

Model operating conditions

ERA 63—Sewage Treatment

Version history

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Context

This document provides advice to potential environmental authority holders on the model operating conditions that will be applied to their environmental authority. It is relevant for environmentally relevant activity (ERA) 63 operations if a site specific application is made. It is particularly relevant for ERA 63 Threshold 1 – sewage treatment works.

However for the following thresholds, or any other thresholds made available for standard or variation application, the relevant eligibility criteria and standard conditions will be considered:

1. ERA 63 (1)(a)(i) – sewage treatment works up to 100EP which release to land
2. ERA 63 (2) – sewage pumping stations greater than 40KL/hr.

Key terms and/or phrases used in this document are defined in the definitions section and **bolded** throughout this document.

For each condition you will find guidance on the intent and how to comply. These sections provide basic information on the reason for inclusion of a condition and what compliance may or may not look like. You may find this information helpful in managing your **activity** to ensure that you remain in compliance with your approval conditions. However, this additional information will not form part of your final approval conditions and is provided in this document as guidance only. You must decide on the level of risk associated with your **activity** and ensure that the measures implemented are appropriate to manage the environmental outcome or particular requirement set out within each condition of your approval.

1 Introduction

The *Environmental Protection Act 1994* (EP Act) provides for the granting of environmental authorities for sewage treatment **activities** (ERA 63).

These model operating conditions provide a framework of conditions that will apply to site specific applications for ERA 63 across the State of Queensland, particularly for sewage treatment works.

In assessing applications for ERA 63, the **administering authority** must address the regulatory requirements set out in the Environmental Protection Regulation 2019 and the standard criteria contained in the EP Act. The **administering authority** will consider the regulatory requirements in the context of information about the environmental impacts of a project, provided through application documentation for an environmental authority.

Conditions in your environmental authority will generally state what is and what is not permitted as part of the **activity**. They will generally relate to the operation of the **activity** and may also cover rehabilitation requirements. Where **you** also require a development permit for your **activity** under the *Planning Act 2016*, the conditions in your environmental authority will not deal with land-use issues, as these will be assessed and conditioned in your development approval.

An environmental authority approves the carrying out of an **activity** and does not approve any environmental harm unless a condition stated by the authority specifically states that an action or event can occur.

The **administering authority** may amend the conditions in this guideline to ensure that they are current and appropriate (although conditions in your approval will only change in the circumstances set out in the EP Act).

2 How to use this guideline

2.1 New project applications

These model operating conditions provide a framework of conditions that will be applicable to all new environmental authorities for ERA 63, particularly for sewage treatment works.

As the model operating conditions are a framework only, additional conditions can be applied at the discretion of the **administering authority** to address risks that are specific to a particular operation or a particular site (e.g. where specific **environmental values** may be impacted). Also, if a particular model operating condition does not apply to an operation, then it will not form part of the conditions placed on the environmental authority.

The applicant can also request the addition, removal or replacement of conditions to tailor the environmental authority to their particular operation. These requests are to be made through the site specific application for an environmental authority and supported by a justification for the change requested.

In some circumstances, payment of financial assurance may also be required. If financial assurance is required, it will be stated as an additional condition on the environmental authority.

These model operating conditions will generally not apply to thresholds ERA 63(1)(a)(i) or ERA 63 (2) where there are eligibility criteria and standard conditions published for these ERA thresholds. In most instances a standard or variation application would be made and the standard conditions or a slight variation from these would apply. Eligibility criteria and their associated standard conditions can be viewed at www.business.qld.gov.au using the search term 'activities suitable for standard applications'.

However, if an application for these thresholds is made as a site specific application, and the operation is significantly varied from the usual operation of these **activities**, these model operating conditions may be used.

2.2 Amendments

When making an amendment to alter **activities** that were approved prior to the release of these model operating conditions **you** are strongly encouraged to also request to update your environmental authority with these conditions. However, if **you** do not wish to align your whole environmental authority with these conditions your amendment application will only change any conditions relevant to the extent of your amendment request.

3 Obligations under the EP Act

At all times **you** must meet your obligations under the EP Act. The following information is provided to help **you** understand some of the key environmental obligations under the EP Act which may relate to the operation of your **activity**. This is not an exhaustive list of all of the environmental obligations.

Environmental obligations which **you** must comply with include:

1. general environmental duty—section 319
2. duty to notify of environmental harm—sections 320-320G.

3.1 General environmental duty

A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm¹. This is a person's general environmental duty.

You have the responsibility to work out what **you** need to do to make sure that **you** manage your environmental risk and achieve the outcomes set out in your environmental authority.

Failure to comply with the general environmental duty is not, itself, an offence. However causing an **environmental nuisance** or causing serious or material environmental harm is an offence unless **you** can prove:

- that the environmental harm was not unlawful; and
- **you** have complied with the general environmental duty.

Over time it may also be necessary to review the contaminant release limits from sewage treatment **activities** with the aim of reducing them if new technologies or better science becomes available.

In keeping with the general environmental duty it is recommended that at least every five years, **you** investigate additional treated water reuse measures and/or treatment technologies to further reduce the release of contaminants to waters. The investigations should inform the implementation of cost effective additional or alternative treatment technologies or re-use options.

You should report to the **administering authority** any outcomes of the investigations, including proposed additional or alternative treatment, proposed alternative or increased re-use options, or justification where re-use options are not adopted.

3.2 Duty to notify of environmental harm

The duty to notify requires a person to give notice where serious or material environmental harm is caused or there is a risk of such harm, and that harm is not authorised by the **administering authority**.

For more information on the duty to notify requirements, including who must be notified, how and when to notify, refer to the guideline *The duty to notify of environmental harm* (available at www.qld.gov.au using the publication number ESR/2016/2271).

4 Offences under the legislation

This section sets out some of the offences that **you** should be aware of as **you** are carrying out your **activity**. If **you** commit one of these offences, **you** could be fined, prosecuted, or required by the **administering authority** to take a particular action. This list does not include all of the environmental offences under the legislation.

If **you** do commit an offence while carrying out your **activity**, the **administering authority** will take enforcement action in accordance with its [Enforcement guidelines](#).

¹ Extract from section 319 (1) of the EP Act.

4.1 Contravention of a condition of an environmental authority

It is a legal requirement that **you** comply with the conditions in your environmental authority. **You** must also ensure that anyone operating under the environmental authority also complies with the conditions. This might include contractors visiting the site temporarily or transport operators loading and unloading materials on site, and all staff employed at the site. Multiple people may be prosecuted if an offence is committed.

If **you** think that **you** have breached a condition of your environmental authority, it is your responsibility to correct the problem and bring yourself back into compliance with the condition. **You** should not wait for the **administering authority** to tell **you** what to do. **You** may also be legally required to contact the **administering authority** by the conditions in your environmental authority or the duty to notify requirements under the EP Act.

Penalties for a breach of a condition of an environmental authority vary from penalty infringement notices for one-off offences that are easily rectified, through to the issuing of statutory notices—such as an environmental evaluation, transitional environmental program or an environmental protection order. In serious cases the **administering authority** may initiate court proceedings to have a court order issued or to prosecute those responsible for the breach.

4.2 Causing material or serious environmental harm

Material environmental harm has the meaning as defined in section 16 of the EP Act. Material environmental harm is environmental harm that costs more than \$5,000 to clean up, or that causes (or has the potential to cause) more than \$5,000 worth of damage to property.

Serious environmental harm has the meaning as defined in section 17 of the EP Act. In summary, it is harm that is irreversible; has a high impact or widespread effects to the environment; is caused to an area of high conservation significance; or causes clean-up costs or property damage worth more than \$50,000.

Material and serious environmental harm excludes **environmental nuisance**.

4.3 Causing environmental nuisance

Environmental harm includes **environmental nuisance**. **Environmental nuisance** is unreasonable interference with an **environmental value** caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, **offensive** or unsightly condition because of contamination. For activities that need an environmental authority, the most common causes of **environmental nuisance** are dust, noise and odour.

4.4 Depositing a prescribed contaminant in waters

Prescribed water contaminants includes a wide variety of contaminants, from inert substances such as earth, clay, gravel and sediment to substances such as chemicals, contaminants with a high or low pH, construction and building waste, gas, oil and sewage. For a full list of **prescribed water contaminants** see Schedule 10 of the Environmental Protection Regulation 2019.

It is your responsibility to ensure that **prescribed water contaminants** do not enter a waterway roadside gutter or stormwater drain. This includes making sure that the prescribed water contaminants are not left in a position where they could enter one of those places. You also need to ensure that stormwater falling on, or running across your site does not leave the site contaminated. Where stormwater contamination occurs **you** must ensure that it is treated to remove contaminants. **You** should also consider where and how **you** store material used in your processes onsite to reduce the chance of water contamination.

5 Model operating conditions

Model operating conditions applicable to all ERA 63 activities	
GENERAL	
PMG024 (G1)	<p>Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations:</p> <ol style="list-style-type: none"> 1. Inflows must not exceed the peak design capacity of <INSERT X> times the Design Average Dry Weather Flow (DADWF) of <INSERT XX ML/day> or <INSERT YY L/s> on any day unless the standard treatment processes of the plant are bypassed> 2. <REPEAT for all relevant activities approved>.
	<p><i>Intent</i></p> <p>This condition establishes the design and peak capacity of the plant and ensures that the inflows at the plant achieve the peak design standards proposed in the application. Design Average Dry Weather Flow is assessed over the longer term as part of Condition PWM016 (WT1), either through Annual Volume (dry weather) or Annual Mass Load limits.</p> <p>It also establishes the nominated peak capacity (inflow) that triggers a bypass release (where bypasses are proposed at the plant) through the bypass definition. The inclusion of a bypass definition and the additional bypass related conditions in the “water” section will be considered based on the design of the plant during the application assessment. Any proposed bypass release will need to demonstrate that the receiving environment will be capable of handling the design bypass release and will be considered on a case by case basis.</p>
	<p><i>How to comply</i></p> <p>You must not receive inflows on any day at the sewage treatment works above the limit that this condition sets out (based on the design of the plant), even if the threshold for the sewage treatment activity by definition is broader than this condition.</p> <p>Bypass releases must only occur as a result of a wet weather event and for flows that are in excess of the specified peak inflow capacity (see bypass definition for specific peak inflow capacity).</p> <p>Flow monitoring instrumentation should be placed in the inflow and outflow location(s) appropriate to obtain the data. The total inflow and outflow over a 24 hour period must then be measured and recorded using an appropriate method. If you are requested by the administering authority to demonstrate compliance with this condition you should supply this information including records of the measured volumes and bypass releases. Information of bypass releases must include the following:</p> <ol style="list-style-type: none"> a) the start, date and duration of the release; b) the measured or estimated volume of the bypass release; c) the level of treatment at the sewage plant prior to discharge; d) the cause of the release; and e) any monitoring undertaken of the quality of the water released.

<p>PMG008 (G2)</p>	<p>All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.</p>
	<p><i>Intent</i></p> <p>This condition is intended to ensure that all of the activities and all operational and management actions are undertaken in a way which does not cause or threaten to cause environmental harm.</p>
	<p><i>How to comply</i></p> <p>You must ensure that all actions taken and equipment used to undertake the activity are conducted in a way that minimises risk to the environment. For example, if you are storing chemicals onsite, you must store them in a way that minimises the risk of these chemicals being released to the surrounding environment. This may include storing the chemicals away from busy trafficable areas where they are more likely to be punctured or knocked over, keeping the chemicals in an appropriately bunded area and complying with any best practice or Australian standards relevant to chemical storage. If you had a release of chemicals which resulted in environmental nuisance or harm and you had not taken all reasonable and practicable measures to reduce the potential for the release, you will be in non-compliance with this condition.</p> <p>Where there has been a change to chemicals or the treatment process used to treat water prior to release to the environment, it may be necessary to undertake a toxicity risk assessment. The toxicity risk assessment should characterise the hazards, possible impacts to the environment and likelihood of impact, and may include direct toxicity assessment.</p>
<p>PMG007 (G3)</p>	<p>Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.</p>
	<p><i>Intent</i></p> <p>This condition will ensure that all instances of non-compliances are promptly made known to the administering authority, even those considered to be minor in nature. This notification will help capture non-compliances that may result in nuisance, or ongoing minor non-compliances which may pose longer term risks to the environment. This will allow action to be taken as necessary by you and the administering authority to protect the environment. The record keeping requirement will ensure that these non-compliances are documented.</p>
	<p><i>How to comply</i></p> <p>You must report any breach of a condition of your approval to the administering authority as soon as practicably possible within 24 hours of becoming aware of the breach. In most instances, this can be done by contacting the Pollution Hotline on 1300 130 372. When reporting through the Pollution Hotline you will be asked to provide details of the breach and this information will be forwarded to the department's relevant regional office. By reporting you will have complied with your condition requirements, even if the regional office is made aware of the issue after 24 hours. When reporting through the Pollution Hotline you should also consider if the breach is an emergency pollution incident</p>

	<p>that requires the department’s attendance. In making this decision you may wish to consider your duty of care requirements.</p> <p>Depending on the breach, the administering authority may require further detail in a follow up email which can be sent to the Pollution Hotline email address, <PollutionHotline@des.qld.gov.au>. You are required to keep records, including full details of the release or event, any potential environmental risks resulting from the release and any actions taken to rectify the event.</p> <p>Longer term ongoing issues may have been identified and where a way forward may have been agreed to with the administering authority, continuous reporting may not be required. For example, where 80th percentile reporting indicates an ongoing non-compliance which may be minor in nature and will take time to rectify. This will need to be determined on a case by case basis with the regional DES office involved in managing your site.</p> <p>To demonstrate that you have met your general environmental duty in relation to this condition, you may want to consider the following options:</p> <ul style="list-style-type: none"> • Report possible breaches to the administering authority as soon as you are made aware of them, even if you are unsure if a condition of the environmental authority has been breached. • Have alarms systems or identification procedures in place to ensure that any breaches of conditions are identified swiftly. • Ensure communication systems or procedures are in place to allow staff members to communicate breaches to site managers quickly.
<p>PMG014 (G4)</p>	<p>Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.</p> <hr/> <p><i>Intent</i></p> <p>The release of contaminants into the environment is generally prohibited. There will be certain circumstances where the release of contaminants are permitted as set out within the conditions of approval, where the type, amount of contaminants released and the resulting cumulative impact on the receiving environment is known or can be evaluated (e.g. release limits). The intent of this condition is to ensure that the only contaminants released have been assessed and approved by the administering authority and that no other releases occur. This also ensures that releases, when they occur, are in a controlled manner.</p> <hr/> <p><i>How to comply</i></p> <p>You must ensure that contaminants resulting from the activity are not released to the environment, unless expressly permitted within your approval. A permitted release of contaminants must be in accordance with the conditions that relate to the release. This includes, but is not limited to, meeting any release limits for all types of listed contaminants and complying with specified release locations or discharge requirements.</p>
<p>PMG018 (G5)</p>	<p>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</p>

	format requested.
	<p><i>Intent</i></p> <p>This condition will ensure that all documentation held in relation to the environmental authority is available if required by the administering authority. This may be necessary to identify or resolve any environmental issues which may arise as a result of the ongoing operation of the activity.</p>
	<p><i>How to comply</i></p> <p>You must keep all information and records required by the conditions of your environmental authority for at least five years. This includes monitoring reports, details of releases and any other necessary information you require to comply with and to demonstrate compliance with the conditions. Monitoring results should be kept for the life of the activity, unless all monitoring required is provided completely through WaTERS.</p> <p>The administering authority can require this information to be provided upon request. Where information is requested in a required format, the administering authority would give consideration to the reasonableness of the request and purpose of the reporting.</p> <p>If electronic data is provided through systems such as WaTERS, data needs to be provided in the required electronic format. Where data has been submitted to WaTERS this information is maintained by the Department of Science, Information Technology and Innovation.</p> <p>You must keep environmental monitoring results until the surrender of the environmental authority as these will be required as part of the surrender application process.</p>
PMG015 (G6)	<p>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.</p> <p><i>Intent</i></p> <p>The requirement that an appropriately qualified person undertake this monitoring is intended to ensure that the monitoring is conducted properly and that the results are reliable. Relevant guidelines, Australian standards, or other documents relating to the monitoring will be listed as associated monitoring requirements and must also be adhered to.</p> <p><i>How to comply</i></p> <p>Compliance with this condition will require you to ensure that an appropriately qualified person(s) undertakes monitoring at all of the listed release points and for all of the set parameters. You should check the qualifications and experience of the person and satisfy yourself that they are qualified to carry out the monitoring. This could include industry accredited courses, recognised competency or training records. Any monitoring should be carried out in accordance with any relevant best practice guideline or other relevant standards as per the associated monitoring requirements listed in the relevant monitoring conditions.</p> <p>Monitoring includes sampling and analysis and also extends to the handling, transportation and verification of the samples. In addition, the information gathered must be interpreted and recorded by</p>

	<p>people with the relevant qualifications. The monitoring, interpretation and recording need not all be undertaken by the same person, provided they are appropriately qualified.</p>
<p>PMG012 (G7)</p>	<p>A receiving environment monitoring program must be designed and implemented by an appropriately qualified person(s) to monitor the effects of the activity on <INSERT environment, waters, groundwater, air shed, noise sensitive place, land etc.>.</p> <hr/> <p><i>Intent</i></p> <p>This condition, along with condition PMG013 (G8), ensures that any impacts to the receiving environment are monitored and that the release of treated sewage effluent to the environment is carried out in a sustainable manner. The monitoring program may be required for some activities and should be considered on a case by case basis. The need for such a program will be determined when an environmental approval application is assessed, and is based on the potential risk involved considering the nature of the activity and sensitivity of the receiving environment.</p> <hr/> <p><i>How to comply</i></p> <p>If this condition is applied to your activity it has been considered necessary for a monitoring program to be undertaken. It is essential that the monitoring program be designed and conducted by an appropriately qualified person or persons. The program must monitor for all of the activity's contaminants which could cause environmental harm to the receiving environment. The monitoring frequency must be sufficient to determine if the activity is impacting on the environment. Background levels of the relevant contaminants must be understood prior to conducting the activity. The monitoring program may include receiving surface water monitoring if releasing to waters and/or soil and groundwater monitoring if treated effluent is being irrigated to land.</p>
<p>PMG013 (G8)</p>	<p>The receiving environment monitoring program required by condition PMG012, must include at least the following: <INSERT detail depending on the receiving environment and the nature of the release>.</p> <hr/> <p><i>Intent</i></p> <p>This condition will ensure that, where a receiving environment monitoring program is required by condition PMG012 (G7), the content of the program satisfies certain minimum requirements to ensure that the values of the receiving environment will be appropriately monitored. The requirements may vary from site to site.</p> <hr/> <p><i>How to comply</i></p> <p>To comply with this condition, the appropriately qualified person drafting the receiving environment monitoring program must include all of the information specified under this condition, as a minimum requirement.</p> <p>It may be common for this condition to require a soil survey, vegetation survey, groundwater monitoring, surface water release monitoring. If these components are conditioned, below are some suggestions as to the type of information that would be expected.</p>

Soil survey (*when irrigating*)

A soil survey may be necessary to ensure that the capacity of the land to assimilate nitrogen, phosphorus, salts and organic matter is not exceeded. The survey needs to include:

1. 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
2. determination of the quantity and quality of contaminants applied to the soils from the recycled water irrigation; and
3. 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
4. reporting of monitoring results and an assessment of the impact of the releases on the irrigation areas.

Vegetation survey (*when irrigating*)

A vegetation survey may be necessary to determine whether vegetation has changed or become damaged since irrigation commenced. This may include before and after photos of key species, plant tissue analysis or dry matter production.

Groundwater monitoring (*when irrigating*)

Groundwater monitoring may be necessary in situations where irrigated water is likely to impact on **groundwater**. The monitoring should:

- (a) be able to determine the impacts of the licensed **activity** on the **groundwater** quality in the underlying aquifer; and
- (b) include, but not be limited to, a sufficient number of bores (minimum of three) installed at locations and depths which yield representative **groundwater** samples from at least the upper-most aquifer so as to:
 - i. establish the quality of **groundwater** that has not been affected by seepage or drainage of contaminants to **groundwater** from the **activity**; and
 - ii. detect any seepage of contaminants to **groundwater** from the licensed place; and
- (c) include monitoring of background **groundwater** quality, hydraulically up-gradient of any release of contaminants to **groundwater**; and
- (d) include monitoring of downstream **groundwater** quality, hydraulically down gradient of all storage ponds, sewage treatment plant and irrigation areas;
- (e) include, but not limited to, six monthly monitoring of the quality of **groundwater** to detect any possible release(s) of contaminants; and
- (f) consider the potential use of **groundwater** in the vicinity.

Surfaces water release

Monitoring of releases to surfaces waters may be necessary if treated sewage effluent is released to waters. The monitoring program should focus on near field and further field impacts. The program

	<p>should address at least the following:</p> <ul style="list-style-type: none"> (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) 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 (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 program².
<p>PMG011 (G9)</p>	<p>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 <i>in situ</i> monitoring of <INSERT relevant parameters>.></p> <hr/> <p><i>Intent</i></p> <p>This condition will ensure that samples analysed within any monitoring program will be reliable.</p> <hr/> <p><i>How to comply</i></p> <p>All testing must be taken to a NATA certified laboratory or equivalent. There are a few exceptions to this requirement for monitoring which can be conducted <i>in-situ</i>. This may include monitoring for pH, dissolved oxygen and turbidity. Where these exceptions apply to your particular monitoring the condition will expressly state this.</p> <p>For a laboratory to be considered to have an equivalent certification to NATA, it could be accredited for adopting the Organisation for Economic Corporation and Development (OECD) Good Laboratory Practices. Other equivalent certifications may be considered by the administering authority and should be agreed upon before the monitoring is undertaken.</p> <p>This condition will be considered in conjunction with the discharge limits, monitoring requirements, monitoring feasibility and the potential environmental risk of the activity. There may be social and economic factors that would determine the appropriateness of imposing this condition and it may be altered in some circumstances. For instance, where an environmental authority holder is located in a remote location and feasibility of the monitoring restricts the range of analysis.</p>
<p>PMG025 (G10)</p>	<p>An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.</p>

² The monitoring program should be developed using the Departments Receiving Environment Monitoring Program Guideline (EM1260) 2014 or later version.

	<p><i>Intent</i></p> <p>To ensure the preparation of regular reports that summarise the annual performance of the sewage treatment plant, including actions taken to minimise impacts or to correct any issues identified during the past financial year.</p> <hr/> <p><i>How to comply</i></p> <p>The report must include:</p> <ol style="list-style-type: none"> 1. Summary and interpretation of any data 2. Calculation of either: <ol style="list-style-type: none"> a. mass loads of nitrogen and phosphorus, or b. the total volume of treated water, <p>released to waters from the sewage treatment plant over the previous 12 months;</p> 3. A summary of the previous 12 months monitoring results obtained in accordance with any of the monitoring requirements of this approval including graphical representations showing relevant limits if this data is not already reported to the WaTERS database; 4. An evaluation/explanation of the data from any monitoring programs; 5. An outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; 6. Calculation of the volume of treated water recycled (used for purposes other than direct discharge at the approved discharge location(s)) during the previous 12 months; and 7. Calculations of the volume and frequency of wet weather storage overflows, where applicable. <p>You can request to change this condition where a particular reporting date is preferable, other than the end of November for the previous financial year. However, it is desirable for the industry to maintain a coordinated reporting date which will assist both the administering authority and industry bodies in resourcing this work each year.</p>
<p>PMG020 (G11)</p>	<p>You must record the following details for all environmental complaints received:</p> <ol style="list-style-type: none"> 1. date and time complaint was received 2. name and contact details of the complainant when provided and authorised by the complainant 3. nature of the complaint 4. investigations undertaken 5. conclusions formed 6. actions taken. <hr/> <p><i>Intent</i></p> <p>To ensure that a minimum level of record keeping is kept by the operator in relation to complaints received. This will help the operator to identify whether there is an operational issue causing nuisance that needs to be addressed and will allow the administering authority to access these records to better identify potential problems at the site where there is a history of similar complaints.</p> <hr/> <p><i>How to comply</i></p> <p>You must keep minimum records of any complaints received including the details as required within this</p>

	condition.
PMG009 (G12)	<p>When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority to investigate a complaint of environmental nuisance arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.</p> <hr/> <p><i>Intent</i></p> <p>To ensure that contaminants released to the receiving environment as a result of the activity do not cause environmental nuisance to the community or the environment. In determining if a complaint requires further investigation and monitoring the administering authority may also consider any past history of complaints at the site; required to be recorded under condition PMG020 (G11). This condition will ensure that the operator is responsible for investigating complaints and managing environmental nuisance issues that result from the operation of the activity.</p> <hr/> <p><i>How to comply</i></p> <p>Environmental harm includes environmental nuisance. Environmental nuisance is unreasonable interference with an environmental value caused by contaminants such as aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of the contamination and may be visible or not. The most common cause of environmental nuisance resulting from the activity is odour.</p> <p>Unreasonable interference might include creating an unhealthy, offensive or unsightly condition because of your release. While nuisance is subjective and cannot always be defined by putting a limit on a set contaminant release, you may consider the air quality objectives within Schedule 1 of the Environmental Protection (Air) Policy 2019 to help determine if your release is likely to cause a nuisance. Not all contaminants likely to cause nuisance are listed within the Environmental Protection (Air) Policy 2019.</p> <p>Upon request from the administering authority, you must investigate all potential sources of environmental nuisance which may be caused by the activity. You may be required to investigate the potential impacts of the activity on the qualities of the receiving environment that are conducive to protecting:</p> <ul style="list-style-type: none"> • health and biodiversity of ecosystems • human health and wellbeing • the aesthetics of the environment (including the appearance of buildings, structures and other property) • agricultural use of the environment. <p>Compliance with this condition may require you to ensure that an appropriately qualified person undertakes the investigation and associated monitoring if this is required within the request. You should check the qualifications and experience of the person, and satisfy yourself that this person is qualified to carry out the monitoring.</p> <p>Any monitoring should be carried out in accordance with any relevant best practice guideline or other relevant standards.</p>

<p>PMG017 (G13)</p>	<p>The activity must be undertaken in accordance with written procedures that:</p> <ol style="list-style-type: none"> 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 <i>Environmental Protection Act 1994</i> 6. ensure that reviews of environmental performance are undertaken at least annually.
	<p><i>Intent</i></p> <p>This condition is considered necessary for all activities to ensure procedures, processes or systems are established which detail how you will manage the environmental risk associated with carrying out the activity on the site.</p>
	<p><i>How to comply</i></p> <p>It's recommended that an environmental risk assessment be conducted of the activity and site prior to commencement. This assessment should identify the environmental risks that need to be managed and control measures to be employed. An example would be identifying that there is a potential risk for soil erosion into the surrounding waterways in heavy rainfall events. An acceptable control measure would be to develop a storm water management plan which may include constructing a drainage pond, installing sediment barriers along the boundary of the site and regularly monitoring any receiving waterways.</p> <p>You must have operational procedures that detail how and when to calibrate equipment, and to ensure they are regularly serviced and maintained. This includes all equipment from onsite vehicles to monitoring equipment. Written operational procedures should form the basis for staff training during activities such as induction programs, on the job mentoring and 'toolbox talks'.</p> <p>Environmental performance must be reviewed at least annually however the frequency of review should depend on the risk of the activity. For example, if the activity has the potential to cause dust and the site is in close proximity to a sensitive receptor such as a residential area, the monitoring program could be reviewed every three months to ensure it is adequate. This review could include conducting an audit of compliance against the environmental authority.</p> <p>For further guidance on conducting a risk assessment refer to SA/SNZHandbook 89-2013 Risk management – Guidelines on risk assessment techniques.</p>
<p>AIR</p>	
<p>PMA001 (A1)</p>	<p>Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place.</p>
	<p><i>Intent</i></p> <p>The intent of this condition is to ensure that contaminants released to air as a result of the activity do</p>

	<p>not cause environmental nuisance. You must not cause unreasonable interference with the qualities of the air environment that are conducive to protecting:</p> <ul style="list-style-type: none"> • health and biodiversity of ecosystems • human health and wellbeing • the aesthetics of the environment (including the appearance of buildings, structures and other property). <p>Nuisance may include an unreasonable interference such as creating an unhealthy, noxious, offensive or unsightly condition because of your release. While nuisance is subjective and cannot always be defined by putting a limit on a set contaminant release, you may consider the air quality objectives within Schedule 1 of the Environmental Protection (Air) Policy 2019 to help determine if your release is likely to cause a nuisance. Not all contaminants likely to cause nuisance are listed within the Environmental Protection (Air) Policy 2019.</p> <p>Contaminants may include odour, aerosols, fumes, particles, smoke, steam or dust. They may be visible or not. The most common environmental nuisance complaints resulting from releases to air are in relation to odour and dust.</p>
	<p><i>How to comply</i></p> <p>You must ensure that odour and other air contaminants are contained and controlled at the sewage treatment plant to not result in nuisance at a sensitive or commercial place (as applicable).</p> <p>When considering if this condition has been complied with the administering authority will consider any existing and approved land uses. The single state planning policy references a need to consider protecting existing and approved land uses from encroachment. Likewise, where the operation of the activity is approved, there is a need to recognise that future encroachment of more sensitive land uses (while approved) may reduce the operator’s ability to comply with this condition, through no change in their activity.</p> <p>This condition will also set out (through the definitions of sensitive and commercial places) where nuisance must not occur. Depending on the application, the definitions for sensitive place and commercial place may be altered to ensure that the appropriate definitions apply based on the location and surrounding uses of the particular site. For example, where a treatment plant is approved within an industrial area with other odour generating industries, the commercial place component of this condition may be removed.</p> <p>You will need to identify and manage the potential sources of air emissions from your site, particularly those that would result in odour nuisance. The following list identifies some of the ways that emissions can be managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity.</p> <ul style="list-style-type: none"> • Minimise the frequency and duration of odour generating activities. • Implement measures to reduce impacts of odour being generated (i.e. covering of primary and secondary treatment facilities; appropriate storage and regular disposal of odorous wastes and reducing the area or source of the odour). • Conduct odour-generating activities within an enclosed space and prevent fugitive emissions (i.e. keep external doors closed and keep building such as sludge handling areas under negative pressure).

	<ul style="list-style-type: none"> • Implement and maintain odour collection and treatment systems (i.e. install and maintain pollution control equipment and technologies such as odour control wet/chemical/bio scrubbers, bio-filters, adsorption/absorption systems, gas flares etc.) • Establish a routine odour/dust monitoring program to proactively check that emission control devices and management practices are working. • Install back-up systems and devices to indicate any failures of the pollution control equipment. • Enclose equipment or activities which produce dust or emissions (i.e. screening). • Design, create and maintain wind breaks.
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5.1 Additional model operating conditions—when releases to water are required

These conditions will apply, in addition to the conditions set out in section 5, if the ERA 63 will release to water.

WATER																																																																					
PWM016 (WT1)	<p>The only contaminants to be released to surface waters <INSERT if appropriate 'excluding bypass releases covered by water conditions PMW019 and PMW020'> are from the sewage treatment plant to waters described as <Describe waterway and location> in accordance with <i>Table - Surface water release limits</i> and the associated requirements.</p> <p>Table - Surface water release limits</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Release Point Name</th> <th style="width: 20%;">Quality characteristic (units)</th> <th style="width: 10%;">Minimum</th> <th style="width: 10%;">Long-term Median</th> <th style="width: 10%;">Long-term 80th percentile</th> <th style="width: 10%;">Short-term Median</th> <th style="width: 10%;">Maximum</th> </tr> </thead> <tbody> <tr> <td><INSERT></td> <td>BOD5 (mg/L)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Total Suspended Solids (mg/L)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Annual volume (dry weather) (ML)*</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Total Nitrogen (mg/L as N)</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Total Nitrogen Annual Mass Load (dry weather) (kg)**</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Ammonia (mg/L as N)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Total Phosphorus (mg/L as P)</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> <tr> <td><INSERT></td> <td>Total Phosphorus Annual Mass Load (dry weather)***</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;"><INSERT></td> </tr> </tbody> </table>						Release Point Name	Quality characteristic (units)	Minimum	Long-term Median	Long-term 80th percentile	Short-term Median	Maximum	<INSERT>	BOD5 (mg/L)	-	-	<INSERT>	-	<INSERT>	<INSERT>	Total Suspended Solids (mg/L)	-	-	<INSERT>	-	<INSERT>	<INSERT>	Annual volume (dry weather) (ML)*	-	-	-	-	<INSERT>	<INSERT>	Total Nitrogen (mg/L as N)	-	<INSERT>	-	-	<INSERT>	<INSERT>	Total Nitrogen Annual Mass Load (dry weather) (kg)**	-	-	-	-	<INSERT>	<INSERT>	Ammonia (mg/L as N)	-	-	-	-	<INSERT>	<INSERT>	Total Phosphorus (mg/L as P)	-	<INSERT>	-	-	<INSERT>	<INSERT>	Total Phosphorus Annual Mass Load (dry weather)***	-	-	-	-	<INSERT>
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<INSERT>	pH (pH units)	<INSERT>	-	-	-	<INSERT>
<INSERT>	Dissolved Oxygen (mg/L)	2 mg/L	-	-	-	-
<INSERT>	Enterococci (primary/secondary)	-	-	-	<INSERT>	<INSERT>
<INSERT>	Free Chlorine Residual (mg/L)****	-	-	-	-	<INSERT>
<INSERT>	Total Chlorine (mg/L)****	-	-	-	-	<INSERT>

* INSERT only if annual load limits for Total Nitrogen (TN) and Total Phosphorous (TP) are not adopted
 ** INSERT only if annual volume limit is not adopted
 *** INSERT only if annual volume limit is not adopted
 **** INSERT only if chlorine disinfection is used

Associated requirements

1. Indicators for TN and TP must be done as 24 hour composite samples.
2. Annual Mass Load/Volume <delete one> must be calculated on a rolling <x> weekly basis.
3. Sampling must be in accordance with the Monitoring and Sampling Manual and all monitoring devices must be effectively calibrated and maintained.

Intent

Where a release of contaminants to surface waters is proposed, limits are set on contaminants to ensure that the **environmental values** of the receiving environment are protected. While the limit type will normally be a minimum, maximum or percentile, there may be slight variations to this table as necessary based on the proposed release.

These limits will generally not apply to **bypass** releases due to wet weather events.

How to comply

If **you** are proposing to release contaminants to surface waters, **you** must not exceed the release limits for the relevant contaminants as set out within the conditions of your environmental authority.

This table will be developed in consultation with the **administering authority's** experts on waters, be based on your specific **activity** and your environmental risk assessment (that may include monitoring and modelling of receiving waters). **You** will be advised of the proposed table prior to receiving the environmental authority.

Monitoring as required by any other conditions of this approval (including PMW017 (WT2)) must demonstrate compliance with the release limits. For each indicator and limit type, this requires a comparison of the each monitoring result to the release limit.

Where medians or percentile limits are imposed, this should be done on a rolling basis for each monitoring result.

If a concentration limit is used for **Total Nitrogen (TN)** and **Total Phosphorous (TP)** i.e. Annual Mass Load (dry weather), calculate the mass load limit as follows:

- TN Annual Dry Weather Mass Load Limit TN (kg) = Design Average Dry Weather Flow (ML per **day**) x 365 x long term Median TN Limit (mg/L)
- TP Annual Dry Weather Mass Load Limit TP (kg) = Design Average Dry Weather Flow (ML per **day**) x 365 x *long term Median TP Limit (mg/L)*

If an annual volume limit is used i.e. Annual volume (dry weather), calculate the annual volume limit as follows:

- Annual Volume Limit (dry weather) = Design Average Dry Weather Flow (ML per **day**) x 365

When using Annual Mass Loads for **Total Nitrogen** and **Total Phosphorus**, calculate rolling values as follows:

- Annual Mass Load TN (kg) = Yearly sum of Daily Release Volume (ML) for all dry weather **days** / the number of dry weather **days** x 365 x Yearly **Median** TN Concentration (mg/L)
- Annual Mass Load TP (kg) = Yearly sum of Daily Release Volume (ML) for all dry weather **days** / the number of dry weather **days** in the year x 365 x Yearly **Median** TP Concentration (mg/L).

If total load method is not used for **Total Nitrogen** and **Total Phosphorous**, calculate volumes as follows:

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.

PMW017
(WT2)

Monitoring of contaminant releases to **waters** <INSERT if appropriate 'excluding **bypass** releases covered by water conditions PMW019 and PMW020'> must be undertaken in accordance with *Table - Monitoring frequency*' and the associated monitoring requirements and records of the results must be kept.

Table - Monitoring frequency

Quality Indicator (units)	Measurement (units)	Minimum frequency	Monitoring location	
			GDA94, Zone <INSERT>	
			Decimal degrees*	
			Latitude	Longitude
BOD5	(mg/L)	Every <INSERT> week(s)	<INSERT>	<INSERT>
Total Suspended Solids	(mg/L)	Every <INSERT> week(s)	<INSERT>	<INSERT>
Volume (inflow)	(ML)	daily	<INSERT>	<INSERT>
Volume (outflow)	(ML)	daily	<INSERT>	<INSERT>
Ammonia	(mg/L as N)	Every <INSERT> week(s)	<INSERT>	<INSERT>
NOx	(mg/L as N)	<INSERT> weekly	<INSERT>	<INSERT>
Filterable reactive	(mg/L as P)	<INSERT>	<INSERT>	<INSERT>

	phosphorous (FRP)		weekly		
	Total Nitrogen	(mg/L as N)	Every <INSERT> week(s)	<INSERT>	<INSERT>
	Total Phosphorus	(mg/L as P)	Every <INSERT> week(s)	<INSERT>	<INSERT>
	pH	N/A	Every <INSERT> day	<INSERT>	<INSERT>
	Dissolved Oxygen	(mg/L)	Every <INSERT> day	<INSERT>	<INSERT>
	Electrical Conductivity	(µS/cm)	Every <INSERT> day	<INSERT>	<INSERT>
	Enterococci	(CFU/100mL)	<INSERT>	<INSERT>	<INSERT>
	Free Chlorine Residual	(mg/L)	Every <INSERT> week(s)	<INSERT>	<INSERT>
	Total Chlorine**	(mg/L)	Every <INSERT> week(s)	<INSERT>	<INSERT>
	<p>* Decimal degrees to be provided to a minimum of 4 decimal places</p> <p>** INSERT only if chlorine disinfection is used</p> <p>Associated monitoring requirements</p> <ol style="list-style-type: none"> 1. Monitoring must be in accordance with the "Monitoring and Sampling Manual" and <INSERT any additional relevant guidelines if necessary> 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 the map in <INSERT plan title, version and date> attached. 4. Total inflow is before bypass release point. 5. Total outflow is treated discharges and excludes flows that are bypassed. 				
	<p><i>Intent</i></p> <p>This condition provides a clear direction for the frequency of monitoring required for each release parameter and the location where collection of samples for monitoring is to be undertaken.</p> <p>The minimum frequency for monitoring is set to ensure that non-compliant releases are identified in a timely manner that will minimise the risk of environmental harm and to provide monitoring results that are likely to provide an indication of trends for the plant.</p>				
	<p><i>How to comply</i></p> <p>Monitoring of contaminant releases must be conducted for the parameters, at the minimum frequency, and at the locations listed. Monitoring required will depend on the size and design of plant and the receiving environment.</p>				
PMW018 (WT3)	<p>In addition to PMW016, 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 <INSERT if appropriate 'excluding bypass releases covered by water conditions PMW019 and PMW020'>.</p>				

	<p><i>Intent</i></p> <p>Certain contaminants are approved for release in release conditions. These are contaminants that are common to the release and for which an acceptable level of release has been determined. However, there may be contaminants in the waste streams that are unforeseen that may cause harm. This condition ensures that releases of these contaminants which might have a visual impact to the receiving waters are not released.</p>
	<p><i>How to comply</i></p> <p>You must not release any discharge to waters that contains visible evidence of oil, grease, scum or litter. You should also implement a visual monitoring inspection schedule to ensure that any other contaminants which may cause environmental harm that may be visually present or change the appearance of the waste stream are identified prior to any release.</p>
<p>PMW019 (WT4)</p>	<p>Bypass releases must be screened prior to being released <INSERT if release points are different from those approved in Table - Surface water release limits 'from release point XX'>.</p>
	<p><i>Intent</i></p> <p>To remove objectionable matter (e.g. rags, hygiene products and plastics) and heavier suspended solids from the sewage inflow to prevent material from entering the receiving environment during the bypass which may cause harm to the receiving environment or aquatic life.</p>
	<p><i>How to comply</i></p> <p>All bypassed material must be screened. It would be reasonable to design the facility to appropriately screen material up to 5 times average dry weather flow.</p>
<p>PMW020 (WT5)</p>	<p>The administering authority must be notified within 24 hours of any bypass release ceasing.</p>
	<p><i>Intent</i></p> <p>To advise the administering authority of all bypass releases, whether planned or otherwise. This will allow the administering authority to determine if the details of the bypass release; required to be recorded under condition PMW021 (WT6) should be provided.</p>
	<p><i>How to comply</i></p> <p>For any bypass releases you must notify the administering authority within 24 hours of the event ceasing. This can be done by contacting the Pollution Hotline on 1300 130 372.</p> <p>However, for ongoing wet-weather bypass releases, you should provide notice for the total flow that bypassed the plant as soon as practicable after the event. To be clear, you do not need to notify every 24 hours while the bypass release is occurring or at the start of the event where it is an ongoing wet-weather bypass release.</p>

<p>PMW021 (WT6)</p>	<p>The following details must be recorded in relation to each bypass release:</p> <ul style="list-style-type: none"> (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.
	<p><i>Intent</i></p> <p>Data is available to characterise all bypasses and can be provided to the administering authority upon request. This may be relevant in determining if bypass releases are occurring based on the design bypass release for the plant, and in considering if the duty to notify requirements under the EP Act would have been triggered as a result of the bypass release.</p>
	<p><i>How to comply</i></p> <p>Record all relevant parameters for all bypass releases cognisant of workplace health and safety considerations. These records are to contain the following information in relation to each bypass release:</p> <ul style="list-style-type: none"> (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 undertaken of the quality of the water released. <p>For ongoing bypass releases, summarise information for each 24 hour period following the initial bypass release.</p>

5.2 Additional model operating conditions— when treated sewage effluent is discharged to an infiltration trench or through an irrigation scheme

These conditions will apply, in addition to the conditions set out in section 5, only if treated sewage effluent is discharged to an infiltration trench or through an irrigation scheme. This is where the application and running of the plant requires disposal to land as part of the treatment and disposal option (i.e. disposal to land is integral to the operation of the facility). Third party reuse is covered under section 5.3 of this document.

PML013 (L1)	<p>The only contaminants to be released to land are <INSERT contaminant stream i.e. treated waters> in accordance with the <DRAFT Table - Treated effluent release limits to irrigation area> and the associated requirements.</p> <p>Table - Treated effluent release limits to irrigation area</p> <table border="1"> <thead> <tr> <th>Release Point Name</th> <th>Quality Characteristic (units)</th> <th>Minimum</th> <th>Median</th> <th>Maximum</th> <th>Minimum frequency</th> </tr> </thead> <tbody> <tr> <td><INSERT></td> <td>Volume (L/ha/day)</td> <td>-</td> <td>-</td> <td><INSERT></td> <td>Daily</td> </tr> <tr> <td><INSERT></td> <td>BOD5 (mg/L)</td> <td>-</td> <td>-</td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>Total Suspended Solids (mg/L)</td> <td>-</td> <td>-</td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>Total Nitrogen (mg/L as N)</td> <td>-</td> <td><INSERT></td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>Total Phosphorus (mg/L as P)</td> <td>-</td> <td><INSERT></td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>pH (pH units)</td> <td><INSERT></td> <td>-</td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>Enterococci /E.coli CFU/100ml)</td> <td>-</td> <td><INSERT></td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> <tr> <td><INSERT></td> <td>Electrical Conductivity (µS/cm)</td> <td>-</td> <td>-</td> <td><INSERT></td> <td>Every <INSERT> week(s)</td> </tr> </tbody> </table> <p>* Some of these quality indicators can be deleted depending on final use>.</p> <p>Associated requirements</p> <ol style="list-style-type: none"> 1. The irrigation area of <provide area> must be in accordance with plan <INSERT plan description>. 2. Monitoring must be in accordance with the administering authority's Monitoring and Sampling Manual and <INSERT any additional relevant guidelines if necessary> and all monitoring devices must be effectively calibrated and maintained. 3. Releases of treated effluent must not be outside of the <INSERT name of areas> indicated on <INSERT details of the irrigation area including maps and plans which show the full extent of the irrigation area including coordinates for the release area>. 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 TSS was only required to be monitored once a week, then a TSS sample would not be required after the first week following cessation of the release). 5. Volume of release must be calculated based on the total irrigation area when irrigating the maximum volume or the worked out for the area of application based on the actual volume irrigated. 6. Indicators for TN and TP are recommended to be done as grab samples. 	Release Point Name	Quality Characteristic (units)	Minimum	Median	Maximum	Minimum frequency	<INSERT>	Volume (L/ha/day)	-	-	<INSERT>	Daily	<INSERT>	BOD5 (mg/L)	-	-	<INSERT>	Every <INSERT> week(s)	<INSERT>	Total Suspended Solids (mg/L)	-	-	<INSERT>	Every <INSERT> week(s)	<INSERT>	Total Nitrogen (mg/L as N)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)	<INSERT>	Total Phosphorus (mg/L as P)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)	<INSERT>	pH (pH units)	<INSERT>	-	<INSERT>	Every <INSERT> week(s)	<INSERT>	Enterococci /E.coli CFU/100ml)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)	<INSERT>	Electrical Conductivity (µS/cm)	-	-	<INSERT>	Every <INSERT> week(s)
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<INSERT>	Total Suspended Solids (mg/L)	-	-	<INSERT>	Every <INSERT> week(s)																																																		
<INSERT>	Total Nitrogen (mg/L as N)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)																																																		
<INSERT>	Total Phosphorus (mg/L as P)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)																																																		
<INSERT>	pH (pH units)	<INSERT>	-	<INSERT>	Every <INSERT> week(s)																																																		
<INSERT>	Enterococci /E.coli CFU/100ml)	-	<INSERT>	<INSERT>	Every <INSERT> week(s)																																																		
<INSERT>	Electrical Conductivity (µS/cm)	-	-	<INSERT>	Every <INSERT> week(s)																																																		

	<p><i>Intent</i></p> <p>The only releases to land allowed are of treated sewage effluent that has been considered and assessed.</p> <p>Where it's proposed to release contaminants to land from a point source, limits are set on contaminants to ensure that the environmental values are protected, in particular ensuring offsite movement of irrigation water is minimal and soil suitability is maintained.</p> <hr/> <p><i>How to comply</i></p> <p>If you are proposing to release contaminants to land, you must not exceed the release limits for the relevant contaminants and the volumes permitted to be discharged per hectare per day as set out within this table. You must also only release to the areas as shown in the attached plans which will be referenced in this condition.</p> <p>This table will be developed by the administering authority based on your specific activity and your environmental risk assessment, that may include soil monitoring and irrigation modelling, e.g. MEDLI (model for effluent disposal using land irrigation). You will be advised of the proposed table prior to receiving the environmental authority.</p> <p>Monitoring required by any other conditions within this approval must demonstrate compliance with the release limits. For each indicator and limit type, this requires comparing each monitoring result to the release limit. Where medians or percentile limits are imposed, this should be done on a rolling basis for each monitoring result unless the monitoring requirements say otherwise.</p> <p>You must also be able to demonstrate that you have complied with the volumes permitted to be irrigated over the disposal area. This may require installing, operating and maintaining flow monitoring equipment at an appropriate location to accurately monitor the daily volumes discharged to each irrigation area. Local climatic and soil moisture condition as well as crop water requirements should also be taken into consideration.</p>
<p>PML014 (L2)</p>	<p>Treated effluent released to land must be done in accordance with documentation that ensures:</p> <ul style="list-style-type: none"> 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. <hr/> <p><i>Intent</i></p> <p>This condition is intended to minimise the risk of environmental harm by having the release to land conducted in accordance with a written procedure or management plan that addresses risk factors. The documentation will provide guiding processes to help the operator of the activity appropriately manage the risk factor.</p>

	<p><i>How to comply</i></p> <p>You must generate a written procedure that addresses each of the risk factors in the condition. The written procedure must ensure that each of the outcomes of the condition can be achieved at all times during irrigation to land.</p> <p>The following list identifies some of the ways that releases of contaminants can be managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity:</p> <ul style="list-style-type: none"> • Adopt water efficiency and best practice measures to minimise the amount of waste water requiring irrigation to land. • Irrigation activities should be undertaken by trained and experienced operators. • Install and regularly maintain irrigation pipes and equipment necessary to ensure compliance with the conditions of the environmental authority. • Display notices in a prominent position on areas undergoing effluent irrigation showing that the area is irrigated with effluent and advising not to drink the effluent. • When conditions prevent the irrigation of treated effluent to land (such as during or following rain events), direct contaminants to a wet weather storage. • Fit lockable valves or removable handles to all release pipes situated in public access areas. • Keep records of any removal or discharge off site, including destination, transporter, dates and volumes. • Retain vegetation wherever possible. • Manage vegetation on irrigation areas, including harvesting vegetation and where possible removing it from the disposal area.
<p>PML015 (L3)</p>	<p>When weather conditions or soil conditions preclude the release of treated sewage effluent to land, effluent must not be irrigated to land.</p>
	<p><i>Intent</i></p> <p>Prevents treated effluent leaching into groundwater and/or treated effluent runoff during wet weather or after wet-weather where soil profiles are at or near saturation.</p>
	<p><i>How to comply</i></p> <p>Irrigation of treated effluent should not occur during rainfall or when soil is saturated or waterlogged. Physical indicators of soil saturation include surface pondage and effluent run-off. During these times treated effluent may be directed to wet weather storage, held onsite or lawfully removed from the site.</p>

5.3 Additional model operating conditions—when treated sewage effluent is supplied to a third party

These conditions will apply, in addition to the conditions set out in section 5, only if treated sewage effluent is proposed to be supplied to a third party as a temporary reuse option. This condition is not appropriate for sites where the disposal of treated sewage effluent through a third party is integral to the ongoing operation of the facility. In these instances there may be additional need to control this long term discharge to land. Such cases would be more appropriately managed by the conditions set out in section 5.2 above.

PMW022 (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.
	<p><i>Intent</i></p> <p>This condition acknowledges that there is beneficial potential for using treated sewage effluent for an alternate purpose, so long as any third party involved provides written consent to the reuse.</p>
	<p><i>How to comply</i></p> <p>Any reuse proposed must comply with all other legal requirements including those relating to public health.</p> <p>Any reuse of treated sewage effluent must not breach any other conditions of your approval. Where a third party receives treated sewage effluent they must give written consent to arrangements for reuse.</p> <p>The following list identifies some of the ways that releases of contaminants by a third party can be managed. It is not exhaustive, and the third party is responsible for working out which measures are necessary to adequately manage the risks to the environment:</p> <ul style="list-style-type: none"> • Adopt water efficiency and best practice measures to minimise the amount of waste water requiring irrigation to land. • Irrigation activities should be undertaken by trained and experienced operators. • Install and regularly maintain irrigation pipes and equipment necessary to ensure compliance with the conditions of the environmental authority. • Display notices in a prominent position on areas undergoing effluent irrigation showing that the area is irrigated with effluent and advising not to drink the effluent. • When conditions prevent the irrigation of treated effluent to land (such as during or following rain events) direct contaminants to a wet weather storage. • Fit lockable valves or removable handles to all release pipes situated in public access areas. • Keep records of any removal or discharge off site, including destination, transporter, dates and volumes. • Retain vegetation wherever possible. • Manage vegetation on irrigation areas, including harvesting vegetation and where possible removing it from the disposal area. <p>If at any time the third party no longer consents to the reuse, it would be expected that you cease the reuse arrangements and return to disposing the treated effluent as approved. However, this is not intended to replace any requirements set out in a third party agreement between you and the third party. Where there are issues with the reuse in relation to a third party agreement, this should be resolved between the parties involved.</p> <p>This condition acknowledges that the receiver of the treated waste water will take on responsibility for its disposal or reuse to ensure it does not cause harm or nuisance to the environment. The receiver will</p>

	<p>be required to consider the general environmental duty and should understand the level of contamination received within the waste stream and the purpose it is to be used for.</p>
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	<p>This condition may not be appropriate for certain approvals where the reuse or disposal method proposed is integral to the operation of the sewage treatment plant. This might include a facility that proposes land irrigation but does not have the area available onsite to irrigate the volumes of treated effluent proposed to be generated by the particular sized plant.</p>
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6 Definitions³

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.

NOTE: Where the prefix 'PD' accompanies a definition (e.g. PD077), this code refers to a Connect business key. Where there is no Connect business key, the definition provided below is not included in a condition rather the definition relates to the supporting text in this document.

PD076 - 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.

PD077 - Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

PD078 - Administering authority means the Department of Environment and Science or its successor or predecessors.

PD085 - Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the EA requirements and can give authoritative assessment, advice and analysis in relation to the EA requirements using the relevant protocols, standards, methods or literature.

PD094 - 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.

PD092 - BOD5 means the 5 day biochemical oxygen demand determined using standard tests (e.g. those used by NATA laboratories). This test is not inhibited for nitrification, otherwise would be referred to as "carbonaceous" BOD.

PD098 - COD means chemical oxygen demand determined using standard tests (e.g. those used by NATA laboratories).

PD099 - 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.

PD107 - Day means any 24 hour period.

PD109 - 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 <INSERT> 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 <INSERT> preceding days exceeds a cumulative rainfall of <INSERT> mm [*INSERT values based on catchment characteristics*].

PD123 - Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994*.

PD124 - Environmental value as defined under Chapter 1 of the *Environmental Protection Act 1994*.

PD129 - Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

PD142 - Long Term (limit) means a limit applied to <INSERT value = 52/X> consecutive samples taken over a one year or 52 week period (on a rolling basis for limit calculations) where consecutive samples are taken on an <INSERT X> weekly basis of approximately equal periods (plus or minus 2 days of <INSERT value = X*7> days).

³ Note to administering authority officers: These definitions have been developed for consistent use across the State. However it is recognised that in rare circumstances, a definition might need to be amended to fit a particular type of operation. Delete this footnote once the definition has been added into the environmental authority. For sewage treatment activities you may need to remove **noxious** and **offensive** definitions when issuing an environmental authority as these relate to the 'how to comply' text. You should also carefully consider the definitions of **sensitive place** and **commercial place** when issuing an environmental authority and if both definitions are appropriate to be included in condition A1 given the proposed location of the **activity**.

PD144 - Measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

PD146 - 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.

PD147 - NATA means National Association of Testing Authorities.

Noxious means harmful or injurious to health or physical well-being.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Prescribed water contaminants means contaminants listed within Schedule 10 of the Environmental Protection Regulation 2019.

PD161 - Receiving environment monitoring program means a monitoring program designed to monitor and assess the potential impacts of controlled and/or uncontrolled releases of contaminants to the environment from the **activity**.

PD163 - Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

PD167 - Release of a contaminant into the environment means to:

- (a) deposit, discharge, emit or disturb the contaminant
- (b) cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- (c) fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- (d) allow the contaminant to escape
- (e) fail to prevent the contaminant from escaping.

PD176 - Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
2. a motel, hotel or hostel; or
3. a kindergarten, school, university or other educational institution; or
4. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
6. a public park or garden; or
7. for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

PD179 - Short-term (limit) means a limit is applied to five consecutive samples (on a rolling basis for limit calculations) where consecutive samples are taken on a <INSERT X>weekly basis of approximately equal periods (plus or minus 2 days of <INSERT value = X*7>days).

PD191 - 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.

PD192 - 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.

PD199 - 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.

PD202 - You means the holder of the environmental authority.