



# Works Approval

## *Environmental Protection Act 1986, Part V*

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**Works Approval Holder:**      **Water Corporation**

**Works Approval Number:**    **W5951/2016/1**

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**Registered office:**      Water Corporation  
629 Newcastle Street  
LEEDERVILLE WA 6007

**Premises address:**      Kulin Wastewater Treatment Plant  
Part Lot 1000 on Plan 42480 and Part Lot 1 on Diagram 62868  
Jilakin Street KULIN WA 6365  
Being bound by the following points (GDA 1994; MGA Zone 50) –

Point	Easting	Northing
1	608684	6384060
2	608945	6384060
3	608945	6384030
4	609034	6384030
5	608944	6383860
6	608853	6383860
7	608853	6383940
8	608744	6383940
9	608744	6384050
10	608684	6384050

**Issue date:**              Thursday, 20 October 2016

**Commencement date:**   Monday, 24 October 2016

**Expiry date:**             Wednesday, 23 October 2019



The following category from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
85	Sewage facility; premises (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	More than 20 but less than 100 m <sup>3</sup> per day.	50 m <sup>3</sup> per day

#### Conditions

This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 20 October 2016

.....  
**Caron Goodbourn**

A/Manager Licensing (Waste Industries)

Officer delegated under section 20  
of the *Environmental Protection Act 1986*



# Works Approval Conditions

## 1 General

### 1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

**'Act'** means the *Environmental Protection Act 1986*;

**'annual period'** means the inclusive period from 1 July until 30 June in the following year;

**'CEO'** means Chief Executive Officer of the Department of Environment Regulation;

**'CEO'** for the purpose of correspondence means;

Chief Executive Officer  
Department Div. 3 Pt. V EP Act  
Locked Bag 33 Cloisters Square  
PERTH WA 6850  
[info@der.wa.gov.au](mailto:info@der.wa.gov.au)

**'Premises'** means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

**'Schedule 1'** means Schedule 1 of this Works Approval unless otherwise stated;

**'Works Approval'** means this Works Approval numbered W5951/2016/1 and issued under the Act;

**'Works Approval Holder'** means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval;

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

### 1.2 General conditions

1.2.1 The Works Approval Holder must ensure that the Works specified in Column 1 of Table 1.2.1 meet or exceed the specifications in Column 2 and 3 of Table 1.2.1 for the infrastructure in each row of Table 1.2.1.



- 1.2.2 The Works Approval Holder must not depart from the specifications in Column 1, 2 and 3 for the infrastructure in each row of Table 1.2.1 except:
- a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
  - b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and
  - c) in accordance with all other conditions in this Works Approval.

Table 1.2.1: Infrastructure to be constructed		
Column 1	Column 2	Column 3
Infrastructure	Area	Specifications
1 x solar powered liquid copper dosing system	Outlet of Pond 2 (inlet into Storage Pond 3)	<ul style="list-style-type: none"><li>(a) To include:<ul style="list-style-type: none"><li>(i) 1000L storage tank for copper ethanolamine chelate complex;</li><li>(ii) Battery;</li><li>(iii) Dosing pump; and</li><li>(iv) Solar panel.</li></ul></li><li>(b) To be constructed within a fully enclosed, self-contained unit (with exception of solar panel).</li><li>(c) To incorporate an impervious hardstand and bund walls, or equivalent impervious enclosure, which encompasses the chemical storage tank and dosing pump and is capable of containing at least 1100L of spilled material.</li></ul>

## 2 Information

### 2.1 Reporting

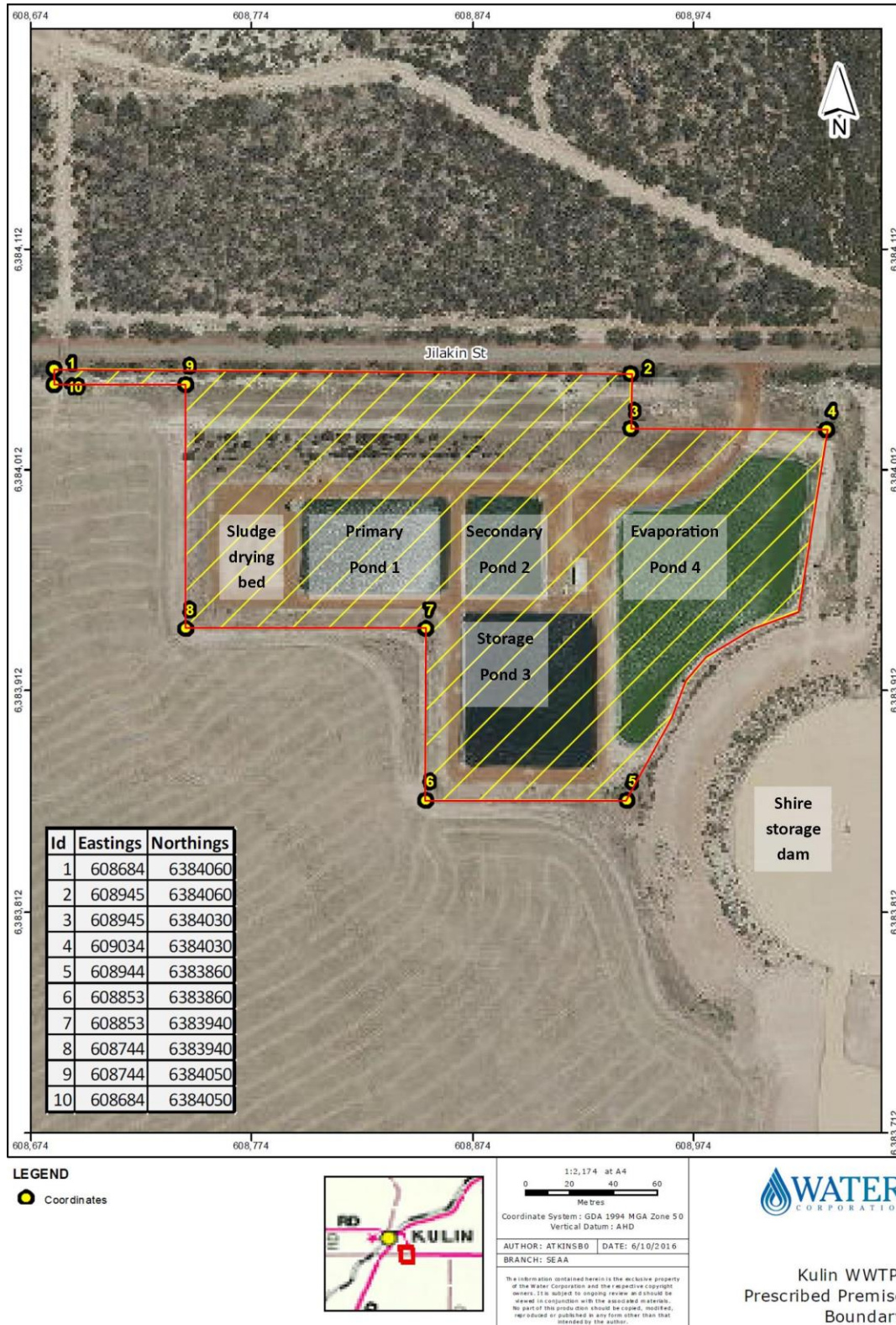
- 2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.
- 2.1.2 The compliance document shall:
- (a) certify that the works were constructed in accordance with the conditions of the works approval;
  - (b) provide information and supporting photographs to demonstrate compliance with each detail listed in Table 1.2.1; and
  - (c) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.



## Schedule 1: Maps

### Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary.







# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Water Corporation

**Works Approval:** W5951/2016/1

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**Registered office:** Water Corporation  
629 Newcastle Street  
LEEDERVILLE WA 6007

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7	608853	6383940
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10	608684	6384050

As depicted in Schedule 1

**Issue date:** Thursday, 20 October 2016

**Commencement date:** Monday, 24 October 2016

**Expiry date:** Wednesday, 23 October 2019

### Decision

Based on the assessment detailed in this document the Chief Executive Officer's (CEO) Delegate has decided to grant a works approval. The CEO Delegate's considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Melissa Chamberlain  
Licensing Officer

Decision Document authorised by: Caron Goodbourn  
Delegated Officer

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## 1 Purpose of this Document

This Decision Document explains how the Chief Executive Officer's (CEO) Delegate has assessed and determined the application and provides a record of the CEO Delegate's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to the CEO Delegate's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



## 2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	85	50kL/day
Application verified	Date: 11/02/2016	
Application fee paid	Date: 10/03/2016	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		





### 3 Executive summary of proposal and assessment

This works approval is for the construction of a solar powered liquid copper dosing skid at the Kulin WWTP which is currently Registered under R1699/2005/1. The dosing skid is to be installed at the outlet of pond 2 (inlet of pond 3) and will add a copper ethanalamine chelate complex (Cupricide) to the treated waste water to reduce the likelihood of algae growth in storage ponds. The purpose of this addition is to reduce the public health risk from exposure to bacterial blooms in the off-site irrigated wastewater, and reduce the likelihood of an uncontrolled overflow in the event the WWTP is required to be shut down due to algal blooms.

Excess treated wastewater is directed off the premises to the Shire Storage Dam from which the Shire operates a reuse/irrigation scheme. The Shire reuse scheme is not Registered and falls outside the premises.

The site is located on the Yilgarn Craton, which is characterised predominately by granite rock overlain by weathered clay soils. Depth to groundwater at the premises is unknown. Department of Environment Regulation's GIS mapping system indicates that bores in the area measures groundwater at a depth of 10 to 17 meters below ground level and therefore groundwater at the premises is estimated to be at a similar depth. There are no significant surface water channels within 1 km of the premises.

The premises is surrounded to the south by privately owned farmland, to the north by crown reserves and to the north east by Kulin Airport. The nearest buildings are industrial sheds approximately 500 meters west, a nursery approximately 550 meters north and an administrative centre 700 meters north west. The nearest residents are located approximately 800 meters north west.

The main environmental risk from the construction and operation of the dosing unit is the spillage of Cupricide liquid. The application states that the dosing system will be a fully enclosed self-contained unit housing a 1000L chemical storage tank, battery and pump with a solar panel outside the enclosure. The bunded area is capable of containing a maximum spill volume of 1100L. The proposed dosing rates are shown in the table below.

WWTP	Proposed Cupricide Dose Rate	Equiv. as Cu <sup>2+</sup> (mg/L)	Average WWTP Flow (kL/d)	Daily Dose (L) (kg as Cu <sup>2+</sup> )	Annual Dose (L) (kg as Cu <sup>2+</sup> )	Reuse Irrigated Area (ha)	Annual contaminant load (kg/ha)
Kulin	0.5 mg/L	0.19 mg/L	~50 kL/d	0.24 L, 0.009 kg	88 L, 3.4 kg	4.6 ha	0.74 kg/ha
	1 mg/L	0.38 mg/L		0.96 L, 0.038 kg	175 L, 6.9 kg		1.48 kg/ha
	(max)	mg/L					



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's *Guidance Statement: Regulatory Principles, Guidance Statement: Setting Conditions* and Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	W1.2.1-1.2.2	<p>Conditions 1.2.1 and 1.2.2 specify the infrastructure to be constructed and their details and require that the works do not deviate unless there is a minor departure, or the departure improves the environmental outcomes. These conditions ensure the works are restricted to the proposed works as outlined in the application form and to the specific details upon which the environmental risks have been assessed.</p> <p><b>Operation</b> <u>Emission Description</u> <i>Emission:</i> Cupricide spilling from the system in the event of a malfunction. <i>Impact:</i> Copper compounds may migrate to groundwater or surface water and negatively impact flora and fauna. The geology of the area is characterised by clay soils. Groundwater is estimated to be located at a minimum of 10 meters depth. There are no surface water channels within 1km of the premises. Public health impacts of mild skin irritation or coughing if contact is made. <i>Controls:</i> The applicant has proposed to install bunding around the copper storage tank to contain 110% of the storage volume.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	<p>Cover letter and Application Form dated 21 January 2016;</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions (cont.)		<p><u>Regulatory Controls</u> Table 1.2.1 specifies that the construction must contain the proposed bunding, or equivalent impervious enclosure to contain 1100L of material. Table 1.2.1 also specifies that the dosing system should be within a fully enclosed unit, as specified in the application. This removes the risk of rainfall impacting on the bund and its contents.</p> <p>The premises operates under a Registration and therefore no conditions are imposed on operations; however the registration holder will be subject to the Unauthorised Discharges regulations, which list copper as a schedule 1 material.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	
Emissions to land including monitoring	N/A	No emissions to land are expected on the premises as part of either construction or operation. All treated wastewater is reused beyond the premises, and therefore not subject to this assessment. It is noted that proposed copper dosing rates are between 0.19 – 0.38 mg/L.	Cover letter and Application Form dated 21 January 2016;
Fugitive emissions	N/A	<p><b>Construction and Operation</b> Minimal dust emissions are expected during construction and operation. The works approval holder will be required to comply with the general provisions of the <i>Environmental Protection Act 1986</i> at all times.</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Odour	N/A	<p><b>Construction</b> No odour emissions are anticipated during construction.</p> <p><b>Operation</b> <u>Emission Description</u> <i>Emission:</i> Odour from Cupricide stored on the premises. <i>Impact:</i> Cupricide emits a slightly ammonical odour which may impact the amenity of people on neighbouring properties. The nearest buildings are industrial sheds approximately 500 meters west, a nursery approximately 550 meters north and an administrative centre 700 meters north west. The nearest residents are located approximately 800 meters north west. <i>Controls:</i> The Cupricide is stored in a fully enclosed and self-contained unit. The storage tank is bunded and capable of containing 110% of the liquid to prevent spillage.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Table 1.2.1 requires that the storage tank is constructed within a fully enclosed, self-contained unit with adequate bunding, as per the application. The premises operates under a registration and therefore no conditions are imposed on operations; however the registration holder will be required to comply with the general provisions of the <i>Environmental Protection Act 1986</i> at all times.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	<p>Cover letter and Application Form dated 21 January 2016;</p> <p><i>Environmental Protection Act 1986</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Noise	N/A	<b>Construction and Operation</b> Minimal noise emissions are expected during construction or operation. The applicant is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> at all times.	<i>Environmental Protection (Noise) Regulations 1997</i>
Information	W2.1.1 – 2.1.2	Condition 2.1.1 requires that the works approval holder submit a compliance document following construction of the works and prior to commissioning.  Condition 2.1.2 specifies the requirements of the compliance document required by condition 2.1.1, including the need for the works approval holder to certify that the works are in compliance with the works approval conditions, and to provide information and/or photographs of how each of the details in Table 1.2.1 of the works approval have been met.	N/A
Works Approval Duration	N/A	The works approval will be granted for a period of 3 years.	N/A



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
14/03/2016	Application referred to Shire of Kulin	No comments	N/A
29/03/2016	Application referred to Department of Water	14/04/2016 no comments provided.	N/A
28/07/2016	Proponent sent a copy of draft instrument	No comments	N/A





## 6 Risk Assessment

*Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management*

**Table 1: Emissions Risk Matrix**

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High