Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Licence

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

Licence Number	L8970/2016/3
Applicant	Brajkovich Landfill & Recycling (WA) Pty Ltd
ACN	650 334 375
File number	DER2016/000736-1
Premises	Brajkovich Landfill North 91 Walyunga Road BULLSBROOK WA 6084 Part of Lot 5 on Deposited Plan 7892 Certificate of Title Volume 1927 Folio 635 As defined by the Premises Map and Coordinates in Schedule 1 of the licence.
Date of report	10 June 2024
Decision	Licence granted

Melissa Chamberlain

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A/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

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the operation of the premises. As a result of this assessment, licence L8970/2016/3 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision 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 Background

Brajkovich Landfill & Recycling Pty Ltd (licence holder) commenced operating at the premises in 2013, as Stargaze Asset Pty Ltd. The current premises activities were assessed and approved under Works Approval W5316/2012/1, issued to Stargaze Asset Pty Ltd on 25 January 2013 (as amended 5 February 2015).

The first licence to operate the premises was granted in 2013 (L8726/2013/1) but ceased to have effect in 2016 due to non-payment of fees. A new licence (L8970/2016/1) was issued on 13 June 2016, and subsequently renewed in 2019 (L8970/2016/2) with an expiry date of 10 June 2024.

On 28 March 2024, the applicant submitted an application for a licence renewal to the department under section 57 of the *Environmental Protection Act 1986* (EP Act). The current licence is due to expire 10 June 2024.

The licence renewal application is in relation to the continued operation of the Brajkovich Landfill North, located at 91 Walyunga Road, Bullsbrook (the premises).

No changes to the premises operations or activities are proposed as part of this licence renewal application. The premises relates to the categories and assessed design capacity under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations) which are defined in licence L8970/2016/3 and Table 1 below. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L8970/2016/3.

2.3 Overview of premises

Brajkovich Landfill North primarily operates as a land rehabilitation project with associated Class I landfill, solid waste depot, and crushing and screening operations. Site work will involve the extraction of further sand to create space for the landfill which is expected to cover a total footprint of approximately 10.15 ha. Removal of the sand resource occurs in stages with the pit area divided into cells and then gradually replaced with Inert Waste Type 1, derived mainly from Construction and Demolition (C&D) Waste. Sufficient material will be placed to eventually restore original pre-extraction levels of the scarp, facilitating re-vegetation of the site for amenity and development purposes. To date, Cells 1-14 have been filled and Cells 15-18 are yet to be filled. The purpose of this licence renewal is to authorise the continued operation of the landfill and completion of the land rehabilitation project.

2.3.1 Solid waste depot and crushing activities

C&D Waste is brought onto the premises, sorted, crushed and where possible, recycled. Inert

waste that is unable to be recycled or reused, will be deposited into the inert landfill. Upon arrival, C&D waste is sorted and mechanically treated within the Recycling Area. Any material not meeting the Inert Waste Type 1 classification is removed from the premises to an approved facility.

Special Waste Type 1, which includes asbestos and asbestos-containing material (ACM), is accepted for immediate disposal directly into the Class 1 inert landfill cells, bypassing the Recycling Area to negate the risk of ACM entering the waste stream for crushing and screening. Green waste is also accepted for mulching, with the processed material either removed for off-site disposal or used on-site for landscaping.

The crushing and screening, storage and landfilling activities at the site cause the premises to become prescribed under the EP Act for the categories as described in Table 1 below.

Table 1: Prescribed premises category description

Classification	Description	Approved premises production or design capacity or throughput
Category 13	Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned	Combined total of 530,000 tonnes per annual period
Category 62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use, other than in the course of operating – (a) a refund point (as defined in the Waste Avoidance and Resource Recovery Act 2007 section 47C(1)) (a refund point); or (b) a facility or other place (an aggregation point) for the aggregation of containers that have been returned to refund points until those containers are accepted for processing or disposal	
Category 63	Class I inert 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	

The licence holder anticipates receiving up to 40 truckloads per day, each carrying 20 m³ to 25 m³ of material, amounting to approximately 800 m³ to 1,000 m³ of C&D material daily. This material typically includes broken bricks, tiles, concrete, sand, gravel, PVC piping, mixed steel, and soil. The licence holder aims to recycle or process 95% of this material.

The material will be sorted before disposal to recover plastics, ACM, timber, and scrap metal, which will be sent to approved off-site facilities for processing or disposal. Nonconforming waste will be managed according to the Environmental and Site Management Plan (ESMP) and licence conditions. Non-inert waste deemed unsuitable for processing will be moved to the quarantine area, placed into skip bins, and then removed off-site.

The crushing and screening operations will produce three grades of aggregate: fines, medium grade, and drainage aggregate. The aggregate will undergo validation testing to ensure it is free from asbestos prior to transportation off-site. Stockpiles of unprocessed materials, products

awaiting ACM testing, and products tested for ACM will be clearly separated and identified to prevent cross-contamination. Crushed material that cannot be reused will be used to rehabilitate the exhausted sandpit.

2.3.2 Asbestos management

Any waste received at the site for purposes other than the landfilling of Special Waste Type 1 must be accompanied by a certificate stating that the waste is asbestos-free. All loads declared asbestos-free will be visually inspected upon arrival and again as they are tipped, before entering the crushing and screening process. If asbestos is identified at any stage, it will be wet down and transferred to the active asbestos landfill cell. Asbestos will never be stored or stockpiled on site.

Asbestos will only be accepted if it is suitably packaged and labeled. The site will be notified prior to the delivery of asbestos or ACM, allowing on-site personnel to manage acceptance appropriately. Asbestos will be immediately disposed of by tipping directly into the designated asbestos cell and covered with inert waste by the end of each day. The asbestos cells will be marked on a site plan, and a permanent record of their locations will be kept on site at all times.

The unloading of any ACM will occur at the lowest possible height within the active cell, and no asbestos will be placed within 2 meters of the final finished level. The site-specific ESMP outlines the processes for asbestos identification and management at all stages of operations.

2.3.3 Inert landfill and stormwater management

The landfill contains 18 designated cells, with Cells 1-14 filled to date. To manage dust and compaction, three cells will open and active at a time. When one cell nears completion, bund walls for the next cell are constructed. Batters between the cells are to be 1:1:5 and constructed with a >1m thick mineral layer. Once each cell is completed, the licence holder will undertake rehabilitation in accordance with local government approval, Victorian BPEM landfill guidelines, and the ESMP.

This licence renewal authorises an extension of all site activities to allow for the completion of the rehabilitation of the landfill cells, extending the landfill's expected operational life further beyond the initial estimate of 10 years.

The base of the landfill is sand, below that clay material is found at 3-4 metres below ground level and is at least 1 metre thick. The hydraulic conductivity of the clay material has been tested for previous licence assessments and meets the performance standards of Victorian BPEM Guidelines.

Surface water management measures are in place to divert stormwater away from the operational landfill. Captured water is diverted into stormwater holding ponds and recycled for dust suppression. Surface water quality is tested every six months. Groundwater is also tested biannually using four monitoring bores installed along the premises boundary.

The holding capacity of the associated settling ponds is designed to handle a 1-in-10-year storm event. Emergency spillway discharge points have been designated to alleviate pressure on the holding ponds, diverting excess flow back to the storage ponds to prevent off-site discharge. The required storage capacity for surface water runoff was previously calculated to be 623 m^3, contained within three holding ponds. The site is divided into four drainage catchment areas to ensure contaminated water is retained within the premises boundaries.

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 decision report are detailed in Table 2 below. Table 2: Proposed applicant controls also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 2: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Dust	• Wind borne dust from exposed surfaces such as cleared land and construction sites; • Wind borne dust resulting from remediation sites; • Wind borne dust from stockpiles of material such as sand, soils, mineral ores, sawdust, coal and fertiliser; • Vehicle movements on paved and unpaved roads; • Mines and quarries; • Road works and road construction • Municipal landfills and other waste handling facilities; and • Handling, crushing, grinding/pulverising, screening of mineral ores and other solid matter.	Air / windborne pathway	• Sealing of the crossover between the access road and Walyunga Road, and the initial stage of the access road further from the site. • Frequent passes by the water cart on all roads. • Installation of a mobile reticulation system. • Speed limit to 10km/h. • Supervision of tipping, loading and compaction. • Wetting down of waste loads during tipping. • Reducing tipping heights. • Compacting completed areas. • Ensuring vehicles are well-maintained to control emissions; and • No crushing works are undertaken if any element of the watering system fails, or dust suppression does not occur at the desired level. Crushing and recycling activities shall cease at wind speeds above 35 knots. • Employee training on dust prevention measures. • Sprinklers operate at both the grizzly end and the conveyor belt end of the crusher whilst it is in operation. Stockpiled material placed as a feed for the crusher shall be wet down prior to being loaded into the crusher. Sprinklers continue out of hours to effectively wet-down all stockpiles. • Uncovered working stockpiles wet-down daily. • Static unworked stockpiles are to be covered using hessian, plastic, shade-cloth or hydro-mulch. • Employee dust patrols during hot, dry or windy periods. • Community feedback processes and complaint management procedures. • Consideration of meteorological conditions, including postponing dust-generating activities according to wind speed where necessary. • Stop work policy implemented if dust is observed crossing site boundaries, or if dust

Emission	Sources	Potential pathways	Proposed controls
			suppression system failure. • Real-time monitoring of PM10 is to be implemented if ever dust is observed crossing site boundaries despite all preventative measures in place. • Stockpiles of rubble are positioned as a screen around the crusher, decided according to the wind direction and direction of receptors.
Noise	• Arrival at and departure from site – light vehicle movements • Tipping of material – engine noise of trucks and impact noise • Crushing of material – engine noise of crusher and noise of crushing activities • Screening of material – noise of screen • Loading of screened material – engine noise of wheeled loader • Placement of screened material into cells – engine noise of excavator • Dust suppression – engine noise of water cart.	Air / windborne pathway	A 5m bund was installed on the western side of the crushing area.
Sediment-laden stormwater	• Stormwater run-off from on-site activities including landfill, stockpiles, and quarantined non-conforming wastes. • Dust generated by on-site activities may accumulate in stormwater run-off.	Overland run-off	• The site is split up into four drainage catchment areas with stormwater run-off directed via drainage channels to on-site sedimentation and holding ponds. • The inert nature of the accepted waste types and the rigorous sorting process should reduce the likelihood of stormwater contamination. • Stormwater ponds have sufficient capacity to hold 1 hour of 1 in 10 year storm intensity rainfall. • Emergency spillway discharge points are designed with sufficient capacity to alleviate pressure on holding ponds by diverting excess flows to back-up storage ponds
Asbestos	• Movement of ACM into landfill cells, potentially releasing fibers into the air • ACM entering waste stream for crushing		Applicant did not propose specific asbestos controls in the application however, asbestos controls outlined in the licence holder's ESMP includes: • Regular visual inspections of received loads. • Quarantining of loads identified as

Emission	Sources	Potential pathways	Proposed controls
	and screening, fibres released into the air or in final product		containing asbestos. • Product testing for asbestos. • Loads containing asbestos to be moistened.

3.1.2 Receptors

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

Table 3 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 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Residential premises	Approximately 15 rural residential properties within 1km of the premises
Environmental receptors	**Distance from prescribed activity**
Threatened Ecological Community (TEC)	Various TECs immediately adjacent to the premises, and within 5km to the west and south of the premises.
Western Swamp Tortoise: - EPP Area - Habitat	 ~ 70m west of the premises boundary ~1.3km west of the premises boundary
Bush Forever Sites: - 296 (Ellen Brook, Upper Swan) - 412 (Walyunga Road Bushland, Bullsbrook)	 ~200m west of the premises boundary ~585m south east of the premises boundary, within Lot 5
Ellen Brook (minor, non-perennial river)	~200m west of the premises (tributaries located within Lot 5)
Multiple use, and conservation category palusplain associated with Ellen Brook	Directly adjacent to western premises boundary
Walyunga National Park: - DBCA Managed lands - Contains TECs and Threatened Fauna	~1km east of the premises boundary

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source 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 applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

Licence L8970/2016/2 that accompanies this decision report authorises emissions associated with the operation of the premises i.e. emissions associated with crushing and screening, waste acceptance and landfilling.

The conditions in the issued licence, as outlined in Table 4 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4: Risk assessment of potential emissions and discharges from the premises during operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of licence	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Waste acceptance, storage, and disposal including: - waste loading/ unloading, - waste storage, - landfilling, - associated vehicle and equipment movements	**Dust:** generated from vehicle movements, tipping, stockpiling of materials and liftoff from stockpiles	Air/windborne pathway causing impacts to health and amenity	Residential premises Users of Walyunga National Park	Refer to Section 3.1	C = Minor L = Likely **Medium risk**	Y	Infrastructure and equipment (Condition 1) Waste processing and storage (Condition 16- 20) Dust management (Conditions 21 and 22) Stockpile management (Condition 23)	The delegated officer has determined that these controls, which generally replicate several of the applicant's proposed controls, are sufficient to manage the risks associated with dust emissions.
	Noise: generated from vehicle movements, tipping and stockpiling of materials using machinery			Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	N/A	The environmental siting of the premises is considered to be effective in mitigating the impact of noise emissions from the premises on sensitive receptors. The delegated officer has determined noise emissions will be effectively managed by applicant controls in accordance with general provisions of the *EP Act* and the Environmental (Noise) Regulations 1987.
	Asbestos: generated from movement of ACM into landfill cells, potentially releasing fibers into the air	Air/windborne pathway causing impacts to health		Refer to Section 3.1	C = Severe L = Rare **High Risk**	Y	Waste acceptance (Conditions 2, 3 and 4) Asbestos management (Conditions 5-15) Waste processing (Condition 16-20) Stockpile management (Conditions 24 and 25) Product testing (Conditions 26 and 27)	These controls generally replicate the applicant's controls as well as the recommendations specified in the Department's *Guidelines for managing asbestos at construction and demolition waste recycling facilities* (DEC, 2021) (Asbestos Guidelines), and are considered necessary by the delegated officer to manage risk.
	Sediment-laden stormwater: potential contamination of stormwater through interaction with waste	Overland runoff potentially causing ecosystem disturbance or impacts to surface water quality	TECs and Bush Forever sites Western Swamp Tortoise Habitat Ellen Brook, including associated floodplains and wetlands Walyunga National Park	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Groundwater monitoring (Conditions 32 and 33)	The delegated officer has considered that inert waste accepted for landfilling does not typically generate large amounts of leachate. Consequently, the delegated officer has determined that the risk of emissions from contaminated stormwater is managed adequately by the site layout and applicant controls, without necessitating additional regulatory measures. Biannual testing of groundwater quality will indicate if the stormwater management measures need to be reviewed. Therefore, the delegated officer has retained groundwater monitoring conditions on the renewed licence.
Crushing and screening of C&D waste	**Dust**: generated from use of crushing and screening equipment	Air/windborne pathway causing impacts to health and amenity	Residential premises Users of Walyunga National Park	Refer to Section 3.1	C = Minor L = Likely **Medium risk**	Y	Infrastructure and equipment (Condition 1) Waste processing and storage (Conditions 16-20) Dust management (Conditions 21 and 22) Stockpile management (Condition 23)	The delegated officer has determined that these controls, which generally replicate several of the applicant's proposed controls, are sufficient to manage the risks associated with dust emissions.
	Noise: generated from use of crushing and screening equipment			Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	N/A	The environmental siting of the premises is considered to be effective in mitigating the impact of noise emissions from the premises on sensitive receptors. The delegated officer has determined noise emissions would be effectively managed by applicant controls in accordance with general provisions of the *EP Act* and the Environmental (Noise) Regulations 1987.
	Asbestos: ACM entering waste stream for crushing and screening operations, fibres being released into the air or in final product			Refer to Section 3.1	C = Severe L = Rare **High Risk**	Y	Waste acceptance (Conditions 2, 3 and 4) Asbestos management (Conditions 5-15) Waste processing (Condition 16-20) Stockpile management (Conditions 24 and 25) Product testing (Conditions 26 and 27)	These controls generally replicate the applicant's measures and the recommendations specified in the Department's *Guidelines for Managing Asbestos at Construction and Demolition Waste Recycling Facilities* (DEC, 2021). The delegated officer considers them necessary to manage risk.

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

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 23 May 2024	None received	N/A
Local Government Authority advised of proposal on 22 May 2024	None received	N/A
The Upper Swan District Ratepayers and Residents Association Inc. advised of proposal on 22 May 2024	None received	N/A
Applicant was provided with draft documents on 4 June 2024.	No comments and request to issue the renewal as soon as possible.	N/A

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that the application to renew licence L8970/2016/3 will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

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. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Managing asbestos at construction and demolition waste recycling facilities*, Perth, Western Australia.
5. Environmental Protection Authority Victoria 2015, *Best Practice Environmental Management: Siting, design, operation and rehabilitation of landfills (Landfill BPEM)*, Melbourne, Victoria.