



Environment Protection Licence

Licence - 10555

Licence Details	
Number:	10555
Anniversary Date:	01-July
Licensee	
SYDNEY WATER CORPORATION	
PO BOX 399	
PARRAMATTA NSW 2124	
Premises	
PICTON SEWAGE TREATMENT SYSTEM INCLUDING STP AT	
REMEMBRANCE DRIVE	
PICTON NSW 2571	
Scheduled Activity	
Sewage treatment	
Fee Based Activity	Scale
Sewage treatment processing by small plants	> 1000-5000 ML annual maximum volume of discharge
Region	
Metropolitan Infrastructure	
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PARRAMATTA NSW 2150	
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PO Box 668	
PARRAMATTA NSW 2124	

Environment Protection Licence

Licence - 10555



INFORMATION ABOUT THIS LICENCE	4
Dictionary	4
Responsibilities of licensee	4
Variation of licence conditions	4
Duration of licence	4
Licence review	4
Fees and annual return to be sent to the EPA	4
Transfer of licence	5
Public register and access to monitoring data	5
1 ADMINISTRATIVE CONDITIONS	6
A1 What the licence authorises and regulates	6
A2 Premises or plant to which this licence applies	6
A3 Other activities	7
A4 Information supplied to the EPA	7
2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1 Location of monitoring/discharge points and areas	7
3 LIMIT CONDITIONS	8
L1 Pollution of waters	8
L2 Load limits	9
L3 Concentration limits	10
L4 Volume and mass limits	13
L5 Waste	13
L6 Noise limits	14
L7 Other limit conditions	14
4 OPERATING CONDITIONS	15
O1 Activities must be carried out in a competent manner	15
O2 Maintenance of plant and equipment	15
O3 Emergency response	15
O4 Processes and management	15
O5 Other operating conditions	16
5 MONITORING AND RECORDING CONDITIONS	17
M1 Monitoring records	17
M2 Requirement to monitor concentration of pollutants discharged	18
M3 Testing methods - concentration limits	20

Environment Protection Licence

Licence - 10555

M4	Testing methods - load limits	20
M5	Environmental monitoring	21
M6	Recording of pollution complaints	21
M7	Telephone complaints line	22
M8	Requirement to monitor volume or mass	22
M9	Requirement to record bypass incidents from sewage treatment plants	23
M10	Other monitoring and recording conditions	23
6	REPORTING CONDITIONS	25
R1	Annual return documents	25
R2	Notification of environmental harm	26
R3	Written report	26
R4	Other notifications	27
R5	Annual system performance report	27
7	GENERAL CONDITIONS	30
G1	Copy of licence kept at the premises or plant	30
G2	Contact number for incidents and responsible employees	30
G3	Signage	30
8	POLLUTION STUDIES AND REDUCTION PROGRAMS	30
U1	Pollution Study: Short-term water quality sampling program	30
U2	Pollution Study: Source control investigations to reduce stormwater and industrial wastewater flows to the Picton STS	34
U3	Pollution Study: Investigations for additional wastewater recycling and reuse options for Picton sewage treatment system	36
U4	Pollution Study: Trial pilot-scale constructed wetlands project	38
9	SPECIAL CONDITIONS	38
E1	Sydney Water Dry Weather Sewage Overflow Response Report	38
E2	Special Dictionary	42
DICTIONARY		45
	General Dictionary	45

Environment Protection Licence

Licence - 10555



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

Licence - 10555



The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

SYDNEY WATER CORPORATION
PO BOX 399
PARRAMATTA NSW 2124

subject to the conditions which follow.



Environment Protection Licence

Licence - 10555

1 Administrative Conditions

A1 What the licence authorises and regulates

- A1.1 This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2: Not applicable.
- A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Sewage treatment	Sewage treatment processing by small plants	> 1000 - 5000 ML annual maximum volume of discharge

- A1.3 Not applicable.
- A1.4 The objectives of this licence are to:
- a) require practical measures to be taken to protect the environment and public health from sewage treatment plant effluent and sewer overflows;
 - b) require proper and efficient management of the sewage treatment system to minimise harm to the environment and public health;
 - c) require no deterioration and continuing improvement in the sewage treatment system environmental performance relative to existing conditions; and
 - d) minimise the frequency and volume of overflows and sewage treatment plant bypasses.
- A1.5 This licence is to be construed in a manner that will promote the objectives referred to in A1.4.

A2 Premises or plant to which this licence applies

- A2.1 The licence applies to the following premises:

Premises Details
PICTON SEWAGE TREATMENT SYSTEM INCLUDING STP AT
REMEMBRANCE DRIVE
PICTON
NSW 2571

Environment Protection Licence

Licence - 10555



LOT 52 DP 251857, LOT 53 DP 251857, LOT 54 DP 251857, LOT 55 DP 251857, LOT 56 DP 251857, LOT 1 DP 583248, LOT 2 DP 583248, LOT 1 DP 778862, LOT 2 DP 778862, LOT 1 DP 818863, LOT 2 DP 818863, LOT 1 DP 865604, LOT 57 DP 979250, LOT 58 DP 979250, LOT 59 DP 979250, LOT 60 DP 979250, LOT 61 DP 979250, LOT 62 DP 979250, LOT 2 DP 1042285

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

A3 Other activities

A3.1 This licence applies to all other activities carried on at the premises, including:

Ancillary Activity
Chemical Storage
Composting
Waste Storage

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 Air monitoring points - not applicable.
- P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.
- P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Environment Protection Licence

Licence - 10555

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Volume monitoring Effluent quality monitoring		Precautionary Discharge. Outlet of Effluent Buffer Tank at the Western Dam marked Point 1 on "Map 1 Picton Farm" dated 6 April 2016
10	Volume Monitoring		Stonequarry Creek Flow measurement point. Sydney Water Point 911 (downstream of Point 2) marked Point 10 on "Map 1 Picton Farm" dated 6 April 2016
11	Volume monitoring Effluent quality monitoring Discharge to recycled water utilisation area	Volume monitoring Effluent quality monitoring Discharge to recycled water utilisation area	Recycled Water. Outlet of Eastern Dam marked Point 11 on "Map 1 Picton Farm" dated 6 April 2016
12		Discharge to treatment plant utilisation area	Internal Reuse. Outlet of Western Dam marked Point 12 on "Map 1 Picton Farm" dated 6 April 2016
13	Volume monitoring Effluent quality monitoring Discharge to recycled water utilisation area	Volume monitoring Effluent quality monitoring Discharge to recycled water utilisation area	Recycled Water. Outlet of Western Dam marked Point 13 on "Map 1 Picton Farm" dated 6 April 2016
14		Discharge to waters	Precautionary Discharge point to Stonequarry Creek marked Point 2 on "Map 1 Picton Farm" dated 6 April 2016

- P1.4 P1.4 For the purposes of conditions L2.1, L2.2, L2.7, L2.8 and L2.9, the sewage treatment plant discharges to Yarramundi 1 sub-zone. Yarramundi sub-zone is the area labelled 'Yarramundi 1' on the zone map held on EPA electronic file EF15/791.

3 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.
- L1.2 Subject to the conditions of this licence, sewage must not be discharged from the components of the reticulation system except from those components identified on the system map.
- L1.3 Notwithstanding the provisions of the condition above, this licence does not permit the pollution of waters at any time during dry weather from:
- uncontrolled overflows, or
 - directed overflows other than from sewage pumping stations,
- if a cause of the pollution is failure to:

Environment Protection Licence

Licence - 10555



- i) operate any part of the reticulation system in a proper and efficient manner; or
- ii) maintain any part of the reticulation system in a proper and efficient condition.

L1.4 This licence does not permit the pollution of water at any time during dry weather from any pumping station. This condition is effective from 1 July 2006.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 From 1 July 2024, the load limits for Nitrogen (total) and Phosphorus (total) listed in L2.1 will change to the following values:

- a) Nitrogen (total) 39,700 kg/year
- b) Phosphorus (total) 720 kg/year

L2.3 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
BOD (Enclosed Water)	730.00
Nitrogen (total) (Enclosed Water)	1460.00
Oil and Grease (Enclosed Water)	292.00
Phosphorus (total) (Enclosed Water)	73.00
Total suspended solids (Enclosed Water)	730.00

L2.4 For the purposes of condition L2.1 only, premises means the sewage treatment plant(s) referred to in condition A2.1 of this licence.

L2.5 For the purposes of condition L2.2 and M1.1 the relevant load calculation protocol is the methodology detailed in the document titled “Development of Load Calculation Method and Trial Calculation” (June 2003) approved by the EPA in September 2003 and any subsequent amendments approved by the EPA in writing.

L2.6 Not applicable.

L2.7 From 1 July 2024, the annual load of Nitrogen (total) and Phosphorus (total) discharged from Sydney Water’s sewage treatment plants in the Yarramundi sub-zone 1 must not result in the aggregated 5 year rolling average load of Nitrogen (total) and Phosphorus (total) exceeding the specified aggregate loads in condition L2.2 in a given year:

- a) Nitrogen (total) 39,700 kg/year
- b) Phosphorus (total) 720 kg/year

Environment Protection Licence

Licence - 10555



Note: The loads for the 2024/25 year will be the rolling average of reporting period loads from 2019/20 to 2023/24. Where there have been STP upgrades during this period, the historical loads would be reduced by the load reductions achieved by the upgrades, to obtain an equivalent historical load for use in the rolling average calculations.

- L2.8 From 1 July 2024, the annual load targets from Sydney Water’s sewage treatment plants discharging to Yarramundi sub-zone 1 are the following aggregated 5 year rolling average loads of Nitrogen (total) and Phosphorus (total):
- a) Nitrogen (total) 36,100 kg/year
 - b) Phosphorus (total) 660 kg/year

Note: The loads for the 2024/25 year will be the rolling average of reporting period loads from 2019/20 to 2023/24. Where there have been STP upgrades during this period, the historical loads would be reduced by the load reductions achieved by the upgrades, to obtain an equivalent historical load for use in the rolling average calculations

- L2.9 The licensee may use nutrient load offset trading to reduce or increase the aggregated 5 year rolling average load of Nitrogen (total) and Phosphorus (total) in L2.7 and L2.8 in accordance with the protocol detailed in the document titled “*Compliance offsets for nutrient discharges to the Hawkesbury-Nepean River - Interim Operational Protocol 2018 to 2024 (July 2019)*” by BDA Group held on EPA electronic file EF15/791.

L3 Concentration limits

- L3.1 For each monitoring/discharge point or utilisation area specified in the table\’s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\’s.
- L3.4 Water and/or Land Concentration Limits

POINT 11

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit

Environment Protection Licence

Licence - 10555

Biochemical oxygen demand	milligrams per litre	10	15	-	-
Faecal Coliforms	colony forming units per 100 millilitres	2000	10000	-	-
Nitrogen (ammonia)	milligrams per litre	2	5	-	-
Nitrogen (total)	milligrams per litre	10	15	-	-
pH	pH	6.5-9.5	-	-	-
Phosphorus (total)	milligrams per litre	8	9	-	-
Total suspended solids	milligrams per litre	120	480	-	-

POINT 13

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
BOD	milligrams per litre	7	10	-	-
Faecal Coliforms	colony forming units per 100 millilitres	-	200*	-	-
Nitrogen (ammonia)	milligrams per litre	0.5	1	-	-
Nitrogen (total)	milligrams per litre	6	10	-	-
pH	pH	6.5-9.5	-	-	-
Phosphorus (total)	milligrams per litre	0.2	0.4	-	-
Total suspended solids	milligrams per litre	7	15	-	-

POINT 14

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
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Environment Protection Licence

Licence - 10555

BOD	milligrams per litre	7	10	-	-
Faecal Coliforms	colony forming units per 100 millilitres	-	200*	-	-
Nitrogen (ammonia)	milligrams per litre	0.5	1	-	-
Nitrogen (total)	milligrams per litre	6	10	-	-
Phosphorus (total)	milligrams per litre	0.2	0.4	-	-
Total suspended solids	milligrams per litre	7	15	-	-

Note: The faecal coliforms concentration limit marked by an asterisk in the above table is to be interpreted as an 80% concentration limit for the purpose of assessing compliance with this condition.

L3.5 From 1 July 2024, the concentration limits for Nitrogen (total) and Phosphorus (total) listed in L3.4 for Points 1 and 2 will change to the following values:

- a) Nitrogen (total) 6 mg/L (50 percentile concentration limit)
- b) Phosphorus (total) 0.1 mg/L (50 percentile concentration limit)

Note: The 100 percentile limits for Nitrogen (total) and Phosphorus (total) will cease to apply from 1 July 2024.

L3.6 Not applicable.

L3.7 Not applicable.

L3.8 Toxicity limits

Not applicable.

L3.9 In the case of a pollutant which is subject to a 3DGM limit, only the samples collected on the first day of the 3DGM sampling are to be used for the calculation of the percentile.

L3.10 Notwithstanding condition L3.2 above, when the pH of the effluent discharged at Point 11 and Point 13 is elevated due to algal problems in the irrigation dam:

- a) application of effluent to the irrigation utilisation area may continue to be undertaken; and
- b) exceedance of the upper value of the 50 percentile concentration limit for pH is permitted where algae in the dam was the sole cause of the exceedance.

Environment Protection Licence

Licence - 10555

L4 Volume and mass limits

- L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
- liquids discharged to water; or;
 - solids or liquids applied to the area;
- must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit
11	kilolitres per day	14000
13	kilolitres per day	14000
14	kilolitres per day	14000

- L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 11, 13 and 14 must not exceed 14000 kL/day.
- L4.3 In addition to the volume/mass limit imposed at Point 14 by condition L4.1, the following volume/mass limits apply at Point 14 for precautionary discharges to Stonequarry Creek:
- 0 kilolitres per day, when creek flow at Point 10 is less than or equal to 8,000 kilolitres per day;
 - 25% of creek flow at Point 10, when creek flow at Point 10 is greater than 8,000 kilolitres per day.
- L4.4 For the period specified in Condition U1 for the purposes of obtaining sampling data for Discharge Regime 1, the licensee is permitted to undertake precautionary discharges to Stonequarry Creek as follows:
- up to 100% of creek flow at Point 10, when creek flow is greater than 2,500 kilolitres per day;
 - Maximum volume discharged from Point 14 must not exceed 15,000 kilolitres per day;
 - the total volume limit discharged from points 11, 13 and 14 does not apply; and
 - Upon completion of the sampling period for Discharge Regime 1, the licence conditions L4.1 – L4.3 resume.

L5 Waste

- L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The licensee may receive and/or transfer sewage generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems.

Environment Protection Licence

Licence - 10555



Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L6 Noise limits

L6.1 Not applicable.

L7 Other limit conditions

L7.1 Hydraulic Sewer System Model

- a) The licensee must maintain a hydraulic sewer system model which has no temporal or magnitude bias in either flow volume or water levels at the licence gauges as referenced in the document titled "PRP101.1 System Model Performance Indicators, September 2000" and subsequent modifications made by the Criteria Review Committee.
- b) The licensee must undertake an annual Quality System audit of the hydraulic sewer system model to determine if the model used during that reporting period meets the standards set out in condition L7.1(a).
- c) The licensee must prepare a written report on each Quality System audit of any model used to assess sewage system wet weather overflow performance for the purpose of determining compliance with this licence. The report must also include the Pearson's correlation coefficient for the model used during the reporting period.
- d) The licensee must provide a written report with each Annual Return on any Quality System audit of the hydraulic sewer system model stating the methodology and results of the audit.
- e) The licensee must convene an Independent Criteria Review Committee at least once every three Reporting Periods to review the methodology and findings of each of the Quality System audits.
- f) The licensee must ensure that the Independent Criteria Review Committee prepares a written report on the review required by condition L7.1(e).
- g) The licensee must submit to the EPA a copy of each Independent Criteria Review Committee report received by the licensee in a particular Reporting Period with the following Annual Sewage Treatment System Performance Report required by condition R5 of this licence.

L7.2 Wet weather overflow limits

Not applicable.

L7.3 Not applicable.

L7.4 Dry weather overflow limits

Not applicable.

L7.5 Utilisation Areas

Liquids must only be applied to liquids utilisation areas for which a discharge point or area

Environment Protection Licence

Licence - 10555



has been identified in P1 of this licence.

- L7.6 Spray from liquids application must not drift beyond the boundary of the utilisation area to which it is applied.
- L7.7 Biosolids must only be applied to utilisation areas as defined in the map titled "Map 1 Picton Farm" dated 6 April 2016.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.
This includes:
 - a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
 - b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.
- O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

- O3.1 In the event of an overflow from the reticulation system or a bypass from a sewage treatment plant that harms or is likely to harm the environment or present a significant public health risk, the licensee must take all reasonable and feasible actions as soon as practicable to minimise the impact of the overflow or bypass on the environment and public health.

For the avoidance of doubt, the requirements of this condition are in addition to any measures required to be implemented in accordance with the Pollution Incident Response Management Plan required to be prepared and implemented under Part 5.7A of the Protection of the Environment Operations Act 1997.

O4 Processes and management

- O4.1 Appropriate Treatment Processes

Environment Protection Licence

Licence - 10555

Sewage or effluent must not be discharged from points 11, 13 and 14 unless it has been treated in accordance with the requirements of the table below.

Required treatment process	Flow range
Screening, biological treatment, filtration and disinfection (full tertiary treatment)	All flows to the Western Dam which discharge to utilisation area (Point 13) or to Stonequarry Creek (Point 14)
Screening, biological treatment (secondary treatment)	All flows to the Eastern dam which discharge to utilisation area (Point 11)

O4.2 Not applicable.

O4.3 Not applicable.

O4.4 Not applicable.

O4.5 Not applicable.

O4.6 Not applicable.

O4.7 **Level of reticulation system management, operations and maintenance activities**

Not applicable.

O4.8 Not applicable.

O4.9 **Exceedance of design capacity of primary disinfection processes**

Not applicable.

O5 Other operating conditions

O5.1 **Prohibition on acceptance of pesticides**

The licensee must not consent to any discharge of organophosphate pesticides (including chlorpyrifos, diazinon, malathion) or organochlorine pesticides (including dieldrin, heptachlor and chlordane) into the sewage treatment system.

O5.2 Not applicable.

O5.3 Not applicable.

O5.4 Not applicable.

O5.5 Not Applicable.

Environment Protection Licence

Licence - 10555

O5.6 Management of Utilisation Area

The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids.

Note: For the purpose of this condition, 'effectively utilise' includes the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.

O5.7 Effluent application

- a) Effluent application must not occur in a manner that causes surface runoff.
- b) Spray from effluent application must not drift beyond the boundary of the premises.
- c) Livestock access to any effluent application area must be denied during effluent application and until the applied effluent area has dried.
- d) All effluent application operations and activities occurring at the premises must be carried out in a manner that will minimise dust at the boundary of the utilisation area.
- e) The licensee must not cease to use the utilisation area (Points 11 and 13 in this licence) without the prior written approval of the EPA to an alternative means of disposal of the effluent. Any such written approval is intended to be effected for the purposes of this condition by variation of this licence.
- f) Effluent liquid waste pipelines and fittings must be clearly identified. Standard watertaps, hoses and valves must not be fitted to the pipelines of the effluent system. The effluent system must not be connected to other pipelines. Lockable valves or removable handles must be used where there is public access to the effluent.
- g) Public access to any effluent utilisation area must be denied during effluent application and until the effluent application area has dried.
- h) Adequate notices, warning the public not to drink or otherwise use the treated effluent, must be erected on the site. These notices must be legible English and in any other languages as may be necessary, and must indicate at least that the water in use is "Reclaimed Water - Unfit for Drinking".
- i) Pasture or fodder crops must not be harvested before the effluent utilisation area has dried.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;

Environment Protection Licence

Licence - 10555

- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M1.4 Registers

The licensee must maintain and make available for inspection by the public, at the licensee's Head Office, registers recording the following information, for the sewage treatment system:

- a) a map or maps of the sewage treatment system showing:
 - i) the location of the sewage treatment plant or plants, sewage pumping stations, directed overflow structures, pipes and access chambers in the sewage treatment system, referenced by the licensee's identifier and the EPA point identification number, as applicable;
 - ii) the catchments, sub-catchments and sensitive areas relevant to the sewage treatment system;
- b) the number of chokes within the system reported to the licensee during each reporting period;
- c) a schedule of proposed works to be carried out in relation to the premises during each reporting period;
- d) the works completed in relation to the premises during each reporting period; and
- e) the complaints by type recorded under M7 during each reporting period.

M1.5 Changes to the system map must be recorded by reference to the date of the change, description of the change and the name of the person authorising the change.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Not applicable.

M2.3 Water and/ or Land Monitoring Requirements

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample

Environment Protection Licence

Licence - 10555

Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample
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POINT 11

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 2	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 2	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 2	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 2	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 2	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample

POINT 13

Pollutant	Units of measure	Frequency	Sampling Method
BOD	milligrams per litre	Special Frequency 2	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 2	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 2	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 2	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 2	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample

M2.4 For the purposes of the tables above:

- Special Frequency 1 means daily during the occurrence of any discharge longer than 2 hours during normal working hours.
- Special Frequency 2 means every 6 days when the irrigation system is operating at the time of sampling.

M2.5 Not applicable.

M2.6 The monitoring results collected in accordance with condition M2 for:

- Point 1 can be used to determine compliance with the limits in condition L3.4 for Point 14;
- Point 11 can be used to determine compliance with the limits in condition L3.4 for Point 11; and
- Point 13 can be used to determine compliance with the limits in condition L3.4 for Point 13.

M2.7 Subject to M2.8, where the licensee is unable to carry out any sampling required under condition M2 at the required frequency or interval or both because of a circumstance set out in column 1 of the Table below, the licensee is taken to have carried out the sampling at the required frequency or interval or both, as the case may be, if the licensee collects the required sample within the corresponding timeframe in column 2 of the Table.

Environment Protection Licence

Licence - 10555

No.	Column 1	Column 2
1	The unforeseen loss of power supply to the essential monitoring equipment that cannot be rectified by the reasonable provision and operation of standby generators	Within 48 hours of power being restored to the premises
2	The inability of the licensee to access or safely access the monitoring site or equipment due to tidal or fluvial flooding	As soon as practicable once flooding has ceased or abated
3	The failure or malfunction of essential monitoring equipment caused by tidal or fluvial flooding	Within 48 hours after failure or malfunction of essential monitoring equipment has ceased

M2.8 The licensee must collect and analyse the required number of samples for the reporting period as specified in conditions M2.3 – M2.5 above.

M2.9 The licensee must keep records of all circumstances listed in column 1 of the Table in condition M2.7 which triggered sample collection in accordance with column 2 of the same Table, including information that can demonstrate that the circumstances in column 1 applied and that the sampling was carried out in accordance with the timeframe prescribed in column 2 of that Table. The licensee must keep these records for a period of 5 years after the end of the reporting period in which the circumstances occurred.

M2.10 The record must be produced to any authorised officer of the EPA who requests to see them.

M3 Testing methods - concentration limits

M3.1 Not applicable.

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M3.3 The requirements of condition M3.2 also apply to the monitoring of the concentration of pollutants in waters.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

Environment Protection Licence

Licence - 10555



M5 Environmental monitoring

M5.1 Sewage Treatment System Impact Monitoring Program

- a) The licensee must undertake the monitoring programs detailed in the Sydney Water publication "Sewage Treatment System Impact Monitoring Program, December 2010", or in any replacement document approved in writing by the EPA.
- b) The licensee must maintain a database of the results obtained in undertaking monitoring programs specified in the document cited above. Information from the database must be made available to any authorised officer of the EPA on request.
- c) The licensee must provide to the EPA the reports specified in the document cited above.
- d) The "Sewage Treatment System Impact Monitoring Program (STSIMP): Annual Data Report" specified in the document cited above must be submitted not later than 15 December in each year.
- e) The "STSIMP: Interpretive Report" specified in the document cited above must be submitted not later than 31 December every fourth year.
- f) For the purposes of conditions e) above, the next "STSIMP: Interpretative Report" must be submitted by 31 December 2020.

Note: Copies of reports relating to the Sewage Treatment System Impact Monitoring Program can be found at

<http://www.sydneywater.com.au/SW/water-the-environment/how-we-manage-sydney-s-water/wastewater-network/stsimp-reports/index.htm>

M6 Recording of pollution complaints

- M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M6.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

Environment Protection Licence

Licence - 10555

M7 Telephone complaints line

- M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M7.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.
- M7.4 For the purpose of this condition, operating hours are defined as twenty four hours a day, seven days a week.

M8 Requirement to monitor volume or mass

- M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- the volume of liquids discharged to water or applied to the area;
 - the mass of solids applied to the area;
 - the mass of pollutants emitted to the air;
- at the frequency and using the method and units of measure, specified below.

POINT 1

Frequency	Unit of Measure	Sampling Method
Continuous	kilolitres per day	Electronic level sensor and continuous logger

POINT 10

Frequency	Unit of Measure	Sampling Method
Continuous	kilolitres per day	Electronic level sensor and continuous logger

POINT 11

Frequency	Unit of Measure	Sampling Method
Continuous	kilolitres per day	Electronic level sensor and continuous logger

POINT 13

Frequency	Unit of Measure	Sampling Method
Continuous	kilolitres per day	Electronic level sensor and continuous logger

- M8.2 The monitoring results collected in accordance with condition M8.1 for:
- Point 1 can be used to determine compliance with the limits in condition L4.1 for Point 14.
 - Point 11 can be used to determine compliance with the limits in condition L4.1 for Point 11.
 - Point 13 can be used to determine compliance with the limits in condition L4.1 for Point 13.

Environment Protection Licence

Licence - 10555



d) Points 1 and 10 can be used to determine compliance with the limits in condition L4.3 for Points 14 and 10.

M8.3 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be calculated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction and the licensee is to rectify the failure or malfunction as soon as practical.

M9 Requirement to record bypass incidents from sewage treatment plants

M9.1 The licensee must record the following details in relation to each bypass from the premises:

- a) the EPA point identification number through which the bypass discharged;
- b) the start time, date and duration of the bypass;
- c) the estimated volume of the bypass;
- d) the level of treatment at the sewage treatment plant prior to discharge;
- e) classification as a dry or wet weather bypass;
- f) the most likely cause of the bypass; and
- g) the name or names of the treatment process or processes bypassed.

M9.2 A dry weather bypass is a bypass that occurs when the inflow rates of sewage to the sewage treatment plant does not exceed 35 L/s and a wet weather bypass occurs when this flow is equalled or exceeded.

M10 Other monitoring and recording conditions

M10.1 Continuation of Monitoring Programs

Not applicable.

M10.2 Biosolids

Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

M10.3 Dry weather leakage monitoring program

- a) The licensee must monitor (using results obtained by sampling and analysis) the concentration of faecal coliforms in samples collected from each sampling point identified on the spreadsheet titled "Dry Weather Leakage Monitoring Program SCAMP sampling locations master spreadsheet" and associated maps submitted to the EPA (EPA Reference: SF19/48619).
- b) The licensee must undertake the dry weather leakage monitoring at a frequency approved in writing by the EPA for each sampling point, using sampling method grab sample, units of measure of cfu/100mL.
- c) The licensee must seek approval in writing from the EPA to make changes to the dry weather leakage monitoring program SCAMP sampling locations.
- d) Within two weeks of receiving approval from the EPA, the licensee must update the master spreadsheet and associated maps referenced in condition M10.3a and provide the EPA with a copy of the updated documents.

Environment Protection Licence

Licence - 10555



M10.4 Investigations and remedial action for dry weather leakage

- a) The licensee must investigate the cause of faecal coliform presence in any of the samples collected where the analysis results for any sample collected indicates an exceedance in the threshold of 10,000 cfu/100mL ("the threshold"). The investigation must be commenced as soon as the licensee becomes aware of the threshold for faecal coliform being exceeded.
- b) The licensee must take remedial action where any investigation undertaken identifies the reticulation system as the cause of the exceedance of the threshold for faecal coliform specified in condition 10.4(a).
- c) The licensee must record:
 - i) the method, results and conclusions of investigations undertaken in accordance with condition 10.4(a), and
 - ii) actions taken by the licensee as a result of the conclusions of the investigations.

M10.5 a) The licensee must undertake the following actions, in addition to the actions set out in condition M10.4, when analysis results of three consecutive samples collected at the same location indicate that the threshold for faecal coliform specified in condition M10.4(a) has been exceeded:

- i) notify the EPA in writing as soon as possible, providing the three sample analysis results, and identifying the relevant SCAMP;
 - ii) commission an environmental auditor certified by an independent certification body accredited by the Joint Accreditation System of Australia and New Zealand (JASANZ) to review the three investigations specified in condition M10.4(a). The licensee must commission this review within fourteen days of the completion of the investigation into the third consecutive exceedance of the threshold, unless otherwise approved in writing by the EPA;
 - iii) submit the results of the independent review to the EPA within 42 days of the commissioning of the independent review;
 - iv) implement the recommendations of the independent review unless otherwise directed in writing by the EPA; and
 - v) commence sampling at the relevant sampling location on a quarterly basis, unless otherwise approved in writing by the EPA. Sampling must be undertaken at quarterly intervals until three consecutive samples are below the threshold, at which time the frequency of sampling at the location can revert to the frequency specified in condition M10.3.
- b) The independent review required by condition M10.5(a) must examine the three investigations undertaken by the licensee into the relevant exceedances of the threshold and determine:
- i) if the investigations and any actions undertaken as a result of the investigations were appropriate to prevent further exceedances of the relevant threshold; and
 - ii) if any additional investigations or actions must be undertaken to prevent further exceedances of the threshold.

M10.6 The licensee must notify the EPA in writing if any sample analysis result obtained from monitoring required by condition M10.3 indicates that the levels of faecal coliform have exceeded 10,000cfu/100mL.

Environment Protection Licence

Licence - 10555

The notification must be made as soon as possible after the licensee has obtained the sample result indicating the exceedance. The notification must include the sample results and identify the relevant SCAMP.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the

Environment Protection Licence

Licence - 10555



licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- a) the assessable pollutants for which the actual load could not be calculated; and
- b) the relevant circumstances that were beyond the control of the licensee.

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.8 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or
- b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
- and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any

Environment Protection Licence

Licence - 10555



complainants;

f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and

g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R3.5 For the purposes of this condition, the definition of event in the Special Dictionary does not apply.

R4 Other notifications

R4.1 a) Notwithstanding notification requirements under condition R2, the licensee must notify the EPA of incidents where sewage or effluent has been discharged to, or is reasonably expected to be discharged to waterways in the following circumstances:

i. a dry weather sewage overflow from a sewage pumping station;

ii. sewage or effluent not treated at the sewage treatment plant in accordance with the requirements of conditions O4.1 – O4.6; or

iii. any treated sewage or effluent discharge released to the environment that is not in accordance with the precautionary discharge requirements at condition L4.3.

b) Notifications must be made to the EPA by contacting the Environment Line as soon as practicable after the licensee becomes aware of the incident.

c) The notification should include the relevant information as per s150 of the Protection of Environment Operations Act.

d) Where an incident has been reported under condition R2 there is no requirement to report it under condition R4 in addition to the report made under condition R2.

Note: Notifications must be made to the other agencies such as Beachwatch, National Parks and NSW Food Authority, where relevant. The requirements for such notifications must be included in Pollution Incident Response Management Plans.

Note: The reporting requirements in condition R4 do not replace any other reporting requirements in the licence or under the Protection of the Environment Operations Act 1997.

R5 Annual system performance report

R5.1 The licensee must supply to the EPA an Annual Sewage Treatment System Performance Report not later than 60 days after the end of each reporting period.

R5.2 The Annual Sewage Treatment System Performance Report is to supplement the Annual Return and must report but not be limited to the following components:

R5.3 Effluent discharged

a) The percentile values calculated from the monitoring data for each pollutant which has corresponding limits.

b) The annual load of all assessable pollutants.

Environment Protection Licence

Licence - 10555



- c) An analysis of the sewage treatment plant performance against the concentration, toxicity and load limits specified in the licence.
- d) An assessment of the current year's sewage treatment plant performance against the previous five year's performance. The assessment must include but not be limited to an explanation of any observed trends in the sewage treatment plant performance, and the reason for such trends.
- e) The load of Phosphorous (total) and Nitrogen (total) discharged from the sewage treatment plant expressed as a percentage of the total load of Phosphorous (total) and Nitrogen (total) directly discharged from all Sydney Water sewage treatment systems to the Hawkesbury-Nepean.
- f) The total volume discharged from the sewage treatment plant, and the average volume discharged from the sewage treatment plant during dry weather.
- g) The total volume and percentage volume of effluent recycled.
- h) i) The total number of sewage treatment plant bypasses and the total volume discharged that did not receive required treatment during:
 - AA) dry weather; and
 - BB) wet weather
- ii) A summary report of all bypass events which includes, but is not limited to, the following: classification as a dry or wet weather bypass, duration, volume discharged, volume treated, receiving waters, cause, treatment process(es) bypassed and any action(s) taken

R5.4 Biosolids

Reporting requirements in accordance with the Biosolids Guidelines

R5.5 Reticulation System

- a) Dry weather leakages:
 - i) monitoring results from each SCAMP;
 - ii) outcomes of any investigations; and
 - iii) details of rectification action taken.
- b) Dry weather overflows from chokes and sewage pumping stations:
 - i) including;
 - AA) number of dry weather overflows to waterways, for the whole system and for each SCAMP;
 - BB) total number of dry weather overflows, for the whole system and for each SCAMP;
 - CC) total number of dry weather overflows per 100km for whole system;
 - DD) the name of each sewage treatment system which exceeded the dry weather overflow limit at condition L7.4; and
 - EE) the name of each SCAMP where the number of dry weather overflows reaching waterways in a SCAMP exceeds the target for that SCAMP specified in the SCAMP table below.
 - ii) comparison of the dry weather overflow performance against the previous four twelve month periods for dry weather overflows to waterways and total dry weather overflows.
- c) Where the dry weather overflow sewage treatment system limit at condition L7.4 and/or target in the SCAMP table below was exceeded during the reporting period, the licensee must provide a report to the EPA no later than 30 September each year explaining the reason for the exceedance, which should include but not be limited to:
 - i) an analysis of the exceedances of limit(s) and / or target(s), including the determination of any long-term trends and evaluation of dry weather overflow abatement programs implemented by the licensee;

Environment Protection Licence

Licence - 10555



- ii) the details of any dry weather overflow abatement investigations, works and activities that were scheduled to be undertaken during the reporting period and which were completed;
- iii) the details of any dry weather overflow abatement investigations, works and activities that were scheduled to be undertaken during the reporting period and which were not undertaken or not completed;
- iv) the details of any dry weather overflow abatement investigations, works and activities the licensee will undertake in subsequent reporting periods to minimise the likelihood of the limit(s) and / or target(s) being exceeded in any future reporting period, including the timeframes for those actions to be implemented and the level of prioritisation given to each sewage treatment system and / or SCAMP; and
- v) an assessment of whether any amendment to the dry weather overflow abatement investigations, works and activities scheduled for the remaining reporting periods to 30 June 2015 is required to achieve the dry weather overflow limits and / or targets at condition L7.4 and in the SCAMP table below.

SCAMP table

SCAMP Name	Dry Weather Overflows Reaching Waterways per Annum
S_PICTON	1

R5.6 Wet weather overflow abatement

Not applicable.

R5.7 Complaints and reports

A breakdown of the total number of complaints and reports received by the licensee in relation to the premises into categories of “odours”, “water pollution – sewage treatment plant”, “water pollution – reticulation system”, and any other category indicated by the complaint/report. A brief description of any significant unresolved issues arising out of the complaints and reports must be provided.

R5.8 The Annual Sewage Treatment System Performance Report must be presented in a format approved in writing by the EPA.

R5.9 Target nutrient loads (applicable from 1 July 2024)

- a) The licensee must report the Nitrogen (total) and Phosphorus (total) from Sydney Water’s sewage treatment plants discharging to Yarramundi sub-zone 1 relative to the annual load targets in condition L2.8 including whether the targets were achieved. The report is to include a summary of any investigations, programs, projects, works or activities, including offsets, that were completed that contributed to the achieving of the targets.
- b) Where the annual load targets were not achieved, the licensee must provide a statement explaining the reasons for exceeding the targets which includes:
 - i. a summary of any investigations, programs, projects, works or activities, including offsets, that were completed with the intent of achieving the targets
 - ii. a summary of any planned investigations, programs, projects, works or activities, including offsets that were not undertaken or completed

Environment Protection Licence

Licence - 10555



iii. a summary of what will be done in the next reporting period to achieve the targets including an assessment of whether an amendment to the investigations, programs, projects, works or activities, including offsets is required to achieve the targets in conditions L2.8.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Contact number for incidents and responsible employees

G2.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:

- a) respond at all times to incidents relating to the premises; and
- b) contact the licensee's senior employees or agents authorised at all times to:
 - i) speak on behalf of the licensee; and
 - ii) provide any information or document required under this licence.

G2.2 The licensee is to inform the EPA in writing of the appointment of any contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

G3 Signage

G3.1 The location of EPA point number(s) listed in tables P1.1, P1.2 & P1.3 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

8 Pollution Studies and Reduction Programs

U1 Pollution Study: Short-term water quality sampling program

U1.1 The objective of this Pollution Study is to require the licensee to undertake a short-term water quality sampling program to characterise Picton STP's effluent discharges to Stonequarry Creek and to obtain in-stream water quality sampling data to inform further discussions regarding the licensee's proposal to

Environment Protection Licence

Licence - 10555

alter the existing licensed precautionary discharge requirements and to increase the existing pollutant load limits.

- U1.2 The licensee must undertake effluent characterisation and in-stream water quality sampling during each of the three discharge regimes listed in the table below and in accordance with the following conditions:

Discharge Regime	Minimum creek flow (ML/d)	Proportion of creek flow (%) [*]	Maximum discharge (ML/d)
1 - Licensee's proposed preferred precautionary discharge regime	2.5	<100	15
2 – Current licensed precautionary discharge regime	8	<25	14
3 – No discharges	1 (approx.) – natural base flow	N/A	N/A

Note: ^{*} The EPA notes that the treated effluent may not be able to be discharged at exact percentages for proportion of creek flow.

- U1.3 The following conditions apply to Discharge Regime 1 listed in condition U1.2:
- Discharge Regime 1 is permitted to be undertaken for up to two weeks to enable sampling as specified under condition U1.6.
 - Sampling under Discharge Regime 1 must commence when flows in the creek fall below 8 ML/day.

Note: It is the EPA's preference that samples are collected when the creek flow is between 2.5 and 8 ML/day; however, sampling may occur in flows greater than 8 ML/day if rainfall occurs during the sampling period.

- U1.4 Sampling undertaken for Discharge Regimes 1 and 2 do not have to be undertaken in chronological order.

- U1.5 The licensee must collect samples from the following sample locations:
- EPA Point 1 (outlet of the effluent buffer tank at the Western Dam);
 - N911 – Stonequarry Creek at Picton Farm downstream of STP discharge point;
 - N911A – Stonequarry Creek, upstream of STP discharge point, downstream of Redbank Creek;
 - N914 – Redbank Creek, upstream of STP discharge point;
 - N912 – Stonequarry Creek, upstream of STP discharge point and Redbank Creek, downstream of Picton Township.

- U1.6 For each monitoring /discharge point specified below, the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each analyte specified in Column 1. The licensee must use the sampling method and sample at the frequency specified:

EPA Point 1 - Effluent Discharge Characterisation

Environment Protection Licence

Licence - 10555

Analyte	Frequency	Sampling Method
Dissolved metals (Al, As, Sb, Ba, Be, B, Ca, Cd, Cr, Co, Cu, Fe, Pb, K, Li, Mg, Mn, Mo, Ni, Si, Se, Ag, Na, Sr, S, Ti, Tl, Sn, V, Zn)	Special Frequency 3	Grab
Total Acid extractable metals (Al, As, Sb, Ba, Be, B, Ca, Cd, Cr, Co, Cu, Fe, Pb, K, Li, Mg, Mn, Mo, Ni, Si, Se, Ag, Na, Sr, S, Tl, Tl, Sn, V, Zn)	Special Frequency 3	Grab
Chloride	Special Frequency 3	Grab
Fluoride	Special Frequency 3	Grab
Sulfate	Special Frequency 3	Grab
Conductivity	Special Frequency 3	Grab
Alkalinity (total, bicarbonate, carbonate)	Special Frequency 3	Grab
Ammonia	Special Frequency 3	Grab
Phosphorous (free reactive)	Special Frequency 3	Grab
Phosphorous (total)	Special Frequency 3	Grab
Total Nitrogen	Special Frequency 3	Grab
NOx-N	Special Frequency 3	Grab
TKN	Special Frequency 3	Grab
Total dissolved solids	Special Frequency 3	Grab
Total organic carbon	Special Frequency 3	Grab
Dissolved oxygen (mg/L and % saturation)	Special Frequency 3	Field measurement using hand-held meter
pH	Special Frequency 3	Field measurement using hand-held meter
Temperature	Special Frequency 3	Field measurement using hand-held meter
Turbidity	Special Frequency 3	Field measurement using hand-held meter

EPA Point 1 - Effluent discharge toxicity testing

Test	Frequency	Sampling Method
i) Whole of effluent acute toxicity screening (100% sample only) for 48-hour Ceriodaphnia dubia and 2-4-day larval fish, and Microtox® acute test	Special Frequency 3	Grab
ii) Whole of effluent chronic toxicity screening (100% sample only) for 72-hour micro-alga, 7-day Ceriodaphnia dubia and 10-day larval fish	Special Frequency 3	Grab

Environment Protection Licence

Licence - 10555

iii) full toxicity assessment (dilution series) with specified test organisms must be undertaken, if toxicity is identified in whole of effluent toxicity (acute and / or chronic) screening

Special Frequency 3

Grab

Locations N911, N911A, N914 and N912 – In-stream water quality sampling

Analytes	Frequency	Sampling Method
Dissolved metals (Al, As, Sb, Ba, Be, B, Ca, Cd, Cr, Co, Cu, Fe, Pb, K, Li, Mg, Mn, Mo, Ni, Si, Se, Ag, Na, Sr, S, Ti, Tl, Sn, V, Zn)	Special Frequency 4	Grab
Total Acid extractable metals (Al, As, Sb, Ba, Be, B, Ca, Cd, Cr, Co, Cu, Fe, Pb, K, Li, Mg, Mn, Mo, Ni, Si, Se, Ag, Na, Sr, S, Tl, Ti, Sn, V, Zn)	Special Frequency 4	Grab
Chloride	Special Frequency 4	Grab
Fluoride	Special Frequency 4	Grab
Sulfate	Special Frequency 4	Grab
Conductivity	Special Frequency 4	Grab
Alkalinity (total, bicarbonate, carbonate)	Special Frequency 4	Grab
Ammonia	Special Frequency 4	Grab
Phosphorous (free reactive)	Special Frequency 4	Grab
Phosphorous (total)	Special Frequency 4	Grab
Total Nitrogen	Special Frequency 4	Grab
NOx-N	Special Frequency 4	Grab
TKN	Special Frequency 4	Grab
Total dissolved solids	Special Frequency 4	Grab
Total organic carbon	Special Frequency 4	Grab
Dissolved oxygen	Special Frequency 4	Field measurement using hand-held meter
pH	Special Frequency 4	Field measurement using hand-held meter
Temperature	Special Frequency 4	Field measurement using hand-held meter
Turbidity	Special Frequency 4	Field measurement using hand-held meter
Algal counts	Special Frequency 3	Grab
Chlorophyll-a	Special Frequency 3	Grab

U1.7 For the purposes of the tables above:

Environment Protection Licence

Licence - 10555



- a) Special Frequency 3 means a total of 3 samples to be collected on different weekdays during the occurrence of each discharge regime specified in condition U1.2.
- b) Special Frequency 4 means a total of 7 samples to be collected on different weekdays during the occurrence of each discharge regime specified in condition U1.2.

- U1.8 The licensee must provide the EPA with the data results from the sampling program (in excel spreadsheet format) required by condition U1 and a copy of the original analysis report(s) from its appointed testing laboratory within 4 weeks of the completion of the sampling program.
- U1.9 At the same time as providing the EPA with the sampling data in condition U1.8, the licensee must provide a report to the EPA containing:
 - i) daily flow data from the discharge point (EPA Point 1) and licensed creek flow gauge (EPA Point 10) for all flow / discharge regimes and days when samples are collected; and
 - ii) a report on the operation and performance of the licensee's reinstated creek flow gauge (EPA Point 10) and the use of the new flow rating curve, and a comparison with the flows recorded in the upstream NSW Office of Water flow gauge.

U2 Pollution Study: Source control investigations to reduce stormwater and industrial wastewater flows to the Picton STS

- U2.1 The objective of this Pollution Study is to require the licensee to undertake a detailed investigation to identify opportunities to reduce stormwater and industrial wastewater flows into the Picton sewage treatment system ("sewerage system"). This is to inform consideration of whether a program of targeted source control works to reduce stormwater ingress and industrial wastewater entering the Picton sewerage system would be effective in reducing flows into the sewerage system and thus to reduce Picton Sewage Treatment Plant wastewater discharges to Stonequarry Creek and the Hawkesbury-Nepean river system.

Note: The study is part of an Effluent Management Program aimed at managing additional wastewater flows into the Picton sewerage system due to growth in the region.

- U2.2 The scope of these investigations in relation to the Picton sewerage system must include (but not be limited to):
 - (a) a scientifically rigorous investigation (including sewer flow gauging, direct measurement of inflow at sewer openings and refinements to hydraulic sewer system modelling) to identify the magnitude and sources of stormwater ingress (including both infiltration and inflow) into the Picton sewerage system from both public (including Sydney Water's sewer) and private sewers;
 - (b) investigation and assessment of options to reduce industrial wastewater discharges to the sewerage system (including options to improve wastewater quality for reuse at these premises (including but not limited to irrigation of land, industrial reuse, toilet flushing)) at:
 - (i) the Ingham's Turkey processing facility;
 - (ii) the Wollondilly abattoir; and
 - (iii) any other trade waste customer.
- U2.3 The licensee must develop a draft project plan for the investigations that allows the licensee to meet the objective and scope stated in conditions U2.1 and U2.2, and which clearly outlines (and provides justification for) the project background, scope, methodologies used for each investigation and timeframes.

Environment Protection Licence

Licence - 10555



The licensee must submit the draft project plan to the EPA within 10 weeks of this Pollution Study being issued.

- U2.4 The licensee must finalise the project plan by addressing any written comments provided by the EPA and resubmit it to the EPA for approval within three weeks of receiving such comments.
- U2.5 The licensee must undertake the investigations in accordance with the objective and scope outlined in conditions U2.1 and U2.2 and the methodology and timelines in the EPA approved project plan (or any revisions to the project plan approved by the EPA in writing) and submit a detailed draft report on the investigations to the EPA by **31 December 2018** which must include (but not be limited to):
- An introduction and background
 - Description of methodologies used (including any monitoring, modelling and statistics)
 - Description of assumptions used in, and limitations of, the investigations
 - Results of stormwater ingress investigations specified in condition U2.2 (a), including (but not limited to) expression of outputs as:
 - o Percentages of total rainfall entering the wastewater system;
 - o Proportions of ingress attributed to infiltration and inflow; and
 - o Proportions of ingress entering through private (residential and commercial/industrial) and public assets.
 - Results of investigations at premises that discharge industrial wastewater to the sewerage system specified in condition U2.2 (b);
 - Detailed analysis and discussion of results, including (but not limited to) analysis of the benefits that could be achieved (in estimated reductions of inflow volumes to Picton Sewage Treatment Plant and resultant estimated reductions of effluent discharges to waterways during dry, average and wet weather flow conditions) through a range of source control options, including but not limited to:
 - o reducing stormwater inflow to the Sydney Water sewer;
 - o reducing stormwater infiltration to the Sydney Water sewer;
 - o reducing stormwater inflow to private sewers;
 - o reducing stormwater infiltration to private sewers;
 - o reducing industrial wastewater discharges to Sydney Water sewer; and
 - o a combination of these and any other identified options.
 - analysis of the feasibility and viability of each source control option (including but not limited to costs, challenges, opportunities and justification for whether the licensee should proceed or not proceed with each option)
 - Conclusions, including recommendations for a targeted program of source control works to reduce the volumes of stormwater and industrial wastewater flows into the Picton sewerage system (including details of each recommended option, summary of what actions are required and estimated implementation timeframes), where it is considered that this would be effective.
- U2.6 The licensee must finalise the draft report by addressing any written comments provided by the EPA and resubmit it to the EPA for approval within four weeks of receiving such comments.
- U2.7 The licensee must submit written progress reports to the EPA every 6 months from the date that this Pollution Study is issued until its completion, which must include (but not be limited to):
- (i) A summary of any investigations, plans, works and other activities that have been undertaken to meet the objective and scope of this Pollution Study as stated in conditions U2.1 and U2.2;
 - (ii) Tracking of progress against the timeframes included in the approved project plan towards meeting

Environment Protection Licence

Licence - 10555



the objectives and timeframes of this Pollution Study.

- U2.8 In addition to the reporting requirements of condition R5, the licensee must submit with each Annual System Performance Report:
- (i) details of any investigations, plans, works and activities that were undertaken as part of this Pollution Study during the reporting period, and
 - (ii) an outline of progress toward achieving the objectives of this Pollution Study.

Note: A Pollution Reduction Program is intended to be included on the licence for implementation of source control works to reduce the volumes of stormwater and industrial wastewater inflows into the Picton sewerage system based on the outcomes of this Pollution Study.

U3 Pollution Study: Investigations for additional wastewater recycling and reuse options for Picton sewage treatment system

- U3.1 The objective of this Pollution Study is to require the licensee to undertake a detailed investigation to identify opportunities for additional recycling and reuse of wastewater from the Picton sewage treatment system ("sewerage system"). This is to inform decisions about increasing off-site recycling and reuse of wastewater from the Picton sewerage system to reduce Picton Sewage Treatment Plant wastewater discharges to Stonequarry Creek and the Hawkesbury-Nepean river system.

Note: The study is part of an Effluent Management Program aimed at managing additional wastewater flows into the Picton sewerage system due to growth in the region.

- U3.2 The scope of these investigations must include (but not be limited to) the following options for reuse and recycling of wastewater from the Picton sewerage system:
- (a) Additional agricultural irrigation schemes and/or water reuse applications undertaken by Sydney Water;
 - (b) Irrigation of other agricultural land;
 - (c) Irrigation of parks, gardens, sports fields, golf courses or other land uses, for example, Wilton Airport;
 - (d) Recycled wastewater schemes (dual reticulation) in new housing and commercial / industrial developments for uses such as toilet flushing, watering gardens etc;
 - (e) Industrial and/or manufacturing purposes (such as in cooling systems, process water, washing, fire protection, dust suppression etc);
 - (f) Sewer mining opportunities;
 - (g) Fire-fighting purposes; and
 - (h) Any other identified options.
- U3.3 The investigations outlined in condition U3.2 must not be limited to the Picton sewerage system catchment.
- U3.4 The licensee must develop a draft project plan for the investigations that allows the licensee to meet the objective and scope stated in conditions U3.1 and U3.2, and which clearly outlines (and provides justification for) the project background, scope, methodologies used for each investigation and timeframes.

The licensee must submit the draft project plan to the EPA within 10 weeks of this Pollution Study being

Environment Protection Licence

Licence - 10555



issued.

- U3.5 The licensee must finalise the project plan by addressing any written comments provided by the EPA and resubmit it to the EPA for approval within three weeks of receiving such comments.
- U3.6 The licensee must undertake the investigations in accordance with the objective and scope outlined in conditions U3.1 and U3.2 and the methodology and timelines in the EPA approved project plan (or any revisions to the project plan approved by the EPA in writing) and submit a detailed draft report on the investigations to the EPA by **31 December 2018** which must include (but not be limited to):
- An introduction and background
 - Description of methodologies used
 - Description of assumptions used in, and limitations of, the investigations
 - Detailed assessment, analysis and discussion of results of each wastewater recycling and reuse option specified in condition U3.2, including (but not limited to):
 - i) analysis of the benefits that could be achieved from each option expressed as:
 - an estimated reduction of wastewater discharge volumes to waterways from Picton Sewage Treatment Plant resulting from the diversion of treated wastewater for off-site reuse and recycling applications;
 - an estimated reduction of wastewater inflow volumes to the Picton Sewage Treatment Plant from extraction and use of sewage from the sewerage system and resultant reductions of effluent discharges to waterways;
 - any other identified benefit;
 - ii) analysis of the feasibility and viability of each option (including but not limited to costs, challenges, opportunities and justification for whether the licensee should proceed or not proceed with each option)
 - Conclusions, including recommendations for an implementation program of potential wastewater recycling and reuse applications (including details of each recommended option, summary of what actions are required and estimated implementation timeframes), where it is considered that this would be effective.
- U3.7 The licensee must finalise the draft report by addressing any written comments provided by the EPA and resubmit it to the EPA within four weeks of receiving such comments.
- U3.8 The licensee must submit written progress reports to the EPA every 6 months from the date that this Pollution Study is issued until its completion, which must include (but not be limited to):
- (i) A summary of any investigations, plans, works and other activities that have been undertaken to meet the objective and scope of this Pollution Study as stated in conditions U3.1 and U3.2;
 - (ii) Tracking of progress against the timeframes included in the approved project plan towards meeting the objectives and timeframes of this Pollution Study.
- U3.9 In addition to the reporting requirements of condition R5, the licensee must submit with each Annual System Performance Report:
- (i) details of any investigations, plans, works and activities that were undertaken as part of this Pollution Study during the reporting period, and
 - (ii) an outline of progress toward achieving the objectives of this Pollution Study.

Note: A Pollution Reduction Program is intended to be included on the licence for the implementation of a program of off-site wastewater recycling and reuse applications to reduce Picton Sewage Treatment Plant wastewater discharges to Stonequarry Creek and the Hawkesbury-Nepean river system.

Environment Protection Licence

Licence - 10555

U4 Pollution Study: Trial pilot-scale constructed wetlands project

- U4.1 The objective of this Pollution Study is to require the licensee to undertake a trial project at the Picton STP that involves the operation of pilot-scale constructed wetland(s) and a detailed investigation to assess the treatment performance, effectiveness and cost of these wetlands in reducing pollutant concentration levels in the treated wastewater discharges produced at Picton STP and discharged to Stonequarry Creek and the Hawkesbury-Nepean river system. The investigation findings will inform consideration of the feasibility of implementing full-scale constructed wetlands at the Picton STP and/or at the licensee's other STPs.

Note: The study is part of an Effluent Management Program aimed at managing additional wastewater flows into the Picton sewerage system due to growth in the region.

- U4.2 The licensee must develop a draft project plan for the project that allows the licensee to meet the objective stated in condition U4.1 and which clearly outlines (and provides justification where applicable):
- (i) the project background and scope;
 - (ii) the options analysis of all constructed wetland options considered for this project and the justification for the preferred option(s) to be trialled;
 - (iii) key tasks and deliverables in relation to the construction and operation of the pilot-scale constructed wetland(s);
 - (iv) an outline of the assessments, methodologies (e.g. monitoring), data, information and analyses required for the investigation;
 - (v) project timeframes for the tasks required to complete this Pollution Study and key project milestones; and
 - (vi) the process / analysis required for potentially applying the findings of this trial to full-scale implementation of constructed wetlands at the Picton STP and/or at the licensee's other STPs.

The licensee must submit the draft project plan to the EPA within eight weeks of the Pollution Study being issued.

- U4.3 The licensee must finalise the project plan by addressing any written comments provided by the EPA and resubmit it to the EPA within three weeks of receiving such comments.

Note: A further Pollution Study and/or Reduction Program will be included on the licence for implementation of the trial project following finalisation of the project plan.

9 Special Conditions

E1 Sydney Water Dry Weather Sewage Overflow Response Report

E1.1 Report Scope

Environment Protection Licence

Licence - 10555



a) The Licensee must provide a single, combined Report (“the Report”) on the adequacy of the systems, resources, processes, procedures, practices and training it has in place for its reticulation system as at the date which this condition is included in the Licence to comply with:

1. Condition O3.1 of the Sydney Water Environment Protection Licences (EPLs) on responding to sewer overflows; and
2. Part 5.7 of the Protection of Environment Operations Act 1997 (“the Act”) regarding the notification of incidents; and
3. Part 5.7A of the Act and Part 3A POEO (General) Regulation regarding requirements for a Pollution Incident Response Management Plan (PIRMP).

b) The Report is to identify any improvements that the Licensee should make so that its response to sewer overflows from its reticulation system complies with the regulatory requirements identified within this condition.

E1.2 Independent Expert

- a) The Report must be prepared by a suitably qualified and experienced independent environmental expert (the “Expert”).
- b) Details of three options on the Expert (and team members) proposed to be engaged by the Licensee must be provided to the EPA's Regional Manager Operations - Metropolitan Infrastructure for written approval by 12 April 2019.
- c) The Licensee must ensure when selecting the proposed Expert and their team for b) above that there is expertise in each team across all the areas of human health, aquatic and terrestrial ecology, water science, laboratory operations, sewage and environmental engineering, logistics and systems auditing. For the purposes of this condition, the Licensee must provide the EPA the following details for the Expert and each proposed team member:

1. name;
2. contact details;
3. the area in which they have expertise;
4. relevant qualifications;
5. relevant experience;
6. availability.

- d) The Licensee must engage an Expert and team that is approved by the EPA’s Regional Manager Operations - Metropolitan Infrastructure in writing by two weeks after approval is received from the EPA.
- e) Once engaged, the Licensee must require the Expert and their team to meet with the EPA to discuss the background and context for the Report.

E1.3 Report Requirements

- a) The Licensee must provide a single combined Report which examines, makes recommendations to improve and provides conclusions about the effectiveness of the licensee's procedures and processes with respect to its response to sewer overflows from its reticulation system.

Environment Protection Licence

Licence - 10555



b) The Report must detail the current systems, resources, processes, procedures, practices and training used by the Licensee on or around the time that this condition was included in this Licence.

c) The Licensee must also require the Expert to provide as part of the final Report:

1. a list of all the documents considered, including copies of any of the Licensee's procedures specifically referenced in the Report;
2. names, roles and organisations of personnel interviewed by the Expert (including their team members) in preparing the Report.

d) The report must consider the following:

E1.4 *Notifications*

- a. process for notification of incidents to the EPA to meet the requirements of Part 5.7 of the Act;
- b. process for determining incidents that trigger the statutory requirement for notification to the EPA per Part 5.7 of the Act;
- c. process for providing information to comply with Part 5.7 of the Act;
- d. process for providing further information to the EPA following the initial self-report in an accurate and timely manner to comply with Part 5.7 of the Act;
- e. the practices used to implement the processes under a – d in a timely and consistent manner;

E1.5 *Incident Management*

- f. roles and responsibilities of personnel involved in incident management including, but not limited to, overseeing of incident response, coordination and implementation of on ground response, liaison with and communication to the EPA, provision of information to the public, and whether roles and responsibilities are sufficiently clear;
- g. availability, accessibility and scheduling of suitable plant and personnel resources for all aspects of managing the sewer overflow;
- h. process and methodology used to allocate priority when responding to sewer overflows, including relationships to other responses being undertaken by the Licensee;
- i. whether the systems, resources, processes, procedures, practices and training in place for monitoring and auditing current processes require improvement and if so, the reasons, to meet the requirements of Condition O3.1 of the EPLs;

E1.6 *Rectification of faults and sewage containment*

- j. processes or procedures for response to, and rectification of, faults;
- k. adequacy of processes and procedures for achieving timely and satisfactory fault rectification;
- l. processes or procedures for implementation of sewage containment strategies;
- m. adequacy of processes and procedures for achieving timely implementation of sewage containment strategies;
- n. adequacy and effectiveness of the methods for, and execution of, sewage containment, to meet the requirements of Condition O3.1 of the EPLs;

E1.7 *Management of environmental and health impacts resulting from sewer overflows*

- o. assessment methodology for determining environmental and health impacts resulting from sewer overflows;

Environment Protection Licence

Licence - 10555



- p. assessment methodology for determining appropriate clean-up strategies to remediate the environment and reduce risk to public health;
- q. processes or procedures for achieving timely implementation of clean-up strategies;
- r. types of environmental remediation works utilised to clean-up after sewer overflows;
- s. effectiveness of environmental remediation works utilised to clean-up after sewer overflows;
- t. types of remediation works utilised for reducing public health risks from sewer overflows;
- u. effectiveness of remediation works utilised for reducing public health risks from sewer overflows;
- v. assessment methodology for determining the adequacy of clean-up strategies; and
- w. environmental impact of clean-up strategies, to meet the requirements of Condition O3.1 of the EPLs;

E1.8 *Risk communication*

- x. methods used to communicate potential health risks from sewer overflows to potentially affected parties to meet the requirements of Condition O3.1 of the EPLs. This may include but is not limited to signage, door knocking, written notification and physical barriers;
- y. processes for achieving timely implementation of communication referred to in (x) to meet the requirements of Condition O3.1 of the EPLs;
- z. adequacy and appropriateness of communication methods deployed; and

E1.9 *Training*

- aa. adequacy of the Licences' requirements for staff competency in relation to incident management, fault rectification, assessment of environmental and health risks and undertaking remediation works, including staff training provided by the Licensee.

E1.10 **Report**

- a) The Licensee must submit to the EPA's Regional Manager Operations - Metropolitan Infrastructure a draft Report ("Draft Report"), being a report prepared by the Expert (and their team) covering all of the matters described in conditions E1.3-E1.9, six months after the Expert is engaged (condition E1.2 d).
- b) The Licensee must ensure the Draft Report is updated to address any comments made by the EPA.
- c) The Licensee must submit to the EPA's Regional Manager Operations - Metropolitan Infrastructure the final Report one month after the EPA's comments have been provided (condition E1.10 b).

E1.11 **Implementation of the Report Recommendations**

- a) The Licensee must submit an Implementation Plan to the EPA's Regional Manager Operations - Metropolitan Infrastructure by no later than two months after acceptance of the final Report by the EPA (condition E1.10 c).
- b) The Implementation Plan must:
 - 1. identify what actions the Licensee proposes to take in response to the Report from the Expert;
 - 2. propose a timeframe for these action(s); and
 - 3. provide an explanation for the Licensee's proposals where there is any variance from the recommendations in the final Report.

Environment Protection Licence

Licence - 10555

E2 Special Dictionary

E2.1

Term	Definition
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
average concentration limit	Means the average of twelve monitoring test results undertaken during the reporting period.
average dry weather flow (ADWF)	Means the average flow at a point calculated or measured over a 24 hour period in dry weather.
Biosolids	Has the same meaning as in Schedule 1, Part 3 of the Protection of the Environment Operations Act 1997.
Biosolids Guidelines	Means the "Environmental Guidelines: Use and disposal of biosolids products" published by the EPA November 1997, or any subsequently updated guidelines which replace this publication.
Bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
catchment	Catchment boundaries are marked on the system map.
cfu	Means colony forming units.
choke	Means a full or partial blockage in a sewer pipe that results in sewage being discharged to the environment. A choke may be caused by structural collapse of the sewer pipes, tree roots, debris or siltation.
condition	Means a condition of this licence.
directed overflow	Means a directed overflow structure within the reticulation system.
directed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
dry weather	Dry weather occurs when less than 10 millimetres of rainfall has been measured at a rain gauge in the catchment of the sewage treatment system during a 24 hour period (where there is no rain gauge in the catchment, at the rain gauge closest to the centre of the catchment). Dry weather SPS discharge occurs when less than 10mm rainfall has been measured at a rain gauge in the catchment of the SPS during a 24 hour period (where there is no rain gauge in the catchment at the rain gauge closest to the SPS).
dry weather overflow	Means an overflow in the reticulation system not caused by wet weather, as determined by the hydraulic sewer system model.
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.

Environment Protection Licence

Licence - 10555

emission factor	In relation to load-based licensing, means the level of emissions expected to be generated relative to another characteristic of the activity.
harm	Has the same meaning as in the Protection of the Environment Operations Act 1997.
kL	Means kilolitre.
L/s	Means litres per second.
leakage	Overflows caused by the exfiltration of sewage from faults, such as cracks, in sewer pipes to the surrounding environment.
licence issue date	Means the date of the issue of this licence, or if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
mL	Means millilitres.
ML	Means megalitres.
node	Is a point in the hydraulic sewer system model that represents one or more overflows in the same catchment.
offensive odour	Has the same meaning as in the Protection of the Environment Operations Act 1997.
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system. Overflows may occur as directed overflows or uncontrolled overflows.
Partial disinfection	Means a discharge of sewage or effluent from an STP that occurs when the flow rate of sewage at the influent point of the STP equals or exceeds the rate specified in condition O6.3.
Partial treatment discharge	Means a discharge of sewage or effluent from an STP that occurs when the flow rate of sewage at the influent point of the STP equals or exceeds the rate specified in condition O6.3 for Bondi, Malabar and North Head STPs only.
performance acceptance criteria	In relation to hydraulic sewer stem model, means the standard of accuracy (sometimes called the "goodness of fit") to be achieved when observations of a particular performance indicator are compared to the results predicted by the model.
reticulation system	Means that part of the sewage treatment system which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), access chambers, vent shafts, directed overflow structures and sewage pumping stations, but does not include the sewage treatment plant.
SCAMP	Sewer Catchment Asset Management Plan.
sewage	Means all material received in the reticulation system.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.

Environment Protection Licence

Licence - 10555

sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
sub-catchment	Sub-catchment boundaries are marked on the system map.
ten year rainfall time series data	Means the rainfall data for the period 1985 to 1994 as used in the EISs.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the sewerage system.
ug/L	Means micrograms per litre.
uncontrolled overflow	Means an overflow from any part of the reticulation system that is not a directed overflow. Leakage or overflows from access chambers are examples or uncontrolled overflows.
waters	Has the same meaning as in the Protection of the Environment Operations Act 1997.
waterways	Means the whole or any part of any river, stream, lake, lagoon, swamp, wetlands, natural or artificial watercourse, dam or tidal waters (including the sea), but does not include watercourses that are dry at the commencement of the overflow, or underground pipes, channels or gutters designed to receive or pass rainwater.
wet weather	Wet weather occurs when 10 millimetres or more of rainfall has been measured at a rain gauge in the catchment of the sewage treatment system during a 24 hour period (where there is no rain gauge in the catchment, at the rain gauge closest to the centre of the catchment).
wet weather overflow	Means an overflow in the reticulation system caused by wet weather as determined by the hydraulic sewer system model.

Environment Protection Licence

Licence - 10555

Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Licence

Licence - 10555

flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

Environment Protection Licence

Licence - 10555



TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Neale Philip

Environment Protection Authority

(By Delegation)

Date of this edition: 30-June-2000

Environment Protection Licence

Licence - 10555

End Notes

- 1 Licence varied by notice 010628, issued on 04-Jul-2000, which came into effect on 29-Jul-2000.
- 2 Licence fee period changed by notice 1011799 on 28-Sep-2001.
- 3 Licence varied by notice 1005279, issued on 22-Oct-2001, which came into effect on 16-Nov-2001.
- 4 Licence varied by notice 1017899, issued on 27-Jun-2002, which came into effect on 28-Jun-2002.
- 5 Licence varied by notice 1018896, issued on 19-Aug-2002, which came into effect on 19-Aug-2002.
- 6 Licence varied by notice 1021142, issued on 23-Dec-2002, which came into effect on 17-Jan-2003.
- 7 Licence varied by notice 1032953, issued on 22-Mar-2004, which came into effect on 02-Apr-2004.
- 8 Licence varied by notice 1047036, issued on 29-Jun-2006, which came into effect on 29-Jun-2006.
- 9 Licence varied by notice 1092453, issued on 05-Nov-2008, which came into effect on 05-Nov-2008.
- 10 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 11 Licence varied by notice 1102718, issued on 25-Jun-2009, which came into effect on 25-Jun-2009.
- 12 Licence varied by admin corrections to annual return, issued on 02-Jul-2009, which came into effect on 02-Jul-2009.
- 13 Licence varied by notice 1116042, issued on 02-Jul-2010, which came into effect on 02-Jul-2010.
- 14 Licence varied by notice 1122396, issued on 09-Dec-2010, which came into effect on 09-Dec-2010.
- 15 Licence varied by notice 1128723, issued on 02-Jun-2011, which came into effect on 02-Jun-2011.
- 16 Licence varied by notice 1129098, issued on 23-Jun-2011, which came into effect on 23-Jun-2011.
- 17 Licence varied by notice 1505104 issued on 28-Jun-2012
- 18 Licence varied by notice 1518840 issued on 25-Jun-2014
- 19 Licence varied by notice 1528924 issued on 23-Mar-2015

Environment Protection Licence

Licence - 10555



20	Licence varied by notice	1530604 issued on 21-May-2015
21	Licence varied by notice	1538208 issued on 19-Feb-2016
22	Licence varied by notice	1539159 issued on 28-Jun-2016
23	Licence varied by notice	1542296 issued on 27-Jul-2016
24	Licence varied by notice	1544237 issued on 01-Sep-2016
25	Licence varied by notice	1557301 issued on 10-Oct-2017
26	Licence varied by notice	1572511 issued on 30-Nov-2018
27	Licence varied by notice	1577328 issued on 25-Mar-2019
28	Licence varied by notice	1580214 issued on 01-Jul-2019
29	Licence varied by notice	1586316 issued on 04-Oct-2019
30	Licence varied by notice	1587679 issued on 31-Oct-2019