



Application for Works Approval

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

Works Approval Number W6471/2020/1

Applicant Shire of Tammin

File Number DER2020/000575

Premises BGC Asphalt Plant Tammin
Lot 76 Tammin Wyalkatchem Road
North Tammin WA 6409
Legal description:
Lot 76 on Plan 101448, Reserve No. 6350

Date of Report 8 January 2021

Decision Works approval granted

Abbie Crawford

**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 mobilisation, operation and demobilisation of a temporary asphalt plant at Lot 76 Tammin Wyalkatchem Road, Tammin (Premises). As a result of this assessment, Works Approval W6471/2020/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Decision Report, the Delegated Officer has considered and given due regard to the Department of Water and Environmental Regulation's 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 2 December 2020, the Shire of Tammin (the Applicant) submitted a works approval application for a temporary asphalt manufacturing plant to be located at Lot 76 Tammin-Wyalkatchem Road, North Tammin. The plant is to be operated on a short term basis, and operated by BGC (Australia) Pty Ltd.

The application is for the mobilisation, operation and demobilisation of a transportable Ciber iNOVA 2000 asphalt manufacturing plant (asphalt plant). The asphalt plant will be located on a hardstand area within the Premises and produce asphalt for approximately 11 weeks. Following completion of the roadworks for which this asphalt plant is producing the asphalt, the asphalt plant will be demobilised and removed from the Premises.

The Premises is approximately 3.4 km north of Tammin town site and the nearest sensitive receptor is approximately 1.3 km from the Premises.

The works approval application relates to Category 35: Asphalt Manufacturing and the asphalt plant can produce up to 200 tonnes per hour of asphalt. The asphalt plant comes on two large truck trailers. Diesel and bitumen tanks will be placed within the Premises for providing the fuel and bitumen. Raw materials (aggregate) will be brought to the Premises, stockpiled near the asphalt plant and then placed in the hoppers by a frontend loader. The raw materials will be dried in the diesel fuelled drier and then mixed with bitumen to produce asphalt. The asphalt is then loaded into trucks to be transported to the roadworks location.

Following the completion of the roadworks the asphalt plant will be demobilised from the Premises and the location on which it was operating will be left clean.

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 *Guidance Statement: Risk Assessments* (DER 2017).

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 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the applicant'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 1 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 (*Guidance Statement: Environmental Siting* (DER 2016)).

Table 1: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Tammin town site	Approximately 3.4km to the south of the Premises
Farm	Approximately 1.3 km north of the Premises
Environmental receptors	Distance from prescribed activity
Remnant vegetation with potentially threatened or priority flora and fauna	Approximately 250 m west of the Premises

3.1.2 Emissions and controls

The key emissions and associated actual or likely pathway during operation of the asphalt plant which have been considered in this Decision Report are detailed in Table 2 below. Table 2 also details the proposed 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
Mobilisation, operation and demobilisation of the asphalt plant			
Dust	Truck movement, frontend loader operation, loading of hoppers with aggregate. Asphalt manufacturing.	Air/windborne pathway causing impacts to health and amenity	Aggregate wetted down prior to transport to site, water cart available for dust suppression; Baghouse filter on the asphalt plant. Stack testing undertaken on the mobile plant within last 3 months demonstrating performance; and Spare bags available if bag failure occurs.
Noise			Asphalt plant to be operated only short term and mainly during day-time.
Odour			Asphalt plant uses diesel. Modern asphalt plants with good temperature control to reduce fumes from the asphalt manufacturing process.

Emission	Sources	Potential pathways	Proposed controls
Air emissions			Modern asphalt plant using diesel. Air emissions filtered through baghouse filter prior to discharge to air, ensuring emissions of particulates less than 50 mg/m ³ ; and Recent stack testing undertaken confirms performance of asphalt plant.
Spills/leaks	Asphalt plant, front end loader, trucks and storage tanks.	Direct discharge to land	Asphalt plant located on hardstand, spill kits available, double-skinned tank for the bitumen storage and self-bunded diesel tank.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) 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 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 3.

Works Approval W6471/2020/1 that accompanies this Decision Report authorises the mobilisation, operation and demobilisation of the asphalt plant. The conditions in the issued Works Approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3: Risk assessment of potential emissions and discharges from the asphalt plant

Risk Event					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Mobilisation, Operation and demobilisation of the asphalt plant								
Asphalt plant operation	Dust	Air/windborne pathway causing impacts to health and amenity	Nearest receptor >1 km	Refer to Section 3.1.2	C = Slight L = Unlikely Low Risk	Y	Conditions 1,2 and 3	N/A
	Noise			Refer to Section 3.1.2	C = Slight L = Rare Low Risk	Y	N/A	N/A
	Air emissions			Refer to Section 3.1.2	C = Slight L = Unlikely Low Risk	Y	Conditions 1,2 and 3	The Delegated Officer notes that recent stack test results for the mobile asphalt plant to be utilised at the premises indicate that emissions to air are below nominal emissions limits for asphalt manufacturing plants. The Delegated Officer considers that these test results indicate that potential impacts to receptors will be unlikely. The Delegated Officer also considers that any potential impacts will be mitigated due to the short term nature of the works, and the distance to receptors. As the works are short term in nature, the works approval expiry date has been reduced.
	Hydrocarbon and contaminated liquid spills and seepage	Direct discharge to land	Remnant vegetation and associated ecosystems	Refer to Section 3.1.2	C = Slight L = Unlikely Low Risk	Y	N/A	Discharges of hydrocarbons and other chemicals are subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

4. Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website (10/12/2020) for 7 days	None received	N/A
Applicant was provided with draft documents on 24/12/2020	Remainder of comment period waived on 5/01/2021	N/A

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 risk.

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.