot 434 and Lot 304 are encumbered by Sundry Document H626074 and Sundry Document H626060 respectively, outlining that a portion of the land falls within the Dampier to Bunbury Natural Gas Pipeline corridor. • Lot 434 and Lot 304 are encumbered by Contaminated Sites Memorial K923952 and Memorial K905823, classifying the land as 'Possibly Contaminated - Investigation required' and 'Contaminated - Remediation Required', respectively. With reference to the aforementioned encumbrances, we provide the following comments: • Permits and Approvals (Sundry Document H626074 and Sundry Document H626060)	The Delegated Officer has amended conditions relating to the Landfill Development Plan required to be submitted by the Licence Holder. These conditions require the Licence Holder to provide information relating to slope angles and stability of the landfill. A comparison of the design levels to the DPLH document has been specified as a requirement of the plan and where there are departures the Licence Holder is required to specify where this occurs. Refer to Condition 40 of the Revised Licence. It is recommended that the Licence Holder consults with DPLH and the City of Kwinana on the Landfill Development Plan prior to submission to DWER, to factor in any comments in the context of their respective regulatory or planning frameworks.

Stakeholder	Comments received	Department's response
	• The Department, on behalf of the DBNGP Land Access Minister, offers in-principle support of the proposed amendment to licence L6772/1997/13 as it is not expected to materially interfere with the exercise of rights that have been, or might in future be, conferred under section 34 of the Dampier to Bunbury Pipeline Act 1997. • The Department recommends DWER remind Waste Stream Management to consider setback distances outlined in WAPC Planning Bulletin 87: High Pressure Gas Transmission Pipelines in the Perth Metropolitan Region. Contaminated Sites (Memorial K923952 and Memorial K905823) • As the licence amendment is the decision of DWER (who are the regulator) we have no objections to this proposal. The Department is generally supportive of the licence amendment application, but notes that Section 6 of the application indicates a Landfill Development Plan is being developed. The original management plan has instead been provided, indicating the "on completion" profile, which is significantly different to the current profile. The plan (Kwinana Landfill Tipsite - Landscape & Visual Impact Assessment Report, September 2004) clearly indicates profile options (pages 23-25) of how the site would look at the end of Waste Stream Management's landfill usage, noting Option A (page 23) was the preferred option. As recently raised with DWER and the Appeals Convenor, the Department is concerned about the northern tipping face, particularly across Lot 304. Independent engineering advice has been sought from GHD, who identified this tipping face as being too steep and unstable for works to proceed. Further advice indicated the tipping face may partially encroach the bund wall. We further advise that upon completion of landfill works, the portion of Lot 304 currently occupied by Waste Stream Management is proposed to be vested to the City of Kwinana for local open space purposes. Consequently, the Landfill Development Plan being developed should appropriately recognise the proposed end use for these parcels of land and not detrimentally effect Alcoa's Residue Storage Area 'C' immediately to the north.	

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L6772/1997/13		
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received		13 January 2022			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Waste Stream Management Pty Ltd			
Premises name		Waste Stream Management			
Premises location		Lot 434 on Deposited Plan 220492, Lot 303 on Diagram 72808 and Part of Lot 304 on Diagram 72808			
Local Government Authority		City of Kwinana			
Application documents					
HPCM file reference number:		DWERDT549402			
Key application documents (additional to application form):		Supporting Document (2022) Asbestos Management Plan assessment against DEC guidelines (2013) Environmental Improvement Plan Report (2012) Draft Fire Management Plan (2021)			
Scope of application/assessment					

Summary of proposed activities or changes to existing operations.	Licence amendment Operation of a construction and demolition waste recycling facility and inert landfill premises. The scope of the amendment is to update the premises risk assessment and conditions in the licence to better reflect current waste acceptance and processing activities at the premises. Submission of the amendment was requested by Compliance and Enforcement, following the identification of non-compliances and new activities at the premises in 2021. The application outlines the scope of activities currently being undertaken at the premises, some of which were not previously authorised or assessed by the department. The amendment will align the format and content of the licence with the current licensing approach. This will include changes such as the inclusion of an infrastructure and equipment table and inclusion of more detailed asbestos management conditions (rather than referring to compliance with an Asbestos Management Plan within the licence).

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 13: crushing of building material	90,000 tonnes per annual period	N/A
Category 61A: solid waste facility	100,000 tonnes per annual period	N/A
Category 62: solid waste depot	90,000 tonnes per annual period	N/A
Category 63: Class 1 inert landfill site	500,000 tonnes per annual period	N/A
Category 70: Screening etc, of material	50,000 tonnes per annual period	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☐ No ☐ N/A ☒	General lease ☒: Ongoing issue regarding boundary to be resolved through pending appeal not related to this amendment. Not required for this

		application
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☒ No ☐	Application reference No: Licence/permit No: GWL109202 Held by City of Kwinana not the LH
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: Proclaimed Groundwater and Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: Kwinana Peel
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Environmental Protection (Controlled Waste) Regulations 2004*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☒ No ☐	Environmental Protection (Kwinana) (Atmospheric Wastes) Policy and Regulations 1999 State Environmental (Cockburn Sound) Policy 2015

Is the Premises subject to any EPP requirements?	Yes ☒ No ☐	Area B ambient air quality standards listed in *Environmental Protection (Kwinana) (Atmospheric Wastes) Regulations 1992*
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	Classification: Lot 434 - possibly contaminated – investigation required (PC–IR), Lot 304 - contaminated – remediation required (C–RR) Lot 304 was classified as contaminated – remediation required on 20 February 2009. The classification was based on leakage of caustic leachate through the basal liners of retired ALCOA residue storage lagoons within the northern portion into the underlying superficial aquifer. The Lot 434 was classified as possibly contaminated – investigation required on 18 March 2009 and the 'reasons for classification' was updated on 11 June 2010. The classification was based on groundwater monitoring results up to March 2010 which found that concentrations of nutrients and metals (iron, manganese and nickel) in groundwater exceeded assessment levels for long-term irrigation and/or non-potable use of groundwater. The source of the identified impacted groundwater is likely from historical buried putrescible waste on-site.