Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

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

Works Approval Number	W6847/2023/1
Applicant	Spinifex Crushing and Screening Services Pty Ltd
ACN	135 324 551
File number	DER2023/000637
Premises	Mt Regal Mine M47/1418 & M47/1484 MAITLAND WA 6714 As defined by the Schedule 1 premises map attached to the issued works approval
Date of report	6/03/2024
Decision	Works approval granted

Steve Checker

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Steve Checker
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 construction and operation of the premises.

Compliance with the *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998* (CB Regulations) which apply to the operational aspects of Category 77 at the premises has been assessed.

As a result of this assessment, works approval W6847/2023/1 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 Application summary and overview of premises

On 21 September 2023, Spinifex Crushing and Screening Services Pty Ltd (the Applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to construction and operation of a mobile concrete batching plant and asphalt plant at the premises. The premises is approximately 12 km southeast of Karratha.

The premises relates to the categories and assessed production/design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6847/2023/1. 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 works approval W6847/2023/1.

The Applicant currently holds Existing Licence L9332/2022/1 for a Category 12 and 13 prescribed premises. Post construction of the mobile concrete batching plant and asphalt plant the Existing Licence will require an amendment to authorise operations under the categories approved at the premises under this works approval.

2.2.1 Overview of Premises

The Applicant is proposing to construct and operate a mobile concrete batching and asphalt plant at the premises.

Category 77 - Concrete batching and cement manufacturing

The proposed mobile plant to be used is a Sami Mobile Batching Plant, the details and specifications of which are shown below in Figure 1.

All raw materials (except cement) are currently produced onsite at the premises quarry. Cement will be brought to site in B-double tanker trucks and pneumatically pumped into the cement storage silos. The batching process involves backing an agitator truck under the outfeed screw and programming the batch plant computer to deliver certain weights of the required raw materials (aggregates, cement and additives if any) into the agitator bowl.

Through a number of trials conducted by the Applicant, it has been ascertained that concrete can be batched at a rate of approximately 7-8 m^3/hour on a continuous basis, which puts this

plant at the low end of the production scale when compared to larger static plants.

The primary aim of installing this plant is firstly to satisfy internal requirements for infrastructure construction at the premises, then secondly to supply to smaller niche markets in the region.

The Applicant advises in the Application Form that the plant has a maximum assessed production and design capacity of 160,000 tonnes per annum, but an actual throughput of 80,000 tonnes per annum will be realised.

EUROSILO 45/DE	
Total Storage Cap.	45 m3
Theoretical Prod.	320 kg/min
Total Empty Weight	4500 kg
Absorbed Power	14kW
3 Phase Supply Voltage	380V, 50 Hz
Telescopic Legs	1200 mm
Width for Transport	2490 mm
Height for Transport	3000 mm
Length for Transport	9700 mm

Techno 4 Hoppers	
No. Hoppers	4
Width	2450 mm
Length with elevator retracted	12350 mm
Length with elevator extended	14000 mm
Height with elevator retracted	2780 mm
Total Empty Weight	7500 kg
Power Supply Voltage	380V, 50 Hz
Input Power	20 - 22 kW
Absorbed Power	7 -9 kW
Total Storage Capacity	32 m3
Typical production	20 m3/hr
Hopper Loading Height	2700 - 3100mm
Main belt unloading height	3950 - 4350 mm
Telescopic Legs	1080 mm

Figure 1: Mobile concrete batching plant specifications

Category 35 - Asphalt manufacturing

The proposed mobile asphalt plant is a Fujian Tietuo Mobile Asphalt Mixing Plant, the details and specifications of which are shown below in Figure 2.

Mobile Asphalt Plant Data	
Integrated Asphalt Manufacturing Plant	Tietuo Machinery QLB-40
Average Capacity of Machinery	40 tonnes per hour
Stack height	6.1 m
Plant Motive Power	Diesel Generator
Heater/Dryer Drum Burner	Diesel Fuel
Bitumen Tank Temperature	Electric, via Diesel Genset
Cold Aggregate Bins	5
Bitumen Storage and Heating Tank	40,000 litres
Installed Diesel Storage	5,000 litres
Water for dust control & safety	20,000 litres
Installed Genset	400 KVa
Asphalt maximum daily production	400 tonnes
Estimated Annual Production if fully utilised	< 10,000 tonnes
Baghouse	
Dust Collection Area	240 m2
Operating Temperature	80°C to 180°C
Maximum Temperature	230°C
Dust Collection	224 Nomex Bags
Dust Collection Efficiency	Better than 99%

Figure 2: Mobile asphalt plant specifications

Asphalt will be manufactured in a batch mix process in which an enclosed conveyor feeds aggregate from a cold feed unit into a sealed, insulated and clad rotary dryer. The aggregates which are already produced on site and stockpiled, will be transferred as required to the feed unit via a Loader.

In the diesel-fired dryer, aggregate is heated to approximately 160°C and is transferred to the pug mill. The remainder of the process occurs within the pug mill, which is fully insulated and enclosed to retain heat and minimise dust and odour emissions. Bitumen is then injected hot into the pug mill and is mixed into the hot aggregate with any other required material (e.g. filler,

colouring agents etc.) via a twin-shaft paddle mixer. Bitumen is then stored in a sealed 40,000 litre tank which is kept heated to prevent the bitumen from solidifying. The mixture is deposited to an elevated heated storage vessel for discharge to asphalt trucks for transport.

All aspects of the process are computer-controlled from a central control cabin. The combusted air is exhausted through a baghouse filter. The filter contains 224 bags, with a filter area of 240 m^2. Total capacity of the baghouse filter is 27 m^3 per hour. The baghouse incorporates an automatic reverse-pulse cleaning system with fines returned to the mixer via a screw conveyor. The manufacturer's specifications for the baghouse state that the dust concentration of the filtered air will be less than or equal to 20 mg/m^3. The baghouse consists of a two levels system where course particles in the air stream are removed via a gravity collector and fine particles collected in air-filtration bags. The total capacity of the baghouse filter is 27,000 m^3/hr and incorporates an automatic reverse pulse cleaning system to return accumulated dust in the filtration bags to the pug mill. Filtered air is then discharged via a 3 m vertical stack on the bag house.

Filter bags are an American heat resistant Nomex material with a maximum instantaneous temperature of 235°C. Elastic clamps secure bags to the bag frame to facilitate fast and secure installation and replacement. Access to the baghouse for periodic inspection and bag replacement is via the baghouse top cover. The upper level of the baghouse normally operates below atmospheric pressure where bag cleaning is achieved via a pulsing system that is a reverse flow of normal atmospheric pressure into the upper chamber.

Dust collection bags are periodically pulsed to shake loose collected dust. A screw auger returns both gravity and pulsed dust to the filler elevator where dust is re-incorporated into the manufacturing process.

Aggregate heating and baghouse filtration is an integrated system designed to operate between 80° and 180°C. The integrity of the baghouse is insured via air temperature monitoring at the induction fan. A short-term limit of 220°C is allowed with an over-temperature cut-out at 230°C. Also, an alarm is set to alert the operator in the event that the temperature drops to 80°C. The over-temperature stop device consisting of a cold-fan valve on the inlet of the baghouse ensuring that temperatures within the baghouse do not exceed the short-term temperature limit - in the event that temperature exceeds the cut-out value, the control system will cut off fuel to the burner in the dryer/heater drum.

The temperature control system not only protects the integrity of the baghouse, but also ensures that product quality is maintained by ensuring the drum temperature remains within defined limits - this also prevents blue-smoke emissions arising from over-temperature exceedances (in an older generation of plants, blue-smoke emissions arising from overheating were a major cause of odour emissions).

Bitumen will be stored on-site in a mobile 40,000 litre heated/stirred container. The temperature of the stored bitumen will be maintained using an on-site generator.

The mobile asphalt plant has a capacity of 400 tonnes per day which equates to approximately 146,000 tonnes per annum (400 tonnes per day x 365 days). The Applicant has advised in the Application Form that the plant has a maximum assessed production and design capacity of 100,000 tonnes per annum, but an actual throughput of 50,000 tonnes per annum will be realised.

2.2.2 Compliance with the Concrete Batching Regulations

The Applicant has advised during the application process that the premises will be compliant with the CB Regulations through the following actions:

- The mobile concrete batching plant is fitted with an air cleaning system that reduces dust emissions. The plant also has a dust collection hopper.
- The plant will be cleaned and maintained as per manufacturers recommendations.

- Cement will be stored in pneumatically pumped silos. These silos are fitted with baghouse filters and relief valves.
- Wastewater will be directed to a slurry pit.

2.3 Infrastructure

Figure 3 provides the proposed location of the mobile concrete batching plant and asphalt plant at the premises.

The Mt Regal Mine facility infrastructure, as it relates to Category 35, and 77 activities, is detailed in Table 1 with reference to the site plan outlined in Figure 3.

Table 1 also lists infrastructures associated with each prescribed premises category.

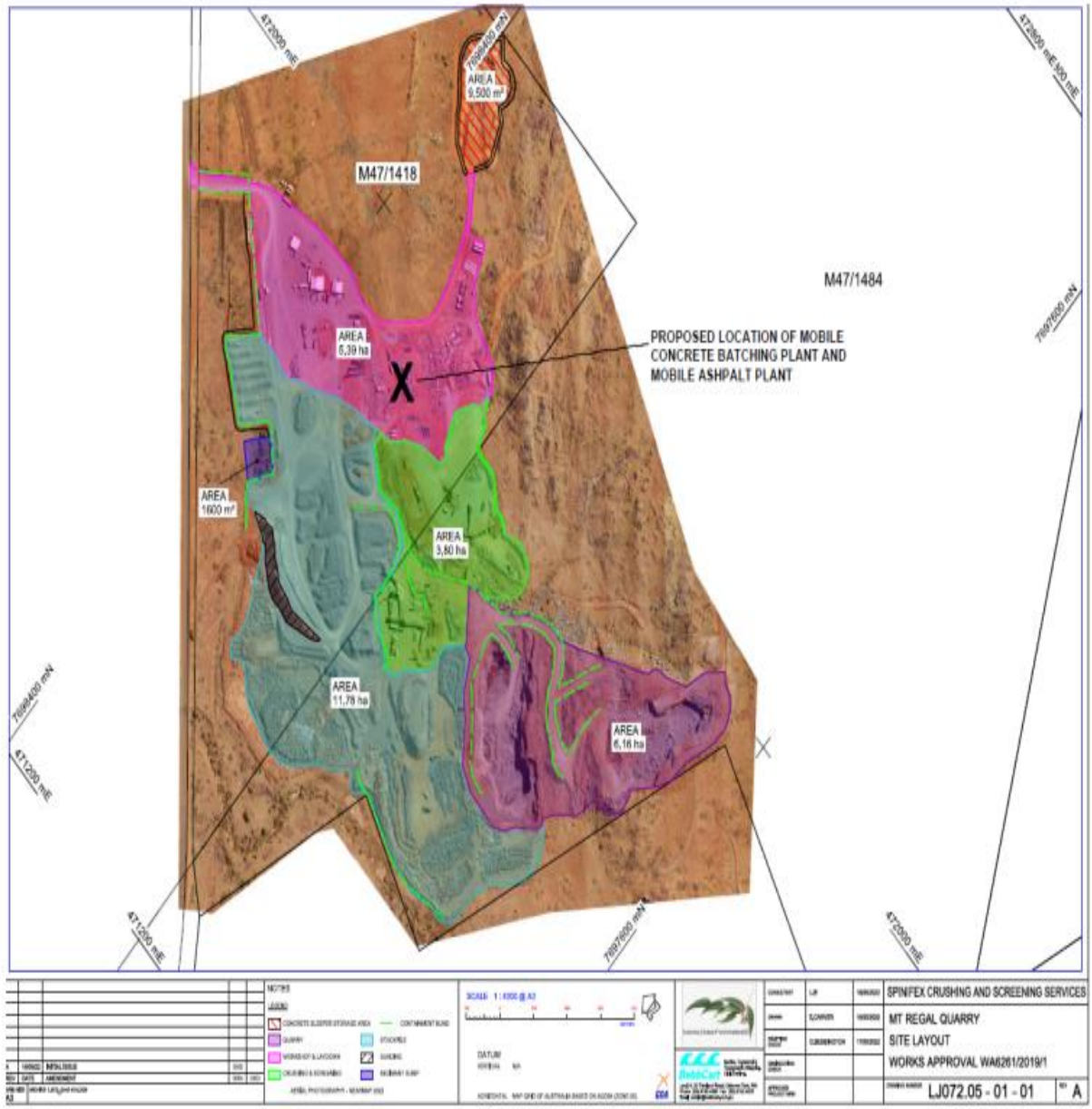

Figure 3: Location of mobile concrete batching plant and asphalt plant

Table 1: Category 35 and 77 infrastructures

	Infrastructure	Site Plan Reference
Prescribed Activity Category 77		
Mobile Concrete batching and cement product manufacturing plant comprising Techno 4 and Cement Eurosilo 45/DE infrastructure		
Techno 4 plant		Infrastructure will be located within the area shown in Figure 3.
1	Hopper capacity 32m^3 dived into four compartments with hinged upper hungry boards on three sides.	
2	Industrial panel computer equipped with alarms.	
3	Control room for operator.	
4	Water batching unit with pump with 220 lt/min flow rate up to a height of 12 m.	
5	Batching unit for 4 additives with magnetic flow meter for batching 4 additives. Gear pump and compressor for management of the electro- pneumatic tank pipe.	
6	Filter with dust collection hopper with vibrating cartridge filter.	
7	Dust suction hood with filter accessory allows for suction of dust produced during loading of the mixer trucks. Includes telescopic extension, curtain panels, manifold stub pipe and vibrating filter cartridges, suction device with electric motor and control valve and the dust collection hopper.	
Cement Eurosilo 45/DE Mobile horizontal silo		
1	Mobile horizontal silo capacity of 45 m^3 with support frame and legs.	
2	Weighing / batching system with 6 load cells and electronic terminals and fixed board control.	
3	Cement extraction system using horizontal screw conveyor and inclined discharge screw conveyor equipped with adjustable ball coupling. Fitted with 8 vibrators for material flow.	
2	Supply also includes the loading pipe, the relief pipe and manholes and safety relief valve.	
Additional infrastructure for Category 77		
1	Slurry pit and sediment trap	Infrastructure will be located within the area shown in Figure 3.
Prescribed Activity Category 35		
Mobile Asphalt manufacturing plant		

	Infrastructure	Site Plan Reference
1	Cold aggregate feeder bins including conveyors	Infrastructure will be located within the area shown in Figure 3.
2	Pug-mill for mixing heated aggregate and liquid bitumen	
3	Rotating heater / dryer drum	
4	Gob-hopper for loading Trucks	
5	Bag house including 6.1 m stack (from bag house)	
6	Diesel heated 40,000 litre mobile bitumen storage tanker including 3.76 m heated bitumen vent stack	
7	3-sided aggregate steel bins	
Ancillary infrastructure for Category 35		
1	Control room	
2	60,000 litre diesel tank	
3	Diesel generator 400 KVa	
4	Water tank 20,000 litre	
5	Stormwater basin	

2.4 Part V of the EP Act

2.4.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

The guidance documents which inform this assessment are:

- *Guidance Statement: Setting conditions (October 2015)*
- *Guidance Statement: Licence duration (August 2016)*
- *Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)*
- *Guideline: Decision making (December 2020)*
- *Guideline: Environmental siting (December 2020)*
- *Guideline: Regulatory principles (December 2020)*
- *Guideline: Risk assessments (December 2020)*

2.4.2 Works approval and licence history

Table 2 summarises the works approval and licence history for the premises.

Table 2: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
W6261/2019/1	19/09/2019	Works approval issued for the installation of a mobile crushing and screening plant
L9332/2022/1	09/09/2022	Licence issued to operate a mobile crushing and screening plant within Mining Leases M47/1418 and M47/1484 (Mt Regal Mine), Karratha, Western Australia.
W6847/2023/1	Draft	Works Approval issued for the Construction of a mobile concrete batching plant and asphalt plant.

2.5 Legislative context and other approvals

Table 3 summarises approvals relevant to the assessment.

Table 3: Other approvals

Legislation	Number	Approval
Environmental Protection Act 1986	CPS 6233/1	Clearing Permit CPS 6233/1 is valid until 30 June 2025 and authorizes the clearing of 272.02 hectares of native vegetation within Mining Lease 47/1484 for the purpose of mineral production.
Environmental Protection (Clearing of Native Vegetation) Regulations 2004	Regulation 5, Item 20	Clearing resulting from low impact or other mineral or petroleum activities.
Rights in Water and Irrigation Act 1914	GWL 174699(2)	Groundwater licence 174699 is valid until 18 October 2031 and has an annual water entitlement of 50kL for dust suppression for mining purposes. The Licensee is Achillies Pty Ltd
Mining Act 1978	Reg ID 52422	Mining Proposal and Mine Closure Plan

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 / operation which have been considered in this decision report are detailed in Table 4 below. Table 4 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 4: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Installation of the Mobile Concrete and Asphalt Plant, vehicle movements, associated hardstand earthworks etc.	Air / windborne pathway	The Exiting Licence L9332 has dust management conditions that will help mitigate dust emissions during installation of the mobile plant. Condition 21 limits speed – 10km/hr. Water cart on site. Sitting – distance to sensitive receptors. Sprinkler systems operate at the premises. Complaints register – Existing Licence condition 25.
Noise			Compliance with the Environmental Protection (Noise) Regulations 1997 (Noise Regs). All onsite machinery fitted with mufflers. Sitting – distance to sensitive receptors. Existing noise bunds are on constructed at the premises. Complaints register – Existing Licence condition 25. Operating hours of 6.00am – 6.00pm Monday to Sundays. No night operations.
Operation			
Dust	Operation of mobile concrete and asphalt plant. Vehicle movements	Air / windborne pathway	Compliance with the CB Regs. Water cart on premises. Sprinkler / water suppression systems. Licence Condition 21 limits speed – 10km/hr. Sitting – separation to sensitive receptors. Complaints register – Existing Licence condition 25. Stockpiles are kept damp. Bag house including broken bag alarms / detection system. Serviced according to manufacturer specifications. Aggregate will be stored within three-walled Hoppers, with stored material kept below the height of the walls.
Noise			Compliance with the Noise Regs. Intermittent operation days.

Emission	Sources	Potential pathways	Proposed controls
			All onsite machinery fitted with mufflers. Sitting – distance to sensitive receptors. Existing noise bunds are on constructed at the premises. Complaints register – Existing Licence condition 25. Operating hours of 6.00am – 6.00pm Monday to Sundays. No night operations.
Odour	Operation of mobile concrete plant Combustion gases, particulates, and VOCs from operation of mobile asphalt plant.		Compliance with the CB Regs. Asphalt and cement are produced only on a campaign basis. The baghouse installed with a filter that: (i) has a design capacity of 27,000 m^3/hour; (ii) has a design capacity for particulates of less than 20mg/m^3; and (iii) is fitted with a minimum of 224 filter bags with a filter area of at least 240m^2. • The baghouse is fitted with an automatic reverse-cycle cleaning system. • The baghouse is fitted with a broken bag detection system. • The baghouse will be fitted with an air temperature control system with built in alarms and cut off controls. • Stack is to be fitted with a sampling port that meets requirements of AS 4323.1. • A condenser to be fitted on the sealed lid to direct condensate back into the tank. • Stack height on baghouse is 6.1m; and • Serviced according to manufacturer specifications. Baghouse filters will be regularly inspected and replaced when broken or leaking bags are detected. Operations cease if a baghouse fault or malfunction occurs. Low Sulphur bitumen. Bitumen is stored in heated tanks fitted with condensers on the head space vents so that any volatile odourous emissions are condensed to liquid that drops back into the tank. Flue gas from the aggregate drying process and bitumen mixing are recirculated through the burner combustion zone to further reduce volatile organic emissions before being ducted through a baghouse fabric filter system, then to the atmosphere via a 3m stack. The asphalt product will be produced at

Emission	Sources	Potential pathways	Proposed controls
			temperatures typically less than 175°C which is below the threshold of 180°C for blue smoke emissions that can contain excessive odours and volatile organics. The temperature of the dried raw material and the mixed asphalt is managed via a temperature probe monitored in the control room. The covered load-out conveyor (that transports asphalt upwards into the small storage bucket) will mitigate any residual odours from dispersing into the atmosphere. The manufactured asphalt will typically be loaded out into trucks direct from the batch process. A small 8m^3 elevated bucket may temporarily hold a single produced batch for short periods until a truck arrives for loadout. The duration of the fugitive emissions from the loadout process are reduced by the speed of the loading from the batch process onto tray trucks, which usually takes less than two minutes before the tray is covered and the truck driven from site.
Air emissions (combustion gases, particulates and VOCs)	Operation of mobile asphalt plant. Combustion gases, particulates, and VOCs		Asphalt is produced only on a campaign basis. The baghouse installed with a filter that: (iv) has a design capacity of 27,000 m^3/hour; (v) has a design capacity for particulates of less than 20 mg/m^3; and (vi) is fitted with a minimum of 224 filter bags with a filter area of at least 240 m^2. • The baghouse is fitted with an automatic reverse-cycle cleaning system. • The baghouse is fitted with a broken bag detection system. • The baghouse will be fitted with an air temperature control system with built in alarms and cut off controls. • Stack is to be fitted with a sampling port that meets requirements of AS 4323.1. • A condenser to be fitted on the sealed lid to direct condensate back into the tank. • Stack height on baghouse is 6.1m; and • Serviced according to manufacturer specifications. Baghouse filters will be regularly inspected and replaced when broken or leaking bags are detected. Operations cease if a baghouse fault or malfunction occurs. Low Sulphur bitumen. Bitumen is stored in heated tanks fitted with

Emission	Sources	Potential pathways	Proposed controls
			condensers on the head space vents so that any volatile odourous emissions are condensed to liquid that drops back into the tank. Flue gas from the aggregate drying process and bitumen mixing are recirculated through the burner combustion zone to further reduce volatile organic emissions before being ducted through a baghouse fabric filter system, then to the atmosphere via a 3m stack. The asphalt product will be produced at temperatures typically less than 175°C which is below the threshold of 180°C for blue smoke emissions that can contain excessive odours and volatile organics. The temperature of the dried raw material and the mixed asphalt is managed via a temperature probe monitored in the control room.
Contaminated stormwater	Operation of mobile concrete and asphalt plant.	Overflow and seepage into soil and water courses	Compliance with the CB Regs. Stormwater basin/settling pond. Slurry pit and sediment trap.
Leaks and Spills	Storage of heated bitumen, cement powder. Storage of diesel	Seepage to soil and groundwater	Compliance with the CB Regs. Compliance with the Environmental Protection (Unauthorised Discharge) Regulations 2004 (UDR). Tanks are self-contained bunds. Spill kits on premises. All storage will be in accordance with the Australian Standards AS1940 and AS1692. Waste oils will be removed from vehicles by an E-vac system and stored on the service truck. All used hydrocarbons will be dispensed from the fuel truck at the licensed facility offsite. Any hazardous chemicals and flammable and combustible liquids will be stored in accordance with legislative requirements and Australian Standards AS1940:2004-The storage and handling of Flammable and Combustible liquids. Scheduled maintenance and servicing of equipment and vehicles to be conducted off site as per manufacturer's instructions.

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 5 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 5: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Stayover at Ausco	Serviced accommodation for mining and resource workers, approximately 5km east of the Premises
MAC Village Karratha	Serviced accommodation for mining and resource workers, approximately 8.5km north-east
Bayton	Residential suburb, approximately 8.7km north-west
Environmental receptors	**Distance from prescribed activity**
Parks and Wildlife Managed Lands and Waters	Murujuga National Park, approximately 13km north of ML47/1484
Threatened Ecological Communities and Priority Ecological Communities	Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays, /approximately 2km north and west of ML47/1484
Threatened/Priority Flora	Roebourne Plains coastal grasslands with gilgai microrelief on deep cracking clays, /approximately 2km north and west of ML47/1484
Threatened/Priority Fauna	The northern quoll (*Dasyurus hallucatus*) is listed as endangered under the *Biodiversity Conservation Act 2016* within the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and has been recorded within 10 kilometres of ML47/1484. In May 2014 Spinifex Crushing and Screening commissioned 360 Environmental to undertake a Level 1 Fauna assessment within M47/1484. This survey identified the northern quoll within the survey area. A second, targeted survey concluded that the site was highly unlikely to contain any denning habitat but could potentially be used as foraging habitat.
Public drinking water source areas	There are no Public Drinking Water Source Areas (PDSWA) within close proximity. The nearest PDSWA is the Harding River, which is approximately 36 km southeast of the site.
Major watercourses/waterbodies	No major watercourses occur within the Premises boundary, however numerous minor, non-perennial watercourses intercept the area.

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 works approval and amended 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 6.

Works Approval W6847/2023/1 that accompanies this decision report authorises construction only. The conditions in the issued works approval, as outlined in Table 6 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Post construction and compliance with the Works Approval W6847/2023/1, a licence amendment for Existing Licence L9332/2022/1 is required to authorise emissions associated with the ongoing operation of the premises i.e. Category 35 and 77 activities. For Category 77 activities, compliance with the CB Regulations post construction of the mobile concrete batching plant is required for operation of the mobile concrete batching plant, therefore there will be no stand-alone licence conditions for the Mobile concrete batching plant. As outlined in Table 6, the licence will need to be amended to add additional conditions for Category 35 activities. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 6: Risk assessment of potential emissions and discharges from the premises during construction and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval / licence	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Placement of mobile concrete and asphalt plant and associated equipment including vehicle movements (reversing beepers).	Dust	Air / windborne pathway causing impacts to health and amenity	Residences 5km east	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	N/A
	Noise			Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	N/A
Operation ***All Category 77 operation Activities mut comply with the Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998.***								
Operation of mobile asphalt plant and associated equipment including vehicle movements (reversing beepers).	Dust	Air / windborne pathway causing impacts to health and amenity	Residences 5km east	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	Existing Conditions 1, 10, 18, 19, 20, 21, 22, 26 27 & 28 regulate dust emission.	L9332/2022/1 will require an amendment to allow Category 35 and 77 activities. Category 77 must comply with the CB Regs therefore the Licence will not have any specific licence conditions as regulation 3, 4, 5, 6, 7, 9 and 10 of the CB Regs regulates Dust for Category 77 operations. Existing licence conditions will require amendments to add Category 35 activities but may not warrant any new standalone conditions.
	Noise			Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	The general provisions of the EP Act and Noise Regs apply.	

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval / licence	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
	Odour			Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	N	Amended Licence L9332/2022/1 will require Asphalt Stack emission testing to compliment USEPA Methods (5 or 17, 7E, 10, 18 and 2).	The Applicant has not nominated time-limited operations under the Works Approval. No Air emissions monitoring data (Combustion gases/particulates/VoCs) has been submitted in the Works Approval Application. DWER therefore applies a precautionary approach. Validation Stack emissions monitoring to be included in the Licence for the following parameters – PM; NOx; CO; Total VOCs; stack flow rate and stack velocity. Stack monitoring will determine the acceptability of the constructed works and to ensure the baghouse filter is being maintained and emissions controlled. Existing licence conditions will need to be amended to include Category 35 activities. Regulation 7 of the CB Regs regulates air cleaning (odour).
	Air emissions - Combustion gases, particulates, and VOCs	Air / windborne pathway causing impacts to health and amenity	Residences 5km east	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	N	Amended Licence L9332/2022/1 will require Asphalt Stack emission testing to compliment USEPA Methods (5 or 17, 7E, 10, 18 and 2).	
	Sediment laden stormwater	Overland runoff potentially causing	Non-perennial watercourse	Refer to Section 3.1	C = Slight L = Unlikely	Y	Existing Licence Condition 1, 23, 26, 27 and 28	L9332/2022/1 will require an amendment to allow Category 35 and

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval / licence	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
		ecosystem disturbance or impacting surface water quality	within and around the premises boundary. Threatened fauna (within 10km of the premises boundary)		**Low Risk**			77 activities. Category 77 must comply with the CB Regs therefore the Licence will not have any stormwater specific licence conditions as regulation 11, 12 and 13 the CB Regs regulate this. Existing licence conditions will require amendments to add Category 35 activities but may not warrant any new standalone conditions.
Mobile Concrete and Asphalt Plants	Spills and leaks	Direct discharge causing impacts to soil, vegetation, terrestrial fauna, and surface water		Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	The general provisions of the EP Act, CB Regs and UDR apply.	N/A

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 7 provides a summary of the consultation undertaken by the department.

Table 7: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 06/12/2023	None received	N/A
Local Government Authority advised of proposal on 6/12/2023	The City of Karratha did not respond.	N/A
Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal 6/12/2023	DEMIRS replied on 19/12/2023 stating / advising that: We have reviewed the Application Form for Works Approval (W6847/2023/1 Mt Regal Quarry) on tenement M47/1418 under the Environmental Protection Act 1986 and following are the comments from DEMIRS; 1) DEMIRS haven't approved or received a mining proposal that incorporated the activities subject to this Works Approval (For mobile cement batching plants). *2)* The purpose of this Works Approval (Cement manufacturing and supplying to smaller niche markets in the region), is not appropriate under the *Mining Act 1978.* As a result, DEMIRS does not support the approval of this application. If the company requires assistance with this matter, please kindly advise them to contact the below mentioned.	Noted. It is the responsibility of the Applicant to ensure that all relevant approvals are in place for a premises prior to commencing the works authorised under the works approval. Therefore, the Applicant is advised to contact DEMIRS as soon as possible to obtain outstanding required approvals prior to commencing construction works at the premises.
Applicant was provided with draft documents on 16 January 2024	Applicant responded on 27 February 2024 that they have reviewed the draft documents and have no comments.	Noted.

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval 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. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Application type		
Works approval	☒	W6847/2023/1
Date application received		21 September 2023
Applicant and premises details		
Applicant name/s (full legal name/s)		Spinifex Crushing and Screening Services Pty Ltd
Premises name		Mt Regal Mine
Premises location		M47/1418 and M47/1484
Local Government Authority		City of Karratha
Application documents		
HPCM file reference number:		DER2023/000637
Key application documents (additional to application form):		Application Form Supporting documents Odour emissions
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.		Works approval Construction of Mobile concrete and asphalt Plants

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 *35: Asphalt manufacturing*	*50,000 tonnes per annum*	
Category 77: concrete batching or cement products manufacturing	80,000 tonnes per annum	

Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Approval: Expiry date:
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☒ No ☐	CPS No: CPS 6233/1 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: CPS 6233/1 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: GWL 174699(2) Licence/permit No: Licence expiry 18 October 2031
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes ☐ No ☒ N/A ☒
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998*

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
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 *Contaminated Sites Act 2003*?	Yes ☐ No ☒	Classification: N/A Date of classification: N/A