

Application for Licence Amendment

Part V Division 3 of the Environmental Protection Act 1986

Licence Number	L6956/1997/12
Licence Holder	Shire of Victoria Plains
File Number	DWERVT1560
Premises	Bolgart Refuse Site
	Bolgart East Road
	BOLGART WA 6568
	Legal description –
	Lot 1 on Diagram 16424
	Certificate of Title Volume 1182 Folio 811
	As defined by the Premises maps attached to the Revised Licence
Date of Report	18/10/2024
Decision	Revised licence granted

Rowena Beaton SENIOR ENVIRONMENTAL OFFICER – WASTE INDUSTRIES an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L6956/1997/12 is held by the Shire of Victoria Plains (Licence Holder) for the Bolgart Refuse Site (the Premises), located on Bolgart East Road, Bolgart.

This Amendment Report documents the assessment of potential risks to the environment and to public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Licence L6956/1997/12 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department 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 15 May 2024, the Licence Holder submitted an application to the Department of Water and Environmental Regulation (the department) to amend Licence L6956/1997/12 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought by the Licence Holder:

- The construction of a new transfer station/e-waste shed and concrete apron for the storage of solid wastes, pending final disposal or re-use.
- Temporary storage of household putrescible waste and e-waste at the premises, prior to removal off-site for recycling (e-waste) or disposal at another appropriate Class II landfill (putrescible waste).
 - Approximately 3 m³ of putrescible waste is expected to be received at the premises weekly and stored in lidded bins on the concrete apron next to the ewaste shed.
 - Approximately 100 kg of e-waste is expected to be received per week, to be stored in the e-waste shed. Lithium batteries are proposed to be stored in fireproof containers exterior to the enclosed shed storage area.
- A two-year extension to the times specified in Condition 18, Table 6.
 - Groundwater monitoring well MB1/22 to be operational between 1 August 2024 and 30 September 2024.
 - Groundwater monitoring well MB2/22 to be operational by 31 October 2024.
- Removal of the requirement in Condition 8, Table 6, to decommission monitoring well MB1/21 within 30 days after monitoring well MB1/22 is determined to be operational. Instead, the Licence Holder requests that MB1/21 is only required to be decommissioned if two consecutive samples from MB2/22 demonstrate that "relevant parameters", i.e. Australian Drinking Water Guidelines, have been exceeded.

The department has also assessed, as part of this amendment, the addition of untreated timber

to the waste types allowed to be accepted at the premises. The Licence Holder is already accepting timber at the premises. The department's proposed amendment is intended to clarify that only untreated timber can be accepted.

Whilst solid waste is proposed to be stored on the premises, pending final disposal or re-use, the quantity of waste received does not reach the threshold of 500 tonnes or more per year for a Category 62 Solid Waste Depot as listed in Schedule 1 of the *Environmental Protection Regulations 1987*. The Delegated Officer notes that a further licence amendment will be required to include Category 62, should it be likely that the 500 tonnes per annum threshold will be reached in future.

The Licence Holder has not requested a change to the design capacity for Category 64, but landfilling volumes are expected to decrease due to the increase in the recovery of recyclable materials at the facility and transfer of putrescible wastes to another landfill. Future landfilling at this premises will therefore be for mostly inert materials. Approximately 8 tonnes of inert materials are proposed to be landfilled each week.

2.3 Background

The premises is a small unlined rural landfill, receiving less than 800 tonnes of waste per year. A large portion of the premises is now located within the proposed Bolgart Water Reserve Priority 2 Public Drinking Water Source Area (P2 PDWSA). Landfilling can pose a risk to groundwater quality. The license was renewed by the department in October 2021 for five years only, based on the need for further assessment of potential risks to the P2 PDWSA.

Prior to the 2021 licence renewal, the licence was amended on 17 October 2019 to extend the licence duration. As part of this amendment, potential impacts from the premises to the PDWSA were assessed. The extension was provided to allow the Licence Holder time to prepare a Groundwater Sampling and Analysis Plan (SAQP) in accordance with the licence and commence groundwater investigations. The SAQP was submitted to DWER on 17 December 2019 and the department amended the licence on 7 April 2020 to add conditions that required the licence holder to undertake the works proposed in the SAQP. Groundwater investigations were undertaken in 2021 and a report on the findings submitted to the department on 4 May 2021. The findings of the report were considered as part of the licence renewal undertaken in October 2021.

The department's assessment and review of the report identified the following:

- 1. The groundwater drilling program was not completed in accordance with the specified timeline and as a result, drilling occurred in summer rather than winter to spring as intended.
- 2. The location of the groundwater well drilled (MB1/21) was considered suitable to monitor groundwater quality between the active landfill and Water Corporation's drinking water supply bore (6/81).
- 3. MB1/21 was constructed with a very long screen interval (18 metres) compared to what is typically suitable for a monitoring well.
- 4. MB1/21 is screened across 3 geological units comprising a sand layer, overlying a clay layer, overlying interbedded layers of water-bearing clay and sand. Section 8.2.3.1 of Schedule B2 of the National Environmental Protection (Assessment of Site Contamination) Measure specifies *"To minimize the potential for vertical flow between aquifers via the well bore, screens should not be installed across different geological units or water-bearing zones."*
- 5. The design of MB1/21 is not considered suitable as it could act as a pathway for contamination between a potential seasonal perched feature at about 19 mbgl and the regional groundwater table at about 27 mbgl.

6. Leachate contamination in the potential seasonal perched feature may not be detected in groundwater samples from MB1/21 because of dilution from groundwater in the regional water table aquifer.

Due to these findings, conditions were included in the renewed licence to install a new shallow groundwater monitoring well (targeting the regional groundwater table) between August 2022 and 30 September 2022 (Condition 18). The timing was important due to late winter/early spring having the highest likelihood of perched water occurring beneath the premises. If a perched feature was encountered during drilling of the groundwater monitoring well, then a separate perched groundwater monitoring well was required to be installed. If no perched feature was encountered, then the perched well was not required. Once the new well(s) was/were installed then monitoring well MB1/21 was required to be decommissioned due to the risk it presented in acting as a pathway for contamination between a potential perched feature and the groundwater table.

Condition 20 was included to require the Licence Holder to conduct a groundwater monitoring program in accordance with Schedule 2 of the licence, which required groundwater monitoring of the wells on a 6 monthly basis (MB1/21 from 1 July 2021 to 30 June 2022 and the new wells from 1 July 2022 onwards). The Licence Holder advised on 7 November 2022 that they did not complete the monitoring well installation works as required by the licence due to budget constraints and advised of their plans to complete the works in the future.

On 19 September 2023 the Licence Holder requested the department to reconsider the installation of monitoring wells at Bolgart Refuse Site in accordance with Condition 18 due to continued budget constraints. To address concerns regarding potential groundwater contamination from the landfill, the Licence Holder proposed to put systems in place to divert all putrescible material from the Bolgart Refuse site to the Calingiri Class II Landfill.

Whilst the Licence Holder's proposal to divert waste would reduce future impacts from the premises to groundwater, it would not remove the potential risk to groundwater presented by wastes previously buried at the landfill. As the department had also not received any annual Groundwater Monitoring Reports for the premises, as required by condition 29, the impacts on groundwater from the landfill were unknown. For these reasons, the department determined that the monitoring well installation and monitoring requirements would remain, and the Licence Holder was in non-compliance with licence conditions.

This licence amendment application was subsequently submitted to rectify those non-compliances.

2.4 Contaminated Sites Act 2003

The site has been used as an unlined landfill for approximately 42 years, with landfilling being an activity that has the potential to cause contamination.

On 11 April 2024 the premises was classified as *possibly contaminated – investigation required* on the grounds that the site has been used as a landfill and landfill gas and groundwater at the site had not been fully investigated.

Further investigations are required, including groundwater investigations. A Preliminary and Detailed Site Investigation report documenting the results of these investigations is required to be submitted to the department by 31 January 2025.

2.5 **PDWSA Land use compatibility**

The department's <u>Land use compatibility in public drinking water source areas policy</u> outlines the department's position on the management of land use activities within PDWSAs in Western Australia. The policy is implemented through the department's <u>Water quality protection note</u> (WQPN) 25: Land use compatibility tables for public drinking water source areas. WQPN provides guidance on avoiding (P1 areas), minimising (P2 areas) or managing (P3 areas) risks to drinking water quality and public health from land uses in PDWSAs. The department generally does not support expansion or intensification of an existing, incompatible land use unless the overall water quality contamination risk is reduced.

The Shire's proposal to operate a transfer station for the storage of waste is an incompatible land use in a P2 PDWSA that would generally not be supported by the department. However, the department takes into account that the premises is already an operating landfill (also an incompatible land use in a P2 PDWSA) that was legally established prior to amending the boundary of the Bolgart PDWSA. Also, given that a small quantity of waste is proposed to be accepted for storage at the transfer station and taking into consideration the Licence Holder's proposed controls to mitigate risks and to reduce the overall water quality contamination risk to the PDWSA, the department will not oppose the proposal.

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 construction and operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence	e Holder controls
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Emission	Sources	Potential pathways	Proposed controls		
Construction					
Dust	Construction of new	Air/windborne	None provided		
Noise	associated concrete apron	pairiway	None provided		
Operation					
Leachate	Storage and disposal of waste to unlined landfill cells	Seepage and infiltration to groundwater	• Diversion of putrescible waste from landfilling by temporarily storing putrescible waste in lidded bins at the transfer shed (outside on the concrete apron).		
	(Proposed removal of existing control – decommissioning of existing monitoring		• Putrescible waste will be contained in lidded bins located on the concrete apron outside the e-waste shed.		
	well which creates a potential pathway for contamination		E-waste will be stored inside the shed in bins.		
			• Stormwater will be diverted away from		

Emission	Sources	Potential pathways	Proposed controls			
	as it screens across		the landfill trench.			
	two separate aquifers) Temporary storage of putrescible waste		 Monitoring wells MB1/22 and MB2/22 will be regularly sampled to ensure that any potential contamination of groundwater is identified. 			
			• If groundwater quality sampling results from MB2/22 (perched aquifer) indicate possible contamination from the landfill then well MB1/21 will be decommissioned to prevent contamination of the deeper water table.			
Contaminated stormwater	Acceptance, consolidation, and storage of e-waste prior to removal off-	Overland runoff and seepage and infiltration to	• Putrescible waste will be contained in lidded bins located on the concrete apron outside the e-waste shed.			
	site	groundwater	E-waste will be stored inside the shed in bins.			
	Acceptance of putrescible waste for temporary		• Batteries are to be stored in a fire-proof container external to the E-waste shed.			
	storage onsite Storage of timber onsite		Stormwater will be diverted away from waste			
Noise	Vehicle movements	Air/windborne pathway	 Operation of the premises will be limited to daylight hours. 			
	removal of putrescible and e- wastes to and from the premises		• Compliance with the Environmental Protection (Noise) Regulations 1997.			
			Correct operation and maintenance of machinery.			
			• The Facility Operator's attendant will monitor noise at the premises on the days that it is open to the public.			
			Noise complaints will be recorded and investigated.			
Odour	Storage of household putrescible waste		 Putrescible wastes will be stored in lidded bins and removed from the premises weekly. 			
	Calingiri Landfill (or other suitable class Il facility)		• The Facility Operator's attendant will monitor odour emissions from the premises on the days that it is open to the public.			
			Odour complaints will be recorded and investigated.			
Vermin and pests		Air and land	Putrescible wastes will be stored in lidded bins and removed from the premises weekly.			

Emission	Sources	Potential pathways	Proposed controls
			The Facility Operator's attendant will monitor for pests on the days the premises is open to the public.
			Receival bin bays will be cleaned.
			 Litter will be removed on a weekly basis.
			Complaints will be recorded and investigated.
Windblown waste		Air/windborne pathway	• Litter fencing is erected around the site. Moveable litter barriers (i.e. chicken wire and star pickets) are to be used where required.
			Litter fences will be inspected weekly and any litter removed.
			 Regular inspections of the approach road and adjacent properties will be undertaken to remove any windblown litter.
			Litter complaints will be recorded and investigated.
Smoke	Waste fire in stored timber, household putrescible waste and/or e-waste	Air/windborne pathway	• Lithium batteries will be stored separately to other e-waste in fire-proof containers exterior to the enclosed storage shed area.
			• Damaged/leaking batteries will be separated from other batteries and placed in an absorbent, non-flammable material in a cool, dry place (i.e. sand or vermiculite) at a remote storage location away from structures, vehicles and equipment.
			• Roof water from the gatehouse is collected and stored in a rainwater tank which will be available for first action in the event of a fire. The tank will be filled by a water tanker when required to maintain an appropriate service level.
			• In the event of a fire onsite, the local brigade will be mobilised and the response time would be minimal given the proximity of the site to the Bolgart townsite.
			• Gates are locked outside of operational hours to prevent unauthorised access to the facility.
			Boundary fences and firebreaks will be

Emission	Sources	Potential pathways	Proposed controls			
			maintained.			
			• Only permitted wastes will be received.			
			 Machinery will be maintained in good working order to minimise the risk of sparks. 			
			 Firefighting equipment will be maintained in good working order. 			
			• Fire incidents will be reported to the department.			
			• Fire incidents will be investigated, and records of incidents maintained.			
			 A stockpile of cover is maintained near the tipping area that is designated for fire-fighting purposes. 			
			 A fire-fighting trailer with a 1,000 L water tank is available for firefighting purposes. 			
			 A fire extinguisher is located on all landfill equipment, the office and e- waste shed. 			
			• All personnel required to work on site will be trained in firefighting procedures for each waste type.			
Fire-fighting wash water		Overland runoff and seepage and infiltration to groundwater	• The site is level, and all runoff is contained onsite through surface water management structures.			

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 2 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)).

able 2: Sensitive human and environmental receptors and distance from prescri	ibed
nctivity	

Human receptors	Distance from prescribed activity				
Golf course	250 m south-west of the Premises				
Bolgart town residential area	880 m west of the Premises				
Bolgart Primary School	880 m west of the Premises				
Rural farmland	Adjacent to the western, northern, eastern, and southern boundaries of Premises				
Environmental receptors	Distance from prescribed activity				
Bolgart Water Reserve Priority 2 Public Drinking Water Source Area (PDWSA) consisting of two wellfields associated with Water Corporation production bores 6/81 and 1/96.	The southern portion of the Premises is located within the Bull Road Wellfield. The Western Wellfield of the Bolgart Water Reserve is located 1.2 km west of the Premises				
Groundwater	The <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) proclaimed Bolgart East Groundwater Area is 20 m south of the Premises. Groundwater was encountered at a depth of 27.3 m below ground level (BGL) at the Premises during a monitoring event on 5 March 2021. Groundwater flow direction is currently not known. However, the topography near the premises slopes down towards the south, west and north-west.				
Surface water	The Premises is within the RIWI Act Proclaimed Avon River Catchment Area and the Avon River Management Area (Waterways Conservation Area). The Bolgart Brook is located approximately 1.25 km west of the Premises. This is a non-perennial watercourse. Two unnamed perennial lakes are located approximately 3 km south-east of the Premises. An unnamed minor watercourse is located 3.15 km south-east of the Premises.				
Threatened Ecological Communities Eucalypt woodlands of the Western Australian Wheatbelt (Priority 3 and critically endangered community)	25 occurrences identified within 2 km of the Premises.				
Threatened/Priority Fauna Shield-backed trapdoor spider (endangered)	1 occurrence identified within about 2 km of the Premises.				



Figure 1: Distance to sensitive receptors

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 incomplete 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 3.

The Revised Licence L6956/1997/12 that accompanies this Amendment Report authorises emissions associated with the construction of the proposed e-waste shed and the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with Guidance Statement: Setting Conditions (DER 2015).

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Table 3. Risk assessment of potential emissions and discharges from the Premises during operation and construction of the e-wast
shed

Risk Event				Risk rating ¹	Licence			
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Construction								
Construction of new e-waste shed	Dust	Air/windborne pathway causing impacts to health and amenity	Residences and primary school 880 m west of premises	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer has considered the risk of dust to be low due to the separation distance between the source and receptors
	Noise		Golf course 250 m south- west of premises	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	N/A	Noise Emissions can be managed by the <i>Environmental Protection</i> (Noise) Regulations 1997.
Operation								
Leaving in place monitoring well MB1/21 (which could act as a potential pathway for contamination between a potential seasonal perched feature and the regional groundwater table).	Leachate from the landfilling of putrescible waste (including legacy waste)	Seepage and infiltration to potential perched feature and mixing with water in the deeper aquifer, degrading the beneficial uses of groundwater.	Down- gradient groundwater users including drinking water production bore (6/81) of Bolgart Water Reserve	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Ν	Condition 20	The Delegated Officer considers that the Licence Holder's controls are not adequate to manage the risks presented by leaving MB1/21 in place. The well design of MB1/21 would still have the potential to be a preferential pathway for contamination even if sampling suggested that contamination had not yet occurred in the perched feature. Schedule B2 of the <u>National</u> <u>Environmental Protection</u> (Assessment of Site Contamination) <u>Measure</u> states that monitoring wells which are no longer required or are unsuitable should be decommissioned as they may provide conduits for future

Risk Event	Risk Event								
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls	
								contamination. Therefore, the Delegated Officer has determined that MB1/21 will require decommissioning.	
Acceptance, consolidation, and storage of e-waste prior to removal off-site.	Contaminated stormwater	Overland runoff and seepage and infiltration to groundwater causing ecosystem disturbance and degrading the beneficial uses of groundwater tausing ecosystem disturbance and degrading the beneficial uses of groundwater tausing the beneficial uses of groundwater tausing t	Down- gradient groundwater users including drinking water production bore (6/81) of Bolgart Water	Refer to Section 3.1	C = Moderate L = Rare Medium Risk	Y	Conditions 6 and 15 <u>Condition 7,</u> <u>8 and 9</u>	The Delegated Officer considers the Licence Holder's controls to be suitable to prevent e-waste from coming into contact with stormwater. These controls will be included as regulatory controls within the licence.	
Storage of timber			Reserve Down- gradient aquatic ecosystems – Bolgart Brook 1.25 km west		C = Moderate L = Unlikely Medium Risk	N	Condition 17 Condition 1	To reduce the risk of contaminated stormwater, the Delegated Officer has specified in the licence that treated timber is not permitted to be accepted on the premises.	
Vehicle movements Delivery and removal of putrescible and e-wastes to and from the premises	Noise	Air/windborne	Residences and primary school 880 m west of premises	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	N/A	Noise Emissions can be managed by the Environmental Protection (Noise) Regulations 1997.	
Storage of household putrescible waste prior to relocation to Calingiri Landfill (or other suitable class II	Odour	pathway causing impacts to health and amenity	Golf course 250 m south- west of Refu premises Sec	Refer to Section 3.1	C = Minor L = Possible Medium Risk	Y	Condition 9	The Delegated Officer considers the Licence Holder's controls to be suitable to prevent odour emissions. These controls will be included as regulatory controls within the licence.	
facility)	Contaminated stormwater	Overland runoff and seepage and infiltration to	Down- gradient groundwater users	Refer to Section 3.1	C = Moderate L = Rare	Y	Conditions 6, 9 and 17	The Delegated Officer considers the Licence Holder's controls to be suitable to prevent putrescible waste	

Risk Event					Risk rating ¹	Licence			
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls	
		groundwater causing ecosystem disturbance and degrading the beneficial uses of groundwater	including drinking water production bore (6/81) of Bolgart Water Reserve Down- gradient aquatic ecosystems – Bolgart Brook 1.25 km west		Medium Risk		<u>Condition 8</u>	from coming into contact with stormwater. These controls will be included as regulatory controls within the licence.	
	Vermin and pests	Air and land pathway causing impacts to health, amenity, and ecosystem disturbance	Residences and primary school 880 m west of premises Golf course 250 m south- west of premises	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 9, 13	The Delegated Officer considers the Licence Holder's controls to be suitable to prevent attraction and breeding of pests. These controls will be included as regulatory controls within the licence.	
Waste fire in stored household putrescible waste, timber or e- waste	Smoke	Air/windborne pathway causing impacts to health and amenity	Residences and primary school 880 m west of premises Golf course 250 m south- west of premises Fauna	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Ν	Condition 32 Conditions 9 and 18	The department received notification from the Licence Holder on 24 May 2024 regarding a fire on the premises which occurred on 17 May 2024. The cause of the fire was unknown, and the ignition point was assumed to be the eastern flank of the site. The fire did not reach the landfill but burnt through stockpiles of steel, white goods, untreated timber and mattresses. The Delegated Officer considers that	

Risk Event					Risk rating ¹	Licence			
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls	
								as a fire has occurred, it is possible for another fire to occur at some point. Therefore, additional regulatory controls have been included in the licence for storage of timber to ensure that the timber stockpile is accessible for firefighting purposes and is adequately separated from other combustible wastes in accordance with DFES <i>Guidance Note:GN04 Fire</i> <i>Prevention and Management in a</i> <i>Recycling Facility.</i> The Delegated Officer also considers the 1,000 L water tank proposed for fire-fighting to be inadequate based on advice received from DFES on 9 September 2024. As the premises is located within a bushfire prone area, a minimum of 10,000L has been conditioned to be available for fire- fighting purposes as per Schedule 2 of the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2021) An additional control for battery storage has also been included on the licence for batteries to be stored in well-ventilated non-metal containers (unless the metal containers are lined with plastic) to reduce the risk of a fire (EPA Victoria 2021).	
	Fire-fighting wash water	Overland runoff and seepage and infiltration to groundwater causing ecosystem disturbance and	Down- gradient groundwater users including drinking water production bore (6/81) of	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Ν	Condition 18	The Delegated Officer considers it appropriate to condition that firefighting wash-water be contained on the premises and any contained wash-water removed by a carrier licensed under the Controlled Waste	

Risk Event				Risk rating ¹	Licence			
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
		degrading the beneficial uses of groundwater	Bolgart Water Reserve Down- gradient aquatic ecosystems – Bolgart Brook 1.25 km west					Regulations.

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. Bold and underline text depicts additional regulatory controls imposed by department.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Department of Fire and Emergency Services (DFES) advised of proposal on 31 July 2024	The following comments were received from DFES on 9 September 2024: "As the subject site is within a bushfire prone area, any future planning or development application (DA) would be required to comply with State Planning Policy 3.7 (Planning in Bushfire Prone Areas) and associated Guidelines. If the decision maker /local government determines that State Planning Policy 3.7 applies to the future DA, then relevant information (usually in the form of a Bushfire Management Plan) pursuant to this policy should be forwarded to DFES for comment.	The Delegated Officer has considered the comments provided by DFES and the specified requirements have been included as controls within the licence where possible
	I note from the fire control measures summary in your email that "a firefighting trailer with a 1,000 L water tank is available for firefighting purposes". While I acknowledge the licence amendment application is not a DA, the proposed firefighting water provision does not comply with requirements the Schedule 2: Water Supply Dedicated For Bushfire Firefighting Purposes of the Guidelines. Schedule 2 provides detailed requirements on water supply capacity, water tank construction and design, and specifications of pipes and fittings. You may wish to consider these requirements in the Guidelines which can be accessed from https://www.wa.gov.au/system/files/2022- 05/Guidelines-for-planning-in-bushfire-prone- areas-version-1.4_0.pdf DFES's Special Operations Branch also provided the following comments:	
	 Firefighting water capacity and pipe fitting should meet the minimum requirement of Schedule 2 of the Guidelines (as mentioned above). Lithium batteries should be stored in the shade (preferably the drums / fire resistant packaging should have a non-combustible shade structure over them) to minimise the risk of them heating to the point of thermal runaway and possible ignition, especially in summer months. It is noted that a cool dry place is mentioned below for damaged batteries (it is assumed this refers to lead /acid car batteries) but not for the Lithium batteries. 	
	 Suggest sand is used rather than vermiculite as an absorbent, as vermiculite doesn't work very well, and tends to float 	

	on the spill, not absorb much, and is therefore less effective than sand and can result in a bigger mess than was present before it is used."	
Licence Holder was provided with draft amendment on 13 September 2024	Comments were received from Licence Holder on 8 October 2024. Refer to Appendix 1	Refer to Appendix 1

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.

5.1 Summary of amendments

Table 5 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.

Condition no.	Proposed amendments
1	Inclusion of timber as a waste type permitted to be accepted at the premises. The Licence Holder was already accepting this waste at the premises and the change clarifies that it is allowed to be accepted as long as it is untreated.
	Inclusion of e-waste as a new waste type permitted to be accepted at the premises.
6	Addition of E-waste shed and associated concrete apron to the infrastructure and equipment requirements table.
	Addition of firefighting equipment to the infrastructure and equipment requirements table.
7	Addition of new condition to allow the construction of the new E-waste shed and associated concrete apron.
	Addition of a new condition for the construction/installation of a 10,000 L water tank for firefighting purposes.
8	Inclusion of a condition requiring the licence holder to undertake an audit of their compliance with Condition 7 and to prepare and submit an Environmental Compliance Report on that compliance.
9	Inclusion of timber and E-waste and associated process requirements in the waste processing table.
	Inclusion of the temporary storage of putrescible wastes prior to disposal off-site.
11	Inclusion of cover requirements for timber
18	Addition of fire prevention and control conditions for maintenance of fire-fighting equipment, maintaining an adequate supply of water for firefighting, and for management of firefighting wash-water.
20	Amendment to timeframe for installing monitoring wells MB1/22 and MB2/22 as previous timeframe has passed.
	Amendment to decommissioning timeframe for monitoring well MB1/21.

Table 5: Summary of licence amendments

Schedule 2	Changes to groundwater monitoring requirements to remove monitoring well MB1/21. Condition 35 added to specify that the first sampling events from MB1/22 and MB2/22 are to occur before 9 December 2024.

Table 6: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
7 - 32	N/A	8-34	Renumbered due to the addition of a new conditions (7 and 8).
33-34	N/A	36-37	Renumbered due to the addition of new condition (35)
10	Licence Holder must ensure no waste is burnt on the premises	18	Moved to condition 18 with other fire prevention and control related requirements
11	Pest control measures to be implemented	13	Moved under Emissions and Discharges heading
27	Annual audit	29	Revised to current licensing format.
28	Annual Environmental Report	30	Revised to current licensing format.

References

- 1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
- 2. Department of Fire and Emergency Services (DFES) 2020, Guidance Note: GN04 Fire Prevention and Management in a Recycling Facility, Perth, Western Australia.
- 3. DFES 2023, *GL-11: DFES site planning and fire appliance specifications*, Perth, Western Australia
- 4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
- 5. DWER 2020, Guideline: Risk Assessments, Perth, Western Australia.
- 6. DWER 2021, Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas, Perth, Western Australia
- 7. EPA Victoria 2021, Storage and management of waste batteries guideline, Carlton, Victoria
- 8. Western Australian Planning Commission (WAPC) 2021, *Guidelines for Planning in Bushfire Prone Areas*, Perth, Western Australia

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Condition 19(c)	 10,000 litres is a significant volume of water to be stored on a small rural landfill. In addition water solely for fire-fighting purposes "effectively delivered to extinguish a fire at any part of the premises" would require the additional installation of a prohibitively expensive delivery system (i.e. reticulated supply, pumps, several connection points for hoses or fixed points for targeted sprinkler application etc). A 1000 litre trailered fire-fighting unit is available onsite for immediate response to a fire outbreak. The town VBF Brigade can respond within 10 minutes after a call for assistance by onsite staff and from notification of a fire at the site if it is closed and unmanned. While the site itself is not connected to mains water supply, the closest water standpipe for filing light tankers is only 325 metres away (towards the Bolgart townsite on Bolgart East Road. 	The information in the Licence Holder's comments was provided to DFES for further advice. DFES advised that the original advice provided was in line with the provisions of SPP3.7 and the Guidelines, as well as technical input from the relevant branches of DFES and that they did not have any further comments. Based on DFES advice, the Delegated Officer considers that the premises should meet the same requirements as other developments in bushfire prone areas. Therefore, the Delegated Officer has determined that the requirement for a minimum 10,000 L water tank for firefighting stands. The requirement for the water to be "effectively delivered to extinguish a fire at any part of the premises" has been removed to clarify that an additional delivery system will not also be required. The tank is required to be accessible by DFES for firefighting purposes in the event of a fire. The above was also discussed in a meeting with the Shire's Environmental Health Officer on 11 October 2024.
Condition 21, Table 7	Construction and Development MB1/21 has recently been inspected and there is an obstruction at around 16-18 metres. Prior to a driller removing the blockage, it is planned that they will drill a test hole (MB2/22) adjacent to MB1/22 to assess whether a perched aquifer is evident (by November 2024). It is noted that the yearly average rainfall to-date for Bolgart in 2024 is similar to previous years. In addition, there is more rain forecast for October, with the expectation that the mean is likely to be achieved for that month as well. It is expected therefore	The Delegated Officer considers monitoring well MB1/21 to be unsuitable for ongoing monitoring due to its 18 m screened interval. Even if a perched feature is not present, well screens should be kept as short as possible (ideally 3 m or less) to avoid potential dilution effects. Therefore, the Delegated Officer considers it necessary for MB1/21 to be decommissioned. MB1/22 water table aquifer well will be required to be installed to replace MB1/21. MB2/22 perched aquifer well will be required should a perched feature be encountered during drilling for the well. The installation of a nested bore

Condition	Summary of Licence Holder's comment	Department's response
	with the rainfall to-date that any perched water under the site will be found by this activity. If perched water is found, MB2/22 will be developed in accordance with Column 2 and ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores, and sampling of that bore will commence immediately. If the test hole does not evidence any perched water, the bore will be capped and checked on a regular basis during the year for perched water. If perched water is evidenced in the future, the bore will be upgraded (or a new bore installed) in accordance with <i>ASTM D5092/D5092M-16</i> and sampling would commence immediately. If no perched water is found in MB2/22, servicing/clearing of MB1/21 would commence (November 2024). Subject to the bore being serviceable, sampling would commence immediately (i.e. November 2024). If the bore cannot be repaired, it will need to be decommissioned and a new MB1/22 will need to be constructed. Sampling Should a perched aquifer be identified, sampling will commence immediately MB2/22 has been purged. If the results do not show contamination exceedances, it should be conceeded that contamination of the deeper aquifer is extremely unlikely, no sampling of the deeper aquifer is onto nonsecutive MB2/22 samples, MB1/21 would either be upgraded to prevent contamination of the lower aquifer by the perched aquifer, or decommissioned and a new MB1/21 will be repaired or replaced with a new MB1/22 will not be conducted until November 2024 and dependant on the outcomes of that bore construction and any sampling, the works on fixing or replacing MB1/21 might not be completed until November 2024 and dependant on the outcomes of that bore construction and any sampling, the works on fixing or replacing MB1/21 might not be completed until 2 weeks into December. Therefore, a revision is sought as follows: <i>MB2/22 must be constructed and if required (i.e. perched aquifer is found), developed (purged) and determined to be operational by 30 November 2024.</i> <i>If t</i>	 (also known as a multi-port monitoring bore) may also be an option. These bores are designed to obtain data from one or more aquifers in a single drill hole. Either way, the groundwater bore(s) should be correctly installed to ensure that cross-contamination does not occur between any perched water system and superficial aquifer in the future. Guidance can be obtained from <i>Minimum</i> <i>construction requirements for water bores in Australia</i>, Fourth Edition (National Uniform Drillers Licensing Committee, 2020) in addition to ASTM D5092/D5092M- 16: Standard practice for design and installation of groundwater monitoring bores and Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 1999. Even if no contamination is found initially, having both a perched aquifer well and a water table well will provide valuable information on whether landfill leachate reaches groundwater in the future, especially given that the extent to which any perched feature is connected to the underlying superficial aquifer is largely unknown. Perched aquifer wells can also be seasonally dry (unable to be sampled), such as at the end of summer. The above was discussed with the Shire's Environmental Health Officer on 11 October 2024 and it was agreed that the installation of MB1/22 and MB2/22 (if required), as well as the decommissioning of MB1/21 could occur prior to 30 November 2024.
	MB1/22) by 14 December 2024.	

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY							
Application type							
Works approval							
		Relevant works- approval- number:		Non e	-		
		Has the works app complied with?	proval been-	Yes ⊑	-No		
Licence	₽	Has time limited o the works approva acceptable operat	perations under- al demonstrated- ions?	Yes ⊑ ⊕] No 🗆 N/A-		
		Environmental Co Critical Containme Report submitted?	mpliance Report /- ent Infrastructure- 2	Yes ⊑	- No □ -		
		Date Report recei	ved:				
Renewal	₽	Current licence- number:					
Amendment to works approval	₽	Current works approval- number:					
		Current licence number:	L6956/1997/12				
Amendment to licence		Relevant works approval number:		N/A			
Registration-	₽	Current works- approval- number:		Non e	Ð		
Date application received	L	15 May 2024					
Applicant and Premises details	5						
Applicant name/s (full legal name	e/s)	Shire of Victoria Plains					
Premises name		Bolgart Refuse Site					
Premises location		Lot 1 on Diagram 16424 Certificate of Title Volume 1182 Folio 811 Bolgart East Road BOLGART WA 6568					
Local Government Authority		Shire of Victoria Plains					
Application documents	Application documents						
HPCM file reference number:	DWERVT1560						
Key application documents (addited to application form):	tional	Nil					
Scope of application/assessment							

	Licence amendment for:		
Summary of proposed activities or changes to existing operations.	1.	the addition of Category 62 for a transfer station, including new e-waste shed.	
	2.	Acceptance and storage of e-waste prior to removal off-site	
	3.	Acceptance and storage of household putrescible waste in skip bins prior to removal and disposal at another Class II facility (some putrescible waste is still proposed to be landfilled).	
	4.	Timeframe for installation of wells MB1/22 and MB2/22 to be changed for MB1/22 to be operational between August 2024 and 30 September 2024, and MB2/22 to be operational by 31 October 2024.	
	5.	removal of the requirement to decommission monitoring well MB1/21 until two consecutive samples from MB2/22 demonstrate potential contamination of groundwater	

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 64: Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial.	800 tonnes per annual period		N/A		
Category 62: Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use	<500 t/a		N/A		
Legislative context and other approvals					
Has the applicant referred, or do the intend to refer, their proposal to the EPA under Part IV of the EP Act a significant proposal?	hey e Is a	Yes □ No ⊠	Referral decision No: Managed under Part V ⊠ Assessed under Part IV □		
Does the applicant hold any existin Part IV Ministerial Statements relevant to the application?	ng	Yes □ No ⊠	Ministerial statement No: EPA Report No:		
Has the proposal been referred and/or assessed under the EPBC		Yes □ No ⊠	Reference No:		

Act?		
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes □ No □ N/A ⊠	Not applicable for an amendment
Has the applicant obtained all relevant planning approvals?	Yes 🗆 No 🗆 N/A 🖂	Site zoning exempts requirement for planning approval for a structure of the nature proposed
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: N/A Licence/permit No: N/A Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ⊠ No □ No point source discharges but potential infiltration of leachate from unlined landfill	Name: Avon River CatchmentType: Proclaimed Surface WaterAreaHas Regulatory Services (Water)been consulted?Yes ⊠ No □ N/A □WSPP contacted as existingfacility lies within PDSWA.Advice will need to be soughtregarding decommissioning ofexisting well.Regional office: Swan Avon
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ⊠ No □	Name: Bolgart Water Reserve Priority: P2 Are the proposed activities/ landuse compatible with the PDWSA (refer to <u>WQPN 25</u>)? Yes I No I N/A I

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 ⊠	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes □ No ⊠	
Is the Premises subject to any EPP requirements?	Yes □ No ⊠	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?		Classification: possibly contaminated – investigation required (PC–IR)
	Yes ⊠ No □	2024