



Works Approval

Works Approval Number	W6155/2018/1
Works Approval Holder	SSHP Pty Ltd
ACN	619 371 872
Registered business address	Unit 6, 280 Bannister Road Canning Vale WA 6155
File Number	DER2018/000807-1
Duration	03/10/2018 to 02/10/2021
Date of issue	03/10/2018
Prescribed Premises	Category 85
Premises	Southern Stars Holiday Park Dunsborough 645 Vasse-Yallingup Siding Road Anniebrook WA 6280 Legal description - Lot 50 on Deposited Plan 51557. Certificate of Title Volume 2627, Folio 787 As defined by the Premises maps in Appendix 1

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 3 October 2018, by:

Rebecca Kelly
Manager Waste Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Works Approval.

Defined terms

Definition of terms used in this Works Approval can be found at the start of this Works Approval. Terms which are defined have the first letter of each word capitalised throughout this Works Approval.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

Works Approval

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered or permitted to be altered from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Works Approval does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to, the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

Responsibilities of Works Approval Holder

Separate to the requirements of this Works Approval, general obligations of Works Approval Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Works Approval Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under s.61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a Works Approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Works Approval Holder commits an offence if Emissions are caused, or altered, from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a closure notice or an environmental protection notice.

Defences to certain offences may be available to a Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The specified and general Emissions and Discharges from the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

Amendment of Works Approval

The Works Approval Holder can apply to amend the Conditions of this Works Approval under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Works Approval at any time on the initiative of the CEO without an application being made.

Duration of Works Approval

The Works Approval will remain in force for the duration set out on the first page of this Works Approval or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Works Approval in accordance with s.59A of the EP Act.

Definitions and interpretation

Definitions

In this Works Approval, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 <i>Water Quality – Sampling – Guidance on sampling of waste waters</i>
Averaging period	means the time over which a limit or target is measured or a monitoring result is obtained
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
cfu/100mL	means colony forming units per 100 millilitres
Commissioning	means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application.
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.

Term	Definition
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
WWTP	Means Wastewater Treatment Plant
Material Environmental Harm	has the same meaning given to that term under the EP Act.
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
SSHP	Southern Star Holiday Park
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at

Term	Definition
	the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

Interpretation

In this Licence:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
 - (a) specified in Column 1; and
 - (b) to the requirements specified in Column 2; of Table 2 below.
2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Works Approval are still satisfied.

Reporting

3. Subject to Condition 2, within 30 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO a report with photographs confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 2 below has been constructed or installed with no material defects and to the requirements specified in Column 2.
4. The Works Approval Holder shall submit a Commissioning report for the Southern Stars Holiday Park Wastewater Treatment and Recycling Scheme, to the CEO within two months of the completion of commissioning.
5. Works Approval Holder shall ensure the report includes;
 - (a) a summary of the monitoring results recorded under Condition 9;
 - (b) a list of any original monitoring reports submitted to the Licensee from third parties for the commissioning period;
 - (c) a summary of the environmental performance of the Lakelands Wastewater Treatment Plant as installed, against the design specification set out in the works approval application;
 - (d) a review of performance against the works approval conditions; and
 - (e) where they have not been met, measures proposed to meet the design specification and/or works approval conditions, together with timescales for implementing the proposed measures.
6. Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure required by Condition 2(b).

Table 2: Infrastructure and equipment requirements table

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Wastewater Treatment Plant	Collection and processing of wastewater from the proposed Southern Star Holiday Park in accordance with Schedule 2, Table 7 and Table 8.	Infrastructure as shown in Schedule 1, Figure 2.
Groundwater monitoring bores and soil moisture meters.	<ul style="list-style-type: none"> • Install at least one groundwater monitoring bore down hydraulic gradient of the irrigation area • Install at least one monitoring bore within the boundary of the irrigation area • Installation of the monitoring bores is required 3 months prior to the commissioning period to facilitate the monitoring required by Condition 11. • Install at least one soil moisture meter in each irrigation area 	Irrigation area shown in Schedule 1, Figure 2

Emissions

7. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for specified Emissions and general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

Table 3: Authorised Emissions Table

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
Specified Emissions	
Emission of treated wastewater to land planted with citrus trees and kikuyu grasses to the required specification in Condition 10 during commissioning.	Subject to compliance with Condition 10
General Emissions (excluding Specified Emissions)	
Emissions which arise from undertaking the Works set out in Schedule 2.	Emissions excluded from General Emissions are: <ul style="list-style-type: none"> • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
	<ul style="list-style-type: none"> • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.

Monitoring

8. The Works Approval Holder shall ensure that:
 - (a) all wastewater sampling is conducted in accordance with AS/NZS 5667.1 and AS/NZS 5667.10.
 - (b) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.
9. The Works Approval Holder shall undertake the monitoring specified in Table 4 during the Commissioning period of no longer than 6 months.

Table 4: Monitoring Effluent Requirements

Monitoring point reference	Parameter	Units	Averaging period	Frequency
WQ1 – final effluent to recycled water storage tank (Schedule 1 Figure)	<i>E.coli</i>	cfu/100ml	Spot sample	Weekly (NATA accredited analysis)
	Total Nitrogen	mg/L		
	Total Phosphorous			
	Ammonia as N			
	Nitrate + nitrite + nitrogen			
	Biochemical Oxygen Demand			
	Total suspended solids (as turbidity)		Weekly (in-field non-NATA accredited analysis permitted); and Monthly NATA accredited testing for verification purposes.	
	Total Dissolved Solids ¹			
	pH ¹	pH units	N/A	Weekly (in-field non-NATA accredited analysis permitted)
Volumetric flow rate	m ³ /day	24 hours	Continuous	

Note 1: In-field non-NATA accredited analysis permitted.

10. The Works Approval Holder shall ensure that, prior to irrigating the wastewater, it meets the quality criteria in Table 5.

Table 5: Wastewater Irrigation Criteria

Parameter	Limit Value
pH	6.5 - 8.5 ¹
Biochemical Oxygen Demand	< 20 mg/L ¹
Turbidity	< 5 NTU ¹
Total Nitrogen	40 mg/L ²
Total Phosphorus	10 mg/L ²
Total Chlorine	0.2 - 2.0 mg/L ¹
E. coli	<10 cfu/100ml ¹

Note 1: *Guidelines for Non-potable uses of recycled Water in Western Australia 2011, Department of Health*

Note 2: *Western Australian environmental guidelines for the establishment and maintenance of turf grass areas" Swan River Trust updated 2014*

11. The Works Approval Holder shall undertake the groundwater monitoring specified in Table 6 prior to and during commissioning of the WWTP.

Table 6: Groundwater Monitoring Requirements

Monitoring point reference	Parameter	Units	Averaging period	Frequency
Groundwater levels		m AHD m bTOC m bgl		Monthly for at least 3 months prior to commissioning and for the duration of the commissioning period.
Additional bores to be installed in accordance with Table 2	<i>E.coli</i>	cfu/100ml	Spot sample	Monthly for at least 3 months prior to commissioning and for the duration of the commissioning period.
	Total Nitrogen	mg/L		
	Total Phosphorous			
	Ammonia as N			
	Biochemical Oxygen Demand			
	Chlorine			
	Total Dissolved Solids			
	pH ¹			

Note 1: In-field non-NATA accredited analysis permitted.

Record-keeping

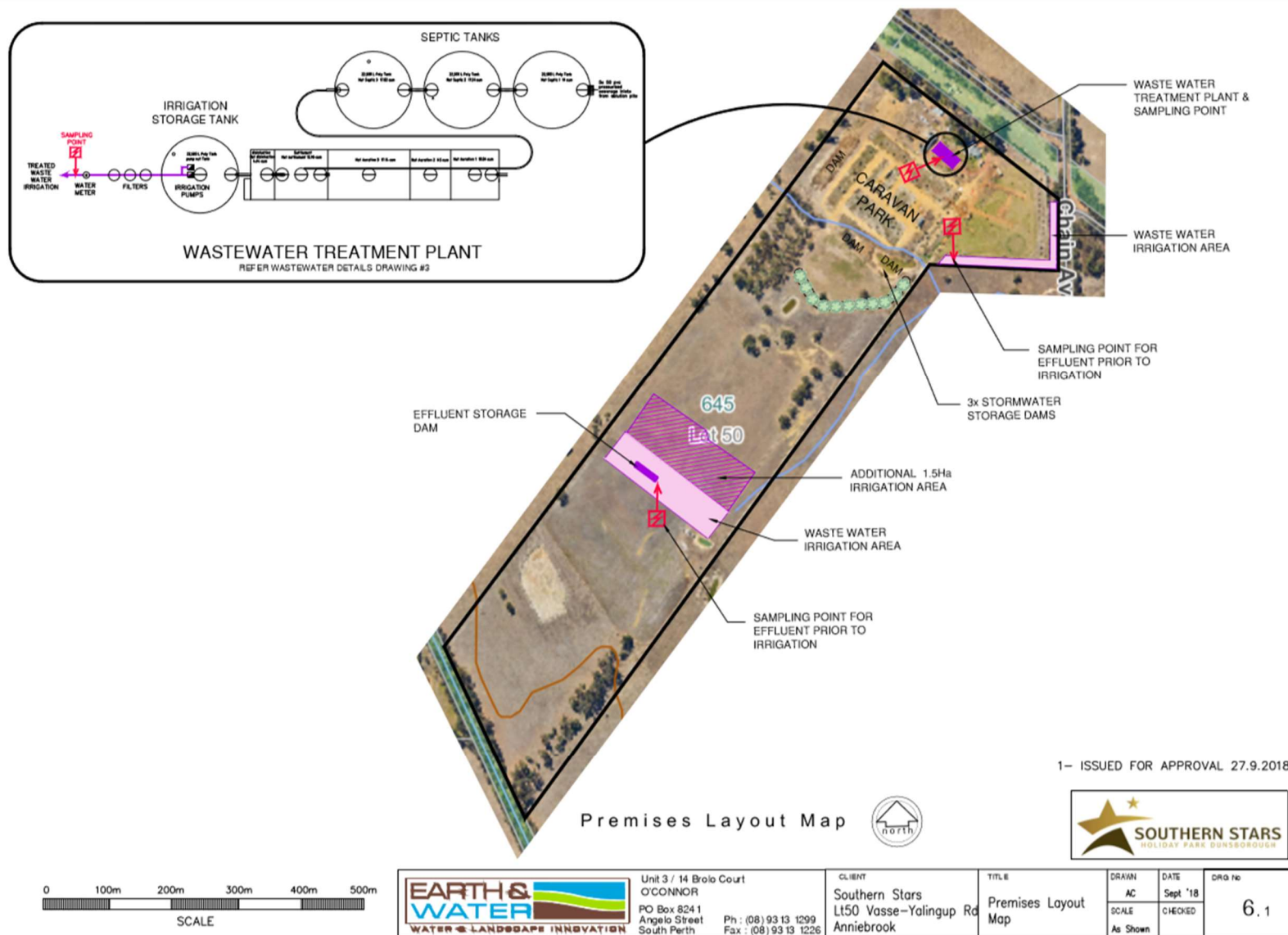
12. The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
- be legible;
 - if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
 - be retained for at least 3 years from the date the Books were made;
 - be available to be produced to an Inspector or the CEO.
13. The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

Figure 1: Premises location map



Figure 2: Premises layout



W6155/2018/1

IR-T05 Works Approval Template v2.0 (July 2017)

Schedule 2: Works

The WWTP facility infrastructure, as it relates to Category 85 activities, is detailed in Table 7.

Table 7: WWTP Infrastructure

	Infrastructure
	Collection and processing of wastewater from the proposed Southern Star Holiday Park
1	Pressure Main
2	Pump Station
3	Rotary screen
4	Solids bin
5	<p>Scrubber with 20m high air emission stack</p> <ul style="list-style-type: none"> This will facilitate the removal of noxious odours from the Collection tank 1, Aeration tank 2, SBR tank 3 and the Polish Tank 4 Referred to as a wet scrubber where gas molecules (odorant) are taken up by a liquid (solution of water and liquid chlorine).
6	<p>Collection/Anaerobic tank 1 (23kl)</p> <ul style="list-style-type: none"> Anaerobic digester equalisation tank buffering peak flows throughout the day. The tank is fitted with a level sensor for lowering the tank level prior to peak flow periods.
7	<p>Aerobic tank 2 (23kl)</p> <ul style="list-style-type: none"> Treatment of organic load. Fitted with submersible aerator to supply a high volume of oxygen for the biological process and to facilitate recirculation of the wastewater undergoing treatment. Second aeration tank where nitrogen in wastewater will be removed after converting ammonium ions to nitrogen gas. Denitrification conversion will be carried out in the SBR tank when the aerator is off and in the following water tanks
8	<p>Polish tank 3 (23kl)</p> <ul style="list-style-type: none"> Where denitrification will continue and the wastewater is treated with free chlorine. Following this the treated wastewater will be pumped through 5 deep bed media filters with automatic backwash valves. Backwash from the filters will be sent to the sludge tank.
9	<p>Sludge tank 4 (23kl)</p> <ul style="list-style-type: none"> Will receive sludge from the polish tank 4 as well as sludge settled at the bottom of tanks 1 to 3. Polymer will be added to tank 2 and 3 to aid generation of sludge for removal Excess water will be sent back to the anaerobic tank 1 for re-treatment.
10	<p>Disinfection system</p> <ul style="list-style-type: none"> Chlorinator <p>Provides residual disinfection in distribution tank and throughout the distribution system (free chlorine). The chlorine will be dosed, monitored and controlled automatically.</p>
11	<p>Treated wastewater conduit</p> <ul style="list-style-type: none"> Treated wastewater will be piped from the WWTP to the irrigation area
13	Treated Wastewater Storage tanks 2 x 23kL

14	<p>Micro Filters</p> <ul style="list-style-type: none"> Three sand filters will be used to further clarify the treated wastewater prior to being sent to the irrigation network.
15	<p>Flow meter</p> <ul style="list-style-type: none"> A flow meter will measure the quantity of treated wastewater sent to the irrigation network.

At the time of assessment, emissions and discharges from the Works listed in Table 8 were considered in the determination of the risk and related conditions for the Works Approval.

Table 8: Authorised Works

Works	Specifications/Drawings
Construction of a WWTP	As per Table 7
Infrastructure	Requirement
WWTP	The Works Approval Holder must ensure WWTP is designed to secondary treatment standard including anaerobic/aerobic and SBR/polishing/disinfection. The system must be constructed to the specifications listed in Table 7.
Scrubbers	<p>The Works Approval Holder must ensure that:</p> <ul style="list-style-type: none"> The scrubber flume is constructed to a minimum height of 20m Contaminated air from the treatment tanks is conducted through the scrubbing system before release into the atmosphere
Wastewater treatment tank covers	<p>The Works Approval Holder must insure that:</p> <ul style="list-style-type: none"> All treatment tanks on site are covered and ventilated through the scrubber Negative pressure is maintained under the covers during normal WWTP operation
Storage of treated wastewater	<p>The Works Approval Holder must ensure there are suitable storage facilities for storage of treated wastewater that is not able to be irrigated. The following storage features must be installed:</p> <ul style="list-style-type: none"> A 22.5KI treated effluent storage tank; and A 838 kL effluent dam will be constructed with a HDPE liner to ensure storage of cumulative treated effluent is contained over winter.
Storage of chemicals	<p>The Works Approval Holder must ensure that:</p> <ul style="list-style-type: none"> All chemical containment and storage infrastructure is designed and constructed in accordance with <i>Australian Standard AS 4452B1997: The Storage and Handling of</i>

	<p><i>Toxic Substances</i></p> <ul style="list-style-type: none"> • The area is closed off to general public • Trained staff undertake chlorine manipulation • Emergency procedures and safety calls available in case of incident
Bunding	<p>The WWTP must be constructed with a bund.</p> <p>The Bund should be impervious and designed to contain spillages and leaks of liquids used, stored or processed above-ground and to facilitate clean-up operations. A collection sump should be designed to remove accumulated pollutants with the floor graded so that liquids can collect in the sump. The sump should not be connected to stormwater or sewer drainage systems and must be a collection point to pump out pollutants.</p>
Drainage	<p>The WWTP slab must be designed with suitable stormwater drainage to convey only uncontaminated stormwater away from the Premises</p>
Overflow infrastructure	<p>The Works Approval Holder must construct and clearly identify a designated collection point/sump for wastewater overflow events. Overflow events must not lead to uncontrolled release of wastewater to the environment. The collection point for wastewater overflow must be inaccessible to the general public. Wastewater overflow must be directed back to the treatment system or removed from the Premises by an authorised person and disposed to an appropriate waste acceptance facility.</p>
Chemical dosing facility	<p>The Works Approval Holder must ensure the chemical dosing facility is designed and constructed in accordance with the <i>Australian Standard AS4452B1997: The Storage and Handling of Toxic Substances</i>.</p>

Site layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the Premises map (Figure 2 in Schedule 1) and the irrigation areas (Figure 2 in Schedule 1).