Licence

Licence Number	L4201/1991/11
Licensee	Water Corporation
ACN	NA
Registered business address	629 Newcastle Street LEEDERVILLE WA 6007
File Number	DEC6295/2 and DEC6295/3
Duration	01/11/2010 to 31/10/2031
Date of amendment	1 November 2019
Prescribed Premises	Category 54: Sewage facility Category 61: Liquid waste facility As defined in Schedule 2
Premises	Woodman Point Wastewater Treatment Plant Lot 9 Cockburn Road MUNSTER WA 6166 Legal description - Being Lot 9 on Diagram 31097 As defined in Schedule 1

This Licence is granted to the Licensee, subject to the following conditions, on **1 November 2019**, by:

A/MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Contents

Introduction

This Introduction is not part of the Licence conditions.

DWER's industry licensing role

The Department of Water and Environmental Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link: http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.

- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.

- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licensees are also reminded of the requirements of section 53 of the Act which places 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.

Other Guidelines which you should be aware of include:

- *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non-payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

The Woodman Point Wastewater treatment Plant (WWTP) is owned and operated by Water Corporation and is located approximately 25km south west of Perth. The Premises is surrounded by 'Special Use' town planning scheme zoned areas to the east, south and west, and is adjacent to the 'Jervoise Bay Cove' to the west. The Premises services the southern suburbs of Perth which has a nominal contributing population of approximately 700,000.

The WWTP consists of pre-treatment, primary treatment and secondary treatment, which includes a four quadrant sequencing batch reactor (SBR) and an anaerobic biosolids digestion process.

Treated wastewater is discharged to the Sepia Depression via a 23km Sepia Depression Ocean Outfall Landline (SDOOL) and a 4.2 km ocean outfall via the Jervoise Bay Cove.

An Odour Control Facility (OCF) treats odours from the pre-treatment and primary treatment facility, the SBR bio-selectors and the biosolids handling area. The plant also has a Tanker Receiver Facility (TRF), which accepts third party waste. The TRF has a separate dedicated chemical odour scrubber to control odour. Dewatered biosolids is removed from the Premises and disposed of to landfill, with the liquid fraction from the WWTP and TRF being discharged to the flow balancing dam.

The plant is designed to treat up to 160 ML influent per day, with the average daily inflow currently at 141ML/d, for the 2014/ 2015 reporting period. As the Premises is nearing capacity, the Licensee has proposed an upgrade to the Premises which will increase the design capacity to 180 ML/d, on completion of the works upgrade. This will require the current operation to be taken off line and operated through a temporary (150 ML/d) system until the works are completed. The proposed works (as approved through a licence

amendment on 14 April 2016 and 12 July 2016) will be constructed over a 2.5 year period consisting of three stages that will include construction of the following:

Stage one –
- Two new 9.75 m vortex grit tanks;
- Four new primary sedimentation tanks;
- Eight secondary sedimentation tanks (temporarily designed as aeration tanks, four with lift out diffused aeration grids and four operated as clarifiers);
- New recycled water pump station and filtration system.

Stage two –
- Conversion of the SBR to a Modified Ludzack-Ettinger (MLE) configuration (Treated wastewater from the primary sedimentation tanks will bypass the SBR to the temporary secondary sedimentation tanks for a period of nine months).

Stage three –
- Secondary sedimentation tanks retrofitted from temporary aeration tanks to fully functioning secondary sedimentation tanks;
- Mixed liquor transferred to MLE quadrants over 2-3 days and blended with imported seed biosolids.

A desk top assessment of groundwater bore (Site Id. 20022946) on the western boundary of the Premises identifies depth to groundwater at approximately 10.4 mBGL, with TDS approximately 5,000 mg/L (saline). The groundwater forms part of the Murray River Basin and Bartram Road Catchment.

The closest sensitive residential receptor has been identified by the Licensee as approximately 0.5 km south of the Premises. The Premises operation includes an odour buffer of 750 m to the nearest land use.

The Premises is subject to conditions within Ministerial Statement 665.

The main potential emissions during construction are expected to be odour issues from the change in operational process and dust emissions from site construction.

Amendment – 1 November 2019

The CEO has issued a revised licence consolidating changes made under Amendment Notice 1 (issued 29 May 2017), where relevant. The obligations of the Licensee have not changed in making this amendment. As part of consolidating the Licence; DWER has not undertaken any risk assessment of existing operations.

In consolidating the licence, the CEO has:
- updated the format of the Licence;
- deleted the redundant AACR form set out in schedule 1 and directed the Licensee to obtain the most current AACR form from the Department's website;
- removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected any clerical mistakes and unintentional errors.

Previous Condition 1.3.9, as amended via Amendment Notice 1, required the development and submission of an Odour Management Strategy to manage odour related issues associated with the construction and upgrade works and the operation of temporary treatment infrastructure – the strategy was due by 30 November 2018.

On 29 November 2018, the Licensee submitted an Odour Management Plan (OMP). DWER reviewed the OMP and subsequently advised Water Corporation (on 5 July 2018) that the

OMP was sufficient for the management of works under Stages 1 and 2, however it was recommended that a separate stand-alone OMP be developed for Stage 3 which relates to permanent plant operations at the Premises. DWER will continue to liaise with the Licensee separately in respect of the requirements for Stage 3 as the works progress.

As a result of the submission and assessment of the OMP the following changes have been made to licence as part of the licence consolidation process:

1. Previous condition 1.3.9 has been removed as the requirements of this condition have been met (correspondence to this effect was sent to the Licensee on 5 July 2018);
2. Condition 2.4.1 and Table 2.4.1 has been revised to reflect the OMP submitted to DWER on 29 November 2018; and
3. Previous improvement condition 4.1.1 has been removed as the requirements of this condition have been met (correspondence to this effect was sent to the Licensee on 17 March 2017).

No other changes have been made at this time.

The licences and works approvals issued for the Premises, since 25/10/1998, are:

Instrument log		
Instrument	**Issued**	**Description**
W1013/1991/1	25/10/1993	Works approval
W1330/1991/1	19/12/1995	Works approval
W2710/1991/1	01/04/1999	Works approval
L4201/1991/4	19/09/2000	Licence re-issue
L4201/1991/5	01/07/2001	Licence re-issue
L4201/1991/6	01/07/2002	Licence re-issue
L4201/1991/7	14/01/2003	Licence re-issue
W3793/1991/1	28/04/2003	Works approval
L4201/1991/8	30/06/2003	Licence re-issue
L4201/1991/9	02/07/2004	Licence re-issue
L4201/1991/10	31/10/2005	Licence re-issue
W4319/1991/1	01/10/2007	Works approval
L4201/1991/11	28/10/2010	Licence re-issue
L4201/1991/11	19/11/2015	Licence amendment
L4201/1991/11	14/04/2016	Licence amendment for works upgrade for design capacity increase
L4201/1991/11	29/05/2017	Amendment Notice 1 issued to extend the submission date of the Odour Monitoring Strategy
L4201/1991/11	01/11/2019	Licence amended to consolidate Amendment Notice 1 into the Licence, where relevant.

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

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

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'AACR' means Annual Audit Compliance Report, copy of the AACR is accessible from the DWER website.

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

'Annual Period' means the inclusive period from 1 July until 30 June in the following year;

'AS/NZS 2031' means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis;*

'AS 4323.1' means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions;*

'AS 4323.3' means the Australian Standard AS4323.3 *Stationary Source Emissions Part 3: Determination of odour concentration by dynamic olfactory*;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.9' means the Australian Standard AS/NZS 5667.9 *Water Quality – Sampling – Guidance on sampling from marine waters*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 10
JOONDALUP DC WA 6027
Telephone: (08) 6367 7000
Facsimile: (08) 6367 7001
Email: info@dwer.wa.gov.au

'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

'**Chemical Scrubber Outlet'** means after the chemical scrubber but prior to entering the Odour Control Facility Discharge Stack;

'engineered containment system' means any vessel or tank containment infrastructure associated with the treatment of wastewater;

'g/s' means grams per second;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'**Jervoise Bay Ocean Outlet',** '**Sepia Depression Ocean Outlet (SDOOL)'** and **'Woodman Point Ocean Outlet'** mean the marine discharge points labelled and depicted in Schedule 1: Maps of the Licence;

'leachate' means liquid released by or water that has percolated through waste and which contains some of its constituents;

'Licence' means this Licence numbered L4201/1991/11 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'Ministerial Statement 665' means "*Ministerial Statement 665 - Use of the Cape Peron Outlet Pipeline to Dispose of Industrial Wastewater to the Sepia Depression, Kwinana*" as amended from time to time;

'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;

'normal operating conditions' means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

'**Odour Control Facility'** and '**Odour Control Facility Discharge Stack'** means those structures labelled and depicted in Schedule 1;

'Odour Control Summary' means Woodman Point Wastewater Treatment Plant Upgrade – Odour Control Summary, identified as Appendix 1 within Woodman Point Wastewater Treatment Plant Licence Amendment – Supporting Document, November 2015. Version: 2 February 2016. Doc Id. PM#13945397-V4.)

'OU' means odour units;

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

'**process equipment**' means any wastewater or biosolids containment infrastructure or wastewater treatment vessel;

'quarterly' means the 4 inclusive periods from, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March and 1 April to 30 June;

‘Schedule 1’ means Schedule 1 of this Licence unless otherwise stated;

‘Schedule 2’ means Schedule 2 of this Licence unless otherwise stated;

‘six monthly’ means the 2 inclusive periods from 1 July to 31 December and 1 January to 30 June in the following year;

‘spot sample’ means a discrete sample representative at the time and place at which the sample is taken;

‘stack test’ means a discrete set of samples taken over a representative period at normal operating conditions;

‘STP’ means standard temperature and pressure (0^{o}Celsius and 101.325 kilopascals respectively);

‘Tanker Receival Facility” and **‘Tanker Receival Facility Discharge Stack’** means those structures labelled and depicted in Schedule 1;

‘usual working day’ means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

‘USEPA’ means United States (of America) Environmental Protection Agency; and

‘USEPA Method 2’ means the USEPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube).

‘Waste Code’ means the Waste Code assigned to a type of controlled waste for purposes of waste tracking and reporting as specified in the Department of Environment Regulation “Controlled Waste Category List” (July 2014), as amended from time to time; and

‘wastewater treatment vessels’ means any vessel, pond or tank containment infrastructure associated with the storage and treatment of wastewater.

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

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

1.2 General conditions

1.2.1 The Licensee shall operate and maintain all pollution control (odour control facility, covers on process equipment) and monitoring equipment (continuous monitors) to the manufacturer's specification or any relevant and effective internal management system.

1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of waste (as defined in Table 1.3.1) outside an engineered containment system.

1.2.3 Subject to the Conditions of this Licence, the Licensee must construct and operate the Works in accordance with the document listed in Table 1.2.1.

Table 1.2.1: Construction Requirements[1]		
Document	**Parts**	**Date of Document**
Woodman Point Wastewater Treatment Plant Licence Amendment – Supporting Document, November 2015. Version: 2 February 2016. Doc Id. PM#13945397-V4.	All, including appendices and drawings	2 February 2016

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this Licence, the Conditions of this Licence shall prevail.

1.2.4 The Licensee must ensure that the proposed Works specified in Column 1 of Table 1.2.2 meets or exceeds the specifications in Column 2 of Table 1.2.2 for the infrastructure in each row of Table 1.2.2.

1.2.5 The Licensee must not depart from the specifications in Table 1.2.2 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 all other Conditions in this Licence are still satisfied.

Table 1.2.2: Works specifications	
Column 1	**Column 2**
Infrastructure	**Specifications (design and construction)**
Stage one	1. Installation of two new 9.75 m vortex grit tanks to replace pre-treatment (cross-flow) detritors; 2. Grit tanks to have trafficable FRP covers; 3. Grit tanks to include ability to have pumped grit removal and separate grit washer; 4. Foul air extraction to be included for the grit washing and classification systems; 5. Construction of four new primary sedimentation tanks (PST); 6. Construction of eight secondary sedimentation tanks (temporarily designed as aeration tanks, four with lift out diffused aeration grids and four operated as clarifiers); 7. SST to each include a pair of direct-piped Return Activated Biosolids (RAS) pumps; 8. New recycled water pump station and filtration system integrated into system with existing recycled water facility decommissioned; 9. New recycled water pump station to include a new junction chamber on the twin outlets to the treated water disposal pump station to allow dam bypass functionality; 10. Incorporation of a new solids-liquids separation system.

Table 1.2.2: Works specifications	
Column 1	**Column 2**
Infrastructure	**Specifications (design and construction)**
Stage two	1. Conversion of the SBR to a continuously aerated Modified Ludzack-Ettinger (MLE) configuration (Treated wastewater from the primary sedimentation tanks will bypass the SBR to the temporary secondary sedimentation tanks for a period of nine months); 2. Treated wastewater to be diverted to the SST from the PST during conversion of the SBR; 3. Decommissioning and removal of two mixed liquor recycle (MLR) pump stations, one WAS pump station, eight mechanical decanters and the existing fixed-to-floor system from each SBR basin; 4. Construction of baffle walls and MLR duct; 5. Height of the existing peripheral channel wall adjacent to basin 1 and 2 increased; 6. New mixed liquor discharge structure integrated into channel; 7. Installation of three submersible mixers, five submersible MLR pumps and one submersible drain pump into each SBR basin;
Stage three	1. Eight secondary sedimentation tanks retrofitted from temporary aeration tanks to six fully functioning secondary sedimentation tanks; 2. Mixed liquor transferred to MLE quadrants over 2-3 days and blended with imported seed biosolids; 3. Imported seed biosolids to be obtained from Beenyup or Kwinana WWTP's.

1.2.6 If Condition 1.2.5 applies, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition 1.2.5 at the same time as the certifications under Condition 1.2.8.

1.2.7 The Licensee must submit a construction compliance document to the CEO, following the construction of each stage (Stages 1 to 3) of the Works and prior to operating the new works at Woodman Point Wastewater Treatment Plant.

1.2.8 The Licensee must ensure the construction compliance document:
(a) is certified by a suitably qualified professional engineer or builder that each item of infrastructure specified in Condition 1.2.5, Table 1.2.2 has been constructed in accordance with the Conditions of the Licence with no material defects; and
(b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

1.2.9 The Licensee must not operate the premises above 160 ML/day until the compliance documents for all stages of the works upgrade have been submitted and reviewed by the CEO.

1.3 Premises operation

1.3.1 The Licensee shall only accept waste on to the Premises if:
(a) it is of a type listed in Table 1.3.1;
(b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
(c) it meets any specification listed in Table 1.3.1.

Table 1.3.1: Waste acceptance			
Waste	**Waste Code**	**Quantity Limit**	**Specification[1]**
Putrescible and Organic wastes			
Sewage waste	K130	180 ML/ day	• Accepted through sewer inflows; and/ or • Tankered into the premises and discharged via the WWTP pre-treatment works during emergency events or maintenance works.
Septage waste	K210	Combined total of 50,000 t/annual period	• Tankered into the premises and discharged via the Tanker Receival Facility.
Vegetable oils and derivatives and other wastes	K200		
Wool scouring wastes	K190		
Tannery wastes not containing chromium	K140		
Animal effluent and residues	K100		
Grease waste	K110		
Industrial Strength Wastewater			
Industrial wash water	L150		
Car and truck wash waters	L100		
Inorganic Chemicals			
Non toxic salts	D300		

Note 1: Additional requirements for the acceptance of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in conditions 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, the Licensee shall contact the CEO to agree a course of action in relation to the waste.

1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing		
Waste type	**Process**	**Process requirements**
Sewage	Physical, chemical and biological treatment	1. Treatment of sewage waste shall be at or below the treatment capacity of 180 ML/day. 2. Sewage biosolids to be directed to ASD; 3. Dewatered biosolids to be removed via a controlled waste carrier to a licenced landfill. 4. Discharged to ocean outfall via SDOOL.
Liquid waste	Physical, chemical and biological treatment	1. Treatment of liquid waste received shall be at or below 50,000 tonnes per annual period; 2. pH to be maintained between 6.5-8.

Table 1.3.2: Waste processing		
Waste type	**Process**	**Process requirements**
		3. Tested for pH and electrical conductivity prior to being processed at the premises. 4. Leachate from dewatering system to be returned back to the WWTP pre-treatment works.
Biosolids	Physical, biological treatment	1. Dewatered biosolids to be removed to a licenced landfill.

1.3.4 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3.

Table 1.3.3: Containment infrastructure		
Vessel or compound	**Material**	**Requirements**
Inlet works (Step Screen)	Grit and Screenings	• Screening wash which returns leachate to the start of the treatment process. • Screenings stored within an enclosed bin which is removed to landfill weekly.
Tanker receival facility	Wastewater	• Covered except during routine maintenance or emergency situations; • Chemical scrubbers; • Odour emission stack.
Primary sedimentation tanks	Wastewater	• Tanks constructed of concrete with splitter box.
Secondary sedimentation tanks	Wastewater	• Tanks constructed of concrete with splitter chamber.
Sequencing batch reactor (SBR)	Treated wastewater	• Constructed of concrete; • Biosolids directed via Dissolved Air Flotation Tank to ASD; • Liquid fraction directed to flow balancing dam.
Flow balancing dam	Treated wastewater	• Constructed of concrete; • Discharge to ocean outfall via SDOOL.
Odour control facility	-	• Enclosed; • Odour scrubbing equipment; • Odour emission stack.
Anaerobic biosolids digester (ASD)	Sewage biosolids	• Enclosed; • Digested biosolids storage tank; • Dewatering centrifuge; • Biosolid hoppers.

1.3.5 The Licensee shall take the specified management action in the case of an event in Table 1.3.4.

Table 1.3.4: Management actions			
Emission point	**Event/ action reference**	**Event**	**Management action**
Odour control facility Tanker receival facility	EA1	Hydrogen sulphide emission levels above 1,500 ppb from the chemical scrubber outlets	• Implement management actions to reduce hydrogen sulphide emission levels; • Assess operation to determine any failure, malfunction or abnormal operation period; • Restore normal operation of any failed equipment or replace the failed equipment; • Undertake any corrective actions as soon as practicable to reduce hydrogen sulphide emissions; • Notify DWER CEO, as per condition 4.3.1.

1.3.6 Following the cessation of emissions/operation under condition 1.3.5, the Licensee shall not restart operation of the process until:
(a) the problem has been rectified; and
(b) the Licensee has recorded the actions taken to maintain compliance with the Licence.

1.3.7 The Licensee shall manage the wastewater treatment vessels such that:
(a) overtopping of the vessels does not occur; and
(b) stormwater runoff is prevented from entering the vessels; and
(c) the integrity of the containment infrastructure and facility operation is maintained; and
(d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the vessels.

1.3.8 The Licensee shall:
(a) implement security measures at the site to prevent as far as is practical unauthorised access to the site; and
(b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
(c) ensure the entrance gates are closed and locked when the site is closed or unmanned.

1.3.9 The Licensee must undertake:
(a) undertake an odour verification of the monitoring and modelling programme (MAM) initially completed, within six months of full operation of the new works, to confirm it is compliant against the 'odour control summary'; and
(b) develop contingencies/ mitigation measures where any failures/ exceedances have been found to occur against the MAM verification.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to air			
Emission point reference and location on Map of emission points	**Emission Point**	**Emission point height (m)**	**Source, including any abatement**
Odour control facility	Chemical scrubber inlet	-	Hydrogen sulphide emitted. Chemical odour scrubbers in use.
	Chemical scrubber outlet (prior to entering discharge stack)	-	
	Discharge stack	12 m	
Tanker receival facility	Chemical scrubber	-	
	Discharge stack	12 m	

2.3 Point source emissions to surface water

2.3.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.3.1, and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.3.1: Emission points to surface water		
Emission point reference and location on Map of emission points	**Description**	**Source including abatement**
Sepia Depression Ocean Outfall Landline (SDOOL)	Discharge pipeline to ocean outfall[1]	Treated effluent.
Woodman Point Ocean Outlet	Discharge pipe to ocean	Treated effluent only discharged during routine maintenance or emergency situations, in order of priory, to: • Woodman Point Ocean Outlet; and • Jervoise Bay Ocean Outlet.
Jervoise Bay Ocean Outlet		

Note 1: Combined discharge volumes are regulated under Ministerial Statement 665.

2.4 Odour

2.4.1 The Licensee must ensure odour emissions are managed in accordance with the documents, or parts of documents, specified in Table 2.4.1.

Table 2.4.1: Management Plans		
Management Plan Reference	**Parts**	**Date of Document**
Odour Improvement Plan, Water Corporation.	All	December 2006
Woodman Point Wastewater Treatment Plant Upgrade – Odour Control Summary (Identified as Appendix 1 within Woodman Point Wastewater Treatment Plant Licence Amendment – Supporting Document, November 2015. Version: 2 February 2016. Doc Id. PM#13945397-V4.)	All	2 February 2016
Woodman Point Waste Water Treatment Plant, Odour Management Plan (Project Number: TE18090)	All	28 November 2018

3 Monitoring

3.1 General monitoring

3.1.1 The licensee shall ensure that:
(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
(b) all surface water sampling is conducted in accordance with AS/NZS 5667.9
(c) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
(d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
(e) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
(f) 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.

3.1.2 The Licensee shall ensure that :
(a) monthly monitoring is undertaken at least 15 days apart;
(b) quarterly monitoring is undertaken at least 45 days apart; and
(c) annual monitoring is undertaken at least 9 months apart.

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to air

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to air

Emission point reference	Parameter	Units[1]	Limit	Averaging period	Frequency[2]	Method
Odour control facility	Hydrogen sulphide – Chemical scrubber inlets (S1008217 & S1008219)	ppm	-	Monthly to achieve a 90% availability	Continuous	-
	Hydrogen sulphide - chemical scrubber outlet prior to entering discharge stack (S100761)	ppb	1,500			
	Volumetric flow rate (S1008217 & S1008219)	m^3/hr	-		Continuous	USEPA Method 2
Odour control facility – discharge	Hydrogen sulphide (concentration)	mg/ m^3	5	Spot sample	Annual	Manual
	Hydrogen sulphide (rate)	g/s	0.25			-

Table 3.2.1: Monitoring of point source emissions to air						
Emission point reference	**Parameter**	**Units[1]**	**Limit**	**Averaging period**	**Frequency[2]**	**Method**
stack sampling (FT07011& AT07002)	Volumetric flow rate	m^3/s	-			USEPA Method 2
	Stack exit temperature	°celsius	-			-
	Odour units	OU	-			AS 4323.1 AS 4323.3
Tanker receival facility – stack sampling (S1004857)	Hydrogen sulphide	mg/ m^3	5	Spot sample	Annual	Manual
	Volumetric flow rate	m^3/s	-			USEPA Method 2
	Stack exit temperature	°celsius	-			-
	Odour units	OU	-			AS 4323.1 AS 4323.3

Note 1: All units are referenced to STP dry.
Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

3.3 Monitoring of point source emissions to surface water

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of point source emissions to surface water			
Emission point reference	**Parameter**	**Units**	**Frequency**
Treated Water channel, at new Reclaimed Water pump station (S1002273)	pH[1]	-	Monthly
	Total suspended solids	mg/L	
	Total dissolved solids		
	Biological oxygen demand		
	Total nitrogen		
	Total phosphorus		
	Ammonium-nitrogen		
	Nitrate+nitrite-nitrogen		
	E. coli[3]	cfu/ 100 ml	
	Cadmium	mg/L	Quarterly
	Copper		
	Chromium		
	Lead		
	Mercury		
	Nickel		
	Zinc		
	Contaminant loading[2]	kg/d	Annual

Note 1: In situ non-NATA accredited sampling permitted.
Note 2: Each parameter identified within the table assessed using flow-weighted data, excluding pH
Note 3: Actual units are to be reported except where the result is greater than the highest detectable level of 24,000 cfu/100mL. In this case the reporting of the highest detectable level is permitted.

3.4 Monitoring of inputs and outputs

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table.

Table 3.4.1: Monitoring of inputs and outputs					
Input/ Output	**Monitoring point reference**	**Parameter**	**Units**	**Averaging period**	**Frequency**
Wastewater input	WWTP Inflow meter (S1001222)	Volumetric flow rate (cumulative)	m^3/day; or ML/ day	Monthly	Continuous
	Tanker receival facility				
Wastewater output	WWTP Outflow meter (S1004373)	Volumetric flow rate (cumulative)			
Biosolids output	ASD	Sewage biosolids	m^3/day; or tonnes	Monthly	Each load leaving the premises

3.5 Process monitoring

3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Process monitoring					
Monitoring point reference	**Process description**	**Parameter**	**Units**	**Frequency**	**Method**
Tanker Receival Facility	Compliance assessment of all tankered controlled waste received against condition 1.3.1	Flow	-	Each load received to or rejected from the premises	Visual
	Tankered controlled waste received	pH	-		None specified
		electrical conductivity			

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:
(a) be legible;
(b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
(c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
(d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
(i) off-site environmental effects; or
(ii) matters which affect the condition of the land or waters.

4.1.2 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

4.1.3 The Licensee shall:

(a) implement a complaints management system that shall record the following information (if known or provided) about complaints received at the Premises concerning any environmental impact of the activities undertaken at the Premises:

(i) name and address of the complainants (if consented);
(ii) date and time of complaint;
(iii) date and time of alleged incident;
(iv) alleged source of the incident;
(v) general description of the alleged incident, including any environmental or health impacts reported by the complainant;
(vi) wind direction, wind speed and temperature at time of alleged incident;
(vii) likely source of the alleged incident; and
(viii) actions taken by the Licensee to address the complaint, including the outcome of any investigation(s) and action(s) to verify any impacts.

(b) complete an annual analysis and review of complaints recorded under 4.1.3(a) to identify any common factors and root cause of complaints and proposals to address these.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 63 calendar days after the end of the annual period (1 September). The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 1.3.4	Summary of Management actions undertaken	None specified
Table 3.2.1	Summary of Monitoring of point source emissions to air	None specified
Table 3.3.1	Summary of Monitoring of point source emissions to surface water	None specified
Table 3.4.1	Summary of Monitoring of inputs/ outputs	None specified
Table 3.5.1	Summary of Process monitoring	None specified
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:

(a) any relevant process, production or operational data recorded; and
(b) an assessment of the information contained within the report against previous monitoring results and Licence limits.

4.2.3 The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	**Parameter**	**Reporting period**	**Reporting date (after end of the reporting period)**	**Format or form**
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties
-	Record of tankered third party waste (date/ time)	Not applicable		As recorded by Licensee

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	**Parameter**	**Notification requirement[1]**	**Format or form[2]**
-	Any maintenance works on the SDOOL that will require the use of the Woodman Point or Jervoise Bay Ocean Outlets	Two weeks prior to planned maintenance operations taking place; or As soon as practicable but no later than 5pm of the next usual working day after becoming aware of any emergency maintenance operations undertaken.	None specified
1.3.5	Limit exceedance where management action taken	As soon as practicable but no later than 5pm of the next usual working day after becoming aware of any confirmed measurement that was not rectified within four hours of detection.	None specified
		Submit to the CEO a written report within five working days of receiving the confirmed measurement and shall include, but not limited to: (i) Date and time of exceedence; (ii) Results of continuous monitoring required by conditions 2.2.1 and 3.2.1 at the time of the exceedence; (iii) Cause of the exceedence; (iv) Indication of potential or known environmental impacts of the exceedence; and (v) Any corrective actions undertaken to prevent recurrence.	Email
1.3.1, 1.3.4 and 3.2.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
3.1.3	Calibration report	As soon as practicable.	None specified

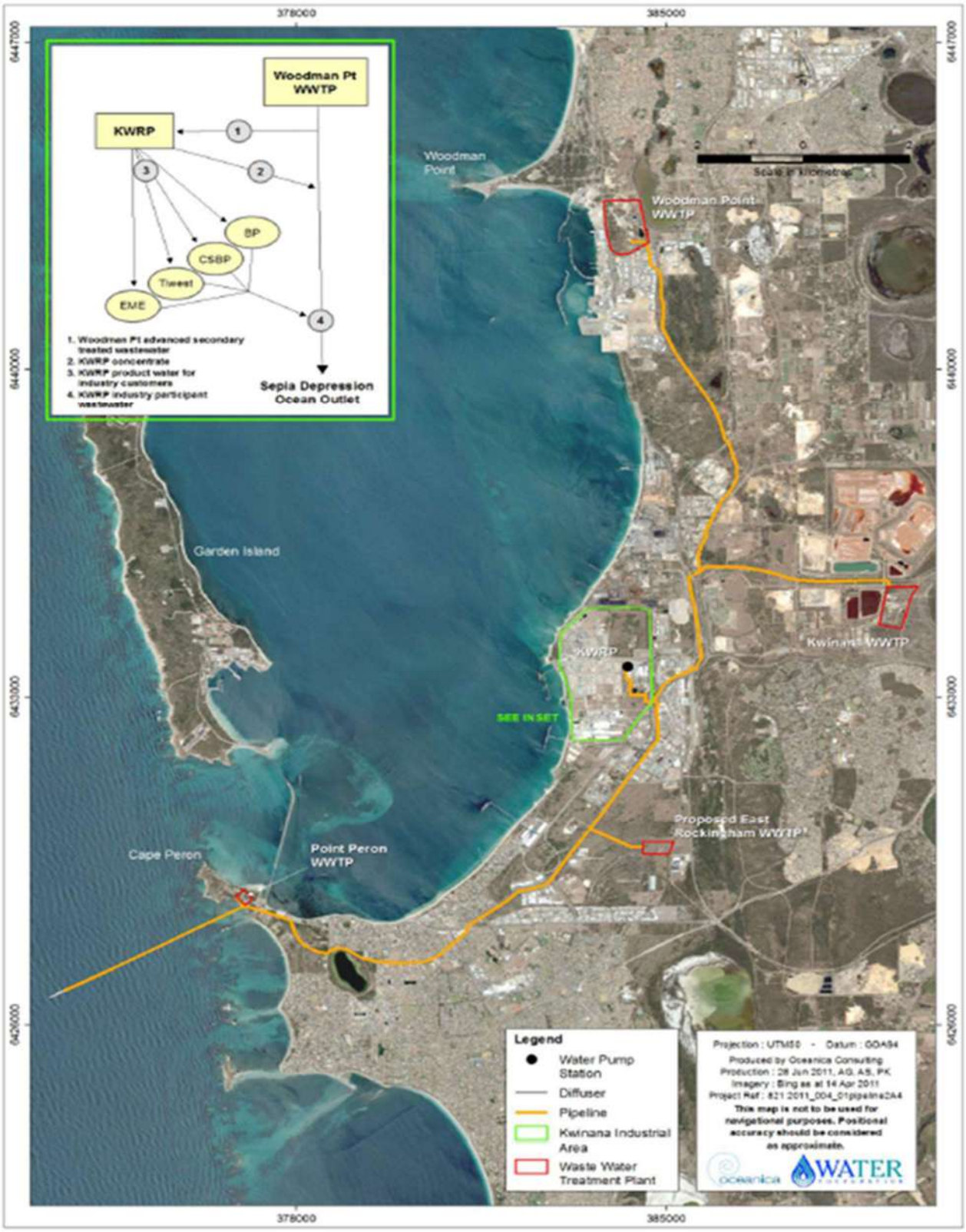
Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 3

Schedule 1: Maps

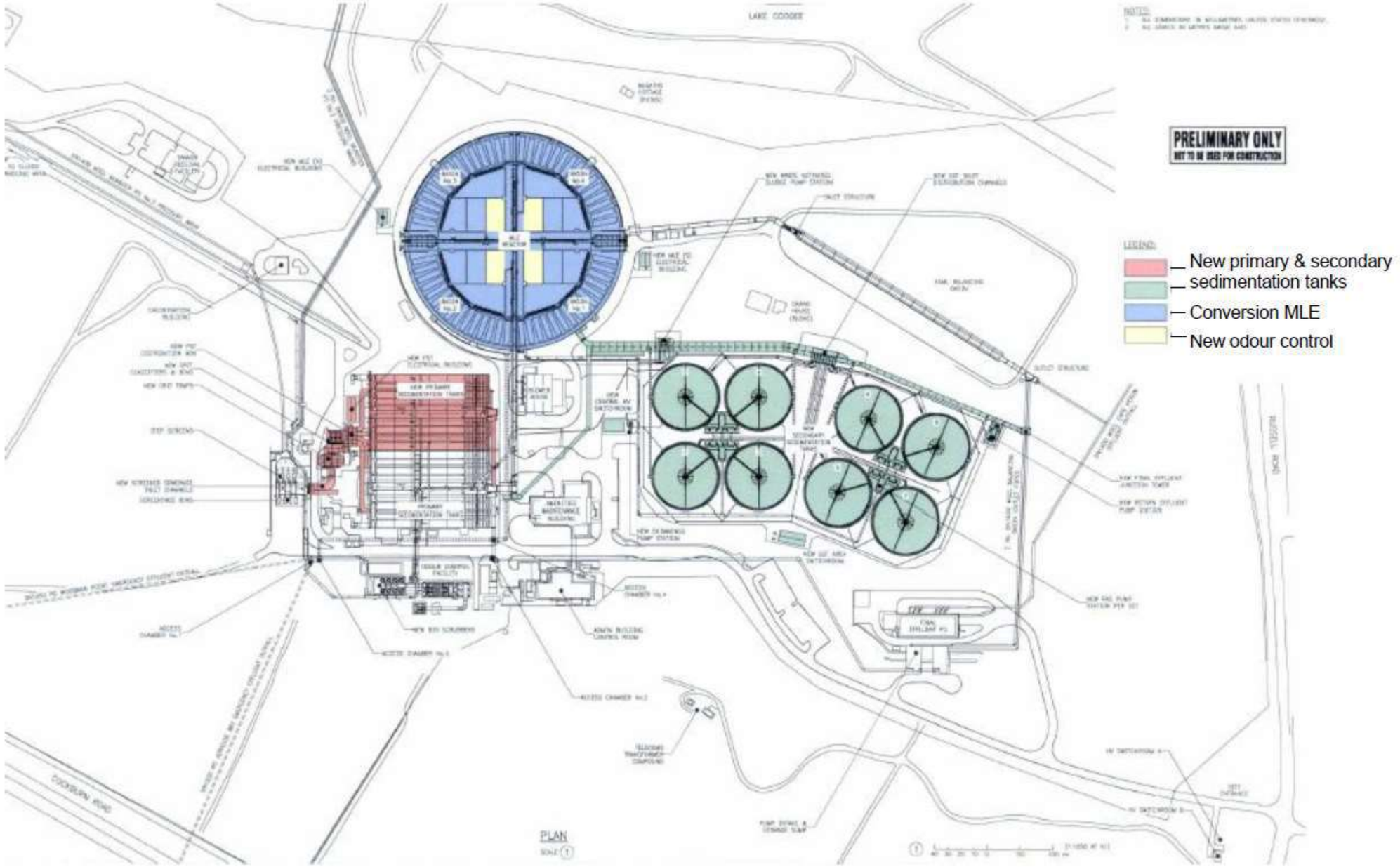
Premises map

The Premises is shown in the maps below. The blue line depicts the Premises boundary.

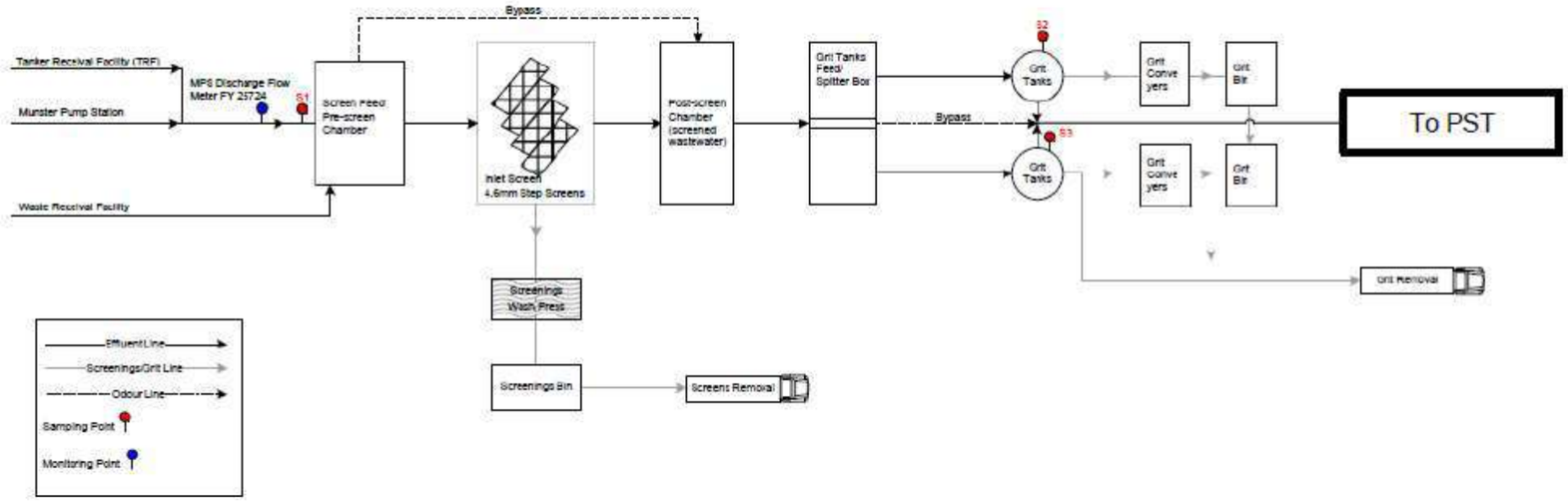
Premises map of discharge pipeline

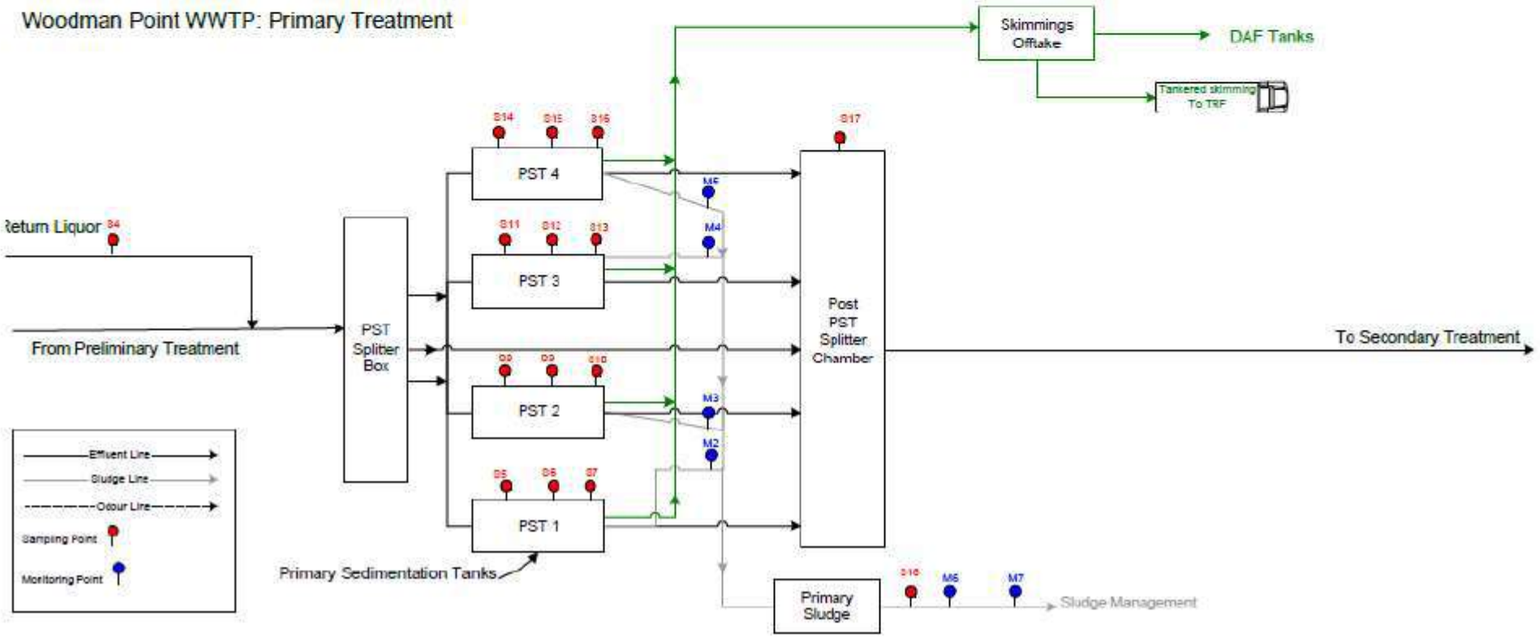


Map of proposed works upgrade to the Premises

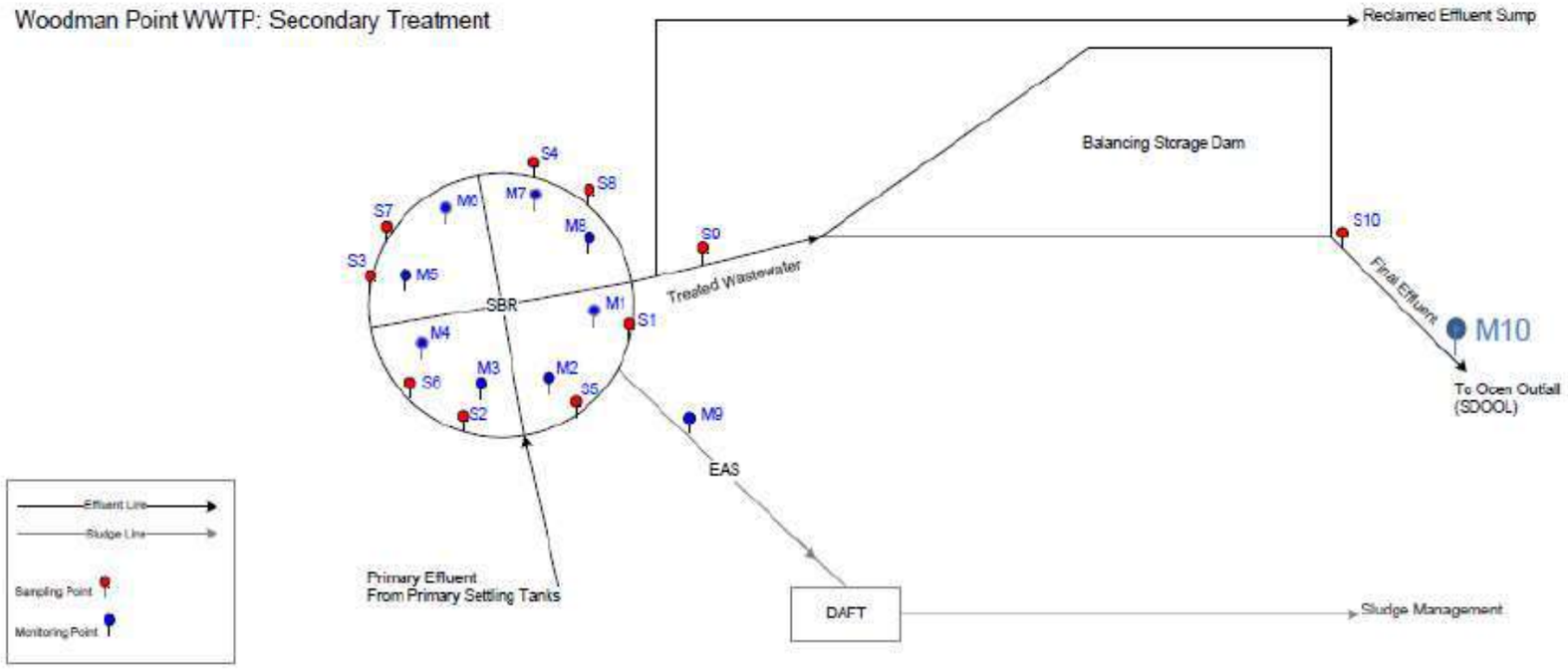


Map of WWTP emission and monitoring points

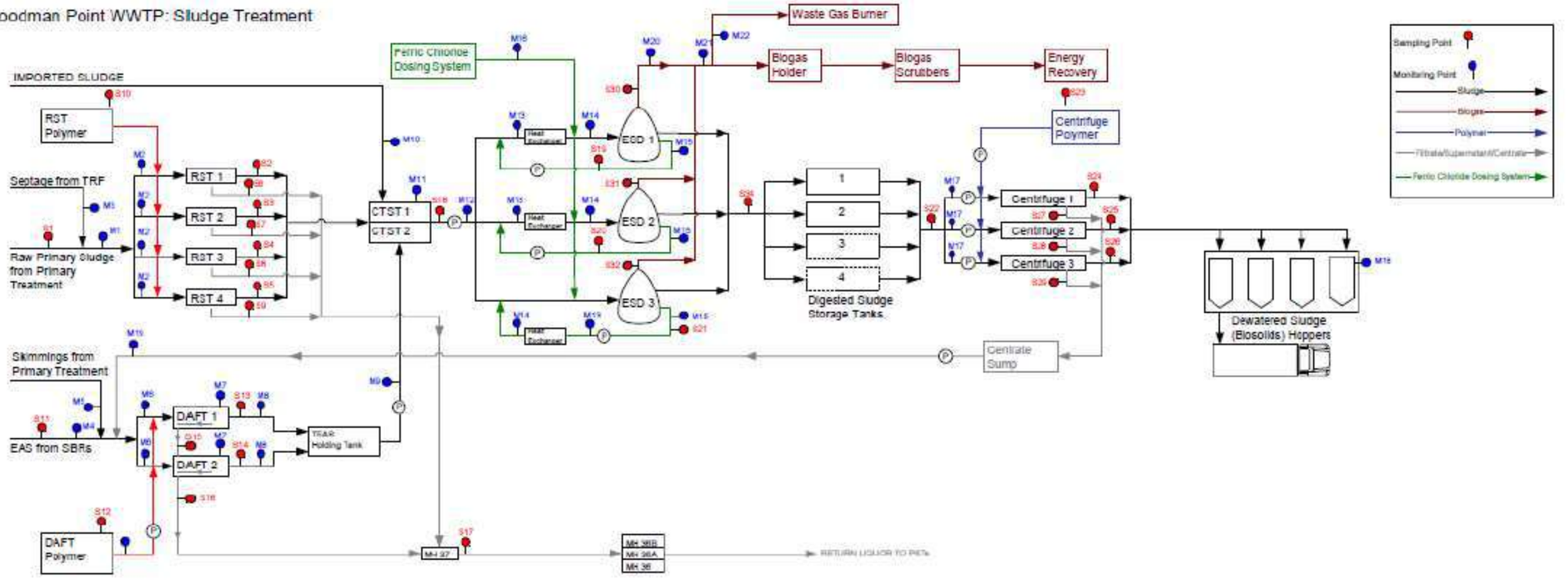




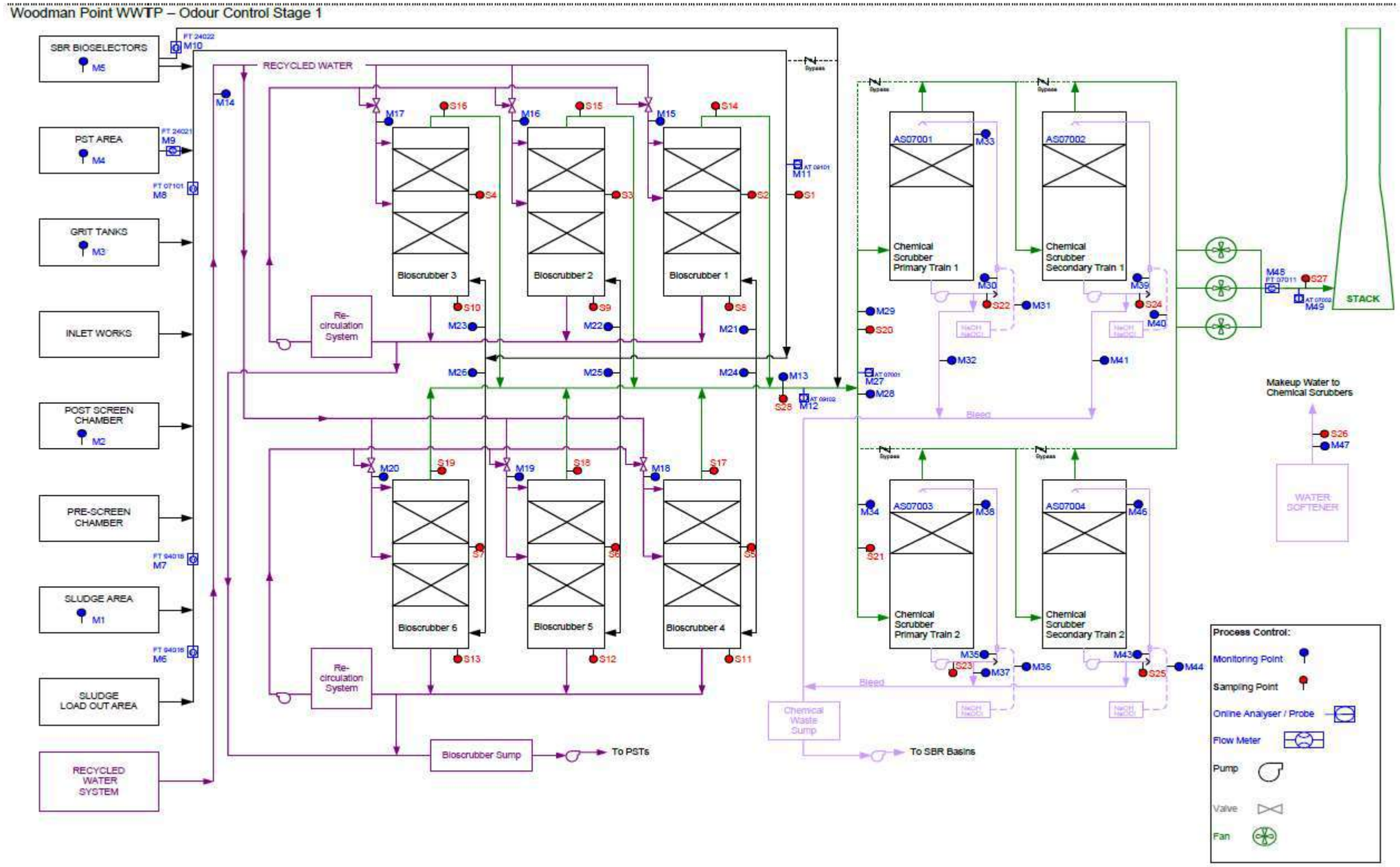
Woodman Point WWTP: Secondary Treatment



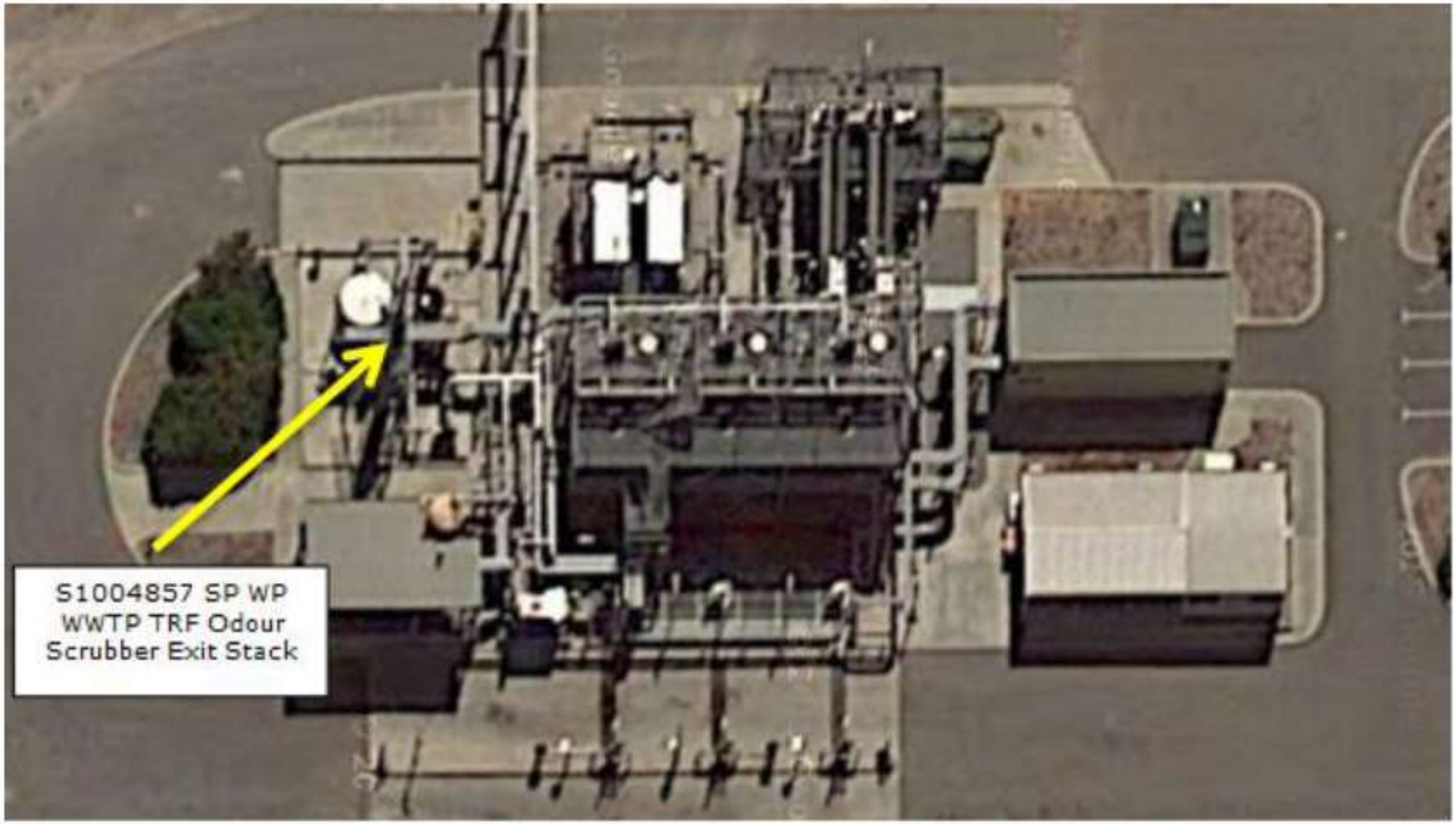
Woodman Point WWTP: Sludge Treatment



Map of Odour Control Facility emission and monitoring points



Map of Tanker Receival Facility emission point



Schedule 2: Prescribed Premises Category

Prescribed premises category
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
54	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.	100 cubic metres per more per day	180,000 cubic metres per day
61	Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	100 tonnes or more per year	50,000 tonnes per annual period

Schedule 3: Notification & Forms

Licence: L4201/1991/11 Licensee: Water Corporation
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Water Corporation	
Date	