Queensland Government

Department of
Environment and Heritage Protection

Enquiries Dayna Claybourn
Telephone 4121 1615
Your reference
Our reference 101/0008358

29 July 2014

South Burnett Regional Council
PO Box 336
KINGAROY QLD 4610

Attention: Mr Allen Christensen

Dear Mr Christensen

RE: Amendment of Environmental Authority EPPR02378514 previously SPCE05950113

I refer to your email correspondence dated 16 June 2014 requesting minor amendments be made to the environmental authority SPCE05950113 for the new Kingaroy Sewage Treatment Plant.

The Department of Environment and Heritage Protection (EHP) has considered your request and has agreed to amend the environmental authority to correct the monitoring frequency for dissolved oxygen and electrical conductivity at monitoring point M3 from daily to weekly. EHP and South Burnett Regional Council (SBRC) previously agreed on weekly monitoring, however the environmental authority issued to SBRC indicated a daily monitoring requirement.

EHP wishes to advise that a decision has been made under s211 of the *Environmental Protection Act 1994* to amend the above environmental authority to correct the monitoring frequencies accordingly.

Please note that environmental authority SPCE05950113 has been renumbered to EPPR02378514 and is enclosed. In future, please quote environmental authority EPPR02378514 when making reference to the new Kingaroy STP approval.

Should you have any further enquiries, please contact Dayna Claybourn, A/Principal Environmental Officer of the department on telephone 4121 1615.

Yours sincerely

Tim Brain
Manager (Southern Region, East)
Environmental Services and Regulation
Department of Environment and Heritage Protection

Department of Environment and Heritage Protection
102 Lennox Street, PO Box 145, Maryborough, QLD 4650
Telephone: (07) 4121 1889
Website www.ehp.qld.gov.au
ABN 46 640 294 485

Permit[1]

Environmental Protection Act 1994

Environmental authority

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPPR02378514

Environmental authority takes effect on **completion of the commissioning** of the Kingaroy Waste Water Treatment Plant and you have given written notification to the administering authority of the occurrence.

The first annual fee is payable within 20 business days of the effective date.

The anniversary date of this environmental authority is the same day each year as the effective date. An annual return and the payment of the annual fee which is currently $26,049.00 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
South Burnett Regional Council	41 Glendon Street KINGAROY QLD 4610

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
63-(1e) Sewage treatment >10000 to 50000EP	Hodges Road Kingaroy QLD 4610 - Lot 1 Plan RP84673 and Lot 22 FY2137

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

T. B

Signature

30 July 2014

Date

Tim Brain
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Dayna Claybourn
ES-RSD-SER-Wide Bay Burnett
PO Box 145
MARYBOROUGH QLD 4650
Phone: (07) 41211889
Fax: (07) 41211650
Email: dayna.claybourn@ehp.qld.gov.au

Conditions of environmental authority

CONDITIONS	
GENERAL	
G1	**Activities** conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. Inflows less than or equal to the **peak design capacity** of 100 L/s must receive full biological treatment and must comply with the release limits stated in *Table 4 – Surface Water Release Limits.* 2. Inflows above the **peak design capacity** of 100 L/s may be **bypassed**. During bypass events, inflows to the biological treatment process must not exceed the **peak design capacity** of 100 L/s plus 25% or 125 L/s and must comply with the release limits stated in *Table 4 – Surface Water Release Limits.*
G2	All reasonable and practicable **measures** must be taken to prevent the likelihood of environmental harm being caused.
G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
G4	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
G5	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results which must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request and in the format requested.
G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
G7	A receiving environment monitoring program must be designed and implemented by **appropriately qualified persons** to monitor the effects of the **activity** on **waters** and land subject to treated effluent irrigation. The implementation of the receiving environment monitoring program must commence on the day the environmental authority takes effect.
G8	The receiving environment monitoring program required by condition G7, must include at least the following: a) a description of potentially affected receiving **waters** including key communities and background water and sediment quality characteristics based on accurate and reliable monitoring data that takes into consideration any temporal variation (e.g. seasonality); and b) a description of applicable **environmental values** and sediment and water quality objectives to be achieved; and c) any relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment within which the Receiving Environment Monitoring Program is proposed; and

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d) water and sediment quality targets within the receiving environment to be achieved, and clarification of contaminant concentrations or levels indicating adverse environmental impacts during the monitoring program; and

e) the monitoring program should be developed using the **administering authority's** *Receiving Environment Monitoring Program Guideline (EM1260)* 2014 or later version; and

f) monitoring of surface **waters** must include, but not be limited to, the quality characteristics for the frequency specified at the monitoring points in accordance with *Table 1 – Environmental Monitoring Requirements* and *Table 2 – Environmental Monitoring Point Locations* and the associated requirements;

Table 1— Environmental Monitoring Requirements[1]

Monitoring Point Names	**Quality characteristic (units)**[2]	**Minimum frequency**[3]
EM1, EM2, EM3	pH (pH units)	2 monthly
EM1, EM2, EM3	Temperature	2 monthly
EM1, EM2, EM3	**Total Nitrogen** (mg/L as N)	2 monthly
EM1, EM2, EM3	Ammonia (mg/L as N)	2 monthly
EM1, EM2, EM3	Nitrates (mg/L)	2 monthly
EM1, EM2, EM3	**Total Phosphorus** (mg/L as P)	2 monthly
EM1, EM2, EM3	Filterable reactive Phosphorus (mg/L)	2 monthly
EM1, EM2, EM3	Dissolved Oxygen (mg/L)	2 monthly
EM1, EM2, EM3	Electrical Conductivity (µS/cm)	2 monthly

Associated requirements

1. Where gauging heights are not maintained or are removed, alternative methods of estimating flow should be adopted.
2. Indicators for all parameters shall be assessed from individual grab samples.
3. Sampling must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.

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Table 2— Environmental Monitoring Point Locations

Monitoring Point Names	Description	Monitoring location GDA94 Decimal degrees	
		Latitude	*Longitude*
EM1	Kingaroy Creek upstream of Hodges Road	26°33'20.2500"	151°49'03.6305"
EM2	Stuart River downstream of the sewage treatment plant discharge, immediately upstream of Weens Bridge	26°30'45.9060"	151°46'29.7540"
EM3	Stuart River upstream of the sewage treatment plant discharge, Burrandowan Road – Stuart River Rest Area	26°35'08.9221"	151°47'26.8263"

g) soil assessments must be conducted to ensure that the capacity of the land to assimilate nitrogen, phosphorus and salts is not exceeded. The soil assessments must include, but not be limited to:
   - soil and sub-soil analysis, including assessment of the soils from representative locations, including type, structure, pH, phosphorus adsorption level and capacity, nutrient status, salinity and sodicity, and cation exchange capacity of the irrigation release areas; and
   - determination of the quantity and quality of contaminants applied to the soils from the treated effluent irrigation; and
   - periodic re-assessment including modelling of the water, nutrient and salt balances and irrigation rate and return period to ensure sustainable use of the irrigation area; and
   - reporting of monitoring results and an assessment of the impact of the releases on the irrigation areas;

h) monitoring of land subject to treated effluent irrigation must include, but not be limited to, the requirements in *Table 3 – Soil Impact Monitoring* and the associated requirements.

Table 3 - Soil Impact Monitoring[1]

Parameter	Frequency
Total Nitrogen	Annually
Total Phosphorus	Annually
Electrical Conductivity	Annually
pH	Annually
Exchangeable Sodium Percentage	Annually

Associated requirements

1. Monitoring shall include the taking of top soil and sub-soil samples from at least one sample location within each irrigation area (that is representative of the soil type within that area).

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G9	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses. The only exception to this condition is for *in situ* monitoring of: a) pH b) temperature c) turbidity d) free chlorine residual e) dissolved oxygen f) electrical conductivity.
G10	An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding financial year.
G11	**You** must record the following details for all environmental **complaints** received: a) date and time complaint was received b) name and contact details of the complainant c) nature of the complaint d) investigations undertaken e) conclusions formed f) actions taken.
G12	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a **complaint** not considered by the **administering authority** to be frivolous or vexatious, of **environmental nuisance** arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
G13	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency 2. establish and maintain control **measures** that minimise the potential for environmental harm 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition 4. ensure plant, equipment and **measures** are operated in a proper and effective manner 5. ensure that staff are trained in and aware of their obligations under the *Environmental Protection Act 1994* 6. ensure that reviews of environmental performance are undertaken at least annually.
AIR	
A1	Odours or airborne contaminants must not cause environmental nuisance at a **sensitive place**.
WATER	
WT1	The only contaminants to be released to surface **waters**, excluding **bypass** releases covered by water conditions WT4 and WT5, are from the sewage treatment plant to **waters** described as Kingaroy Creek at release point M3 in accordance with *Table 4—Surface water release limits* and the associated requirements, *Table 5 – Monitoring and release point locations* and Map 1.

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Table 4—Surface water release limits[8]

Release Point Name	Quality characteristic (units)	Minimum[8]	Long-term Median[8]	Long-term 80th percentile[8]	Maximum[8]
M1	**BOD5** (mg/L)[1]	-	-	20	30
M1	Total Suspended Solids (mg/L)	-	-	20	30
M1	**Total Nitrogen** (mg/L as N)[2,3]	-	10	20	30
M1	Ammonia (mg/L as N)	-	1	3	5
M1	**Total Phosphorus** (mg/L as P)[2]	-	3	6	9
M1	pH (pH units)	6.5	-	-	8.5
M2	Annual volume (dry weather) (ML)[4]	-	-	-	1095
M2	Faecal Coliforms (CFU/100mL)[6]	-	1000	4000	-
M2	Enterococci[5] (primary/secondary)	-	-	-	-
M3	Free Chlorine Residual (mg/L)[7]	-	-	0.5	-
M3	Dissolved Oxygen (mg/L)	2	-	-	-
M3	Electrical Conductivity (µS/cm)	-	-	-	-

Associated requirements

1. **COD** may be monitored as an alternative to **BOD5** once a reliable correlation has been determined through analysis of a minimum number of 24 wastewater samples over a minimum period of 12 months and with the agreement of the **administering authority.**
2. Indicators for TN and TP must be done as 24 hour flow weighted composite samples.
3. NOx and Filterable Reactive Phosphorus (FRP) should also be measured whenever TN is monitored.
4. **Annual Volume** must be calculated on a rolling weekly basis and using the formula detailed in the definitions.
5. Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water. Limits should be set based on the level of recreational use of receiving **waters** – either primary or secondary recreation. E.coli counts may be more relevant for small plants where recreational use in receiving waters is unlikely.
6. To be assessed using five individual grab samples taken not less than 30 minutes apart. Four out of five samples taken on the day shall have a Faecal Coliform count less than 4000 CFU/100mL. The median of the samples taken on the day shall have a Faecal Coliform count less than 1000 CFU/100mL. Samples for Faecal Coliforms and Enterococci are to be taken in duplicates and analysed concurrently. Enterococci limits are to be determined through analysis of waste water samples over a period of 24 months and with the agreement of the administering authority in replacement of Faecal Coliforms.
7. Limits for free chlorine residual concentrations are set considering potential toxicity to the receiving environment, mixing zones and practical methods for treatment and measurement.
8. Sampling must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.

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Table 5 – Monitoring and release point locations

Release Point Names	Description	Monitoring location GDA94 Decimal degrees	
		Latitude	*Longitude*
M1	Between outlet of the secondary clarifiers and chlorination plant	26°33'07.4620"	151°49'07.2290"
M2	Outlet of the chlorination chamber	26°33'09.8988"	151°48'42.1864"
M3	Outlet of the Final Pond	26°33'11.2473"	151°48'38.3470"
M4	Inlet to the irrigation lagoons	26°33'09.7808"	151°49'06.1950"
M5	Class A Recycled Effluent	26°33'04.4170"	151°49'07.1302"

WT2 Monitoring of contaminant releases to waters excluding bypass releases covered by water condition WT5 must be undertaken in accordance with *Table 6—Monitoring frequency* and the associated monitoring requirements and records of the results must be kept.

Table 6—Monitoring frequency

Quality Indicator (units)[1]	Measurement (units)[6]	Minimum frequency[1,2]	Monitoring location[3]
BOD5 (mg/L)	(mg/L)	Weekly	M1
Total Suspended Solids	(mg/L)	Weekly	M1
Volume (inflow[4])	(ML)	Daily	M1
Volume (outflow[5])	(ML)	Daily	M2
Ammonia	(mg/L as N)	Weekly	M1
NOx[6]	(mg/L as N)	Weekly	M1
FRP[6]	(mg/L as P)	Weekly	M1
Total Nitrogen	(mg/L as N)	Weekly	M1
Total Phosphorus	(mg/L as P)	Weekly	M1
pH	N/A	Weekly	M1
Faecal Coliforms	(CFU/100mL)	Monthly[8]	M2
Enterococci[7]	(CFU/100mL)	Monthly[8]	M2
Free Chlorine Residual	(mg/L)	Weekly	M3
Dissolved Oxygen	(mg/L)	Weekly	M3
Electrical Conductivity	(µS/cm)	Weekly	M3

Associated monitoring requirements

1. Monitoring must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
2. Monitoring must be undertaken when the **activity** is in operation and samples must be taken during a release.
3. Release points/areas must be in accordance with Map 1.
4. Total inflow before bypass release point.
5. Total outflow is treated discharges and excludes those flows that are **bypassed**.
6. NOx and Filterable Reactive Phosphorus (FRP) should also be measured whenever TN is monitored.
7. Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water. Monitoring should be set based on the level of recreational uses of receiving **waters** – either primary or secondary recreation. E.coli counts may be more relevant for small plants where recreation is unlikely.
8. To be assessed weekly using 5 individual grab samples collected not less than 30 minutes apart. Samples for E coli (Faecal Coliforms) and Enterococci are to be taken in duplicates and analysed concurrently. Enterococci limits are to be determined through analysis of wastewater samples over a period of 24 months and with the agreement of the administering authority.

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WT3	In addition to WT1, the release to **waters** must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter, excluding **bypass** releases covered by water conditions WT4 and WT5.
WT4	**Bypass** releases must be screened prior to being released from release point BP1, in accordance with *Table 7 – Bypass release point description* and Map 2.

Table 7—Bypass release point description

Monitoring and Release Point Names	Description	Monitoring location GDA94 Decimal degrees	
		Latitude	***Longitude***
BP1	Bypass Discharge Point	26°33'06.7775"	151°49'11.7081"

WT5	The **administering authority** must be notified within 24 hours of any **bypass** release ceasing.
WT6	The following details must be recorded in relation to each **bypass** release: (a) the start time, date and duration of the release; (b) the estimated volume of the **bypass** release; (c) the level of treatment at the sewage treatment plant prior to discharge; (d) the cause of the release; and (e) any monitoring of the water quality released.
Contaminant and Release Reduction	
WT7	At least every two years treated water reuse measures to further reduce the release of contaminants to waters must be investigated. The investigations must include, but not be limited to: (a) implementation of cost effective re-use options; and (b) reporting to the administering authority of the outcomes of the investigations, additional or alternative treatment employed as a result and the current level of re-use, including justification where re-use options are not adopted.

LAND

L1 The only contaminants to be released to land are treated effluent in accordance with *Table 8 – Treated effluent release limits to irrigation area* and the associated requirements.

Table 8 - Treated effluent release limits to irrigation area[1]

Release Point Name [2,3,4]	Quality Characteristic (units)[2]	Minimum[2]	Median[2]	95th percentile	Maximum[2]	Minimum frequency [2,4]
M4	Volume (kL)[5]	-	-	-	-	Weekly
M4	E coli (CFU/100mL)[6]	-	-	1000	-	Weekly
M4	Electrical Conductivity (µS/cm)	-	-	-	-	Weekly
M4	Sodium Adsorption Ratio	-	-	-	-	Quarterly

Associated requirements

1. **Total irrigation area** 16.3 (ha) as outlined in attached plan in Map 3.
2. Monitoring must be in accordance with the **administering authority**'s Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
3. Releases of treated effluent must not be outside of the irrigation areas indicated on Map 3.
4. Monitoring must be undertaken when treated sewage effluent is being irrigated, unless irrigation has ceased for longer than the relevant parameters specified minimum frequency (e.g. if E coli was only required to be monitored once a week, then an E coli sample would not be required after the first week following cessation of the release).
5. Calculated as the volume of treated effluent released to the irrigation areas indicated on Map3.
6. Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water, E. coli counts may be more relevant for land irrigation where recreation is unlikely.

L2 Treated effluent released to land must be done in accordance with documentation that ensures:

a) drainage to groundwater and subsurface flows of contaminants to surface waters are minimised
b) surface pondage and run-off of effluent is prevented
c) degradation of soil structure is minimised
d) soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised
e) spray drift or overspray does not carry beyond effluent disposal areas
f) effluent disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake
g) sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors
h) ongoing sustainability of the irrigation area for the **activity**.

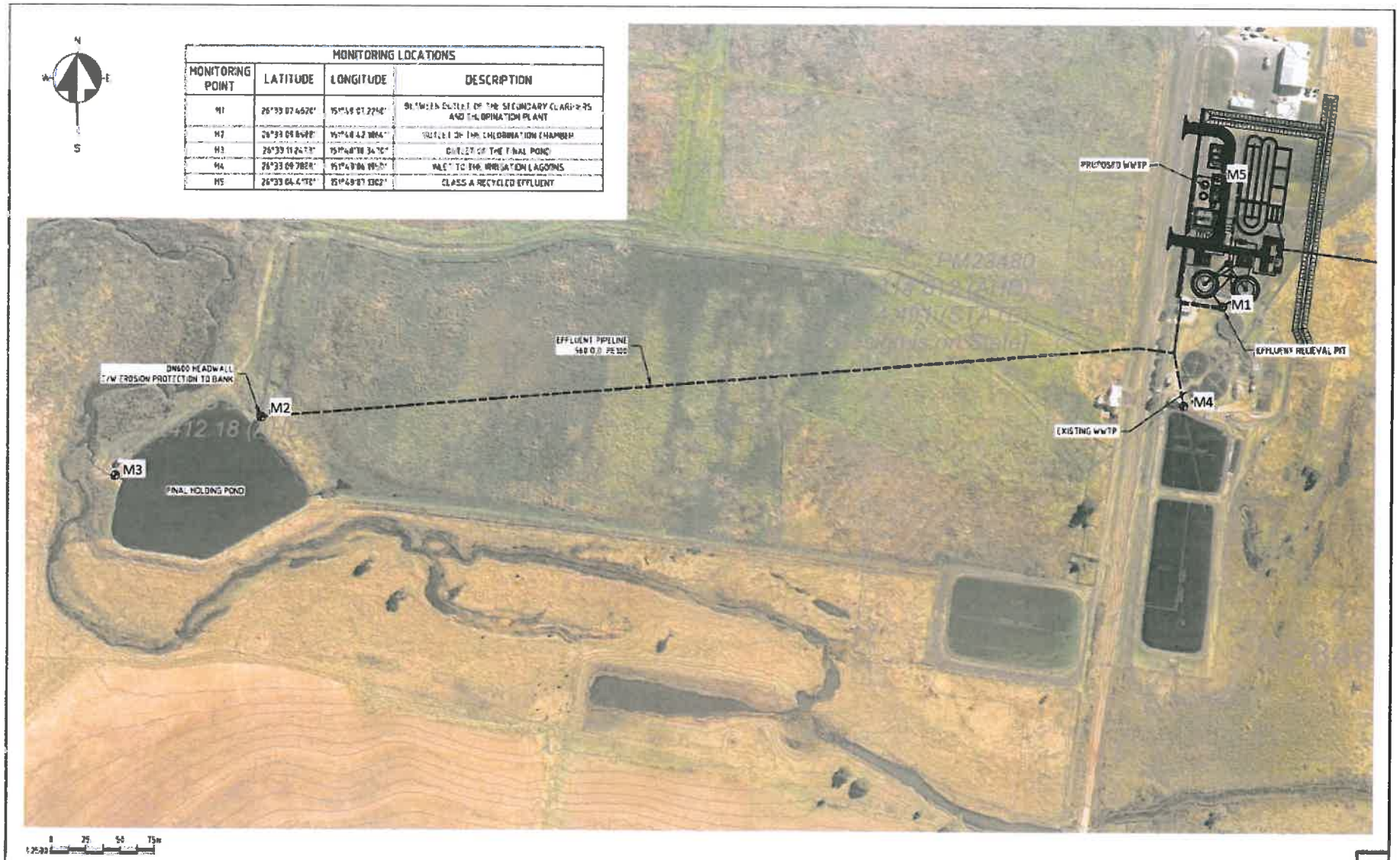
L3 When weather conditions or soil conditions preclude the release of treated sewage effluent to land, effluent must not be irrigated to land.

Third Party Provisions

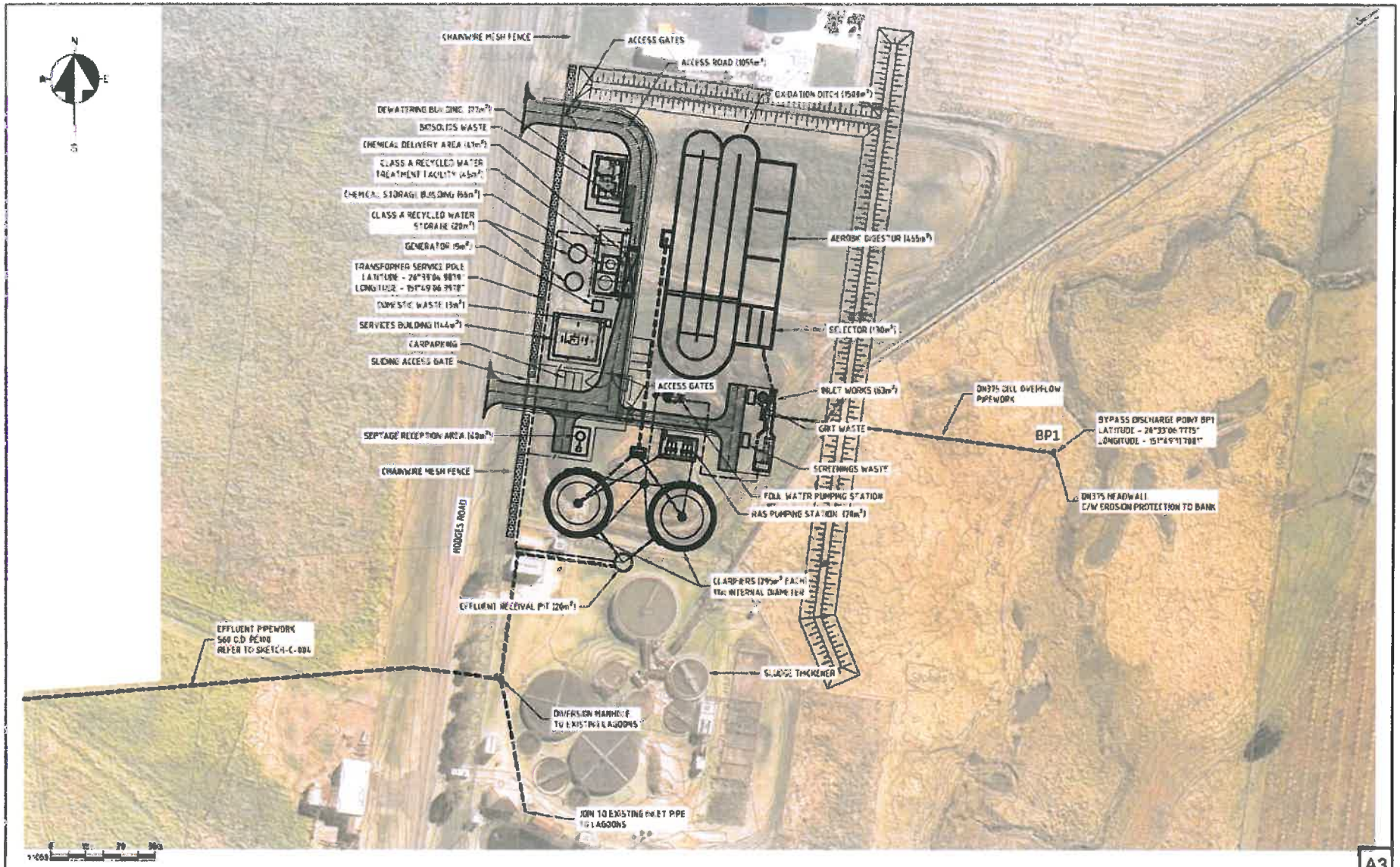
TP1 Treated sewage effluent may be removed from the site and used for an alternate purpose, with the written consent of any third party involved.

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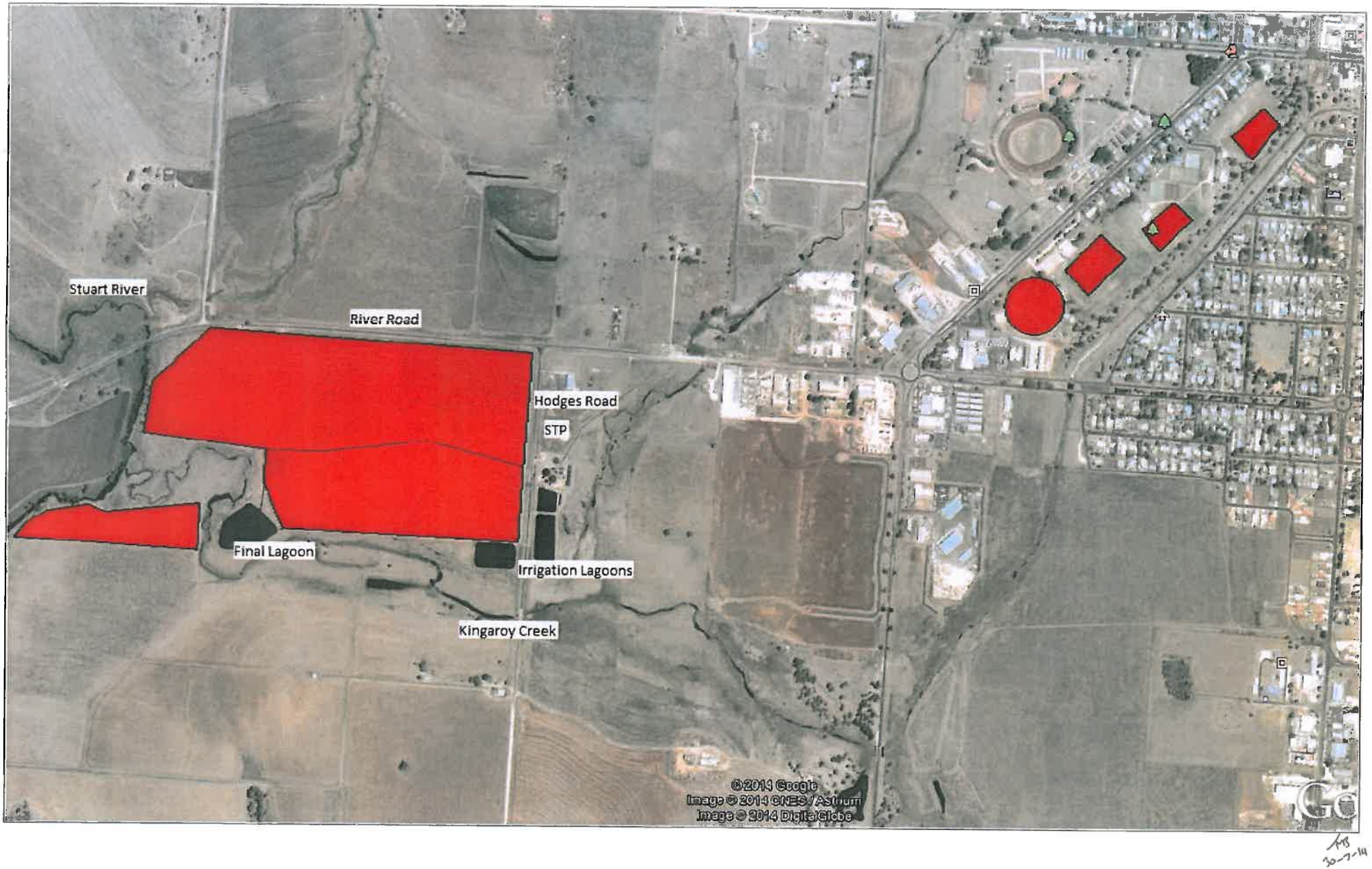
Map 1 – Monitoring and Release Points, M1 – M5



Map 2 – Bypass Release Point, BP1



Map 3 – Irrigation Areas (red shading)



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Definitions

Note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection or its successor or predecessors.

Annual volume means Annual Volume (dry weather) (ML) = Yearly sum of Daily Release Volume (ML) for all **dry weather days** / the number of **dry weather days** x 365.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Bypass means when the standard treatment processes of the plant do not occur as a result of wet weather and inflows that are in excess of the peak design capacity for inflow resulting in the release of untreated or partially treated effluent from the sewage treatment plant to the environment.

BOD5 means the 5 day biochemical oxygen demand determined using standard nitrification inhibited APHA methods (e.g. those used by **NATA** laboratories). This would be referred to as "carbonaceous" BOD.

COD means chemical oxygen demand determined using standard tests (e.g. those used by **NATA** laboratories).

Completion of the commissioning means the day that the works are complete and free of all defects and the plant satisfies all the requirements of the *Table 4 – Surface water release limits* and a certificate of commissioning completion has been issued by the Superintendent pursuant to the contract for construction.

Day means any 24 hour period.

Design Average Dry Weather Flow (DADWF) means the average dry weather flow of the treatment plant at the design horizon.

Dry weather day means a day which less than 1.0 mm of rainfall is recorded at any rainfall measuring station recognised by the Commonwealth Bureau of Meteorology within the sewered area connected to the sewage treatment plant, or if no such measuring station exists, at the nearest such station to the sewage treatment plant. The term also excludes days during which recorded rainfall over the 45 preceding days exceeds a cumulative rainfall of 35 mm.

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Environmental value as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Long Term (limit) means:

- for a parameter monitored monthly, a limit applied to 12 consecutive samples taken over a one year or 12 monthly period (on a rolling basis for limit calculations) where consecutive samples are taken on a monthly basis of approximately equal periods (plus or minus 2 days of 30 days).
- for a parameter monitored weekly, a limit applied to 52 consecutive samples taken over a one year or 52 week period (on a rolling basis for limit calculations) where consecutive samples are taken on a weekly basis of approximately equal periods (plus or minus 2 days of 7 days).
- for a parameter monitored daily, a limit applied to 365 consecutive samples taken over a one year or 365 day period (on a rolling basis for limit calculations) where consecutive samples are taken on a daily basis.

Measures has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

Median means the middle value, where half the data are smaller and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

NATA means National Association of Testing Authorities.

Peak design capacity means three times the Design Average Dry Weather Flow (DADWF) of 30.4 L/s plus septage flow of 8 L/s (equal to 100 L/s) at any time.

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Prescribed contaminants means contaminants listed within Schedule 9 of the *Environmental Protection Regulation 2008*.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public park or gardens; or
- for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2008*.

Short-term (limit) means:

- for a parameter monitored monthly, a limit is applied to five consecutive samples (on a rolling basis for limit calculations) where consecutive samples are taken on a monthly basis of approximately equal periods (plus or minus 2 days of 30 days).
- for a parameter monitored weekly, a limit is applied to five consecutive samples (on a rolling basis for limit calculations) where consecutive samples are taken on a weekly basis of approximately equal periods (plus or minus 2 days of 7 days).
- for a parameter monitored daily, a limit is applied to five consecutive samples (on a rolling basis for limit calculations) where consecutive samples are taken on a daily basis.

Total Nitrogen (TN) means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.

Total Phosphorus (TP) means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

WaTERS is the Water Tracking and Electronic Reporting System database formally known as the Point Source Database.

Wet Weather Day means a day which is not a dry weather day.

You means the holder of the environmental authority.

80th percentile means not more than one fifth, of the measured values are to exceed the stated release limit for the limit period, for example, no more than ten (10) for any fifty (50) consecutive samples for the long term period.

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END OF PERMIT