



Application for Works Approval

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

Works Approval Number	W6885/2024/1
Applicant	Urban Resources Pty Ltd
ACN	121 043 034
File number	DER2023/000774
Premises	Old Bunbury Road Sand Mine Processing Plant 1184 Old Bunbury Road WEST COOLUP WA 6214 Legal description - Lot 101 on Diagram 84277 As defined by the coordinates in Schedule 2 of the works approval
Date of report	22/04/2024
Decision	Works approval granted

A/Manager, Resource 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 time limited operation of the premises. As a result of this assessment, works approval W6885/2024/1 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 28 November 2023, 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 in relation to construction and time limited operation of a mobile screening plant that will process up to 275,000 tonnes per year, a wash plant and divided settlement pond system that will wash the sand. The premises is located approximately 8 km west of Coolup.

Old Bunbury Road Sand Mine has an existing sand mine that will feed the processing plant. The mine will develop in three stages from the centre of the premises. Stage 1 will develop in a northerly direction; stage 2 covers the eastern part of the premises and stage 3 covers the southern part. To date approximately 1.85 hectares of stage 1 has been excavated.

Sand mined on the premises will be dry screened and stockpiled with a Terex Finlay 683 (or similar) mobile screening plant, and washed, dewatered and stockpiled by a wash plant. Maximum throughput of the stand-alone screening plant is 150 tonnes per hour; however, this amount is reduced to 100 tonnes per hour when the washing activity is incorporated to the process. The mobile screening plant will move with the sand extraction activities following the staging plan (stages 1 – 3). Figure 1 shows the location of the excavation area where the screening plant will be moved throughout and the location of the wash plant.

There will be a run of mine (ROM) area where sand will feed into the wash plant, consisting of a wet trommel screen for sand sizing and a cyclone for removal of fine fraction. Washed sand will then be stockpiled for transport offsite.

Wastewater from the wash plant will be directed to a divided, unlined settlement pond. Water will be draw down by gravity drainage through the soil profile back into the superficial aquifer. The settlement pond will consist of two sections: one section for settlement of slurry and a second section for clean water decanted from the first section for reuse in the wash plant. No chemicals or other additions (e.g., flocculants) will be used in this process. If necessary, the clean water section of the pond will be topped up with bore water to feed the wash plant.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6885/2024/1. 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 W6885/2024/1.

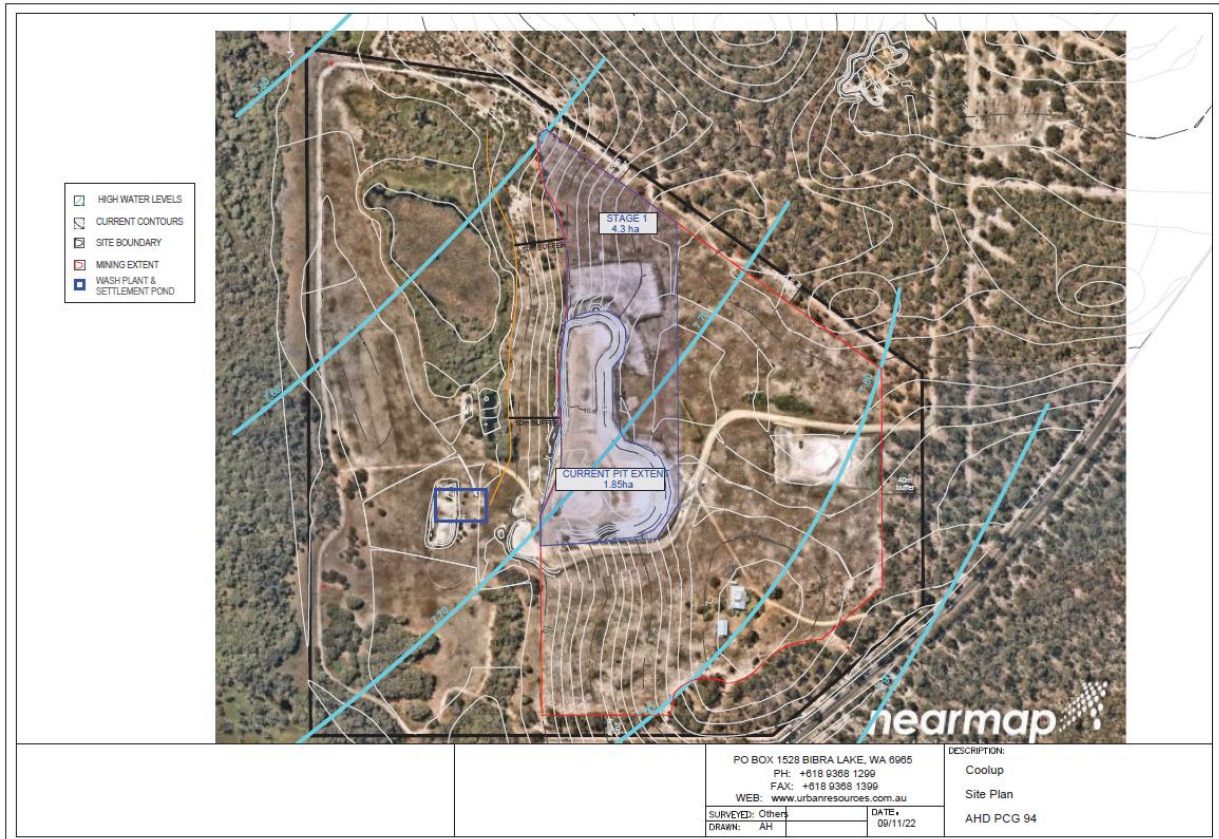


Figure 1. Site plan and wash plant location

2.3 Other relevant approvals

Extractive industries licence

The applicant applied to the Shire of Murray to renew the Excavation Licence for the premises on 2 June 2023. A renewed Excavation Licence was granted on 27 July 2023 (expires on 30 June 2024). The Excavation licence regulates the excavation of sand (which is outside the scope of this works approval application). Conditions on the licence relate to water table monitoring, excavation depth, use of local roads, rehabilitation of the site, die back management, managing fuel spills, reduction of dust and noise nuisance and the restriction of excavation activities to between the hours of 7 am and 6 pm Monday to Saturday only.

Development Approval

The premises is zoned as Rural under the Shire of Murray's Local Planning Scheme No. 4 (LPS4). Planning Approval for Extractive Industry – Sand at the premises was granted by the Shire of Murray on 16 May 2018 and is valid for 10 years.

Water licence

The applicant holds a Groundwater Licence (reference 166244) for the premises, which authorises the abstraction of up to 60,000 kL of groundwater per year from the Perth – Superficial Swan aquifer for dust suppression for earthworks and construction purposes. The licence expires in September 2033. This groundwater bore supplies the wash plant.

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 time limited operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	vehicle movements, earthworks etc.	Air / windborne pathway	<ul style="list-style-type: none"> Water carts will be available on site to suppress visible emissions of fugitive dust. Vehicle speeds will be limited to less than 25km/hr on unconsolidated and unsealed roads.
Noise	Placement and mobilization of washing and screening plant and associated infrastructure (including vehicle movements) Earth moving equipment associated with pond construction	Air / windborne pathway	<ul style="list-style-type: none"> Construction will only occur between the hours of 07:00am to 18:00. Construction activities will not occur on Sundays or public holidays.
Time limited operations			
Dust	Washing and screening of material, vehicle movements.	Air / windborne pathway	<ul style="list-style-type: none"> Dust suppression sprays and sprinklers to be operated on the product stockpiles to control levels of fugitive dust. Water carts will be available on site to suppress visible emissions of fugitive dust. Covers will be fitted on material transfer points and conveyers. Weather forecasts will be utilised to minimise dust generating activities during adverse meteorological conditions.

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> • Wind speed and direction will be checked throughout the day and used to plane and modulate operations. • A complaints procedure will be implemented at the premises.
Noise	Washing and screening of material, vehicle movements.	Air / windborne pathway	<ul style="list-style-type: none"> • Operations must only occur between the hours of 07:00am to 18:00. Operations must not occur on Sundays or public holidays. • Screening plant will be located on the pit floor behind the pit face. • Vehicles, equipment, and machinery will be regularly inspected and maintained, and operated effectively. • Broadband reversing alarms will be used on mobile plant
Sediment laden storm water	Dry screening of materials, stockpiles	Overland runoff	<ul style="list-style-type: none"> • Existing surface water drainage outside operational areas will continue to operate effectively throughout operations of the premises. • Exposed areas with increased susceptibility to erosion or potential for riling will be identified and stabilized if required. • Sediment laden run-off will be maintained in operational areas using diversion drains, bunds and pits to infiltrate into the natural ground. • A 50m buffer will be maintained between operational areas and existing wetland.
Spills or hydrocarbon leaks	Service truck, refueling, light maintenance	Overland runoff	<ul style="list-style-type: none"> • Refueling and light maintenance to be carried out on designated, compacted limestone, hardstand pad. • A spill kit will be retained on site.
Sediment laden process water	Overtopping of settlement ponds	Direct discharge to land	<ul style="list-style-type: none"> • No controls proposed.

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 2 and Figure 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)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Closest residential receptors: Dwelling, 73 Herron Point Road (Lot 100). Dwelling, Lot 1478 Herron Point Road	217m north of prescribed premises boundary 420 m north of prescribed premises boundary
Environmental receptors	Distance from prescribed activity
Geomorphic wetlands – Swan Coastal Plain	1 conservation area inside southwest corner of prescribed premises. 1 conservation area adjoining southeast corner of the border of the premises.
Aboriginal Heritage Place – Nine Mile Lake – mythological type	50 m north of the northern border of the premises.
Priority 3 Threatened Ecological Community: Banksia Woodlands of the Swan Coastal Plain ecological community.	Within and surrounding southwest of the premises.
Declared rare flora – Threatened (T)	625m north of northern border of the prescribed premises boundary.
Legislated Lands and Waters (DBCA -011)	Nine Mile Lake Nature Reserve 250 m north of northern border of premises.

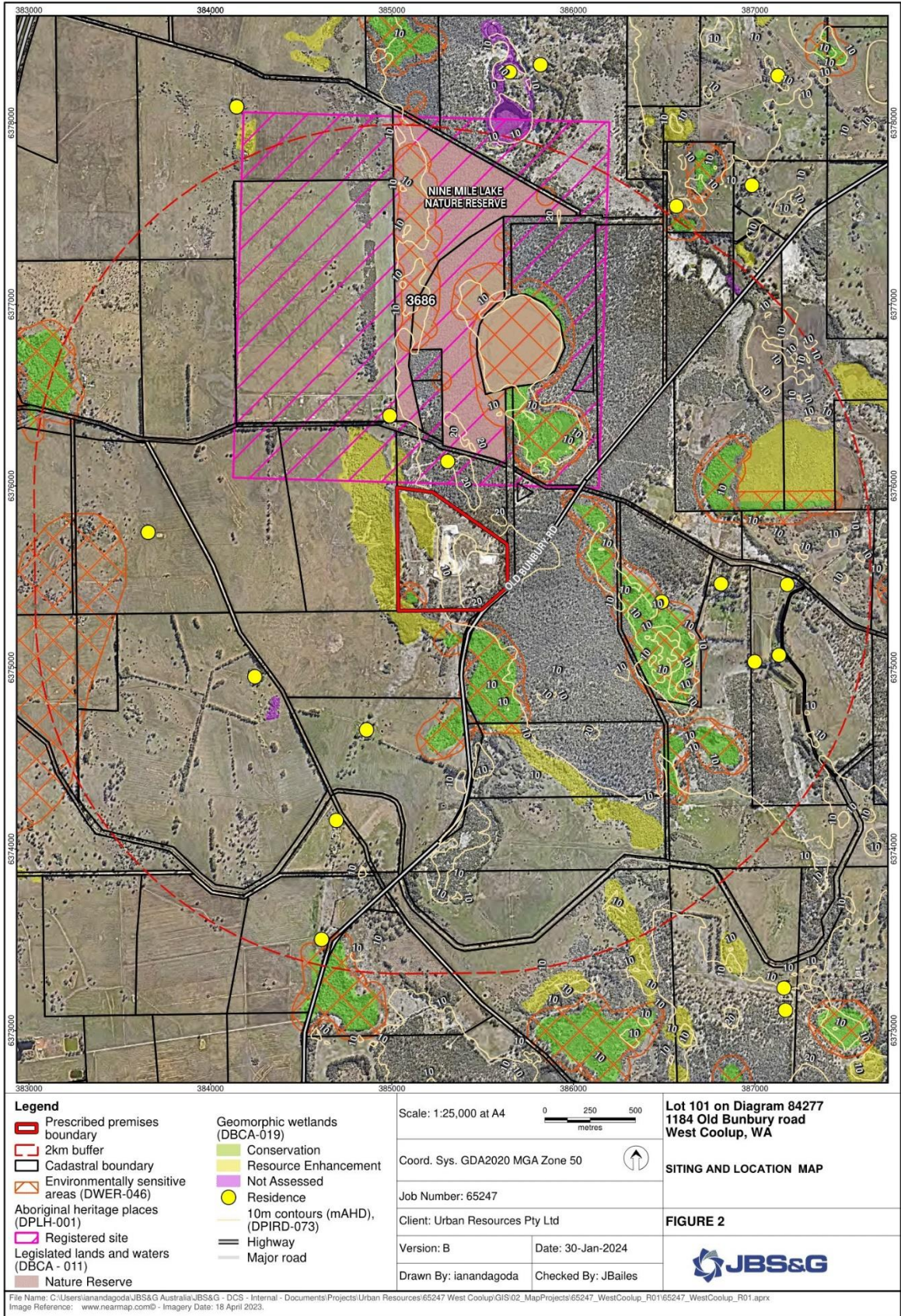


Figure 2: Distance to sensitive receptors

Source: figure provided by applicant

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 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 W6885/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. washing and screening 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 3: Risk assessment of potential emissions and discharges from the premises during construction and time limited operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Placement of screen and associated equipment including vehicle movements (reversing beepers). Construction of settlement pond.	Noise	Pathway: Air / windborne pathway Impact: causing impacts to amenity	Residences 175 m north and 420 m north of prescribed premises boundary	Refer to Section 3.1.1	C = Slight L = unlikely Low Risk	Y	N/A	Construction works is limited to the placement of a mobile screening plant and wash plant within the premises and the construction of two settlement ponds. Noise /dust emissions are not expected to be long in duration or significant. Risk of impacts are therefore considered to be low and no regulatory controls are required.
	Dust	Pathway: Air/Windborne Pathway Impact: Impacts to ecological health and Health / amenity (nearby residence)	Declared Rare Flora Legislated Lands and Waters (DBCA 011) -Nine Mile Lake Aboriginal Heritage Place Nine Mile Lake Priority 3 Threatened Ecological Community: Banksia Woodlands of the Swan Coastal Plain ecological community. Residence 217m north of prescribed	Refer to Section 3.1.1	C = Slight L = Unlikely Low Risk	Y	N/A	

			premises boundary					
Operation (including time-limited-operations operations)								
Crushing and screening of material, product stockpiles	Dust	Pathway: Air/Windborne Pathway Impact: Impacts to ecological health and impacts to human health / amenity	Priority 3 Threatened Ecological Community: Banksia Woodlands of the Swan Coastal Plain community Legislated Lands and Waters (DBCA 011) -Nine Mile Lake Declared Rare Flora	Refer to Section 3.1.1	C = Minor L = Rare Low Risk	Y	Condition 1,6 and 8	The Delegated Officer considers the proposed controls by the applicant to be sufficient to manage dust emissions from impacting environmental receptors.
			Residences 275 m north and 420 m north of the premises boundary		C = Minor L = Possible Medium Risk	N		Dust emissions from the screening of material is expected. Due to the short distance to the nearest residence, it is possible that dust emissions may impact amenity if they are not adequately controlled. The applicant's dust management controls have been conditioned within the works approval. The Delegated Officer has also determined it necessary to include a condition ensuring no dust emissions crosses the premises boundary.
	Noise	Air / windborne pathway causing impacts to	Residences 275 m north and 420 m north of the premises	Refer to section 3.1.1	C = Moderate L = Possible Medium Risk	N	Condition 6, 7, and 9 to 11	Noise emissions from the screening of material is expected. To reduce the risk of amenity impacts on the nearest receptor the applicant's

		health and amenity	boundary					<p>noise management controls have been conditioned within the works approval. The applicant is also required to comply with the assigned noise levels outlined within the <i>Environmental Protection (Noise) Regulations 1997</i> (Noise Regulations).</p> <p>As the mobile screening plant will be moving throughout the mining extent it is possible for it to be located close to the nearest sensitive receptor (residence to the north) and will be within the recommended separation distance (500 m) for screening operations as per the <i>Environmental Protection Authority Guideline 'Separation Distances between Industrial and Sensitive Land Uses, No. 3, June 2005'</i>. This increases the risk of the applicant not being able to comply with the Noise Regulations.</p> <p>As no noise modelling has been undertaken for this application The Delegated Officer has deemed it necessary for the applicant to undertake a noise assessment during time limited operations to demonstrate that the noise emissions produced by the activities on the premises will comply with the Noise Regulations.</p>
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting	Priority 3 Threatened Ecological Community: Banksia Woodlands of the	Refer to Section 3.1.1	C = Minor L = Unlikely Medium Risk	Y	Condition 6	The Delegated Officer is satisfied the applicant controls are sufficient to prevent contaminated stormwater from entering the environment. A 50m buffer will be maintained between operational areas and

		surface water quality	Swan Coastal Plain community Legislated Lands and Waters (DBCA 011) -Nine Mile Lake Aboriginal Heritage Place Nine Mile Lake					existing wetland area located within the premises. Limited runoff is expected due to high infiltration capacity of sandy soils. Sediment laden runoff will be captured in operational area using diversion drains, bunds and pits to infiltrate into natural ground.
	Hydrocarbon leaks or spills		Priority 3 Threatened Ecological Community: Banksia Woodlands of the Swan Coastal Plain community Legislated Lands and Waters (DBCA 011) -Nine Mile Lake Aboriginal Heritage Place Nine Mile Lake	Refer to section 3.1.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A The applicant is required to comply with the <i>Environmental Protection (Unauthorised discharges) Regulations 2004</i> .
Settling ponds	Sediment laden process water (no flocculants)	Overtopping	Geomorphic Wetland Priority 3 Threatened Ecological Community: Banksia Woodlands of the Swan Coastal Plain community	No proposed controls	C = Minor L = Possible Medium Risk	N	<u>Condition 1 and 6</u>	Additional design requirements for the process water settlement pond have been added to the works approval to ensure the pond is adequately sized to contain a high rain fall event and adequate freeboard to prevent overtopping.

		Seepage	Ground water	N/A	C = Slight L = Possible Low Risk	N/A	N/A	No additional regulatory controls required.
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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 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 on 12 February 2024	None received	N/A.
Application advertised in The West Australian newspaper on 12 February 2024	None Received	N/A.
Local Government Authority, Shire of Murray, advised of proposal on 12 February 2024	<p>The Shire of Murray (the Shire) replied on 27/02/2024 and advised that a Development Approval application would be required for the proposal and noted that none had been received to date.</p> <p>The Shire voiced concerns for sensitive water bodies near the site and the Peel Harvey Estuary and would like water quality monitoring to be carried out on the site.</p>	<p>The Department contacted the Applicant to advise that a Development Approval will be required by the Shire of Murray. The applicant responded that they intended to apply for an updated Development Approval (to include the screening activities) once a Works Approval had been granted by DWER.</p> <p>The Delegated Officer has considered the risk to sensitive water bodies and determined that the 50m buffer and storm water management controls are sufficient to mitigate risk of emissions to sensitive water bodies from the prescribed premises.</p>
Nearby residents advised of proposal on 12 February 2024	None Received	N/A.
Applicant was provided with draft documents on 25/03/2024	Response was received on 20/04/2024 from the applicant stating they wish to proceed with the approval as it stands and have no objections or amendments required to the conditions imposed.	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