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1 Purpose of this Document

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



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	62	2000 tonnes per annual period
	64	5000 tonnes per annual period
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



3 Executive summary of proposal and assessment

The Shire of Chittering has three main towns, Bindoon, Muchea and Wannamal with a population of around 5,000 residents. There are about 20 rural residential subdivisions outside of the main town site. The area is predominantly farming and bushland, with a number of state forests.

The site was previously Lot 16, but with the subdivision of the Midland Brick quarry next door, it is now Lot 300 on Plan 71254 (536), Wandena Road, Lower Chittering. The premises is zoned Agricultural Resources with further Rural Residential proposed to the east.

Prior to the site being established as a landfill and recycling centre it was a clay and gravel quarry. Quarrying still occurs on the adjacent lot. Other surrounding land uses include an abattoir 600 m south west of premises, and a residential subdivision east, with the closest sensitive receptor (residents) 500 m away. The site meets the requirements for a class II or III landfill under the Environmental Protection Guidance Statement No. 3: Separation Distances between Industrial and Sensitive Land Uses.

The landfill is located in a Special control area for Basic Raw materials zoning under the Shires Town Planning Scheme and incorporates a surrounding buffer exclusion zone for all development within a 500 m radius of the landfill site. This assists to ensure no future development nearby. The northern portion of the lot is listed as Contaminated Site (CSS ID 18834) waiting classification.

The main soil types in the area are clayey sand and laterite deposits. The site elevation is between 120 m and 140 m Australian height datum(AHD), with the average depth to groundwater stated by staff on site to be 28m below ground level. This information will be confirmed as part of an improvement condition. The site is not in a Public Drinking Water Source Area. Ellen Brook floodplain is located 1.6 km to the west and there is a Geomorphic Wetland (marshland) to the north east about 380m away. Close to the premises there are some minor non-perennial water courses south and north of the site about 200 m.

The Muchea Landfill and Recycling Centre services the region in conjunction with the Bindoon Landfill and Recycling Centre. Most residents participate in a weekly kerbside collection service and a fortnightly recycling collection service. Residents use tip passes for larger items and green waste with fully sorted loads admitted free. Muchea Landfill is open Saturday, Sunday, Monday, Wednesday and Friday 10am to 3pm. Waste is received at the landfill and placed as directed by the operator. Not all waste received at the site is buried. Waste suitable for recycling or disposal at other facilities is collected at premises in special segregated areas. There are segregated areas for construction and demolition waste, cardboard and newsprint, steel, waste oil and Drum Muster Chemical drums.

The site receives:

- Type 1 inert waste;
- Putrescible waste;
- Type 2 inert wastes.
- Special waste Type 1
- Green waste; and,
- Hazardous wastes (oils, paints and batteries).

In accordance with DER's *Guidance Statement: Licence Duration* (Revised May 2015), the licence duration has been extended to 10 May 2024 on 29 April 2016. This amendment includes the addition of Category 62 to reflect the current activities on the premises and updates to the licence format and conditions. Changes are described and detailed in the Decision Table below.



4 Decision table

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

DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General Conditions	L3.1.1	<p><u>Emission Description</u> <i>Emission:</i> Stormwater contaminated with leachate derived from premises operations. <i>Impact:</i> Contamination of surrounding land, surface water drainage and groundwater systems. <i>Controls:</i> The proponent builds up raised earthen bunds around the landfill and directs all stormwater to an unlined retention basin which acts as a soak and infiltrates to the ground. The landfill is lined with in situ clays and groundwater is stated to be significantly below the premises at about 28 m. The premises accepts small amounts of residential waste only.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Likely <i>Risk Rating:</i> High</p> <p><u>Regulatory Controls</u> Surface water and stormwater controls must be implemented to minimise the excessive generation and infiltration of leachate and to prevent any leachate being discharged into the environment.</p> <p>Observations from previous site inspections suggest that the stormwater dam is unlined and relies on in situ clay only. Groundwater is stated to be 28 m below ground level. Insufficient information is available to determine the required capacity to contain cumulative winter runoff from the site or the permeability for the in situ clay lining of the pond.</p>	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General Conditions continued		<p>Improvement Condition IR1 has been added to the licence to obtain information regarding stormwater management on the premises, including the location and capacity of the existing retention ponds.</p> <p>A recent inspection of the premises identified that groundwater bores were in place and monitoring was being undertaken. Improvement Condition IR2 has been added to the licence to determine the number and location of monitoring bores, water quality parameters being monitored, depth to groundwater and any historical monitoring results from the previous annual period.</p> <p>These improvement conditions are to ensure that previous conditions W1(a) and W1(b) were effective in managing the stormwater.</p> <p><u>Residual Risk</u> Consequence: Moderate Likelihood: Likely Risk Rating: High</p> <p>Previous conditions W2(a) and W2(b) related to protection of ground and surface waters. This information may be used to further inform further licence amendments.</p>	
Premises Operation	L1.2.1 – 1.2.7	<p>Previous condition G1(a) and G1(b) have been replaced with Conditions 1.2.1 – 1.2.3 which outline the waste acceptance and the specifications. Condition 1.2.3 outlines the processes involved and the process limits undertaken. This is to ensure wastes and processes are consistent with approved practices.</p> <p>Asbestos <u>Emission Description</u> Emission: Asbestos fibres released into environment Impact: Contamination of surrounding land and reduced local air quality. Health</p>	
Premises Operation			



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
continued		<p>impacts to humans including asbestosis.</p> <p><i>Controls:</i> This asbestos is kept separate from the general landfilling activities and is marked on a map and in a designated area. Asbestos waste is covered immediately to reduce the risk of asbestos fines being released.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.2.1 replaces previous condition G1(a) and part of G1(b) regarding waste acceptance and the allowable specifications to ensure the Licensee operates in accordance with the assessed operation.</p> <p>Condition 1.2.2 has been included to ensure waste not meeting the waste acceptance criteria of condition 1.2.1 is removed from the premises to ensure compliance of authorisation.</p> <p>Condition 1.2.3 replaces previous condition G1(b) and has been included to manage the placement for Special Waste Type 1 ensuring it is disposed of appropriately, marked clearly on site plans and sufficient fill is used. This condition outlines the requirements which have been assessed to be suitable.</p> <p>Condition 1.2.4 has been included to manage landfilling activities which include, waste compaction, rehabilitation and placement of waste to ensure stability of the landfill cell and appropriate rehabilitation is undertaken.</p> <p>Condition 1.2.5 has been included to outline the cover requirements for the different types of waste materials received on site to manage litter, odour, reduces likelihood of vermin and pests, and protects human health from</p>	



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises Operation continued		<p>exposure of hazards.</p> <p>Condition 1.2.6 replaces previous condition G3(a) and G3(b) requiring the licensee to implement security measures around the premises to manage unauthorised access and exposure to hazards.</p> <p>Condition 1.2.7 replaces previous condition G4 requiring the licensee to collect windblown waste from around the premises to prevent littering of neighbouring properties and impacting amenity values.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	
Fugitive emissions (dust)	N/A	<p><u>Emission Description</u> <i>Emission:</i> Dust emissions from stockpiling and general handling of waste, waste loading/unloading, filling of waste and placing of cover material, and vehicle movements. <i>Impact:</i> Reduced local air quality. Nuisance impacts to sensitive receptors. Respiratory impacts to human health. <i>Controls:</i> A water truck is utilised as required. Residents are located 500 m from the Premises.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Dust emissions are unlikely to unreasonably impact on human receptors given</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Fugitive emissions (dust) continued		<p>the 500 m separation distance.</p> <p>It is assessed that dust emissions can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>. It is considered that this is sufficient to remove previous condition A1 regarding dust crossing the premises boundary.</p> <p><u>Residual Risk</u> <i>Consequence</i>: Minor <i>Likelihood</i>: Possible <i>Risk Rating</i>: Moderate</p>	
Odour emissions	N/A	<p><u>Emission Description</u> <i>Emission</i>: Odour emissions from the degradation of putrescible wastes. <i>Impact</i>: Nuisance impacts to sensitive receptors. <i>Controls</i>: Cover material is applied at least weekly and also on days on which municipal collections are received to assist in preventing odours. Residents are located 500 m from the Premises.</p> <p><u>Risk Assessment</u> <i>Consequence</i>: Insignificant <i>Likelihood</i>: Possible <i>Risk Rating</i>: Low</p> <p><u>Regulatory Controls</u> Odour emissions are not likely to unreasonably impact on human receptors given the 500 m separation distance.</p> <p>It is considered that the existing operational controls are appropriate to manage odour; the risk of odour is low and odour emissions can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>.</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	
Monitoring of inputs and outputs	L2.1.1	Condition 2.1.1 has been included on the licence as a means of checking compliance with condition 1.2.1 to ensure waste types and volumes accepted at the premises are being complied with.	N/A
Improvements	L3.1.1 – 3.1.2	<p>There is limited information available to DER regarding the premises. Therefore, improvement conditions have been included to better understand what is occurring on site as well as determining the effectiveness of some of the retention pond management.</p> <p>Improvement Condition IR1 has been added to the licence to determine information regarding stormwater management on the premises, including the location and capacity of the existing retention ponds.</p> <p>A recent inspection of the premises identified that groundwater bores were in place and monitoring was being undertaken. Improvement Condition IR2 has been added to the licence to determine the number and location of monitoring bores, water quality parameters being monitored, depth to groundwater and any historical monitoring results from the previous annual period.</p>	N/A
Information	L4.1.1 – 4.1.3, 4.2.1 and 4.3.1	<p>Condition 4.1.1 outlines the requirements for any records that are to be kept under this licence, ensuring they are legible and retained for 6 years for auditing purposes.</p> <p>Condition 4.1.2 requires the Licensee to undertake an audit of their operations against the conditions of licence and to report on this compliance in an Annual Audit Compliance Report (AACR) as a means of self-regulation.</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Licence Section	Condition number L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>Condition 4.1.3 requires a complaints management system to be implemented where the Licensee can address any issues that rise and report this in the Annual Environmental Report (AER). This replaces part of condition G5(b).</p> <p>Condition 4.2.1 replaces condition G5(a) requiring the Licensee to submit additional information in the Annual Environmental Report including assessment of monitoring results against previous Licence limits. The standard reporting requirement of 28 days has been included.</p>	
Licence duration	N/A	The licence expiry was extended until 2024 on 29/04/2016 in accordance with DERs <i>Guidance Statement on Licence Duration</i> . No alterations to the expiry date are proposed as part of this amendment.	



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
7/6/2016	Proponent sent a copy of draft instrument	<p>Proponent submitted the 21 day waiver form on 17 June 2016 with the following changes and comments:</p> <ul style="list-style-type: none">• Page 3 of Introduction and page 4 of Executive Summary in Decision Document : “Most residents deliver their waste via tip passes with some having a weekly service collection” This should be: “Most residents participate in a weekly kerbside waste collection service and a fortnightly recycling collection service. Residents use tip passes for larger items and green waste with fully sorted loads admitted free.”• Page 3 of Introduction : Muchea landfill is open Saturday, Sunday, Monday, Wednesday and Friday 10 am to 3pm.• In the Decision Document Executive Summary change 3,500 residents to 5,000 residents Add “ There are about 20 rural residential subdivisions outside of the main town sites.” <p>We have noted the Improvements in Table 3.1.1 and reporting timeframes.</p>	DER has considered the requested changes and comments and has made the requested changes to the documents.



6. Risk Assessment

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

Table 1: Emissions Risk Matrix

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