Permit

Environmental Protection Act 1994

Environmental authority EPPR00870313

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

Environmental authority number: EPPR00870313

Environmental authority takes effect upon the day of approval.

The anniversary day of this environmental authority remains **10 June**. The payment of the annual fee will be due each year on this day.

Environmental authority holder

Name	Registered address
GOLD COAST CITY COUNCIL	833 Southport Nerang Rd NERANG QLD 4211 Australia

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (g) more than 100,000EP	Merrimac STP Lot 3 on SP235726
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (g) more than 100,000EP	Elanora STP Lot 1 on SP236797
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Pimpama STP Lot 1 on SP236796, Lot 2 on SP236796, Lot 3 on RP903491
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a	Coombabah STP Lot 21 on SP235731

ABN 46 640 294 485

Queensland Government

Environmentally relevant activities	Locations
total daily peak design capacity of (g) more than 100,000EP	

Additional information for applicants

Environmentally relevant activities

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

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

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State*

Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Rebecca Griffiths
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date approved: 14/06/2022

Enquiries:
Utilities and Government Organisations Assessment
Department of Environment and Science

Phone: 1300 130 372
Email: palm@des.qld.gov.au

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)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Development Approval

This permit is not a development approval under the *Sustainable Planning Act 2009*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Heritage Protection to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority

Contents

Part 1 – Site specific conditions – All locations

Environmentally relevant activities	Locations
63-1(g) Sewage treatment >100,000EP	428 Pine Ridge Road, COOMBABAH – Lot 21 Plan SP235731 Boowaggan Road, MERRIMAC Lot 3 Plan SP235726 Pacific Highway, ELANORA – Lot 1 Plan SP236797
63-1(f) Sewage treatment 50000 to 100,000EP	Kerkin Road North, PIMPAMA – Lot 1 Plan SP236796, Lot 2 Plan SP236796, Lot 3 RP903491

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval:

Agency interest: General	
Condition number	**Condition**
1-G1	All reasonable and practicable **measures** must be taken to prevent the likelihood of environmental harm being caused.
1-G2	Other than as permitted by this environmental authority, the **release of a contaminant into the environment** must not occur.
1-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.

1-G4	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.
1-G5	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.
1-G6	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.
1-G7	An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding financial year.
1-G8	**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.
1-G9	Chemicals and fuels in containers of greater than 15 litres must be stored within a **secondary containment system.**
1-G10	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.
1-G11	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.

<table>
<tr><th colspan="2">Agency interest: Air</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>1-A1</td><td>Odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place.</td></tr>
<tr><th colspan="2">Agency interest: Water</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>1-WT1</td><td>Other than as permitted within this environmental authority, contaminants must not be released to any waters.</td></tr>
<tr><td>1-WT2</td><td>Contaminants must not be released to groundwater or at a location where they are likely to release to groundwater.</td></tr>
<tr><td>1-WT3</td><td>All permitted releases 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 as permitted within this environmental authority.</td></tr>
<tr><td>1-WT4</td><td>The total mass loads of Total Nitrogen and Total Phosphorus released from the wastewater treatment plants permitted by this environmental authority to release to the Gold Coast Seaway must not exceed any of the limits for Total Nitrogen and Total Phosphorus specified in Part 1 Table 1 – Combined Gold Coast Seaway mass load limits for Total Nitrogen and Total Phosphorus.

Part 1 Table 1 – Combined Gold Coast Seaway mass load limits for Total Nitrogen and Total Phosphorus

<table>
<tr><th>Contaminant</th><th>Release limit (kg/year)</th><th>Comment</th></tr>
<tr><td>Total Nitrogen</td><td>275,000</td><td>Annual load*</td></tr>
<tr><td>Total Phosphorus</td><td>220,000</td><td>Annual load*</td></tr>
</table>
* Mass loads calculated as described in condition 1-WT5, using 50th percentile data.</td></tr>
<tr><td>1-WT5</td><td>Total Nitrogen Annual Mass Load and Total Phosphorus Annual Mass Load must be calculated using 50th percentile data from Total Nitrogen and Total Phosphorus monitoring results respectively, and recorded as a graph showing the previous two years annual mass loads. Mass loads must be calculated using the following formulae:

Monthly mass load = (monthly median concentration) x
monthly average dry weather flow) x
number of days in the month</td></tr>
</table>

	Annual mass load = (annual **median** concentration) x (annual average dry weather flow volume) x 365
1-WT6	You must implement an on-going Water Quality Release Improvement Plan (WQRIP) for discharges from the Coombabah, Pimpama, Merrimac and Elanora Wastewater Treatment Plants. a) The WQRIP must outline the reasonable and practicable **measures** you intend to take to minimise the mass loads of **Total Nitrogen** and **Total Phosphorus** per **day** released into the receiving environment each year in accordance with best practice environmental management, including the actions necessary to produce effluents from the Wastewater Treatment Plants that have a **Total Nitrogen** concentration of 5 mg/L as Nitrogen as a 50th percentile and a **Total Phosphorus** concentration of 2 mg/L as a 50th percentile. b) A WQRIP progress report and an updated WQRIP (if required) must be prepared annually as a component of the annual report and include: i. Average daily loads released to **waters**, averaged over each month and over the year for **Total Nitrogen** and **Total Phosphorus**; ii. The reduction in **Total Nitrogen** and **Total Phosphorus** loads achieved over previous years; iii. The approximate proportion of effluent re-used rather than being discharged to **waters**; iv. Other practices and procedures undertaken during the preceding twelve (12) months to reduce the loads of **Total Nitrogen** and **Total Phosphorus** discharged to **waters**; and v. Practices and procedures that will be implemented to further reduce the loads of **Total Nitrogen** and **Total Phosphorus** released to **waters**.
1-WT7	You must, in consultation with the **administering authority**, implement a strategy to determine and report annually on the level of toxicity of contaminants discharged to **waters** from the Coombabah/Pimpama Plants (**RP2**), and the Merrimac/Elanora Plants (**RP1**), and implement **measures** to minimise the risk of environmental harm occurring from any toxicity.
1-WT8	A receiving environment monitoring program must be designed and implemented by **appropriately qualified persons** to monitor the effects of the **activity** on the receiving **waters**, being the “Southern Broadwater” and oceanic **waters** adjacent to the “seaway”.
1-WT9	The receiving environment monitoring program required by condition **1-WT8**, must include at least the following: a) You must either: i. Become and remain a participating member in the water quality strategies and monitoring programs relevant to the receiving **waters** and endorsed in writing by the **administering authority**, or ii. Carry out an equivalent study or an alternative receiving environment monitoring program (REMP) with the written agreement of the **administering authority**.

b) If you are participating in a relevant monitoring program, you are deemed by the **administering authority** to be a participating member in regional studies relevant to the receiving **waters** where you are identified as a contributing member to the regional studies of water quality and ecosystem health in a written statement to the **administering authority** from the authority carrying out the regional studies, and remain a contributing member.

c) If you are participating in a relevant monitoring program and you cease to be a participating member in in regional studies relevant to the receiving **waters**, within 30 days you must notify the **administering authority** in writing and submit a proposal to the **administering authority** that details how you will fulfil the requirements for carrying out a REMP.

d) If you are undertaking a REMP, the REMP must be designed by an **appropriately qualified person** to determine the effects of contaminants released into the receiving environment from the discharge of treated sewage effluent. It must include but not be limited to the following:

   i. description of potentially affected environment including key communities and ambient water quality;
   ii. description of water quality objectives and biological objectives to be achieved;
   iii. description of selected physico-chemical (including pH, **total nitrogen**, **total phosphorous**, dissolved oxygen saturation, water clarity analyses) and biological indicators (including chlorophyll 'a' and macro algal monitoring) and reasons for their inclusion;
   iv. the locations of monitoring stations including monitoring transects away from the outfall of the approved releases as well as any control locations;
   v. the proposed sampling depths;
   vi. the water quality characteristics of receiving **waters** to be determined;
   vii. the frequency of sampling and analysis;
   viii. any historical datasets to be relied upon; and
   ix. description of the statistical basis on which conclusions are drawn.

e) If you are undertaking a REMP, the REMP must:

   i. be carried out such that the experimental design allows for appropriate replication that will achieve an eighty percent (80%) chance of detecting an impact if one exists; and detection of at least a twenty five percent (25%) change from ambient conditions.
   ii. Consider at least the following:
      1. water quality criteria specified in the Australian Water Quality Guidelines;
      2. the Water EPP and any other Environmental Protection Policies enacted under Queensland's EP Act concerning the receiving **waters**;
      3. relevant reports produced as a consequence of the **administering authority's** Environmental Monitoring Programs;

	4. any other requirements arising due to the inclusion of the receiving **waters** within which the REMP is proposed, as part of any Marine Park and/or Fish Habitat Areas if applicable; 5. relevant reports prepared by other governmental or professional research organisations that relate to the receiving **waters** within which the REMP is proposed; and 6. spatial and temporal controls to exclude potential confounding factors. f) If you are undertaking a REMP, in conducting the REMP, you must report annually to the **administering authority** on the data and findings of the REMP. This report must include details of: i. the methodology used, ii. an analysis of the results obtained, iii. an assessment of the impact of contaminant discharge upon the receiving **waters** with respect to its water quality objectives and biological objectives, iv. an assessment of the level of change in ambient conditions, if any, of the receiving **waters**, and v. recommendations that can be drawn from the findings of the REMP, with respect to the prevention or minimisation of the impacts of the contaminant releases on the receiving **waters**.
1-WT10	**Bypass** releases must be screened prior to being released.
1-WT11	The **administering authority** must be notified within 24 hours of any **bypass** release ceasing.
1-WT12	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.
1-WT13	Monitoring of influent for the following metals and analytes likely to be found in the treated sewage wastes must be undertaken at a minimum of six monthly intervals (based on the type of wastes going to sewer in accordance with trade waste agreements in the catchments for each Wastewater Treatment Plant) - Boron, Aluminium, Arsenic, Cadmium, Calcium, Chromium, Cobalt, Copper, Magnesium, Sodium, Lead, Iron, Mercury, Nickel, Potassium, Selenium and Zinc.
1-WT14	a) The total quantity of effluent released to **waters** via the release points in *Part 1 Table 2 – Maximum permitted quantity of release*, must not exceed the respective quantities stated for release points in *Part 1 Table 2 – Maximum permitted quantity of release* on any **dry weather day** or on any one **day**.

b) The volume of effluent released to **waters** must be determined or estimated by an appropriate method for example a flow meter, and records kept of such determinations and estimates.

Part 1 Table 2 – Maximum permitted quantity of release

Release Point	Maximum release on any dry weather day	Maximum release on any one day
Total combined releases from **RP1** and **RP2**	183, 920 cubic metres	551, 760 cubic metres
Releases from **RP1**	86, 500 cubic metres	259, 500 cubic metres

Agency interest: Noise	
Condition number	**Condition**
1-N1	Other than as permitted within this environmental authority, noise generated by the **activity** must not cause **environmental nuisance** to any **sensitive place** or **commercial place.**

Agency interest: Land	
Condition number	**Condition**
1-L1	Other than as permitted within this environmental authority, contaminants must not be released to **land**.
1-L2	Treatment and management of acid sulfate soils must comply with the current edition of the Queensland Acid Sulfate Soil Technical Manual.
1-L3	Treated sewage effluent may be removed from the site and used for an alternate purpose, with the written consent of any third party involved.
1-L4	You are permitted to irrigate treated sewage effluent to landscaped areas of the approved place and public open space maintained by Gold Coast City Council in compliance with your Environmental Management Procedure and Recycled Water Management Plan, and with condition **1-L5**.
1-L5	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 prevented 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.
1-L6	When weather conditions or soil conditions preclude the release of treated sewage effluent to **land**, effluent must not be irrigated to **land**.
Agency interest: Waste	
Condition number	**Condition**
1-W1	All waste generated in carrying out the **activity** must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
1-W2	Sludge generated by the sewage treatment process must not be: (i) disposed of on site; or (ii) stored on site for any period of time longer than that necessary to dewater the sludge and prepare it for transport to and disposal at a proper and appropriate approved waste disposal/incineration/treatment facility that can lawfully accept such waste or to a facility that can lawfully and appropriately reuse, recycle or reprocess such waste. This condition does not apply to sludge stored in the short term and used for the carrying out of trials into recycling or reprocessing of the sludge for beneficial reuse.
1-W3	You may store sludge generated from the carrying out of the **activity** at the approved place in circumstances that would reasonably constitute emergency circumstances, for example, where contractors are unable to transport and dispose of the sludge. This condition has force and effect subject to compliance with conditions **1-W4** and **1-W5**.
1-W4	As soon as practicable before storing any sludges at the approved place, you must notify the **administering authority** in writing of the emergency storage.
1-W5	The notification of emergency storage of sludge as required by condition **1-W4** must include but not be limited to the following: (i) Your name and the reference number of this environmental authority; (ii) the location of the emergency storage of sludge at the approved premises; (iii) the expected time periods in which the sludge is to be stored at the approved premises; (iv) the reason for the emergency storage of sludge at the approved premises; (v) details of any environmental harm caused, threatened, or suspected to be caused by the emergency storage of sludge at the approved premises; and (vi) actions taken to prevent any environmental harm caused by the emergency storage of sludge at the approved premises.

Part 2 – Site specific conditions – 428 Pine Ridge Road, COOMBABAH – Lot 21 Plan SP235731

Environmentally relevant activity	Location
63-1(g) Sewage treatment >100,000EP	428 Pine Ridge Road, COOMBABAH – Lot 21 Plan SP235731

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval:

Agency interest: General	
Condition number	**Condition**
2-G1	Inflows that are in excess of the hydraulic capacity of the plant may **bypass** the standard treatment processes of the plant.
2-G2	The storage and use of Liquefied Petroleum Gas (LPG) at the Coombabah Wastewater Treatment Plant must be in accordance with the latest edition of the Australian Standard AS/NZS 1596:2014 The storage and handling of LP Gas.
Agency interest: Water	
Condition number	**Condition**
2-WT1	The only contaminants to be released to surface **waters** excluding **bypass** releases is treated effluent from the sewage treatment plant from Release Point **RP2** to **waters** described as the Gold Coast Seaway in accordance with *Part 2 Table 1—Surface water release limits* and the associated requirements.

Part 2 Table 1—Surface water release limits

Monitoring Point	Quality Characteristics	Minimum	Median	50th percentile long term	80th percentile short term	90th percentile long term	Maximum
C1	5-Day Biochemical Oxygen Demand [inhibited]	-	-	-	15 mg/L	10 mg/L	30 mg/L
C1	Suspended solids	-	-	-	23 mg/L	15 mg/L	45 mg/L
C1	Dissolved	2.0	-	-	-	-	-

	Oxygen	mg/L					
C1	Ammonia Nitrogen	-	-	-	NS[1] mg/L	NS[1] mg/L	-
C1	**Total Nitrogen**	-	-	5.0 mg/L	-	-	-
C1	**Total Phosphorus**	-	-	5.0 mg/L	-	-	-
C1	pH	6.5	-	-	-	-	8.5
C1	Free Chlorine Residual	-	-	-	-	-	0.7 mg/L
C2	Faecal Coliforms	-	150[2] CFU/ 100mL	-	-	-	-
C2	Enterococci	-	-	-	-	-	-

[1] NS means "Not Specified"

[2] Four out of five samples must contain less than 600 CFU/100mL

Associated requirements

1. Release Point **RP2** is the diffuser on the north wall of the Gold Coast Seaway to **waters** described as the Gold Coast Seaway.
2. Monitoring point C1 is the outlet of the Coombabah Wastewater Treatment Plant effluent storage pond.
3. Monitoring point C2 is the outlet of Coombabah Wastewater Treatment Plant Chlorine Contact Basin Disinfection Unit.
4. Monitoring must be undertaken at least weekly for all parameters.
5. Sampling must be in accordance with the **administering authority's** Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
6. Samples must be representative of the release.

2-WT2

The diffuser at discharge location **RP2** must be submerged at all times.

2-WT3

1. The release of contaminants to **waters** from release point **RP2** must only occur two (2) hours before local high tide until twenty-five (25) minutes before the following local low tide.
2. Notwithstanding section 1. above, the release of contaminants from release point **RP2** outside of the hours stated in section 1. is permitted in the event that it is performed to minimise the potential for overflows of treated wastewater from final storage lagoons at the approved place due to hydraulic overload of the sewage treatment works as a result of significant rainfall events.
3. In the event that contaminants are released from release point **RP2** outside of the hours stated in section 1., you must monitor and record the following for each event:
    a. The date and time of the release

<table>
<tr><td></td><td>b. The reason for the release
c. The volume of contaminants released out of hours, and
d. The quality characteristics of the treated sewage wastes released for a minimum of the following characteristics:
i. 5 day Biochemical Oxygen Demand
ii. Suspended solids
iii. Dissolved Oxygen
iv. Ammonia Nitrogen
v. Total Nitrogen
vi. Total Phosphorus
vii. pH and
viii. Faecal Coliforms.</td></tr>
<tr><td>2-WT4</td><td>All ponds used for the storage or treatment of effluent, sewage or wastes at or on the Coombabah Wastewater Treatment Plant must be constructed, installed and maintained:
(i) so as to minimise the likelihood of any release of such effluent, sewage, or wastes through the bed or banks of the pond to any waters (including groundwater);
(ii) so that a freeboard of not less than 0.3 metres is maintained at all times, except in emergencies; and
(iii) so as to ensure the stability of the ponds' construction.</td></tr>
<tr><td colspan="2">Agency interest: Noise</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>2-N1</td><td>Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Part 2 Table 3 – Noise limits – STP Operations and the associated requirements at any nuisance sensitive place.

Part 2 Table 3 – Noise limits – STP Operations
<table>
<tr><th rowspan="2">Sound Pressure Level dB(A)</th><th colspan="3">Monday to Saturday</th><th colspan="3">Sundays and public holidays</th></tr>
<tr><th>7am-6pm</th><th>6pm-10pm</th><th>10pm-7am</th><th>9am-6pm</th><th>6pm-10pm</th><th>10pm-9am</th></tr>
<tr><th></th><th colspan="6">Noise measured at a nuisance sensitive place</th></tr>
<tr><td>$L_{Aeq\ 1hour}$</td><td>Back-ground + 3</td><td>Back-ground + 3</td><td>Back-ground + 3</td><td>Back-ground + 3</td><td>Back-ground + 3</td><td>Back-ground + 3</td></tr>
</table>
Associated Monitoring Requirements
1) Limits are applied at the boundary of the sensitive or commercial place.
2) The location, date and time of monitoring must be recorded.
3) All monitoring devices must be correctly calibrated and maintained.</td></tr>
</table>

<table>
<tr><td></td><td>4) Any monitoring must be in accordance with the most recent version of the administering authority's Noise Measurement Manual.
5) Any monitoring of noise emissions from the activity must be undertaken when the activity is in operation.
6) All monitoring must be performed by an appropriately qualified person(s).</td></tr>
<tr><td>2-N2</td><td>Other than as permitted within this environmental authority, noise generated by the Stage 6 Upgrade must not cause environmental nuisance to any sensitive place or commercial place.</td></tr>
<tr><td>2-N3</td><td>Noise from the Stage 6 Upgrade must not include substantial low frequency noise components and must not exceed the levels identified in Part 2 Table 4 – Noise limits – Stage 6 Upgrade and the associated requirements at any nuisance sensitive place.

Part 2 Table 4 – Noise limits – Stage 6 Upgrade
<table>
<tr><th rowspan="2">Location</th><th colspan="4">Sound Pressure Level dB(A), $L_{Aeq\ 15\ mins}$</th></tr>
<tr><th>Mon-Sat, 6am-7am</th><th>Mon-Sat, 7am-6pm</th><th>Mon-Fri, 6pm-10pm</th><th>Mon-Sat, 10pm-6am; Saturday 6pm to Monday 6am</th></tr>
<tr><td>Sensitive places generally North of Lot 21 Plan SP235731</td><td>43</td><td>49</td><td>37</td><td>37</td></tr>
<tr><td>Sensitive places generally East of Lot 21 Plan SP235731</td><td>43</td><td>49</td><td>37</td><td>37</td></tr>
<tr><td>Sensitive places generally South of Lot 21 Plan SP235731</td><td>46</td><td>51</td><td>40</td><td>37</td></tr>
<tr><td>Sensitive places generally West of Lot 21 Plan SP235731</td><td>43</td><td>47</td><td>41</td><td>39</td></tr>
</table>
Associated monitoring requirements
1. Limits apply to noise caused by activities associated with the Stage 6 Upgrade. For clarity, noise associated with the Stage 6 Upgrade is not subject to limits applied under condition 2-N1 of this environmental authority.
2. Limits are applied at the boundary of the sensitive or commercial place.
3. The location, date and time of monitoring must be recorded.
4. All monitoring devices must be correctly calibrated and maintained.
5. Any monitoring must be in accordance with the most recent version of the administering authority's Noise Measurement Manual.
6. Any monitoring of noise emissions from the activity must be undertaken when the activity is in operation.
7. All monitoring must be performed by an appropriately qualified person(s).</td></tr>
<tr><td>2-N4</td><td>Pilling works associated with the Stage 6 Upgrade must not take place outside of the hours of 7am to 6pm, Monday to Saturday.</td></tr>
</table>

Part 3 – Site specific conditions – Kerkin Road North, PIMPAMA – Lot 1 Plan SP236796, Lot 2 Plan SP236796, Lot 3 RP903491

Environmentally relevant activities	Locations
63-1(f) Sewage treatment 50000 to 100,000EP	Kerkin Road North, PIMPAMA – Lot 1 Plan SP236796, Lot 2 Plan SP236796, Lot 3 RP903491

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval:

Agency interest: General	
Condition number	**Condition**
3-G1	**Activities** conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. Inflows must not exceed the peak design capacity of 17 mega litres on any **day** under average dry weather flow conditions.
Agency interest: Air	
Condition number	**Condition**
3-A1	Dust and particulate matter emissions must not exceed the following concentrations at any **sensitive place** or **commercial place**: a. dust deposition of 120 milligrams per square metre per **day**, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or b. a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the **administering authority**.
Agency interest: Water	
Condition number	**Condition**
3-WT1	The only contaminants to be released from the sewage treatment plant is treated effluent from the sewage treatment plant at discharge location RP5 in accordance with *Part 3 Table 1—Surface water release limits* and the associated requirements. **Part 3 Table 1—Surface water release limits**

Monitoring Point	Quality Characteristics	Minimum	Median	50th percentile short term	50th percentile long term	80th percentile short term	90th percentile long term	Maximum
P1	5-Day Biochemical Oxygen Demand [inhibited]	-	-	-	-	15 mg/L	10 mg/L	30 mg/L
P1	Suspended solids	-	-	-	-	23 mg/L	15 mg/L	45 mg/L
P1	Ammonia Nitrogen	-	-	-	-	1.5 mg/L	1.0 mg/L	3.0 mg/L
P1	**Total Nitrogen**	-	-	7.5 mg/L	5.0 mg/L	-	-	15 mg/L
P1	**Total Phosphorus**	-	-	3.0 mg/L	2.0 mg/L	-	-	6.0 mg/L
P1	pH	6.5	-	-	-	-	-	8.5
P1	Faecal Coliforms	-	150[1,2] CFU/ 100mL	-	-	-	-	-
P1	Enterococci	-	-	-	-	-	-	-

[1] Means **median** of five consecutive samples taken over 28 hours

[2] Four out of five samples must contain less than 600 CFU/100mL

Associated requirements

1. Release point RP5 is the Coombabah Wastewater Treatment Plant lagoon (prior to the Coombabah Wastewater Treatment Plant lagoon outlet flowmeter).
2. Monitoring point P1 is the outlet of the recycled water pumps that provide water to the Coombabah Wastewater Treatment Plant effluent storage lagoons.
3. Monitoring must be undertaken at least weekly for all parameters.
4. Sampling must be in accordance with the **administering authority's** Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
5. Samples must be representative of the release.

3-WT2	A receiving environment monitoring program must be designed and implemented by **appropriately qualified persons** to monitor the effects of the **activity** on **groundwater**.
3-WT3	The receiving environment monitoring program required by condition **3-WT2**, must include at least the following: 1. **Groundwater** is to be monitored for impacts from the recycled water storage dam on **groundwater**.

	2. The receiving environment monitoring program must be developed by an **appropriately qualified person(s)** with appropriate qualifications and experience in the fields of hydrogeology and **groundwater** sampling design. An **appropriately qualified person** must make all determinations of **groundwater** quality and the assessment as to whether there is any **groundwater** contamination and, if so, the level of environmental harm caused as a result of such contamination. 3. Monitoring must be undertaken at least every six months at a sufficient number of **groundwater** bores installed at locations and depths that provide representative **groundwater** samples from the uppermost aquifer and that establish: a. **groundwater** quality hydraulically up-gradient of the recycled water storage dam at locations which have not been effected by any release of contaminants from the premises to which this approval relates (background); and b. **groundwater** quality within or adjacent to the recycled water storage dam at the premises to which this approval relates. 4. **Groundwater** samples must be analysed for at least the following water quality parameters: a. pH (pH scale); b. Electrical conductivity (µS/cm); c. **Total nitrogen** (as Nitrogen, mg/L); d. Nitrite nitrogen (as Nitrogen, mg/L); e. Nitrate nitrogen (as nitrogen, mg/L); f. **Total phosphorus** (mg/L); g. E. Coli (colony forming units / 100 mL); and h. Biochemical oxygen demand (5-day inhibited, mg/L).
3-WT4	All ponds used for the storage or treatment of treated sewage wastes at or on the approved place must be constructed, installed and maintained: a. so as to prevent any release of contaminants through the bed or banks of the ponds or other structures to any **waters** (including **groundwater**); b. so that an operational freeboard of not less than 0.5 metres is maintained at all times except in emergencies, extreme rainfall events and during transfer of treated sewage wastes when water is also being drawn from the storage to bring the freeboard to not less than 0.5 metres; and c. so as to ensure the stability of the pond or other structure.
Agency interest: Noise	
Condition number	**Condition**
3-N1	Noise from the **activity** must not include **substantial low frequency noise** components and must not exceed the levels identified in *Part 3 Table 2 – Noise limits* and the associated requirements at any nuisance **sensitive place**.

Part 3 Table 2 – Noise limits

Time period	Noise level at a noise sensitive place, measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj, T}$
7am-6pm	45 dB(A) or background noise level plus 5 dB(A), whichever is the greater.
6pm-10pm	45 dB(A) or background noise level plus 5 dB(A), whichever is the greater.
10pm-7am	40 dB(A) or background noise level plus 3 dB(A), whichever is the greater.
Time period	**Noise level at a commercial place, measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj, T}$**
7am-6pm	50 dB(A) or background noise level plus 10 dB(A), whichever is the greater.
6pm-10pm	50 dB(A) or background noise level plus 10 dB(A), whichever is the greater.
10pm-7am	45 dB(A) or background noise level plus 8 dB(A), whichever is the greater.

Associated Monitoring Requirements

1) Limits are applied at the **boundary** of the **sensitive** or **commercial place**.
2) The location, date and time of monitoring must be recorded.
3) All monitoring devices must be correctly calibrated and maintained.
4) Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual*.
5) Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in operation.
6) All monitoring must be performed by an **appropriately qualified person(s)**.

Part 4 – Site specific conditions – Boowaggan Road, MERRIMAC Lot 3 Plan SP235726

Environmentally relevant activities	Locations
63-1(g) Sewage treatment >100,000EP	Boowaggan Road, MERRIMAC Lot 3 Plan SP235726

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval:

Agency interest: General	
Condition number	**Condition**
4-G1	Inflows that are in excess of the hydraulic capacity of the plant may **bypass** the standard treatment processes of the plant.
Agency interest: Air	
Condition number	**Condition**
4-A1	Dust and particulate matter emissions must not exceed the following concentrations at any **sensitive place** or **commercial place**: a) dust deposition of 120 milligrams per square metre per **day**, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the **administering authority**.
Agency interest: Water	
Condition number	**Condition**
4-WT1	The only contaminants to be released to surface **waters** excluding **bypass** releases is treated effluent from the sewage treatment plant from Release Point **RP1** to **waters** described as the Gold Coast Seaway in accordance with *Part 4 Table 1—Surface water release limits* and the associated requirements. **Part 4 Table 1—Surface water release limits**

Monitoring Point	Quality Characteristics	Minimum	Median	50th percentile long term	80th percentile short term	90th percentile long term	Maximum
M2	5-Day Biochemical Oxygen Demand [inhibited]	-	-	-	7.5 mg/L	5 mg/L	10 mg/L
M2	Suspended solids	-	-	-	-	10 mg/L	15 mg/L
M2	Dissolved Oxygen	2.0 mg/L	-	-	-	-	-
M2	Ammonia Nitrogen	-	-	-	2.0 mg/L	5.0 mg/L	-
M2	**Total Nitrogen**	-	-	5 mg/L	-	-	10 mg/L
M2	**Total Phosphorus**	-	-	2 mg/L	-	-	4 mg/L
M2	pH	6.5	-	-	-	-	8.5
B1	Free Chlorine Residual	-	-	-	-	-	0.4 mg/L
M2	Faecal Coliforms	-	150[1] CFU/ 100mL	-	-	-	600[2] CFU/ 100mL

[1] Means **median** of five consecutive samples taken over 28 hours

[2] Four out of five samples must contain less than 600 CFU/100mL

Associated requirements

1. Release Point **RP1** is the diffuser on the south wall of the Gold Coast Seaway to **waters** described as the Gold Coast Seaway.
2. Monitoring point B1 is the outlet of the Benowa Repump Station lagoon at 2 Ken Russell Court, Bundall (Lot 4 on SP232573).
3. Monitoring point M2 is the outlet of Merrimac Wastewater Treatment Plant Chlorine Contact Basin Disinfection Unit.
4. Monitoring must be undertaken at least weekly for all parameters.
5. Sampling must be in accordance with the **administering authority's** Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
6. Samples must be representative of the release.

4-WT2	The diffuser at discharge location **RP1** must be submerged at all times.

4-WT3	1. The release of contaminants to **waters** from release point **RP1** must only occur forty-five (45) minutes after local high water until local low water. 2. Notwithstanding section 1. above, the release of contaminants from release point **RP1** outside of the hours stated in section 1. is permitted in the event that it is performed to minimise the potential for overflows of treated wastewater from final storage lagoons at the approved place due to hydraulic overload of the sewage treatment works as a result of significant rainfall events. 3. In the event that contaminants are released from release point **RP1** outside of the hours stated in section 1., you must monitor and record the following for each event: a. The date and time of the release b. The reason for the release c. The volume of contaminants released out of hours, and d. The quality characteristics of the treated sewage wastes released for a minimum of the following characteristics: i. 5 day Biochemical Oxygen Demand ii. Suspended solids iii. Dissolved Oxygen iv. Ammonia Nitrogen v. **Total Nitrogen** (as Nitrogen) vi. **Total Phosphorus** (as Phosphorus) vii. pH and viii. Faecal Coliforms.
4-WT4	A receiving environment monitoring program must be designed and implemented by **appropriately qualified persons** to monitor the effects of the **activity** on **groundwater**
4-WT5	The receiving environment monitoring program required by condition **4-WT4**, must include at least the following: 1. **Groundwater** is to be monitored for impacts from the Merrimac Wastewater Treatment Plant lagoons on **groundwater**. 2. The receiving environment monitoring program must be developed by an **appropriately qualified** person with appropriate qualifications and experience in the fields of hydrogeology and **groundwater** sampling design. An **appropriately qualified person** must make all determinations of **groundwater** quality and the assessment as to whether there is any **groundwater** contamination and, if so, the level of environmental harm caused as a result of such contamination. 3. Monitoring must be undertaken at least every six months at a sufficient number of **groundwater** bores installed at locations and depths that provide representative **groundwater** samples from the uppermost aquifer and that establish: a. **groundwater** quality hydraulically up-gradient of the Merrimac Wastewater Treatment Plant lagoons at locations which have not been effected by any release of contaminants from the premises to which this approval relates (background); and

<table>
<tr><td></td><td>b. groundwater quality within or adjacent to the Merrimac Wastewater Treatment Plant lagoons at the premises to which this approval relates.
4. Groundwater samples must be analysed for at least the following water quality parameters:
a. Groundwater level (mBTOC)
b. pH (pH scale);
c. Electrical conductivity (µS/cm);
d. Total nitrogen (as Nitrogen, mg/L);
e. Nitrite nitrogen (as Nitrogen, mg/L);
f. Nitrate nitrogen (as nitrogen, mg/L);
g. Total phosphorus (mg/L);
h. Faecal Coliforms (colony forming units/100 mL); and
i. Biochemical oxygen demand (5-day inhibited, mg/L).</td></tr>
<tr><td>4-WT6</td><td>All ponds used for the storage or treatment of acid sulfate soils or for the storage or treatment of treated sewage wastes at or on the approved place must be constructed, installed and maintained:
a. so as to prevent any release of contaminants through the bed or banks of the ponds or other structures to any waters (including groundwater);
b. so that an operational freeboard of not less than 0.5 metres is maintained at all times except in emergencies, extreme rainfall events and during transfer of treated sewage wastes when water is also being drawn from the storage to bring the freeboard to not less than 0.5 metres; and
c. so as to ensure the stability of the pond or other structure.</td></tr>
<tr><td colspan="2">Agency interest: Noise</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td>4-N1</td><td>Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Part 4 Table 3 – Noise limits and the associated requirements at any nuisance sensitive place.

Part 4 Table 3 – Noise limits
<table>
<tr><th>Time period</th><th>Noise level at a nuisance sensitive place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj T}$</th></tr>
<tr><td>7am-6pm</td><td>45 dB(A) or background noise level plus 5 dB(A), whichever is greater</td></tr>
<tr><td>6pm-10pm</td><td>45 dB(A) or background noise level plus 5 dB(A), whichever is greater</td></tr>
<tr><td>10pm-7am</td><td>40 dB(A) or background noise level plus 3 dB(A), whichever is greater</td></tr>
<tr><th>Time period</th><th>Noise level at a commercial place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj T}$</th></tr>
<tr><td>7am-6pm</td><td>50 dB(A) or background noise level plus 10 dB(A), whichever is greater</td></tr>
<tr><td>6pm-10pm</td><td>50 dB(A) or background noise level plus 10 dB(A), whichever is greater</td></tr>
</table></td></tr>
</table>

	10pm-7am | 45 dB(A) or background noise level plus 8 dB(A), whichever is greater **Associated Monitoring Requirements** 1) Limits are applied at the **boundary** of the **sensitive** or **commercial place**. 2) The location, date and time of monitoring must be recorded. 3) All monitoring devices must be correctly calibrated and maintained. 4) Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual*. 5) Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in operation. 6) All monitoring must be performed by an **appropriately qualified person(s)**.

Part 5 – Site specific conditions – Pacific Highway, ELANORA – Lot 1 Plan SP236797

Environmentally relevant activities	Locations
63-1(g) Sewage treatment >100,000EP	Pacific Highway, ELANORA – Lot 1 Plan SP236797

The environmentally relevant activities conducted at the locations as described above must be conducted in accordance with the following site specific conditions of approval:

Agency interest: General	
Condition number	**Condition**
5-G1	Inflows that are in excess of the hydraulic capacity of the plant may **bypass** the standard treatment processes of the plant.
Agency interest: Air	
Condition number	**Condition**
5-A1	You must implement an odour abatement plan for the effective and appropriate management of the actual and potential environmental impacts resulting from odour generated from the carrying out the **activity**.
5-A2	Dust and particulate matter emissions must not exceed the following concentrations at any **sensitive place** or **commercial place**: a) dust deposition of 120 milligrams per square metre per **day**, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the **administering authority**.
Agency interest: Water	
Condition number	**Condition**
5-WT1	The only contaminants to be released to surface **waters** excluding **bypass** releases are from the sewage treatment plant from Release Point **RP1** to **waters** described as the Gold Coast Seaway in accordance with *Part 5 Table 1—Surface water release limits* and the associated requirements. **Part 5 Table 1—Surface water release limits**

Monitoring Point	Quality Characteristics	Minimum	Median[1]	50th percentile long term	80th percentile short term	90th percentile long term	Maximum
E1	5-Day Biochemical Oxygen Demand [inhibited]	-	-	-	15 mg/L	10 mg/L	30 mg/L
E2	Suspended solids	-	-	-	23 mg/L	15 mg/L	45 mg/L
B1	Suspended solids	-	-	-	-	-	45 mg/L
E1	Dissolved Oxygen	2.0 mg/L	-	-	-	-	-
E1	Ammonia Nitrogen	-	-	-	NS[2]	NS[2]	-
E1	**Total Nitrogen**	-	-	15 mg/L	-	-	30 mg/L
E1	**Total Phosphorus**	-	-	5 mg/L	-	-	10 mg/L
E1	pH	6.5	-	-	-	-	8.5
B1	Free Chlorine Residual	-	-	-	-	-	0.4 mg/L
E2	Faecal Coliforms	-	150[3] CFU/ 100mL	-	-	-	600[3] CFU/ 100mL

[1] Means **median** of five consecutive samples taken over 28 hours

[2] NS means "Not Specified".

[3] Four out of five samples must contain less than 600 CFU/100mL

Associated requirements

1. Release Point **RP1** is the diffuser on the south wall of the Gold Coast Seaway to **waters** described as the Gold Coast Seaway.
2. Monitoring point E1 is the outlet of the Elanora Wastewater Treatment Plant effluent storage pond.
3. Monitoring point E2 is the outlet of Elanora Wastewater Treatment Plant Chlorine Contact Basin Disinfection Unit.
4. Monitoring point B1 is the outlet of the Benowa Repump Station lagoon at 2 Ken Russell Court, Bundall (Lot 4 on SP232573).
5. Monitoring must be undertaken at least weekly for all parameters.

	6. Sampling must be in accordance with the **administering authority's** Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained. 7. Samples must be representative of the release.
5-WT2	The diffusers at discharge locations **RP1** must be submerged at all times.
5-WT3	1. The release of contaminants to **waters** from release point **RP1** must only occur forty-five (45) minutes after local high water until local low water. 2. Notwithstanding section 1. above, the release of contaminants from release point **RP1** outside of the hours stated in section 1. is permitted in the event that it is performed to minimise the potential for overflows of treated wastewater from final storage lagoons at the approved place due to hydraulic overload of the sewage treatment works as a result of significant rainfall events. 3. In the event that contaminants are released from release point **RP1** outside of the hours stated in section 1., you must monitor and record the following for each event: a. The date and time of the release b. The reason for the release c. The volume of contaminants released out of hours, and d. The quality characteristics of the treated sewage wastes released for a minimum of the following characteristics: i. 5 day Biochemical Oxygen Demand ii. Suspended solids iii. Dissolved Oxygen iv. Ammonia Nitrogen v. **Total Nitrogen** (as Nitrogen) vi. **Total Phosphorus** (as Phosphorus) vii. pH and viii. Faecal Coliforms.
5-WT4	All ponds used for the storage or treatment of effluent, sewage or wastes at or on the Elanora Wastewater Treatment Plant must be constructed, installed and maintained: (i) so as to minimise the likelihood of any release of such effluent, sewage, or wastes through the bed or banks of the pond to any **waters** (including ground water); (ii) so that a freeboard of not less than 0.3 metres is maintained at all times, except in emergencies; and (iii) so as to ensure the stability of the ponds' construction.
Agency interest: Noise	
Condition number	**Condition**
5-N1	Noise from the **activity** must not include **substantial low frequency noise** components and must not exceed the levels identified in *Part 5 Table 3 – Noise limits* and the associated requirements at any nuisance **sensitive place**.

Part 5 Table 3 – Noise limits

Time period	Noise level at a nuisance sensitive place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj\ T}$
7am-6pm	45 dB(A) or background noise level plus 5 dB(A), whichever is greater
6pm-10pm	45 dB(A) or background noise level plus 5 dB(A), whichever is greater
10pm-7am	40 dB(A) or background noise level plus 3 dB(A), whichever is greater
Time period	**Noise level at a commercial place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax, adj\ T}$**
7am-6pm	50 dB(A) or background noise level plus 10 dB(A), whichever is greater
6pm-10pm	50 dB(A) or background noise level plus 10 dB(A), whichever is greater
10pm-7am	45 dB(A) or background noise level plus 8 dB(A), whichever is greater

Associated Monitoring Requirements

1) Limits are applied at the **boundary** of the **sensitive** or **commercial place**.
2) The location, date and time of monitoring must be recorded.
3) All monitoring devices must be correctly calibrated and maintained.
4) Any monitoring must be in accordance with the most recent version of the **administering authority's** *Noise Measurement Manual*.
5) Any monitoring of noise emissions from the **activity** must be undertaken when the **activity** is in operation.
6) All monitoring must be performed by an **appropriately qualified person(s)**.

Definitions

Key terms and/or phrases used in this document are defined in this section. 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.

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.

Boundary means within 1m of the cadastral **boundary** of the approved place.

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.

Commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Day means any 24 hour period.

Dry weather day means a day which less than 1 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 four preceding days exceeds a cumulative rainfall of 50 mm.

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

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

$L_{Aeq\ 1\ hour}$ means the A-weighted equivalent sound pressure level over the reference time interval, (adjusted for tonal character and impulsiveness of the sound) using Fast response.

$L_{Amax,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

Long term 50th percentile means the **median** value of the measured values in ranked order of the quality characteristic is not to exceed the stated release limit for any fifty-two (52) consecutive samples where:

(i) the consecutive samples are taking over a one year period;

(ii) the consecutive samples are taken at approximately equal periods; and

(iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

Long term 90th percentile means that not more than five (5) of the measured values of the quality characteristic are to exceed the stated release limit for any fifty-two (52) consecutive samples where:

(i) the consecutive samples are taking over a one (1) year period;
(ii) the consecutive samples are taken at approximately equal periods; and
(iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

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.

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.

RP1 means the diffuser on the south wall of the Gold Coast Seaway to **waters** described as the Gold Coast Seaway.

RP2 means the diffuser on the north wall of the Gold Coast Seaway to **waters** described as the Gold Coast Seaway.

Secondary containment system means a system designed, installed and operated to prevent **any release of contaminants** from the system, or containers within the system, to **land**, **groundwater**, or surface **waters**.

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 2004* or a World Heritage Area; or
- a public thoroughfare, 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 50th percentile means that the **median** value of the measured values in ranked order of the quality characteristic is not to exceed the stated release limit for any five (5) consecutive samples where:

(i) the consecutive samples are taking over a five (5) week period;
(ii) the consecutive samples are taken at approximately equal periods; and
(iii) the time interval between the taken of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

Short term 80th percentile means that not more than one (1) of the measured values of the quality characteristic are to exceed the stated release limit for any five (5) consecutive samples where:

(i) the consecutive samples are taking over a five week period;
(ii) the consecutive samples are taken at approximately equal periods; and
(iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

Stage 6 Upgrade means works undertaken to upgrade to the Coombabah Sewage Treatment Plant as described in the report *Coombabah Sewage Treatment Plant Stage 6 Upgrade Minor Amendment and Information for EPPR00870313, 15 April 2020* by City of Gold Coast (DES eDOCS reference #9154910).

Substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z).

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.

You means the holder of the environmental authority.

END OF ENVIRONMENTAL AUTHORITY