



## Application for Works Approval

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

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**Works Approval Number** W6942/2024/1

**Applicant** Shire of Coolgardie

**ACN** 883 388 617

**File number** DER2024/000237

**Premises** Coolgardie Wastewater Treatment Plant  
Lot 2144 on Plan 184160 Crown Reserve 37045,  
Lot 2140 on Plan 91726 Crown Reserve 37045,  
Lot 53 on Plan 91726 Crown Reserve 37045,  
Lot 31 on Plan 91280 Crown Reserve 31983,  
Lot 2435 on Plan 107089, and  
Lot 500 on Plan 64352 Crown Reserve 34285  
Bayley Street  
COOLGARDIE WA 6429

**Date of report** 6/09/2024

**Decision** Works approval granted

**ACTING 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. As a result of this assessment, works approval W6942/2024/1 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 29 May 2024, the Shire of Coolgardie (the applicant) applied 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 and time limited operations relating to the acceptance, storage and treatment of septage wastes received under Category 61 and sewage waste received under Category 54 at the premises. Construction works will facilitate an improvement to current wastewater treatment plant (WWTP) infrastructure at the premises for the treatment of septage and sewage wastes. The premises is approximately 0.5 kilometres (km) west of the town of Coolgardie.

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 works approval W6942/2024/1. 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 W6942/2024/1.

#### 2.2.1 Proposed improvement works

The premises currently consists of five rectangular shaped ponds. The pond system is a dual treatment train arrangement with a facultative primary pond followed by an aerated facultative secondary pond in each train (Pond A1 and A2, Pond B1 and B2). The final pond (Pond C) functions as a balancing storage for the treated effluent prior to being pumped to the designated irrigation areas.

The following information in relation to the applicant's WWTP infrastructure improvements has been summarised from the application and will include:

- Bulk earthworks refurbishments for Ponds A1 and A2 (Train A), B1 and B2 (Train B) at the premises,
- New lining system with a HDPE geomembrane overlaying a geotextile for Ponds A1, B1, A2 and B2, and
- Installation of a new septic tank farm, consisting of six 31,000 litre (L) tanks with a total capacity of 186,000 L.

The proposed infrastructure improvement works are intended to enhance environmental outcomes and controls for the premises. Sewage from the Shire's sewer system will flow directly into the new septic tank farm before transferring into the premises' refurbished pond system.

Ponds A1, B1, A2, and B2 will retain the same geometry and their respective capacities will remain the same following the refurbishment works. Following bulk earthworks, each pond will

be lined with a 2 mm thick HDPE geomembrane liner, with an underlying geotextile that will act as a protection between the geomembrane and subgrade. The geosynthetic layers will be secured in an anchor trench around the perimeter of the pond. To manage surface water and mitigate any ingress into the pond system, the crest of each pond is designed to slope away from the pond perimeter to divert surface water run-off away from the pond.

The septic tank farm is intended to enhance the residence time, and facilitate the sedimentation of solids. The sewage waste collected from within the Shire will first pass through the septic tank farm before being transferred to the premises' pond system. The sewage will enter the septic tank farm through a newly constructed discharge chamber. The septic tanks will operate in parallel in sets of three. The sewage will pass through three tanks before being transferred to the premises' pond system via a new 160 mm polyethylene (PE) sewer pressure main. The septic tank farm will feature two new access chambers, one located at the entrance and another at the exit of the septic tanks. The septic tanks will allow for the settlement of solids and a longer retention time, enhancing the performance of the premises' existing pond system. Solids within the septic tanks will be emptied periodically and as per manufacturer's recommendations. The removed material will be disposed of at an approved licenced facility.

### 2.2.2 Staging of Development

The estimated project timeline for the delivery of the proposed infrastructure improvements is shown in Table 1 below. Construction works will be undertaken in three stages:

- Stage one: redevelopment of Train B,
- Stage two: redevelopment of Train A, and
- Stage three: installation of the new septic tank farm.

**Table 1: Estimated project timeline.**

| Project Stage   | Stage one   | Stage two   | Stage three                  |
|---|---|---|------------------------------|
| Description of works  | Redevelopment of Ponds B1 and B2 (inc. earthworks, connector pipework and lining) | Redevelopment of Ponds A1 and A2 (inc. earthworks, connector pipework and lining) | Installation of septic tanks |
| Infrastructure in operation during construction                 | Train A and Pond C  | Train B and Pond C  | Train A, Train B, and Pond C |
| Construction duration   | 3 months  | 3 months  | 4 months                     |
| Submission of critical containment infrastructure report (CCIR) | 2 weeks   | 2 weeks   | 2 weeks                      |
| Approvals required to operate                                   | Licence amendment application after the completion of the project.                |   |                              |

It is anticipated that Train A will be operational during Train B redevelopment works. Train A redevelopment works will commence once Train B is fully operational. The septic tank farm will be constructed after Train A and Train B development works.

### 2.2.3 WWTP Design specifications

Treated effluent is transferred via a submersible pump from Pond C to the recycled water

network tanks, located next to each designated irrigation area. The effluent is dosed with chlorine prior to entering the tanks, and from the tanks, the effluent is then used for irrigation in the designated areas as outlined in the premises licence (L8359/2009/2). The Oval is located 100 m east from the prescribed premises boundary and has an irrigation area of approximately 1.5 ha. The Coolgardie Park is located in the centre of Coolgardie, approximately 800m east of the premises, and has an irrigation area of approximately 0.8 ha.

The anticipated treated wastewater quality during the time-limited operational stage is detailed in Table 2. Concentrations for *E. coli*, pH, and chlorine are in line with the low exposure risk level (ERL) (level of human contact) effluent compliance values detailed in *Guidelines for non-potable uses of recycled water in Western Australia (Department of Health, 2011)*.

Concentrations for nitrogen and phosphorus are in line with the minimum level of treatment (Category D) for landscape irrigation detailed in the *National Water Quality Management Strategy (NWQMS), Australian Guidelines for Sewage Systems – Effluent Management (1997)*.

**Table 2: Expected quality of treated wastewater.**

| Parameter                       | Concentration     |
|---------------------------------|-------------------|
| Biochemical Oxygen Demand (BOD) | < 30 mg/L         |
| Total nitrogen (TN)             | < 30 mg/L         |
| Total phosphorus (TP)           | < 12 mg/L         |
| pH                              | 6.5 to 8.5        |
| <i>E. coli</i>                  | < 1000 cfu/100 mL |
| Total chlorine                  | 0.2 – 2 mg/L      |

The applicant has provided the delegated officer with confirmation from the from the Department of Health that discharge limits, and monitoring and reporting requirements for pathogens (*E. coli*) concentrations, free chlorine, and pH of irrigated wastewater have been set in the reuse scheme approval.

#### 2.2.4 Time-limited operations

The applicant is required to submit to the department an environmental compliance report to demonstrate that the requirements of the conditions of this works approval have been met. The department will review the environmental compliance report to verify that the works have been completed in accordance with the relevant works approval conditions. Time limited operations may only commence at the premises once the environmental compliance report has been submitted to the department.

### 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 pathways during premises construction] / operation which have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures which the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 3: Proposed applicant controls.**

| Emission  | Sources  | Potential pathways                 | Proposed controls   |
|---|--|------------------------------------|---|
| <b>Construction</b>                                       |  |                                    |   |
| Dust  | Vehicle movements, earthworks and construction / installation of infrastructure    | Air / windborne pathway            | <p>Vehicles to maintain a maximum speed of 20 km/hr unless otherwise signposted.</p> <p>Appropriate speed limit signage located throughout the premises and entrance/exit.</p> <p>Vehicles and machinery will move through the premises via established roads and tracks only.</p> <p>A water cart will be utilised on unsealed roads, stockpiles, and other operations as necessary during construction works.</p> <p>All works will cease during periods of strong winds.</p>   |
| Noise   | Vehicle movements, earthworks and construction / installation of infrastructure    | Air / windborne pathway            | <p>All equipment and machinery will be maintained in good working condition.</p> <p>Ensuring all vehicles accessing the premises use the designated access roadways.</p> <p>The operation of equipment and machinery will be restricted to operational hours only.</p> <p>If required, plant and equipment shall be fitted with appropriate acoustic treatment (i.e., silencers).</p> <p>Vehicles will be restricted to a maximum speed of 20 km/hr at the premises.</p> <p>All vehicles and machinery used at the premises will undergo regular maintenance.</p> |
| Odour   | Desludging of the storage ponds  | Air / windborne pathway            | <p>A complaints register will be maintained to ensure that the community can express their comments or concerns regarding the operations of the premises.</p> <p>Consideration of meteorological conditions during material handling.</p> <p>Odour levels across the premises will be monitored by staff and action taken if required.</p>  |
| Overflowing of untreated and partially treated wastewater | Train A, Train B and treated effluent pond C - Construction will be staged whereby | Overland flow, subsurface leaching | <p>No controls proposed.</p> <p>[The Delegated Officer considers the staged approach for the refurbishment of ponds will minimise any risk of spills</p>  |

| Emission              | Sources  | Potential pathways              | Proposed controls   |
|-----------------------|--|---------------------------------|---|
|                       | the wastewater ponding lagoon will be taken offline and upgraded |                                 | occurring. To ensure construction occurs via the proposed staged approach, thereby ensuring the risk is minimised, the Delegated Officer shall apply the applicant's construction commitments as conditions of the works approval]  |
| <b>Operation</b>      |  |                                 |   |
| Odour                 | Receipt and treatment of sewage and septage wastes               | Air / windborne pathway         | <p>A complaints register will be maintained to ensure that the community can express their comments or concerns regarding the operations of the premises.</p> <p>Odour levels across the premises will be monitored by staff, and remedial action taken if required.</p>  |
| Dust                  | Vehicle movements  | Air / windborne pathway         | <p>Vehicles to maintain a maximum speed of 20 km/hr unless otherwise signposted.</p> <p>Appropriate speed limit signage located throughout the premises and entrance/exit.</p> <p>Vehicles will move through the premises via established roads and tracks only.</p> <p>A water cart will be utilised on unsealed roads, stockpiles, and other operations as necessary during construction works.</p>   |
| Leachate / wastewater | Storage ponds  | Seepage to soil and groundwater | <p>To ensure the materials and construction of the redeveloped WWTP meets the design criteria, a construction quality assurance (CQA) plan and technical specifications have been prepared for the project.</p> <p>The CQA plan details the testing methods and quality assurance procedures to undertake the proposed works.</p> <p>There are two technical specifications for the project. One provides detail on the earthworks for the refurbished pond system, while the other provides detail on the supply and installation of the pond system's new geosynthetic composite lining system.</p> <p>Ponds will be refurbished and installed with liners to achieve a coefficient of permeability not greater than <math>1 \times 10^{-9}</math> m/s.</p> <p>A leak detection survey will be undertaken on the HDPE geomembrane layer, utilising either the arc testing method or water lance method, to identify any potential holes in the geomembrane.</p> <p>Any anomalies detected in the underlying geomembrane will be repaired by the contractor as directed by the CQA consultant.</p> |

| Emission   | Sources  | Potential pathways  | Proposed controls   |
|--|--|---|---|
| Overtopping of ponds with treated and untreated wastewater   | Storage ponds                                  | Direct discharge to land, and surface water contamination | <p>Minimum specified freeboard level will be maintained all the time as per licence condition.</p> <p>Storage ponds will be designed to store a 24-hour duration, 1 in 20-year ARI critical rainfall event without overflow.</p> <p>The sewage waste collected from within the Shire will first pass through the septic tank farm before being transferred to the premises' pond system; therefore, enhancing the residence and sedimentation time; and</p> <p>Treated effluent monitoring will continue to be managed in accordance with the conditions of current licence L8359/2009/2.</p>             |
| Stormwater contamination   | Storage ponds during heavy rainfall conditions | Direct contact during rainfall events                     | <p>The installation of a low permeability lining system for Ponds A1, A2, B1, and B2.</p> <p>The final levels around the pond system ensure that stormwater run-off flows away from the perimeter of each pond.</p> <p>All stormwater engineering features will be inspected regularly, and maintenance works scheduled appropriately.</p> <p>Monitoring of meteorological conditions (i.e., storm events).</p> <p>Regular desludging of the septic tanks and ponds to minimise loss of capacity.</p>   |
| Re-use scheme - treated effluent discharged to spray field for irrigation containing high levels of Nitrogen and Phosphorous | Irrigation of treated effluent                 | Direct discharge  | <p>No controls provided</p> <p>[A nutrient irrigation management plan will be required for the reuse scheme so that plants/vegetation flourish with the right uptake of essential nutrients. The Delegated Officer notes this information is not necessary to assess the proposed works under this Decision Report; however, a proposed monitoring strategy to determine nutrient loading of soils because of irrigation within the reuse scheme shall be required to determine regulatory controls for monitoring discharges to land as part of the future licence amendment application assessment]</p> |

### 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 4 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or



emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020)).

**Table 4: Sensitive human and environmental receptors and distance from prescribed activity.**

| <b>Human receptors</b>                    | <b>Distance from prescribed activity</b>  |
|---|---|
| Residential Premises                      | The closest residential receptor is located approximately 179 m to the northeast of the premises.   |
| Caravan Park                              | Located approximately 357 m to the east of the premises.  |
| Ford Bayley Village                       | Located approximately 220 m to the south of the premises.   |
| Kurrajong Village                         | Located approximately 250 m to the south of the premises.   |
| <b>Environmental receptors</b>            | <b>Distance from prescribed activity</b>  |
| Remnant native vegetation                 | Immediately adjacent to premises boundaries.  |
| Public drinking water supply area (PDWSA) | The premises is not located within a PDWSA.   |
| Groundwater                               | Depth to groundwater encountered at approximately 6 mbgl.<br>Groundwater underlying remises is regarded as being hypersaline groundwater, with no beneficial users of groundwater in the premises vicinity. |

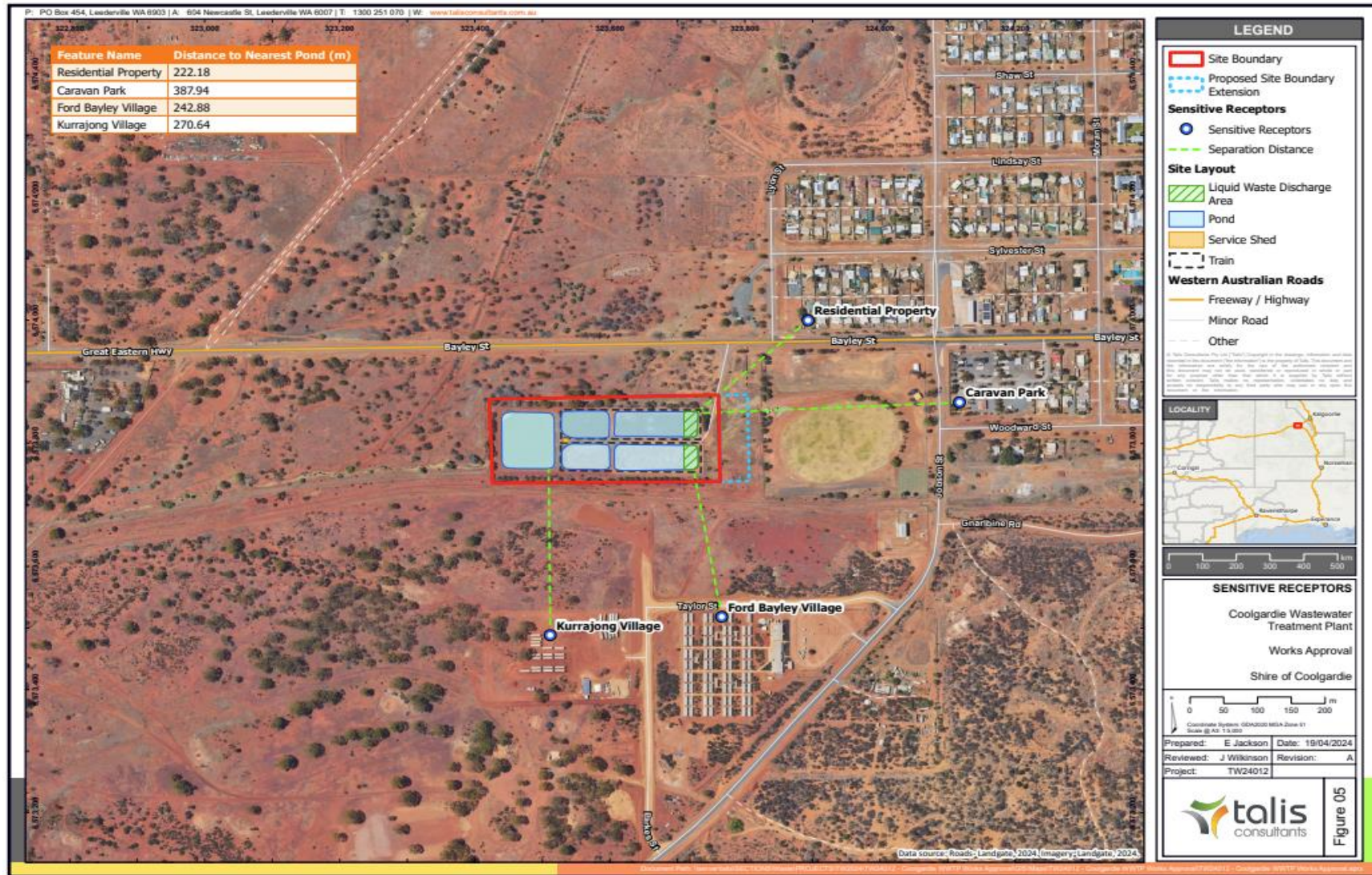


Figure 1: Proximity of sensitive receptors to premises.

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## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers potential source-pathway and receptor linkages as identified in Section 3.13.1.1. 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 3.1.1), 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 5.

Works approval W6942/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence amendment is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises. 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 5: Risk assessment of potential emissions and discharges from the premises during construction and operation.**

| Risk events   |  |   |  |                      | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions <sup>2</sup> of works approval  | Justification for additional regulatory controls   |
|---|--|---|--|----------------------|---|--------------------------------|--|--|
| Sources / activities  | Potential emission   | Potential pathways and impact                                 | Receptors  | Applicant controls   |   |                                |  |  |
| <b>Construction</b>   |  |   |  |                      |   |                                |  |  |
| WWTP Infrastructure improvements – involving bulk earthworks refurbishments for Ponds A1, B1, A2 and B2, New lining system with a HDPE geomembrane overlaying a geotextile for Ponds A1, B1, A2 and B2 and installation of a new septic tanks | Dust   | Air / windborne pathway causing impacts to health and amenity | Closest residential property located approximately 180 m northeast, and mining accommodation villages located within 250 m south of the prescribed premises boundary | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 9, 10, and 11<br>and<br>L8359 Condition 1, 9, and 11  | N/A<br><br>Dust emissions regulated under section 49 of the EP Act.  |
|   | Noise  |   |  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 9, 10, and 11<br>and<br>L8359 Condition 1, 9, and 11  | N/A<br><br>The Delegated Officer considers that should any noise impacts arise, these can be regulated under the provisions of the Noise Regulations.<br><br>No further risk assessment is required.   |
|   | Odour  |   |  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 9, 10, and 11<br>and<br>L8359 Condition 1, 4, 7, 9, and 12  | N/A<br><br>Odour emissions are also regulated under s49 of the EP Act.   |
|   | Spills of untreated and partially treated wastewater including septage waste | Overland flow, subsurface leaching                            | Groundwater and surrounding native vegetation  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 9, 10, and 11<br>and<br>L8359 Condition 1, 4, 7, 9 and 12<br><br>Discharges to land are also be regulated under the <i>Environmental Protection (Unauthorised Discharges)</i> | Refurbishment of the existing ponds poses a level of risk of spills outside the containment system. Construction will be staged, whereby the wastewater ponds Train B will be taken offline and upgraded first. Then Train A ponds will be taken offline and upgraded.<br><br>The Delegated Officer considers the staged approach for construction will minimise any |

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| Risk events  |                         |   |  |                      | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions <sup>2</sup> of works approval   | Justification for additional regulatory controls  |
|--|-------------------------|---|--|----------------------|---|--------------------------------|---|---|
| Sources / activities   | Potential emission      | Potential pathways and impact                                 | Receptors  | Applicant controls   |   |                                |   |   |
|  |                         |   |  |                      |   |                                | <i>Regulations 2004.</i>  | risk of spills occurring.<br><br>Therefore, to ensure construction occurs via the proposed staged approach, ensuring the risk is minimised, the Delegated Officer has applied the applicant's construction commitments as conditions on the works approval. |
| <b>Operation</b><br>(including time-limited-operations operations) |                         |   |  |                      |   |                                |   |   |
| Operation of a Category 54 and 61 liquid waste facility            | Dust                    | Air / windborne pathway causing impacts to health and amenity | Closest residential property located approximately 180 m northeast, and mining accommodation villages located within 250 m south of the prescribed premises boundary | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 9, 10 and 11<br>and<br>L8359 Condition 1, 9 and 11                              | N/A<br>Dust emissions regulated under section 49 of the EP Act.   |
|  | Noise                   |   |  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 9, 10 and 11<br>and<br>L8359 Condition 1, 9 and 11                           | N/A<br>Noise emissions regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> .   |
|  | Odour                   |   |  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11<br>and<br>L8359 Condition 1, 4, 7, 10 and 12 | N/A<br>Odour emissions regulated under s49 of the EP Act.   |
|  | Contaminated stormwater | Direct discharge during rainfall events - soil contamination  | Remnant native vegetation adjacent to premises   | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11  | N/A   |

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| Risk events          |  |   |  |                      | Risk rating <sup>1</sup><br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions <sup>2</sup> of works approval                                      | Justification for additional regulatory controls   |
|----------------------|--|---|--|----------------------|---|--------------------------------|--|--|
| Sources / activities | Potential emission   | Potential pathways and impact   | Receptors  | Applicant controls   |   |                                |  |  |
|                      |  |   |  |                      |   |                                | and<br>L8359 Condition 14  |  |
|                      | Seepage of untreated sewage and treated wastewater from ponds                    | Subsurface seepage causing soil and groundwater contamination   | Remnant native vegetation adjacent to premises, and ground water which lies approximately 6 mbgl | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11                             | N/A  |
|                      | Overtopping of ponds with treated and untreated wastewater                       | Direct discharge to land – soil contamination   | Remnant native vegetation adjacent to premises and ground water which lies approximately 6 mbgl  | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11                             | N/A<br>Discharges to land can also be regulated under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> . |
|                      | Irrigation of treated wastewater containing high Nitrogen and Phosphorous levels | Overland flow and subsurface seepage - mounding of groundwater below the application area, Inundation of the root zone and change in soil chemistry | Soil, groundwater, stormwater runoff   | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br><b>Medium Risk</b>            | Y                              | W6942 Condition 1, 2, 3, 4, 5, 6, 7, 9, 10, and 11<br>and<br>L8359 Condition 3 | NA   |

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. **Additional regulatory controls** depicts additional regulatory controls imposed by department.

## 4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

**Table 6: Consultation.**

| Consultation method   | Comments received   | Department response  |
|---|---------------------|--|
| Application advertised on the department's website on 1 July 2024 | None received       | N/A  |
| Applicant was provided with draft documents on 14 August 2024.    | Refer to appendix 1 | Refer to appendix 1<br>Following consultation, the delegated officer has amended terminology within the works approval for clarity and ease of interpretation. |

## 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: Summary of applicant's comments on risk assessment and draft conditions.

| Condition  | Summary of Licence Holder comment   | DWER response  |
|--|---|--|
| <u>Works Approval</u><br>Condition 1 Table 1<br>Stage one heading  | Typographical changes requested.  | Request adopted.   |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 1, Colum 2 - Infrastructure                                    | Typographical changes requested.  | Request adopted.   |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 1, Colum 3 – Design and construction/installation requirements | Typographical changes requested:<br><br>Remove condition “Ponds must be moisture conditioned prior to HDPE liner placement to keep the liner hydrated under the expected loading conditions” since the 250mm engineered attenuation layer will already be moisture conditioned as part of its placement, and acceptance of the subgrade prior to the placement of liner is required, which will ensure that any potential desiccation is rectified. | Request adopted.<br><br>The table has been updated as requested. |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 2, Colum 2 – Infrastructure                                    | Typographical changes requested.<br><br>Change from liner system to lining system.  | Request adopted.   |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 2, Colum 3 – Design and construction/installation requirements | Typographical error noted.<br><br>Word permeability missing “Lined with 2.0 mm double sided, textured HDPE to achieve a of $<1 \times 10^{-9}$ m/sec”.  | Corrected.   |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 2, Colum 3 – Design and  | Request to remove condition which requires the installation of DN250 PE connector pipes including inlet pipe from access chamber AC1, and connector pipes between ponds B1 to B2, and B2 to C.  | Request adopted<br><br>The table has been updated as requested.  |



| Condition  | Summary of Licence Holder comment  | DWER response    |
|--|--|------------------|
| construction/installation requirements   |  |                  |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Stage two heading  | Typographical changes requested.   | Request adopted. |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 3, Colum 2 – Infrastructure                                    | Typographical changes requested.   | Request adopted. |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 3, Colum 3 – Design and construction/installation requirements | Typographical error noted.<br>Install DN250 PE connector pipes including inlet pipe from access chamber AC1AC3, and connector pipes between ponds A1 to A2, and A2 to C.   | Corrected.       |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 3, Colum 3 – Design and construction/installation requirements | Typographical changes requested<br>Request to remove condition which requires the installation of DN250 PE connector pipes including inlet pipe from access chamber AC1, and connector pipes between ponds B1 to B2, and B2 to C.  | Request adopted. |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 4, Colum 3 – Design and construction/installation requirements | Typographical error noted.<br>Word permeability missing “Lined with 2.0 mm double sided, textured HDPE to achieve a of $<1 \times 10^{-9}$ m/sec”.   | Corrected.       |
| <u>Works Approval</u><br>Condition 1 Table 1<br>Row 4, Colum 3 – Design and construction/installation requirements | Typographical changes requested.<br>Request to remove condition which requires the installation of DN250 PE connector pipes including inlet pipe from access chamber AC1, and connector pipes between ponds B1 to B2, and B2 to C. | Request adopted. |
| Condition 7  | Formatting, typographical and numbering errors noted for condition 7.  | Corrected.       |

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| Condition  | Summary of Licence Holder comment   | DWER response  |
|--|---|--|
| <u>Works Approval</u><br>Condition 7 Table 2<br>Stage one heading                                  | Typographical changes requested.  | Request adopted.   |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Row 1, Colum 3 – Operational requirements, point c | Typographical changes requested.<br>Change from surface water pond to facultative pond - The <del>surface water</del> facultative pond must provide a minimum operational storage capacity <sup>1</sup> of 11,850 m3 for ponds B1 and B2. | The table has been updated as requested.   |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Row 1, Colum 3 – Operational requirements, point c | Typographical changes requested<br>Change from surface water pond to evaporative pond - The <del>surface water</del> evaporative pond must provide a minimum operational storage capacity of 20,475 m <sup>3</sup> for pond C.            | The table has been updated as requested.   |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Stage two heading                                  | Typographical changes requested.  | Request adopted.   |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Row 2, Colum 3 – Operational requirements, point c | Typographical changes requested.<br>Change from surface water pond to facultative pond - The <del>surface water</del> facultative pond must provide a minimum operational storage capacity <sup>1</sup> of 10,350 m3 for ponds A1 and A2. | The Decision report has been updated to reflect the changes requested by the Licence Holder. |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Row 2, Colum 3 – Operational requirements, point c | Typographical changes requested.<br>Change from surface water to facultative pond - The <del>surface water</del> facultative pond must provide a minimum operational storage capacity <sup>1</sup> of 11,850 m3 for ponds B1 and B2.      | The Decision report has been updated to reflect the changes requested by the Licence Holder. |
| <u>Works Approval</u><br>Condition 7 Table 2   | Typographical changes requested.<br>Change from surface water to evaporative pond - The <del>surface water</del> evaporative pond must provide a minimum  | The Decision report has been updated to reflect the changes requested by the Licence Holder. |

Works approval: W6942/2024/1

| Condition   | Summary of Licence Holder comment  | DWER response  |
|---|--|--|
| Row 2, Colum 3 – Operational requirements, point c                  | operational storage capacity of 20,475 m <sup>3</sup> for pond C.  |  |
| <u>Works Approval</u><br>Condition 7 Table 2<br>Stage three heading | Typographical changes requested.   | Request declined. The Delegated Officer is aware that stage three operation at the Coolgardie WWTP will consist of four treatment ponds (Train A and Train B) operated in duty and standby mode and the LLDPE septic tanks operate in parallel in sets of three. |
| <u>Definitions table 5</u>  | Shire is requesting definition for three referenced terms “CQA Validation Report”, “Geotechnical Inspection and Testing Authority (GITA)” and “Suitably Qualified Professional Engineer” used throughout this document and other DWER Approval Documentation for similar projects. | Definition added.  |

## Appendix 2: Application validation summary.

| SECTION 1: APPLICATION SUMMARY                                    |   |  |                              |                             |                              |
|---|---|--|------------------------------|-----------------------------|------------------------------|
| <b>Application type</b>   |   |  |                              |                             |                              |
| Works approval  | <input checked="" type="checkbox"/>   |  |                              |                             |                              |
| Licence   | <input type="checkbox"/>  | Relevant works approval number:  | WTBA                         | None                        | <input type="checkbox"/>     |
|   |   | Has the works approval been complied with?   | Yes <input type="checkbox"/> | No <input type="checkbox"/> |                              |
|   |   | Has time limited operations under the works approval demonstrated acceptable operations? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
|   |   | Environmental Compliance Report / Critical Containment Infrastructure Report submitted?  | Yes <input type="checkbox"/> | No <input type="checkbox"/> |                              |
|   |   | Date Report received:  |                              |                             |                              |
| Renewal   | <input type="checkbox"/>  | Current licence number:  |                              |                             |                              |
| Amendment to works approval                                       | <input type="checkbox"/>  | Current works approval number:   |                              |                             |                              |
| Amendment to licence  | <input type="checkbox"/>  | Current licence number:  |                              |                             |                              |
|   |   | Relevant works approval number:  |                              | N/A                         | <input type="checkbox"/>     |
| Registration  | <input type="checkbox"/>  | Current works approval number:   |                              | None                        | <input type="checkbox"/>     |
| Date application received   | 24 May 2024   |  |                              |                             |                              |
| <b>Applicant and Premises details</b>                             |   |  |                              |                             |                              |
| Applicant name/s (full legal name/s)                              | Shire of Coolgardie   |  |                              |                             |                              |
| Premises name   | Coolgardie WWTP   |  |                              |                             |                              |
| Premises location   | Lot 2144 on Plan 184160 Crown Reserve 37045, Lot 2140 on Plan 91726 Crown Reserve 37045, Lot 53 on Plan 91726 Crown Reserve 37045, Lot 31 on Plan 91280 Crown 37045, and Lot 2123 on Plan 91095 Crown Reserve 34285, Bayley Street COOLGARDIE WA 6429   |  |                              |                             |                              |
| Local Government Authority  | Shire of Coolgardie   |  |                              |                             |                              |
| <b>Application documents</b>                                      |   |  |                              |                             |                              |
| HPCM file reference number:                                       | DER2024/000237  |  |                              |                             |                              |
| <b>Scope of application/assessment</b>                            |   |  |                              |                             |                              |
| Summary of proposed activities or changes to existing operations. | <p>The Shire of Coolgardie is proposing to improve its Coolgardie Wastewater Treatment Plant by undertaking the following:</p> <ul style="list-style-type: none"> <li>Extend the boundary of the prescribed premises</li> <li>Bulk earthworks refurbishments for Ponds A1, B1 A2 and B2;</li> <li>New composite lining system with a HOPE geomembrane and underlying geotextile for Ponds A1, 81 A2 and 82; and</li> <li>Installation of six, 31,000 litre septic tanks.</li> </ul> |  |                              |                             |                              |

**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 |
|--|--|
| Category 54: Sewage facility                 | 1,000 cubic metres per day             |
| Category 61: Liquid waste facility           |  |

**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 <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | Referral decision No:<br>Managed under Part V <input type="checkbox"/><br>Assessed under Part IV <input type="checkbox"/>   |
| Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?   | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | Ministerial statement No:<br>EPA Report No:   |
| Has the proposal been referred and/or assessed under the EPBC Act?   | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | Reference No:   |
| Has the applicant demonstrated occupancy (proof of occupier status)?   | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                              | Certificate of title <input checked="" type="checkbox"/><br>General lease <input type="checkbox"/> Expiry:<br>Mining lease / tenement <input type="checkbox"/> Expiry:<br>Other evidence <input type="checkbox"/> Expiry: |
| Has the applicant obtained all relevant planning approvals?  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> | Approval:<br>Expiry date:<br>If N/A explain why?  |
| Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?                                  | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | CPS No: N/A<br>No clearing is proposed.   |
| Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?                               | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | Application reference No: N/A<br>Licence/permit No: N/A<br>No clearing is proposed.   |
| Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?                              | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                              | Application reference No:<br>Licence/permit No:<br>Licence / permit not required.   |

|  |   |   |
|--|---|---|
| <p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>   | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>                              | <p>Type: Proclaimed Groundwater Area<br/>                 Has Regulatory Services (Water) been consulted?<br/>                 Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>   |
| <p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>  | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>                              | <p>Name: NA<br/>                 Priority: NA<br/>                 Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a>)?<br/>                 Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p> |
| <p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p> | <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>                              | <p>WWTP and liquid waste facility operations include receipt of controlled waste (K210) and sewage (K130). See licence: L8359/2009/2</p>  |
| <p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>   | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>                              | <p>N/A</p>  |
| <p>Is the Premises subject to any EPP requirements?</p>  | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>                              | <p>N/A</p>  |
| <p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>  | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>                              | <p>Classification: listed in DWERS Geocortex viewer as<br/>                 Date of classification:</p>   |
| <p><b>Direct interest stakeholders</b></p>   |   |   |
| <p>Department of Health</p>  | <p>Letter to be sent Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/></p> |   |

## SECTION 2: RECEPTORS

Premises located on western outskirts of Coolgardie.

| <b>Human receptors</b>                   | <b>Distance from activity / prescribed premises</b>  |
|--|--|
| Residential Premises                     | The closest residential receptor is located approximately 179 m to the northeast of the premises.  |
| Caravan Park                             | located approximately 357 m to the east of the premises.   |
| Ford Bayley Village                      | Located approximately 220 m to the south of the premises.  |
| Kurrajong Village                        | Located approximately 250 m to the south of the premises.  |
| <b>Environmental receptors and value</b> | <b>Distance from activity / prescribed premises</b>  |
| Public Drinking Water Supply Area        | The premises is not located within a Public Drinking Water Supply Area (PDWSA). Hypersaline groundwater. No beneficial uses of groundwater in the site vicinity. |
| Groundwater                              | Depth to groundwater encountered at approximately 6 mbgl.  |
| Priority 1 Flora                         | Approximately 1km south of premises.   |