

Permit

Environmental Protection Act 1994

Environmental authority EPPR01792213

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

Environmental authority number: EPPR01792213

Environmental authority takes effect on the day it is signed by the delegate.

The payment of the **annual fee** will be due each year on this day. An **annual return** will be due each year on **1 March**.

Environmental authority holder(s)

Name(s)	Registered address
Mareeba Shire Council	65 Rankin Street MAREEBA QLD 4880

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (e) more than 10,000 but not more than 50,000EP	Mareeba Sewage Treatment Plant - Lot 888 on NR7943
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Atherton Street, Mareeba - Lot 1 on RP722729 Robins Street, Mareeba – Lot 1 on Plan RP722730 Keneally Road Reserve, Mareeba Palm Close Road Reserve, Mareeba Eccles Street, Mareeba - Lot 441 on NR5150 Ceola Drive, Sunset Park Mareeba - Lot 60 on SP101835 Barang Street Road Reserve, Kuranda

Environmentally relevant activity/activities	Location(s)
	Myola Road (Road Reserve), Kuranda
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	JRM Braes Road, Mareeba - Lot 20 on RP748320
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (b) 2,000t to 5,000t	Chillagoe Tip - Lot 130 on LD155 Irvinebank Waste Management Facility - Lot 15 on CP852249 Mount Molloy Waste Facility - Lot 2 on DA36 Almaden Tip - Lot 2 on CP880994
ERA 64 - Water treatment 3: Treating 10ML or more raw water in a day	Mareeba Water Treatment Plant - Lot 388 on CP902751
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (f) more than 50,000t but not more than 100,000t ERA 53 - Organic material processing Processing more than 200t of organic material in a year - (a) by composting the organic material ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (b) general waste ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (c) category 2 regulated waste ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing—	Mareeba Landfill - Lot 517 on SP171524

Environmentally relevant activity/activities	Location(s)
(d) category 1 regulated waste	
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	Kuranda Sewage Treatment Plant - Lot 811 on NR7753
ERA 60 - Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (a) less than 50,000t	Mareeba Sanitary Depot - Lot 533 on NR7032

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.



Liz Clarke

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

Date issued: 19 August 2021

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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)

Conditions of environmental authority

PART 1 GENERAL CONDITIONS

Environmentally relevant activity(ies)	Location(s)
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (b) 2,000t to 5,000t	Chillagoe Tip - Lot 130 Plan LD155 Irvinebank Waste Management Facility - Lot 15 Plan CP852249 Mount Molloy Waste Management Facility - Lot 2 Plan DA36 Almaden Tip – Lot 2 on Plan CP880994
ERA 60 - Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (a) less than 50,000t	Mareeba Sanitary Depot - Lot 533 Plan NR7032
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (f) more than 50,000t but not more than 100,000t ERA 53 - Organic material processing Processing more than 200t of organic material in a year - (a) by composting the organic material	Mareeba Landfill - Lot 517 Plan SP171524

ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (b) general waste ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (c) category 2 regulated waste ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (d) category 1 regulated waste	
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	Kuranda Sewage Treatment Plant - Lot 811 Plan NR7753
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (e) more than 10,000 but not more than 50,000EP	Mareeba Sewage Treatment Plant - Lot 888 Plan NR7943
ERA 64 - Water treatment 3: Treating 10ML or more raw water in a day	Mareeba Water Treatment Plant - Lot 388 Plan CP902751
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Atherton Street, Mareeba – Lot 1 on Plan RP722729 Robins Street, Mareeba – Lot 1 on Plan RP722730 Eccles Street, Mareeba – Lot 441 on NR5150 Keneally Road Road Reserve, Mareeba Palm Close Road Reserve, Mareeba Ceola Drive, Sunset Park Mareeba – Lot 60 on SP101835 Barang Street Road Reserve, Kuranda Myola Road (Road Reserve), Kuranda

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
1-G1	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.
1-G2	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.
1-G3	The activity must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the activity during routine operations and emergencies; and b) establish and maintain control measures that minimise the potential for environmental harm; and c) ensure plant, equipment and measures are maintained in a proper and effective condition; and d) ensure plant, equipment and measures are operated in a proper and effective manner; and e) ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and f) ensure that reviews of environmental performance are undertaken at least annually.
1-G4	All records must be kept for a period of at least five years and provided to the administering authority upon request.
1-G5	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system .
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. The only exception to this condition is for in situ monitoring of: a) pH, dissolved oxygen and turbidity for all sites; and

	b) electrical conductivity / Specific conductance and suspended solids for weekly testing of landfill surface waters. c) Landfill gas.
1-G7	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.
1-G8	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.
Agency interest: Air	
Condition number	Condition number
1-A1	Other than as permitted within this environmental authority, odours or airborne contaminants which are noxious or offensive or otherwise unreasonably disruptive to public amenity or safety must not cause nuisance to any sensitive place or commercial place .
1-A2	Contaminants must not be released to air from any point source.
Agency interest: Water	
Condition number	Condition
1-W1	Other than as permitted within this environmental authority, contaminants must not be released to any waters .
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 .
Agency interest: Waste	
Condition number	Condition
1-WA1	All waste generated in carrying out the activity must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.

PART 2 SITE SPECIFIC CONDITIONS (MAREEBA SANITARY DEPOT)

Environmentally relevant activity(ies)	Location(s)
ERA 60 - Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (a) less than 50,000t	Mareeba Sanitary Depot - Lot 533 Plan NR7032

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
2-G1	All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent: a) nuisance to occupiers of neighbouring premises; and b) any danger or risk to the health of any persons.
Agency interest: Air	
Condition number	Condition
2-A1	The following materials must not be used for dust suppression purposes: a) leachate or landfill gas condensate; or b) waste oil or other hydrocarbons.
Agency interest: Water	
Condition number	Condition
2-W1	The stormwater runoff from disturbed areas , generated by (up to and including) a 24 hour storm event with an average recurrence interval of 1 in 10 years must be retained on site or managed to remove contaminants before release.

2-W2	A system of suitable diversion drains or embankments must be constructed and maintained to divert surface waters away from any area of the licensed place where contact with wastes or contaminants may occur. Particular attention must be paid to any: a) active sanitary disposal trench; b) trench or vessel used to treat wastes prior to disposal; and c) area previously used for waste disposal.
Agency interest: Noise	
Condition number	Condition
2-N1	Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Part 2 – Table 1: Noise limits and the associated requirements at any nuisance sensitive place or commercial place .

Part 2 – Table 1: Noise limits

Noise level measured in dB(A)	Monday to Sunday and Public Holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am
L_A, max, adj, T	Noise measured at a nuisance sensitive place		
	Background + 5	Background + 5	Background + 3
L_A, max, adj, T	Noise measured at a commercial place		
	Background + 10	Background + 10	Background + 8

Associated requirements:

- a) All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and relevant Australian Standard.
- b) Monitoring must be taken when emissions are expected to be representative of actual operating conditions for the sample frequency period.
- c) Noise monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.

Agency interest: Land	
Condition number	Condition
2-L1	Soils or other materials used to construct the capping of trenches located in a completed waste disposal area (as designated in the Site development Plan) must achieve a maximum in situ hydraulic conductivity of no greater than 1×10^{-8} metres per second.
2-L2	Any completed and capped sanitary disposal area must be progressively covered to a depth of at least 250 millimetres with clean earth capable of supporting shallow rooted vegetation. A thicker top soil may be necessary to support deeper rooted vegetation and also to prevent root penetration of the cap.
2-L3	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: a) suitable species of vegetation for the location are established and sustained for earthen surfaces; b) potential for erosion is minimised; and c) the quality of water, including seepage, released from the site does not cause environmental harm.
2-L4	Following cessation of deposition of waste in the landfill unit , post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate, landfill gas or other contaminants that may cause environmental harm is likely.
2-L5	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include measures to: a) maintain the structural integrity and effectiveness of the final capping system; b) maintain the integrity and effectiveness of any low permeability final cover material; c) maintain the groundwater monitoring system and monitor quality of groundwater at a frequency sufficient to detect any release of contaminants to groundwater; and d) maintain vegetation that has been planted as part of post closure activities.
2-L6	At least six (6) months before the cessation of waste disposal activities at the licensed place, the holder of this environmental authority must submit the Post Closure Care Plan to the administering authority for review and comment.

Agency interest: Waste	
Condition number	Condition
2-WA1	This environmental authority only permits the following waste to be received and disposed of at the licenced place: a) grease interceptor trap effluent and residues; b) nightsoil; c) lime treated dimethoate pesticide; and d) treated deltamethrine insecticide.
2-WA2	New sanitary disposal trenches are not authorised to be constructed at the Mareeba Sanitary Depot.
2-WA3	The holder of this environmental authority must ensure any sanitary disposal trenches and above ground embankments are: a) located in an unshaded area; b) constructed so as to promote evaporation of generated leachate and contaminated stormwater; and c) constructed and managed so that a freeboard capable of preventing overspill is maintained at all times.
2-WA4	Where any disposal trench or any part thereof is installed above ground, the embankments must be maintained to ensure their stability and integrity.

PART 3 SITE SPECIFIC CONDITIONS (MAREEBA LANDFILL – WASTE DISPOSAL)

Environmentally relevant activity(ies)	Location(s)
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (f) more than 50,000t but not more than 100,000t	Mareeba Landfill - Lot 517 Plan SP171524
ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (b) general waste	
ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (c) category 2 regulated waste	
ERA 62 - Resource recovery and transfer facility operation 1 operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (d) category 1 regulated waste	

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
3-G1	All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent: a) nuisance to occupiers of neighbouring premises; and b) any danger or risk to the health of any persons.

Agency interest: Air	
Condition number	Condition
3-A1	Cells 4 and 6 are only to be used for non-putrescible waste until the time that the approval holder submits results of comprehensive odour modelling and evidence of the lack of previous odour complaints that demonstrates to the satisfaction of the administering authority that an odour nuisance is unlikely at nearby nuisance sensitive or commercial places.
3-A2	Dust and particulate matter must not exceed the following levels when measured at any nuisance 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 of 2003 (or more recent editions); or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (pm) (PM₁₀) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with: i) <i>Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air – Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size selective inlet -Gravimetric method'</i>; or ii) any alternative method of monitoring PM₁₀ which may be permitted by the administering authority.
3-A3	The following materials must not be used for dust suppression purposes: a) leachate or landfill gas condensate; or b) waste oil or other hydrocarbons.
3-A4	Landfill gas is not considered to cause environmental harm if: a) a landfill gas collection system is installed and maintained when the landfill unit is sufficiently elevated to allow adequate drainage of gas lines; and/or b) landfill gas monitoring shows that the release of methane does not exceed the following limits: i) 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the landfill unit; ii) 25 percent of the lower explosive limit when measured in facility structures (but excluding facility structures used for landfill gas control and landfill gas recovery system components); and iii) the lower explosive limit at the landfill facility boundary.

3-A5	Where landfill gas monitoring shows the release of methane as being above 500 parts per million at a height of 50mm, an effective landfill gas collection system must be designed, installed, operated and maintained on all landfill areas. Any gas collected in this system should, if it all possible, be reused in an energy recovery system, otherwise it must be actively vented or flared using only enclosed flares.
3-A6	A landfill gas monitoring network must be installed for each landfill unit to measure methane levels in facility structures and at the landfill site boundary , as prescribed by condition 3-A4 . The network must consist of gas monitoring devices, such as monitoring bores and be developed by an appropriately qualified person in the fields of hydrogeology and landfill gas monitoring program design to be able to competently make recommendations about these matters.
3-A7	Conduct and keep records of landfill gas monitoring which is performed at the following frequencies: a) at least every three months to assess compliance with the methane limit at a height of 50mm above the cover surface of the landfill unit prescribed by condition 3-A4; and b) at least every three months to assess compliance with methane limits for facility structures and at the boundary prescribed by condition 3-A4.
3-A8	Landfill gas monitoring referred to in the above conditions must be undertaken for at least the following parameters: a) methane; b) oxygen; c) carbon dioxide; d) hydrogen sulphide; and e) atmospheric pressure.
3-A9	If methane gas levels exceeding methane standards referred to in condition 3-A4 are detected, all necessary steps must immediately be taken to ensure protection of human health.
Agency interest: Water	
Condition number	Condition
3-W1	All batteries, liquid chemicals, fuels, and other liquid substances with potential to cause environmental harm must be stored within a secondary containment system that is impervious to the materials stored within it, and must be managed to prevent the release of contaminants to waters or land .

3-W2	The only contaminants to be released to surface waters are settled treated stormwater runoff waters from the final stormwater polishing pond from areas of the site not likely to be contaminated with waste materials to waters accordance with Part 3 – Table 1: Surface water release limits and the associated monitoring requirements.
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Part 3 – Table 1: Surface water release limits

Release point SW1 (GDA94)		Quality characteristics (units)	Limit	Limit type	Minimum monitoring frequency (surface waters)
Latitude	Longitude				
-16.98440538	145.4054714	Total suspended solids* (mg/L)	50	Maximum	Upon commencement of release, and weekly thereafter
-16.98440538	145.4054714	pH (pH units)	4.0 – 9.0	Range	Upon commencement of release, and weekly thereafter
-16.98440538	145.4054714	Electrical conductivity (µS/cm)	1,000	Maximum	Upon commencement of release, and weekly thereafter

Associated monitoring requirements:

- a) Releases must be undertaken from the authorised release point is as shown in **Attachment 1** of this environmental authority
- b) Sampling must be in accordance with the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- c) Samples must be representative of the release.
- d) *Testing for turbidity (NTU) may be derived from the suspended solids limit once a demonstrated correlation between turbidity to suspended solids historical monitoring data has been achieved.

3-W3	If discharge waters from the sediment pond exceed any of the contaminant trigger levels stated in Part 3 – Table 2: Discharge water trigger levels (Surface waters), the environmental authority holder must: a) complete an investigation in accordance with the ANZECC (2000) methodology, or any updated ANZECC guidelines, into the potential for environmental harm; and b) provide a written report to the administering authority within 3 months of the date of the original exceedence, outlining: i) details of the investigations carried out; and ii) actions taken to prevent environmental harm.
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Part 3 – Table 2: Discharge water trigger levels (Surface waters)

Quality characteristics (units)	Trigger level	Trigger level type	Minimum monitoring frequency (surface waters)
Turbidity (NTU)	80 th percentile* of reference site^ or 6 NTU, whichever is higher.	Median	Upon commencement of release, and weekly thereafter
pH (pH units)	Minimum: 6.0 [#] or 20 th percentile* of reference site^, whichever is lower. Maximum: 7.5 [#] or 80 th percentile of reference site^, whichever is higher.	Median	Upon commencement of release, and weekly thereafter
Dissolved oxygen (percentage saturation)	80 th percentile* of reference site^ or 90% [#] of saturation, whichever is lower.	Median	Upon commencement of release, and weekly thereafter
Electrical conductivity (µS/cm)	80 th percentile* of reference site^ or 250 µS/cm ⁺ , whichever is higher.	Median	Upon commencement of release, and weekly thereafter
Total dissolved solids	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Bicarbonate (HCO ₃)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Oxidised Nitrogen	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Ammonia	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Calcium	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Sulphate	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Chloride	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Hexavalent chromium	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Cadmium	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W8
Manganese	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9

Quality characteristics (units)	Trigger level	Trigger level type	Minimum monitoring frequency (surface waters)
Total iron	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Copper	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Lead	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Zinc	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Pesticides (organochlorines and organophosphates)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Total Petroleum Hydrocarbons	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
BTEX (Benzene, Toluene, Ethyl Benzene and Xylene)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Chemical oxygen demand (COD)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
5-day Biological oxygen demand (BOD ₅)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9
Total organic carbon (TOC)	TBA ^x	TBA ^x	Quarterly in accordance with condition 3-W9

Associated monitoring requirements:

- a) *Trigger levels based on 80th or 20th percentile are derived using ANZECC (2000) and the *Queensland Water Quality Guidelines* methodology and are based on the reference sites listed in b) below.
- b) ^Reference sites must:
 - i) be from the same biogeographic and climatic region;
 - ii) have similar geology, soil types and topography;
 - iii) contain a range of habitats similar to those at the test sites;
 - iv) have a similar flow regime to those at the test sites;
 - v) not be so close to the test sites that any disturbance at the test site also results in a change at the reference site; and
 - vi) refer to the *Queensland Water Quality Guidelines* for further guidance.

- c) #Limits are based on values contained in the *Queensland Water Quality Guidelines* Table 2.5.3.1 Regional guideline values for physio-chemical indicators – Wet Tropics Region.
- d) +Limits are based on ANZECC Table 3.3.5 – upper salinity limits for upland rivers of slightly disturbed ecosystems in tropical Australia.
- e) * Proposed interim trigger levels must be submitted to the administering authority by 30 November 2018 and are to be derived using ANZECC (2000) and the *Queensland Water Quality Guidelines* methodology and are based on the reference sites listed in b) above.
- f) The median must be determined based on a maximum of ten (10) consecutive samples.
- g) Sampling must be in accordance with the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- h) Samples must be representative of the release.

3-W5	The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause: a) re-suspension of particles; or b) erosion of bed or banks of receiving waters; or c) landscape damage; or d) ponding of the water; or e) vegetation damage.
3-W6	You must develop and implement a leachate quality management and monitoring program for the leachate generated at the site. The monitoring program is to include an annual analysis of leachate samples for the quality characteristics identified in Part 3 – Table 4: Leachate monitoring requirements.

Part 3 – Table 4: Leachate monitoring requirements

Quality Characteristic	Leachate	Surface water	Groundwater
pH	✓	✓	✓
Electrical conductivity	✓	✓	✓
Total dissolved solids	✓	✓	✓
Dissolved oxygen	✓	✓	
Bicarbonate (HCO ₃)	✓		✓
Oxidised Nitrogen	✓	✓	✓
Ammonia	✓	✓	✓
Calcium	✓	✓	✓
Sulphate	✓	✓	✓
Chloride	✓		✓
Hexavalent chromium	✓	✓	
Cadmium	✓	✓	
Manganese	✓	✓	✓
Total iron	✓	✓	✓
Copper	✓	✓	✓
Lead	✓	✓	✓
Zinc	✓	✓	✓
Pesticides (organochlorines and organophosphates)	✓	✓	✓
Total Petroleum Hydrocarbons	✓	✓	✓
BTEX (Benzene, Toluene, Ethyl Benzene and Xylene)	✓	✓	✓
Chemical oxygen demand (COD)	✓	✓	✓

Quality Characteristic	Leachate	Surface water	Groundwater
5-day Biological oxygen demand (BOD ₅)	✓	✓	
Total organic carbon (TOC)	✓		

3-W7	An effective surface water monitoring program must be developed and implemented for the site. The program must include, but not be limited to, a sufficient number of monitoring locations to: a) establish the reference quality of surface waters; and b) detect any impact on surface waters as a consequence of landfill operation.
3-W8	The surface water monitoring program specified in condition 3-W7 must monitor and record the quality of surface water for at least the quality characteristics identified in Part 3 – Table 4: Leachate monitoring requirements .
3-W9	Surface water quality samples must be collected from sample points in accordance with the surface monitoring program at least in January, April, July and October of each year, or, in the event of no sample being obtainable in ephemeral systems at this time, during the next period of flow of the watercourse.
3-W10	An effective groundwater monitoring program must be developed and implemented for the site. The program must include: a) installation of a groundwater monitoring network which: i) establishes the background quality of groundwater up-gradient and down-gradient of the landfill site; ii) are installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters; iii) include a sufficient number of bore(s) of compliance to detect any impact on groundwater as a consequence of landfill operation, constructed in accordance with the latest edition of the <i>Minimum Construction Requirements for Water Bores in Australia</i> (Agricultural and Resource Management Council of Australia and New Zealand 1997), that are located not more than 150 metres from the landfill area or at the boundary of the landfill facility whichever is the closer; and iv) provides representative groundwater samples for the aquifers being sampled; v) includes monitoring of water from the perched groundwater found in the sand lens in the north-west corner of the site identified during cell construction and situated beneath the landfill liner;

	b) analysis of groundwater samples for at least the quality characteristics identified in Part 3 – Table 4: Leachate monitoring requirements; c) collection of groundwater quality samples from groundwater at least in January, April, July and October of each year; and assessment of monitoring results to determine whether or not there has been any adverse change for each groundwater quality characteristic at locations hydraulically down-gradient of the landfill unit above when compared to background values.
3-W11	If groundwater monitored under condition 3-W10 for parameters specified in Part 3 – Table 4: Leachate monitoring requirements, exceed any of the contaminant trigger levels stated in <i>Part 3 – Table 5: Groundwater contaminant trigger levels – unfiltered</i>, the environmental authority holder must: a) complete an investigation in accordance with the ANZECC (2000) methodology, into the potential for environmental harm; b) provide a written report to the administering authority within three (3) months of the date of the original exceedence, outlining: i) details of the investigations carried out; and ii) actions taken to prevent environmental harm.

Part 3 – Table 5: Groundwater contaminant trigger levels – unfiltered

Quality Characteristic	Unit	Limit	Limit Type
Electrical conductivity	µS/cm	80 th percentile of reference site or 250*, whichever is higher.	Median^
pH	pH units	Minimum: 6.0# or 20 th percentile of reference site, whichever is lower. Maximum: 7.5# or 80 th percentile of reference site, whichever is higher.	Median^
Ammonia as Nitrogen	µg/L	80 th percentile of reference site or 6#, whichever is higher.	Median^
Total Nitrogen	µg/L	80 th percentile of reference site or 250#, whichever is higher.	Median^
Copper	µg/L	1.4 ⁺	95 th percentile^
Lead	µg/L	3.4 ⁺	95 th percentile^

Quality Characteristic	Unit	Limit	Limit Type
Zinc	µg/L	8 ⁺	95 th percentile [^]
Manganese	µg/L	1,900 ⁺	95 th percentile [^]
Benzene	µg/L	950 ⁺	95 th percentile [^]
Polycyclic Aromatic Hydrocarbons (PAHs)		Above limit of detection	95 th percentile [^]
Pesticides (organochlorines and organophosphates)		Above limit of detection	95 th percentile [^]
Total Petroleum Hydrocarbons		Above limit of detection	95 th percentile [^]

Associated notes:

- a) *Trigger levels are based on ANZECC Table 3.3.5 – upper EC limit for upland rivers of slightly disturbed ecosystems in tropical Australia.
- b) #Trigger levels are based on values contained in the *Queensland Water Quality Guidelines* Table 2.5.3.1 Regional guideline values for physio-chemical indicators – Wet Tropics Region.
- c) ^The median must be determined based on a maximum of ten (10) consecutive samples.
- d) +ANZECC (2000) trigger levels for aquatic ecosystems of slightly – moderately disturbed systems – Table 3.4.1 Level of protection 95% - tropical Australian upland rivers.

3-W12	The groundwater monitored under condition 3-W10 for parameters specified in <i>Part 3 – Table 5: Groundwater contaminant trigger levels – unfiltered</i> must not exceed any of the contaminant limits defined in Part 3 – Table 6: Groundwater contaminant limits – unfiltered .
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Part 3 – Table 6: Groundwater contaminant limits – unfiltered

Quality Characteristic	Unit	Limit	Limit Type
Electrical conductivity	µS/cm	1,000	Maximum
pH	pH units	4.0 – 9.0	Range
Total Nitrogen (TN)	mg/L	5	Maximum
Sulphate	mg/L	1,000	Maximum
Copper	mg/L	0.2	Maximum
Lead	mg/L	0.1	Maximum
Zinc	mg/L	2	Maximum

3-W13	Notwithstanding the above conditions, should groundwater monitoring show a statistically significant adverse change of levels of contaminants over background values at locations hydraulically down-gradient of the landfill unit then the administering authority must be notified within 14 days of the environmental authority holder receiving the results.
3-W14	A liner system for landfill cells constructed after 21 March 2007 must be installed and maintained to: a) prevent release of contaminants, including leachate, to land and waters; and b) prevent subsurface migration of landfill gas from the landfill unit.
3-W15	A leachate collection system must be designed by an appropriately qualified person and installed and maintained to: a) collect leachate generated in the landfill unit; b) convey the collected leachate out of the landfill unit to an appropriate leachate storage facility; and c) restrict the height of the leachate to 1.5 metres on any leachate collection sump liner serving the landfill, except during a pump failure, when it may exceed 1.5 metres for a period not exceeding 48 hours.
3-W16	Leachate or contaminated stormwater intercepted by the leachate collection system may only be disposed of: a) by recirculation back into the landfilled waste; or b) by irrigation over exposed wastes on the site that have not received their final cover; or c) to a sewage treatment plant.
3-W17	Any landfill gas condensate collected must be treated as leachate .
3-W18	Leachate and stormwater runoff which has been in contact with waste materials in the landfill unit, must be collected in the leachate storage facility and be: 1. treated in the leachate treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility; or 2. recirculated through waste disposed in the landfill unit; or 3. treated by alternative technologies agreed by the administering authority for offsite disposal, discharge, or onsite reuse; or 4. disposed of at a facility that is approved to receive such waste.
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 or commercial place .
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Part 3 – Table 1: Noise limits

Noise level measured in dB(A)	Monday to Saturday			Sundays and public holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am	9am – 6pm	6pm – 10pm	10pm – 9am
Noise measured at a nuisance sensitive place						
L _{A10} , adj, 10 mins	65	55	50	65	65	50
L _{A1} , adj, 10 mins	70	60	55	70	60	55
Noise measured at a commercial place						
L _{A10} , adj, 10 mins	70	65	55	70	65	55
L _{A1} , adj, 10 mins	75	65	60	75	65	60

Associated requirements:

- a) All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and relevant Australian Standard.
- b) Monitoring must be taken when emissions are expected to be representative of actual operating conditions for the sample frequency period.
- c) Noise monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.

3-N2	When required by the administering authority, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of Part 3 – Table 1: Noise limits, and the results notified within 14 days to the administering authority. Monitoring must include: a) L_{Aeq}, adj, T; b) Background noise (Background) as L_{A90}, adj, T; c) Max_{LpA,T}; d) the level and frequency of occurrence of any impulsive or tonal noise; e) atmospheric conditions including wind speed and direction; f) effects due to extraneous factors such as traffic noise; and g) location, date and time of recording.
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Agency interest: Land	
Condition number	Condition
3-L1	When the deposition of waste to the landfill unit ceases, a final capping system to the landfill unit must be designed by an appropriately qualified person and installed to minimise: a) infiltration of water into the landfill unit and water ponding on the surface; b) the likelihood of any erosion occurring to either the final capping system or the landfilled materials; and c) uncontrolled release of landfill gas. A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.
3-L2	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: a) suitable species of vegetation for the location are established and sustained for earthen surfaces; b) potential for erosion is minimised; c) the quality of water, including seepage, released from the site does not cause environmental harm; d) potential for environmental nuisance caused by dust is minimised; e) the water quality of any residual water body does not have potential to cause environmental harm; and f) the final landform is stable and protects public safety.
3-L3	Rehabilitation of disturbed areas must take place progressively as waste disposal cells are completed, areas of borrow pits are worked out and new areas for waste disposal or borrow pits are developed.
3-L4	Following cessation of deposition of waste in the landfill unit, post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate, landfill gas or other contaminants that may cause environmental harm is likely.

3-L5	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include measures to: a) maintain the structural integrity and effectiveness of the final capping system; b) maintain and operate the leachate collection system; c) maintain the groundwater monitoring system and monitor quality of groundwater at a frequency sufficient to detect any release of contaminants to groundwater; and d) maintain and operate the landfill gas monitoring system.
3-L6	You must implement an interim cover and rehabilitation program for waste disposal cells not forming part of the final surface level of the site and not likely to receive their next layer of waste within 12 months. This program must include at least the following: a) the installation of an interim cover system: i) of at least an additional 300 mm of compacted clayey material; ii) with a maximum permeability of 4×10^{-6} metres per second; iii) designed with effective surface water management systems to prevent water ponding; and b) a stabilisation program including measures such as revegetation and or mulching to prevent erosion.
Agency interest: Waste	
Condition number	Condition
3-WA1	Only the following waste streams can be received at the at the landfill unit for disposal: a) domestic waste; b) commercial waste; c) industrial waste; d) construction and demolition waste; e) solid inert waste; f) limited regulated waste.
3-WA2	No further waste may be deposited in the pre-existing old Mareeba Landfill that received waste prior to 21 March 2007.
3-WA3	In addition to condition 3-WA1, the following waste streams must not be permitted to be placed at the landfill facility at any time:

	a) regulated waste (other than limited regulated waste); b) liquid or semi-liquid waste, other than: i) a liquid or semi-liquid waste which has been produced in the carrying out of the activity; ii) liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams (except for sub-sections r) and s) of this condition below); c) hot ash; d) material that is smouldering or aflame; e) material containing a substance which is ignitable, corrosive, reactive or toxic material (other than materials containing a toxic substance from domestic premises) unless this material is to be deposited into a dedicated monocell with a written approval of the administering authority; f) all radioactive wastes, unless otherwise approved under the Radiation Safety Act 1999; g) an explosive; h) soils contaminated with regulated waste; i) ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction; j) fish processing waste; k) food processing waste; l) poultry processing waste; m) tallow; n) vegetable oils; o) putrescible kitchen wastes from commercial operations; p) drugs and poisons as cited in the Standards for Uniform Scheduling of Drugs and Poisons (Schedules 8 and 9 drugs as per the Poisons (Health and Drugs) Regulation 1996); q) tyres; r) filled or partly filled drums containing liquid wastes; s) car bodies; t) waste paints and solvents; u) gas bottles; v) green waste;
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	w) biosolids; and x) asbestos.
3-WA4	Car bodies, tyres, green waste, ferrous and non-ferrous scrap metals, waste oils, batteries and gas bottles are permitted to be placed within the Waste Transfer Station at the landfill facility , for: a) receiving; b) sorting; c) treating; and d) collecting recyclables prior to offsite processing.
3-WA5	Deposited waste must be covered as often as is necessary, but at least daily for cells 4 and 6, and every 48 hours for other cells to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and pest species.
3-WA6	Excepting combustion of landfill gas, waste must not be burnt.
3-WA7	All reasonable and practicable measures must be taken to contain litter within the waste operations area , and retrieve litter released.
3-WA8	Waste tyres may be stored: a) by recoverable burial in cells in a designated area of the site with any cell containing no more than 500 equivalent passenger-tyre units (EPU); or b) in temporary above ground heaps on the site provided that there are no more than 500 equivalent passenger-tyre units (EPU) at any time in any one heap.
3-WA9	Car bodies stored at the site must be drained of all oils, fuels and hydraulic fluids prior to compaction.

PART 4 SITE SPECIFIC CONDITIONS (MAREEBA LANDFILL – SOIL COMPOSTING)

Environmentally relevant activity(ies)	Location(s)
ERA 53 - Organic material processing Processing more than 200t of organic material in a year - (a) by composting the organic material	Mareeba Landfill - Lot 517 Plan SP171524

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
4-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: a) the manufacturing of compost from organic material or waste must not exceed a rate of 13,000 tonnes a year; and b) the only area approved for the composting activity is the area shown in Attachment 1 of this environmental authority.
4-G2	All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent: a) nuisance to occupiers of neighbouring premises b) any danger or risk to the health of any persons.
Agency interest: Water	
Condition number	Condition number
4-W1	Windrow composting, composting remixing, blending and screening operations must be carried out on a hardstand pad, constructed of compacted clay or other low permeable material to minimise soils infiltration, graded and bunded to avoid rainwater ponding and facilitate collection of leachate and contaminated stormwater runoff in the leachate storage pond(s).
4-W2	Leachate and contaminated stormwater must be separated from uncontaminated rainfall and stormwater and conveyed to a leachate storage pond(s).

4-W3	Leachate and contaminated stormwater intercepted by the leachate collection system may only be disposed of by reuse in the composting operations and/or to a sewage treatment plant.
Agency interest: Noise	
Condition number	Condition
4-N1	Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Part 4 – Table 1: Noise limits and the associated requirements at any nuisance sensitive place or commercial place .

Part 4 – Table 1: Noise limits

Noise level measured in dB(A)	Monday to Saturday			Sundays and public holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am	9am – 6pm	6pm – 10pm	10pm – 9am
Noise measured at a nuisance sensitive place						
L _{A10} , adj, 10 mins	Background + 5	Background + 5	Background + 0	Background + 5	Background + 5	Background + 0
L _{A1} , adj, 10 mins	Background + 10	Background + 10	Background + 5	Background + 10	Background + 10	Background + 5
Noise measured at a commercial place						
L _{A10} , adj, 10 mins	Background + 10	Background + 10	Background + 5	Background + 10	Background + 10	Background + 5
L _{A1} , adj, 10 mins	Background + 15	Background + 15	Background + 10	Background + 15	Background + 15	Background + 10

Associated requirements:

- All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and relevant Australian Standard.
- Monitoring must be taken when emissions are expected to be representative of actual operating conditions for the sample frequency period.
- Noise monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.

4-N2	When required by the administering authority, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of Part 4 – Table 1: Noise limits, and the results notified within 14 days to the administering authority. Monitoring must include: a) $L_{Aeq, adj, T}$; b) Background noise (Background) as $L_{A90, adj, T}$; c) $Max_{LpA, T}$; d) the level and frequency of occurrence of any impulsive or tonal noise; e) atmospheric conditions including wind speed and direction; f) effects due to extraneous factors such as traffic noise; and g) location, date and time of recording.
Agency interest: Waste	
Condition number	Condition
4-WA1	The only wastes authorised to be accepted at the site for use in the composting activity are: a) green waste mulch; b) cardboard; c) sewage sludge and residue; d) sugar cane bagasse; e) seed husks; f) cow manure; g) poultry manure; h) pig manure slurry; i) mill mud; j) food scraps; k) chicken and other animal mortality; l) grease trap sludge; and m) other agricultural organic wastes.
4-WA2	The holder of this environmental authority must ensure that raw material which has a high odour potential (i.e. biodegrading organics) is formed into composting windrows or static composting piles on the same day that the raw material is received.

4-WA3	Ensure that windrows (open or static) are managed to: a) prevent anaerobic conditions occurring; and b) ensure the destruction of pathogens.
4-WA4	All material being composted must have undergone a period of not less than six weeks of composting plus curing.
4-WA5	Static and open windrow temperature must be monitored regularly throughout the composting period and documentation must be recorded to demonstrate that the product has undergone the processes defined in conditions 4-WA3 .
4-WA7	The production and supply of composting/ soil conditioner at the site must comply with the latest edition of the <i>Australian Standard AS4454-2003: Compost, Soil Conditioners and Mulches</i> or any subsequent guideline adopted for use in Queensland.
4-WA8	The end use of compost produced at the composting facility must be determined by applying the classification system contained in the latest edition of the <i>Environmental Management Guidelines for the Use and Disposal of Biosolids Products</i> , 2000, produced by the Environmental Protection Authority (NSW).
4-WA9	The burning of waste is not permitted.
4-WA10	Soils or other materials used in the construction of the base of the composting area and associated above ground perimeter embankment on the site must achieve a maximum in situ hydraulic conductivity of no greater than 1×10^{-9} metres per second so as to effectively prevent or minimise the release of leachate through the base or embankments.

PART 5 SITE SPECIFIC CONDITIONS (CHILLAGOE TIP, IRVINEBANK WASTE MANAGEMENT FACILITY, MOUNT MOLLOY WASTE MANAGEMENT FACILITY AND ALMADEN TIP)

Environmentally relevant activity(ies)	Location(s)
ERA 60 - Waste disposal 2: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) (b) 2,000t to 5,000t	Chillagoe Tip - Lot 130 Plan LD155 Irvinebank Waste Management Facility - Lot 15 Plan CP852249 Mount Molloy Waste Management Facility - Lot 2 Plan DA36 Almaden Tip – Lot 2 on Plan CP880994

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
5-G1	All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent: a) nuisance to occupiers of neighbouring premises b) any danger or risk to the health of any persons.
5-G2	All reasonable and practicable measures must be taken to contain litter within the waste operations area, and retrieve litter released.
Agency interest: Air	
Condition number	Condition
5-A1	The following materials must not be used for dust suppression purposes: a) leachate or landfill gas condensate; or b) waste oil or other hydrocarbons.
Agency interest: Water	
Condition number	Condition
5-W1	A system of suitable diversion drains or embankments must be constructed and maintained to divert surface waters away from any area of the licensed places where contact with wastes or contaminants may occur. Particular attention must be paid to any: a) active waste disposal trench; b) area used for storage of wastes; and c) area previously used for waste disposal.
5-W2	The holder of this environmental authority must ensure that effective and practical measures are taken to ensure any waste disposal trench is operated and managed so as to minimise the generation of leachate .

5-W3	All batteries, liquid chemicals, fuels, and other liquid substances with potential to cause environmental harm must be stored within a secondary containment system that is impervious to the materials stored within it, and must be managed to prevent the release of contaminants to waters or land .
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 1: Noise limits and the associated requirements at any nuisance sensitive place or commercial place .

Part 5 – Table 1: Noise limits

Noise level measured in dB(A)	Monday to Sunday and Public Holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am
L _A , max, adj, T	Noise measured at a nuisance sensitive place		
	Background + 5	Background + 5	Background + 3
L _A , max, adj, T	Noise measured at a commercial place		
	Background + 10	Background + 10	Background + 8

Associated requirements:

- All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and relevant Australian Standard.
- Monitoring must be taken when emissions are expected to be representative of actual operating conditions for the sample frequency period. Noise monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.

5-N2	When required by the administering authority, noise monitoring must be undertaken, in accordance with the associated monitoring requirements of Part 4 – Table 1: Noise limits, and the results notified within 14 days to the administering authority. Monitoring must include: a) $L_{Aeq, adj, T}$; b) Background noise (Background) as $L_{A90, adj, T}$; c) $Max_{LpA, T}$; d) the level and frequency of occurrence of any impulsive or tonal noise; e) atmospheric conditions including wind speed and direction; f) effects due to extraneous factors such as traffic noise; and g) location, date and time of recording.
Agency interest: Waste	
Condition number	Condition
5-WA1	This environmental authority permits only the following wastes to be received for disposal at the licensed places: a) solid inert waste; b) construction wastes and demolition waste (other than asbestos sheeting or asbestos products); c) minor quantities of regulated wastes incidental to and commingled with domestic refuse; d) tyres; e) putrescible wastes and domestic garbage; f) commercial and industrial wastes (other than regulated wastes except where permitted under this condition); and g) green wastes. <i>Note:</i> a) <i>paper covered plasterboard must only be received at the licensed places if it is generated by construction and demolition activities and delivered to the licensed places as part of a mixed load of materials;</i> b) <i>car bodies and other recyclable large metal objects may be temporarily stored at the licensed places; and</i> c) <i>drums containing any residual regulated wastes are themselves a regulated waste and must not be accepted for disposal at the licensed place unless they have been triple rinsed or thoroughly cleaned.</i>

5-WA2	Notwithstanding condition 5-WA1 , the following wastes must not be received for disposal at the licensed places: a) pyrophoric wastes (where co-disposed with other potentially combustible material); b) untreated infectious wastes, pharmaceutical wastes, human body parts, pathogenic wastes and cytotoxic wastes; c) explosives and ammunition, pyrotechnics or propellants, apart from trace residues no longer capable of supporting combustion or an explosive reaction; and d) regulated wastes, other than those permitted under condition 5-WA1.
5-WA3	Excepting combustion of landfill gas, waste must not be burnt.
5-WA4	Soils or geosynthetic membrane liner(s) or other material(s) used in the construction of any future waste disposal trench and above ground embankment(s) on the licensed places must effectively prevent or minimise the release of leachate through the base and embankments.
5-WA5	Where an active waste disposal trench or any part thereof is installed above ground, the embankments must be maintained to ensure their stability and integrity of construction.
Agency interest: Land	
Condition number	Condition
5-L1	When the deposition of waste to the landfill unit ceases, a final capping system to the landfill unit must be designed by an appropriately qualified person and installed to minimise: a) infiltration of water into the landfill unit and water ponding on the surface; and b) the likelihood of any erosion occurring to either the final capping system or the landfilled materials. A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.
5-L2	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: a) suitable species of vegetation for the location are established and sustained for earthen surfaces; b) potential for erosion is minimised; and c) the quality of water, including seepage, released from the site does not cause environmental harm.

5-L3	Following cessation of deposition of waste in the landfill unit , post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate , landfill gas or other contaminants that may cause environmental harm is likely.
5-L4	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include measures to: a) maintain the structural integrity and effectiveness of the final capping system; b) maintain any post closure monitoring programs; c) maintain vegetation that has been planted as part of post closure activities.
5-L5	At least six (6) months before the cessation of waste disposal activities at the licensed place, the holder of this environmental authority must submit the Post Closure Care Plan to the administering authority for review and comment.

PART 6 SITE SPECIFIC CONDITIONS (KURANDA SEWAGE TREATMENT PLANT)

Environmentally relevant activity(ies)	Location(s)
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	Kuranda Sewage Treatment Plant - Lot 811 Plan NR7753

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
6-G1	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.
6-G2	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.
Agency interest: Water	
Condition number	Condition
6-W1	The only contaminants to be released to surface waters is: a) treated sewage effluent from the sewage treatment plant to waters described as Jum Rum Creek in accordance with Part 6 – Table 1: Surface water release limits and the associated requirements; and b) overflows from the sewage pump stations listed in Part 6 – Table 2: Sewage pump stations in accordance with the conditions of this environmental authority.

Part 6 – Table 1: Surface water release limits

Release point (GDA 94)			Quality characteristic (units)	Long-term 50 th percentile	Short-term 50 th percentile	Maximum
Name	Latitude	Longitude				
W1	-16.823817704	145.640449827	Daily volume (dry weather day) (m ³)	-	-	690
W1	-16.823817704	145.640449827	Daily volume (wet weather day) (m ³)	-	-	2,000
W1	-16.823817704	145.640449827	5-day Biological oxygen demand (BOD ₅) (mg/L)	5	10	25
W1	-16.823817704	145.640449827	Total suspended solids (mg/L)	10	20	30
W1	-16.823817704	145.640449827	Free residual chlorine (mg/L)	-	-	0.6
W1	-16.823817704	145.640449827	Ammonia as Nitrogen ((mg/L)	-	-	1.0
W1	-16.823817704	145.640449827	Total Nitrogen (mg/L)	5.0	-	10
W1	-16.823817704	145.640449827	Total Phosphorous (mg/L)	1.0	-	2.0
W1	-16.823817704	145.640449827	E.coli CFU/ 100 mL)	500	-	1,000

Associated requirements

- Release point W1 must be submerged at all times and the authorised release point is as shown in **Attachment 2** of this environmental authority.
- Sampling must be in accordance with the latest version of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- Samples must be representative of the release.

Part 6 – Table 2: Sewage pump stations

Sewage pump station description	Overflow location
Therwine Street, Kuranda	Barron River
Barang Street, Kuranda	Jum Rum Creek

Sewage pump station description	Overflow location
Caroona Street, Kuranda	Jum Rum Creek
Kennedy Highway	Open drain flowing to Barron River
Kuranda Railway Station	Open drain flowing to Barron River
Kullaroo Close, Kuranda	Barron River
Thooree Street, Kuranda	Barron River

Associated requirements

- a) Sampling must be in accordance with the latest version of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- b) Samples must be representative of the release.

6-W2	Monitoring of contaminant releases to waters from release point W1 must be undertaken in accordance with Part 6 – Table 3: Monitoring frequency and the associated monitoring requirements.
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Part 6 – Table 3: Monitoring frequency

Quality characteristic	Measurement units	Minimum frequency	Monitoring location (GDA 94)	
			Latitude	Longitude
BOD ₅	mg/L	Monthly	-16.8230441707	145.640100921
Total suspended solids	mg/L	Monthly	-16.8230441707	145.640100921
Free residual chlorine (mg/L)	mg/L	Monthly	-16.8230441707	145.640100921
pH	pH units	Weekly	-16.8230441707	145.640100921
Specific conductance	µS/cm	Weekly	-16.8230441707	145.640100921
Dissolved oxygen	mg/L	Weekly	-16.8230441707	145.640100921
Ammonia as Nitrogen	mg/L	Monthly	-16.8230441707	145.640100921
Oil and grease	mg/L	Monthly	-16.8230441707	145.640100921
E.coli	CFU/ 100 mL	Monthly	-16.8230441707	145.640100921

Associated monitoring requirements

- a) Sampling must be in accordance with the latest version of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- b) Samples must be representative of the release.

6-W3	Sewage pump stations whose failure would or would be likely to result in a direct or indirect release of contaminants to waters must be fitted with stand-by pumps and pump-failure alarms as well as high level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power if such power failure occurs and, when in operation, must notify the appropriate person to respond to the alarm.
6-W4	Any sewage pump station overflows must be screened to prevent the release of gross solids.
6-W5	Any new sewage pump station installed by the holder of this environmental authority at any licensed place covered by this part of this environmental authority must comply with the following design criteria: a) overflows resulting from infiltration should not occur for less than five (5) times design average dry weather flow (DADWF); b) all overflows and overflow control structures must, where practicable, be located away from environmentally sensitive locations including waterways and natural wetlands; c) where practicable, basins must be installed to isolate and contain sewage pump station overflows; and d) where a retention basin is provided, the contained overflow must be able to be pumped back to the sewage treatment system or removed for offsite disposal.
Agency interest: Noise	
Condition number	Condition
6-N1	Noise from the activity must not include substantial low frequency noise components and must not exceed the levels identified in Part 6 – Table 3: Noise limits and the associated requirements at any nuisance sensitive place or commercial place .

Part 6 – Table 3: Noise limits

Noise level measured in dB(A)	Monday to Sunday and Public Holidays		
	7am – 6pm	6pm – 10pm	10pm – 7am
L _A , max, adj, T	Noise measured at a nuisance sensitive place		
	Background + 5	Background + 5	Background + 3
L _A , max, adj, T	Noise measured at a commercial place		
	Background + 10	Background + 10	Background + 8

Associated requirements:

- a) All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and relevant Australian Standard.
- b) Monitoring must be taken when emissions are expected to be representative of actual operating conditions for the sample frequency period.
- c) Noise monitoring must be in accordance with the most recent version of the administering authority's *Noise Measurement Manual*.

PART 7 SITE SPECIFIC CONDITIONS (MAREEBA SEWAGE TREATMENT PLANT)

Environmentally relevant activity(ies)	Location(s)
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (e) more than 10,000 but not more than 50,000EP	Mareeba Sewage Treatment Plant - Lot 888 Plan NR7943

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: General	
Condition number	Condition
7-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: a) Inflows must not exceed the peak design capacity of 3 times the DADWF of 132L/s on any day unless the standard treatment processes of the plant are bypassed.
7-G2	A receiving environment monitoring program must be designed and implemented by appropriately qualified person(s) to monitor the effects of the activity on receiving waters .
7-G3	The receiving environment monitoring program required by condition 6-G2 , must include at least the following: 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 e) clarification of contaminant concentrations or levels indicating adverse environmental impacts during the monitoring program¹.
7-G4	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.
7-G5	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.
Agency interest: Water	
Condition number	Condition
7-W1	The only contaminants to be released to surface waters , excluding bypass releases covered by conditions 7-W6 to 7-W6 , are from the Mareeba Sewage Treatment Plant to waters described as Two Mile Creek from release point W3 in accordance with <i>Part 7 – Table 1: Surface water release limits</i> and the associated requirements.

Part 7 – Table 1: Surface water release limits

Release Point (GDA 94)			Quality characteristic (units)	Minimum	Long-term median	Short-term 50 th percentile	Short-term Median	Maximum
Name	Latitude	Longitude						
W3	-16.96802976	145.4078442	pH (pH units)	6.0	-	-	-	8.5
W3	-16.96802976	145.4078442	Dissolved oxygen (mg/L)	2.0	-	-	-	-
W3	-16.96802976	145.4078442	5-day Biological oxygen demand	-	-	5.0	-	15

Release Point (GDA 94)			Quality characteristic (units)	Minimum	Long-term median	Short-term 50 th percentile	Short-term Median	Maximum
Name	Latitude	Longitude						
			(BOD ₅) (mg/L)					
W3	-16.96802976	145.4078442	Total suspended solids (mg/L)	-	-	10	-	30
W3	-16.96802976	145.4078442	Total chlorine (mg/L)	-	-	-	-	Monitor only
W3	-16.96802976	145.4078442	Ammonia as Nitrogen (mg/L)	-	1.0	3.0	-	4.0
W3	-16.96802976	145.4078442	Total Nitrogen (mg/L)	-	5.0	-	-	15
W3	-16.96802976	145.4078442	Total Phosphorous (mg/L)	-	2.0	-	-	5.0
W3	-16.96802976	145.4078442	Enterococci (cfu/100mL)	-	230	-	-	700

Associated requirements

- Releases must be undertaken from the authorised release point as shown in **Attachment 3** of this environmental authority
- COD may be monitored as an alternative to BOD₅ once a reliable correlation has been determined through analysis of a minimum number of 24 wastewater samples over a minimum period of 12 months and with the agreement of the administering authority.
- Sampling must be in accordance with the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- Indicators for TN and TP must be done as 24 hour composite samples
- Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water.
- Limits for total chlorine concentrations are set considering potential toxicity to the receiving environment, mixing zones and practical methods for treatment and measurement.
- Sampling must be in accordance with the most recent edition of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- Monitor only (limit to be confirmed upon completion of TEP MAN18760 or by December 2017).
- Samples must be representative of the release.

7-W2	Monitoring of contaminant releases to waters , excluding bypass releases covered by water conditions 7-W6 to 7-W6 , must be undertaken in accordance with Part 7 – Table 2: Monitoring frequency and the associated monitoring requirements.
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Part 7 – Table 2: Monitoring frequency

Quality characteristic	Measurement units	Minimum frequency	Monitoring location (GDA 94)	
			Latitude	Longitude
BOD ₅	mg/L	Fortnightly	-16.96767	145.40865
Total suspended solids	mg/L	Fortnightly	-16.96767	145.40865
Volume (inflow)	ML	Daily	-16.96767	145.40865
Volume (outflow)	ML	Daily	-16.96767	145.40865
pH	pH units	Fortnightly	-16.96767	145.40865
Dissolved oxygen	mg/L	Fortnightly	-16.96767	145.40865
Ammonia	mg/L as N	Fortnightly	-16.96767	145.40865
Total Nitrogen	mg/L as N	Fortnightly	-16.96767	145.40865
Total Phosphorus	mg/L as P	Fortnightly	-16.96767	145.40865
Enterococci	Organisms/ 100 mL	Monthly	-16.96767	145.40865
Total chlorine	mg/L	Fortnightly	-16.96767	145.40865

Associated monitoring requirements

- a) Monitoring must be in accordance with the most recent edition of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- b) Monitoring must be undertaken when the activity is in operation and samples must be taken during a release.
- c) Total inflow before bypass release point.
- d) Total outflow is treated discharges and excludes flows those that are bypassed.
- e) Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water.

7-W3	In addition to condition 7-W3 , the release to waters must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter, excluding bypass releases covered by conditions 7-W4 and 7-W5 .
7-W4	Bypass releases must be screened prior to being released from release point W3.
7-W5	The administering authority must be notified within 24 hours of any bypass release ceasing.
7-W6	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.

PART 8 SITE SPECIFIC CONDITIONS (MAREEBA WATER TREATMENT PLANT)

Environmentally relevant activity(ies)	Location(s)
ERA 64 - Water treatment 3: Treating 10ML or more raw water in a day	Mareeba Water Treatment Plant - Lot 388 Plan CP902751

The environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency interest: Water	
Condition number	Condition
8-W1	The only contaminants to be released to surface waters are supernatant effluent from the sludge settling lagoons from the Mareeba Water Treatment Plant to waters described as an unnamed gully leading to the Barron River from release point W4 in accordance with <i>Part 8 – Table 1: Surface water trigger levels and release limits</i> and the associated requirements.

Part 8 – Table 1: Surface water trigger levels and release limits

Release Point (GDA 94)			Quality characteristic (units)	Trigger level* median [#]	Release Limits	
Name	Latitude	Longitude			Minimum	Maximum
W4	-16.96802976	145.4078442	Total suspended solids (mg/L)	80 th percentile of reference site ⁺	-	40
W4	-16.96802976	145.4078442	pH (pH units)	Between 6.0 and 7.5	5.0	9.0
W4	-16.96802976	145.4078442	Dissolved oxygen (% saturation)	Between 90 and 100	80	-
W4	-16.96802976	145.4078442	Aluminium (total) (µg/L)	55 or 80 th percentile [^] of reference site ⁺ , whichever is higher	0	200

Associated requirements

- Releases must be undertaken from the authorised release point is as shown in **Attachment 4** of this environmental authority.
- *ANZECC (2000) trigger levels for aquatic ecosystems of slightly - moderately disturbed systems – Table 3.4.1 level of protection 95% / Table 3.3.4 / 3.3.5 - tropical Australian upland rivers or the *Queensland Water Quality Guidelines 2009*.
- [#]Trigger levels based on the 80th percentile is derived using ANZECC (2000) and *Queensland Water Quality Guidelines 2009* methodology and are based on the reference sites.
- [^]Based on a minimum of five consecutive samples.
- +A Reference Site is described in *Queensland Water Quality Guidelines 2009*. A reference site is a site whose condition is considered to be a suitable baseline or benchmark for assessment and management of the water treatment plant sites. The reference site must be selected with reference to the criteria for a reference sites for physio-chemical indicators outlined in Table C.1 of the *Queensland Water Quality Guidelines 2009*.

8-W2	Monitoring of contaminant releases to waters must be undertaken in accordance with Part 8 – Table 2: Monitoring frequency and the associated monitoring requirements.
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Part 8 – Table 2: Monitoring frequency

Quality characteristic	Measurement units	Minimum frequency	Monitoring location (GDA 94)		
			Name	Latitude	Longitude
Total suspended solids (mg/L)	mg/L	Quarterly	Reference site W3	TBA	TBA
			Release point W4	-16.96802976	145.4078442
pH (pH units)	pH units	Quarterly	Reference site W3	TBA	TBA

			Release point W4	-16.96802976	145.4078442
Dissolved oxygen	% saturation	Quarterly	Reference site W3	TBA	TBA
			Release point W4	-16.96802976	145.4078442
Aluminium (total)	µg/L	Quarterly	Reference site W3	TBA	TBA
			Release point W4	-16.96802976	145.4078442

Associated monitoring requirements

- a) Monitoring must be in accordance with the most recent edition of the administering authority's *Monitoring and Sampling Manual* and all monitoring devices must be effectively calibrated and maintained.
- b) Monitoring must be undertaken when the activity is in operation and samples must be taken during a release.

8-W3	If receiving waters at the impacted site W4, described in <i>Part 8 – Table 1: Surface water trigger levels and release limits</i>, exceeding any of the contaminant trigger levels stated in <i>Part 8 – Table 1: Surface water trigger levels and release limits</i>, the environmental authority holder must: a) complete an investigation in accordance with the ANZECC (2000) methodology, into the potential for environmental harm; b) provide a written report to the administering authority within 3 months of the date of the original exceedence, outlining: i) details of the investigations carried out; and ii) actions taken to prevent environmental harm.
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PART 9 VARIATION CONDITIONS (SEWAGE PUMP STATIONS)

Environmentally relevant activity(ies)	Location(s)
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Atherton Street, Mareeba – Lot 1 on Plan RP722729 Robins Street, Mareeba – Lot 1 on Plan RP722730 Eccles Street, Mareeba – Lot 441 on NR5150 Keneally Road Road Reserve, Mareeba Palm Close Road Reserve, Mareeba Ceola Drive, Sunset Park Mareeba – Lot 60 on SP101835 Barang Street Road Reserve, Kuranda Myola Road (Road Reserve), Kuranda

With the exception of any variations, the environmentally relevant activity(ies) conducted at the location as described above must be conducted in accordance with the following standard conditions:

- *Code of environmental compliance for certain aspects of sewage treatment activities (ERA 63) (ESR/2015/1669)*

Variations to the standard conditions include:

Condition number	Condition
10	The operator must ensure that contaminants are not released to land or waters (including the bed and banks of any waters) as a result of the activity unless all reasonable and practicable measures have been taken to prevent the release.

PART 10 SITE SPECIFIC CONDITIONS (MAREEBA AIRPORT SEWAGE TREATMENT PLANT)

Environmentally relevant activity	Locations
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	JRM Braes Road MAREEBA QLD 4880 - Lot 20 Plan RP748320

Conditions of environmental authority

Agency interest: General	
Condition number	Condition
10-G1	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: a) inflows must not exceed the peak design capacity of 9.8kL/day equivalent to 49 equivalent persons(EP);

	b) the disposal of treated effluent to land must be via sub surface absorption trenches; c) the trenches must be located in the designated 'Land Application Area' depicted within plan titled 'Mareeba Shire Council Mareeba Airport Master Plan' as provided as Attachment 5; and d) the capacity of the wet weather storage must not be less than 20,000 litres.
10-G2	All reasonable and practicable measures must be taken to prevent the likelihood of environmental harm being caused.
10-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.
10-G4	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
10-G5	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results which must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority upon request and in the format requested.
10-G6	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
10-G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of electrical conductivity and pH.
10-G8	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.
10-G9	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; and f) actions taken.
10-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.

10-G11	The activity must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the activity during routine operations, closure and an emergency; b) establish and maintain control measures that minimise the potential for environmental harm, c) ensure plant, equipment and measures are maintained in a proper and effective condition; d) ensure plant, equipment and measures are operated in a proper and effective manner; e) ensure that staff are trained in and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and f) ensure that reviews of environmental performance are undertaken at least annually.
10-G12	The receiving environment monitoring program must be implemented and include at least the following: a) be undertaken annually; b) monitor the capacity of the effluent disposal area to sustainably assimilate nutrient loads arising from the release of treated effluent from the sewage treatment works; c) include soil samples taken within 1m of the trenches and at the depth of the base of the trenches; d) soil and sub-soil analysis, including assessment of the soils from a reference and representative locations, including type, structure, pH, phosphorus adsorption level and capacity, nutrient status, salinity and sodicity, and cation exchange capacity of the release areas; e) ensure the water balance of the soil within, and in the immediate vicinity of the effluent disposal area, is not adversely affected by the disposal of treated effluent; f) ensure vegetation is not damaged by the disposal effluent; g) establish an inspection regime to ensure no surface ponding of effluent occurs from the disposal of effluent; h) ensure no migration of effluent beyond the area designated for the release of treated effluent; and i) report the monitoring results and an assessment of the impact of the effluent releases to land.
10-G13	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.

Agency interest: Air					
Condition number	Condition				
10-A1	Odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place .				
Agency interest: Land					
Condition number	Condition				
10-L1	The only contaminants to be released to land are treated effluent in accordance with Table 1 — Treated effluent release limits to land application area and the associated requirements.				
	Table 1 – Treated effluent release limits to land application area				
	Quality Characteristic (units) ²	Minimum ²	Median ²	Maximum ²	Minimum frequency ²
	Volume (L/day) ⁴	-	-	9,800	Daily
	BOD5 (mg/L) ⁵	-	-	30	Monthly
	Total Suspended Solids (mg/L) ⁵	-	-	45	Monthly
	Total Nitrogen (mg/L as N) ⁷	-	15	30	Monthly
	Total Phosphorus (mg/L as	-	8	15	Monthly
	pH (pH units)	6.5	-	8.5	Monthly
	Electrical Conductivity (µS/cm)	-	-	1,500	Monthly
Associated requirements					
1. Total effluent release area must not be less than 0.3 hectares as outlined in attached plan – Attachment 5.					

	2. Monitoring must be in accordance with the administering authority's Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained. 3. Releases of treated effluent must not be outside of the 'Land Application Area' indicated in the attached plan as Attachment 5. 4. Volume of release must be calculated based on the total effluent release area when releasing the maximum volume or the worked out for the area of application based on the actual volume released. 5. BOD5 and Total Suspended Solids are about determining that the sewage treatment plant is achieving design outputs. 6. Indicators for Total Nitrogen and Total Phosphorus are recommended to be done as grab samples.
10-L2	Treated effluent released to land must be done in accordance with documentation that ensures: (a) drainage to groundwater and subsurface flows of contaminants to surface waters are 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) effluent disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake; (f) sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors.
10-L3	When weather conditions or soil conditions preclude the release of treated effluent to land, effluent must not be released to land.
Agency interest: Acoustic	
Condition number	Condition
10-N1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place .
Agency interest: Waste	
Condition number	Condition
10-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.

Agency interest: Water	
Condition number	Condition
10-WT1	Contaminants must not be released to any waters.

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

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

Administering authority means the Department of Environment and Science 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.

Background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 per cent of the time period of not less than 15 minutes, using Fast response.

Background bore means **groundwater** monitoring bore, constructed in accordance with the most recent edition of the *Minimum construction requirements for water bores in Australia* (National Uniform Drillers Licensing Committee), and used to sample **groundwater** from an aquifer the water quality of which may be potentially affected by the **activity**. This may be an **up-gradient bore**, **down-gradient bore** or bore in the same aquifer in a nearby location unaffected by the **activity**.

Blasting is the use of explosives to fracture:

- a) rock, coal and other minerals for later recovery; or
- b) structural components or other items to facilitate removal from a site or for reuse.

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.

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.

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

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.

Compliance bore means a bore, constructed in accordance with the *Minimum construction requirements for water bores in Australia* (National Uniform Drillers Licensing Committee), and used to monitor compliance with the groundwater quality limits.

Day means any 24 hour period.

Disturbed areas includes areas:

- a) that are susceptible to erosion;
- b) that are contaminated by the activity; and/or

- c) upon which stockpiles of soil or other materials are located.

Day means any 24 hour period.

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

Down-gradient bore means a **background bore** in a location hydraulically down gradient of those aspects of the **activity** that may affect groundwater quality.

Early warning bore means a down-gradient bore located between the landfilled waste or other contamination risk and compliance bore(s) to provide early warning of contaminant release.

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

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

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

Groundwater monitoring system means a system of groundwater monitoring devices, such as monitoring bores, used to provide data in respect to the level and quality of groundwater in the uppermost aquifer where the location of the groundwater monitoring devices is such that comparisons of groundwater quality and groundwater level can be made between groundwater flowing from beneath the site (down-gradient flow) of the **activity** and groundwater flowing towards the site of the **activity** (up-gradient flow).

$L_{Aeq, T}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the activity is causing a steady state noise, and no shorter than one hour when the approved activity is causing an intermittent noise.

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

Land does not include **waters**.

Landfill unit means a discrete area of land or an excavation that receives solid waste.

Landfill facility means land and structures at the site approved used for the disposal of solid waste.

Leachate means a **liquid** that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the site that contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

Liquid means any substance that:

- a) has an angle of repose of less than five degrees; or
- b) becomes free flowing at or below 60 degrees Celsius or when it is transported; or
- c) is not generally capable of being picked up by a spade or shovel.

Long-term 50th percentile means not more than any six (6) of the measured values of the quality characteristics are to exceed the stated release limit for any twelve (12) consecutive samples for a release / monitoring point at any time where:

- a) the consecutive samples are taken over a twelve (12) month period;
- b) the consecutive samples are taken at approximately equal periods; and

- c) the time interval between the taking of each consecutive sample is not less than thirty (30) days or greater than thirty four (34) days.

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

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.

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 9 of the *Environmental Protection Regulation 2019*.

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.

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

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) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- b) a motel, hotel or hostel; or
- c) a kindergarten, school, university or other educational institution; or
- d) a medical centre or hospital; or
- e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- f) a public thoroughfare, park or gardens; or
- g) for noise, a place defined as a sensitive receptor for the purposes of the *Environmental Protection (Noise) Policy 2019*.

Short-term 50th percentile means not more than any three (3) of the measured values of the quality characteristics are to exceed the stated release limit for any six (6) consecutive samples for a release / monitoring point at any time where:

- d) consecutive samples are taken over a six (6) month period;
- e) the consecutive samples are taken at approximately equal periods; and

- f) the time interval between the taking of each consecutive sample is not less than thirty (30) days or greater than thirty four (34) days.

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.

Toxic material means:

- a) cytotoxic wastes; or
- b) drugs and poisons as cited in the *Standards for Uniform Scheduling of Drugs and Poisons* (Schedules 8 and 9 drugs as per the *Poisons (Health and Drugs) Regulation 1996*).

Up-gradient bore means a **background bore**, in a location hydraulically up gradient of all potential influences of the **activity** that may affect groundwater quality.

Waste operations area means the following areas:

- a) waste receiving
- b) sorting
- c) treating
- d) recycling
- e) disposal.

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.

24 hour storm event with an average recurrence interval of 1 in 10 years means the maximum rainfall depth from a 24 hour duration precipitation event with an average recurrence interval of once in 10 years. *For example, an Intensity-Frequency-Duration table for a 24 hour duration event with an average recurrence interval of 1 in 10 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.*

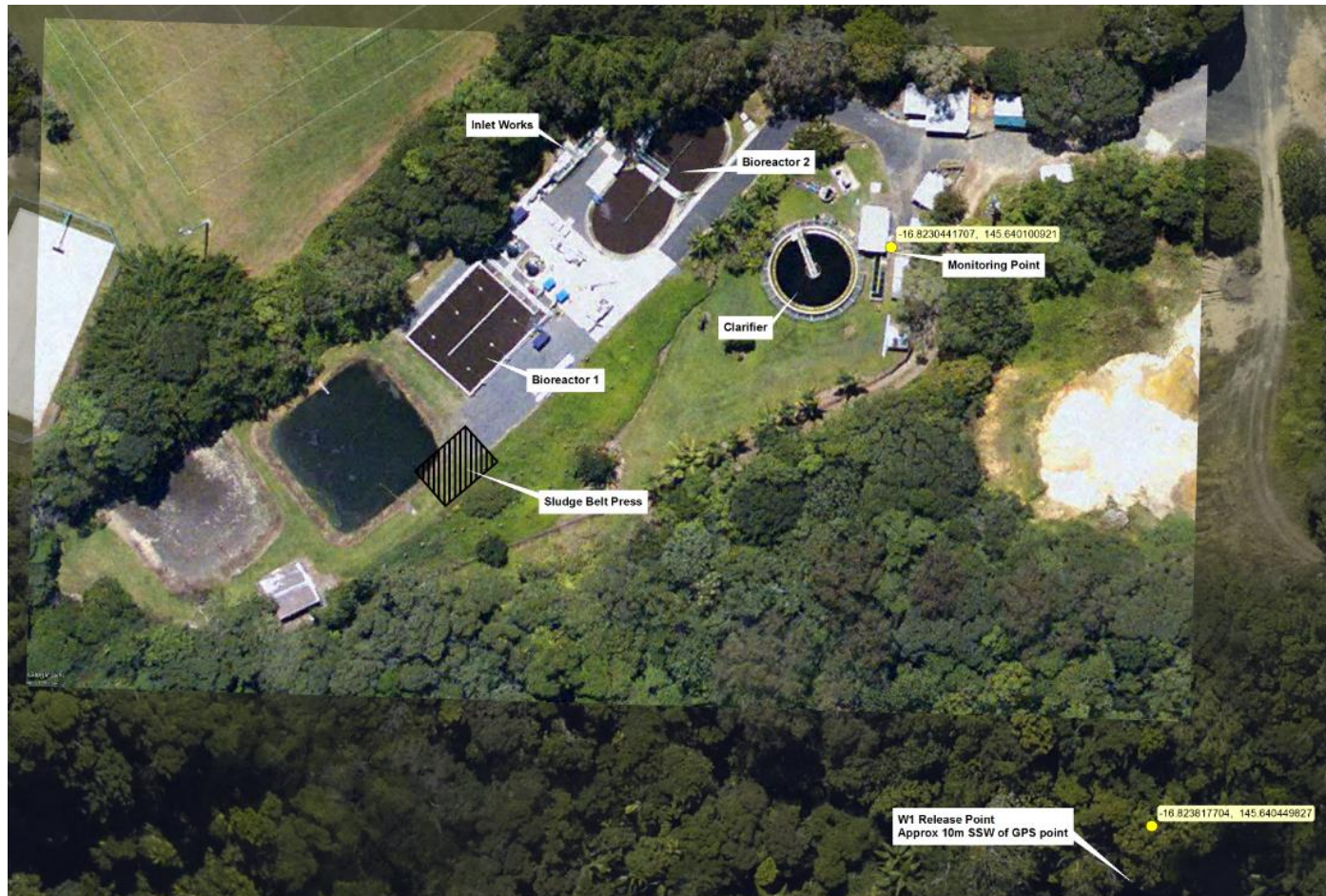
80th percentile means not more than one fifth, of the measured values are to exceed the stated release limit for the limit period, for example, no more than ten (10) for any fifty (50) consecutive samples for the long term period.

Environmental authority figures

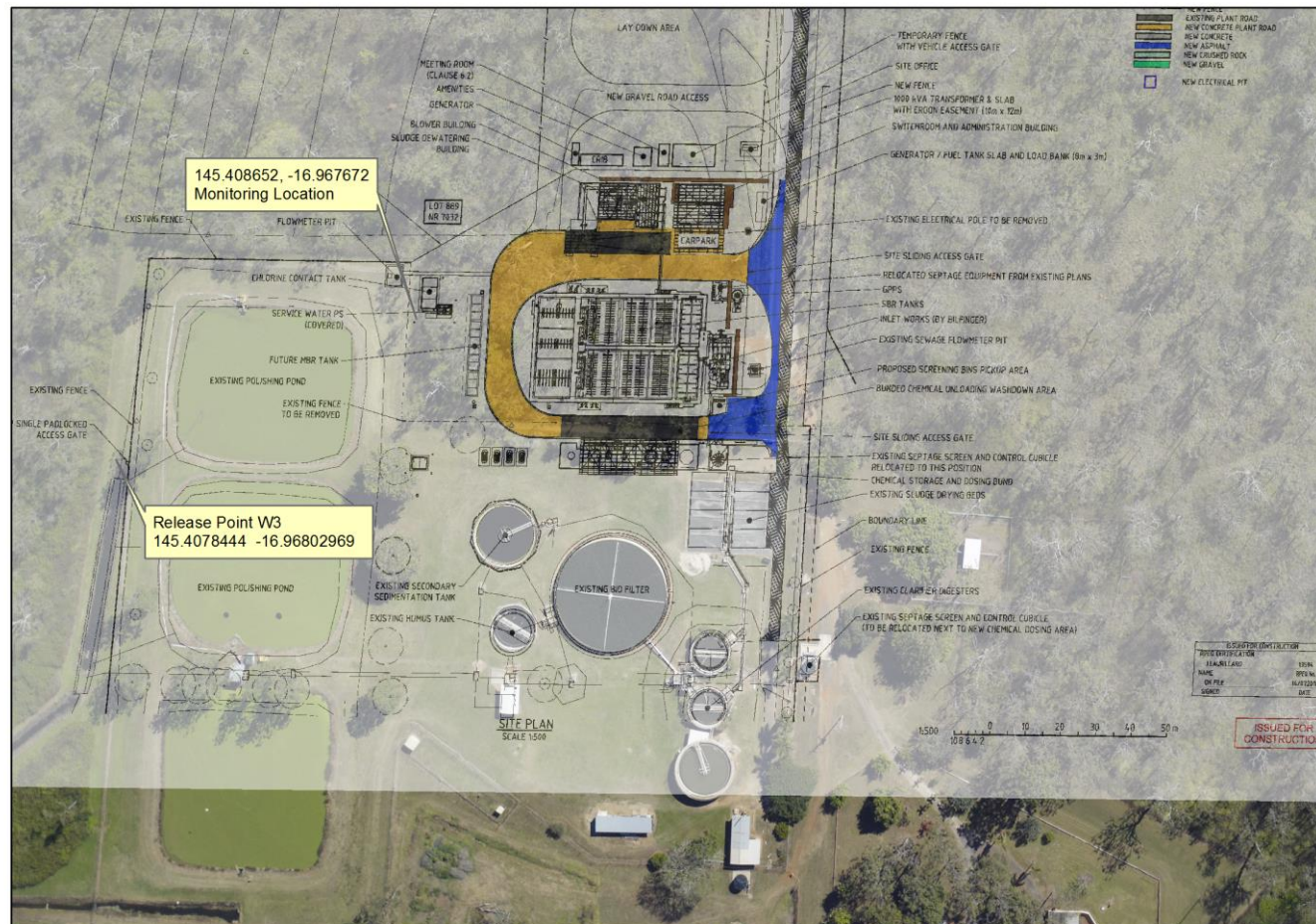
Attachment 1 – Mareeba Landfill Authorised Release Point and Soil Composting Area



Attachment 2 – Kuranda Sewage Treatment Plant Authorised Release Point and Monitoring Point



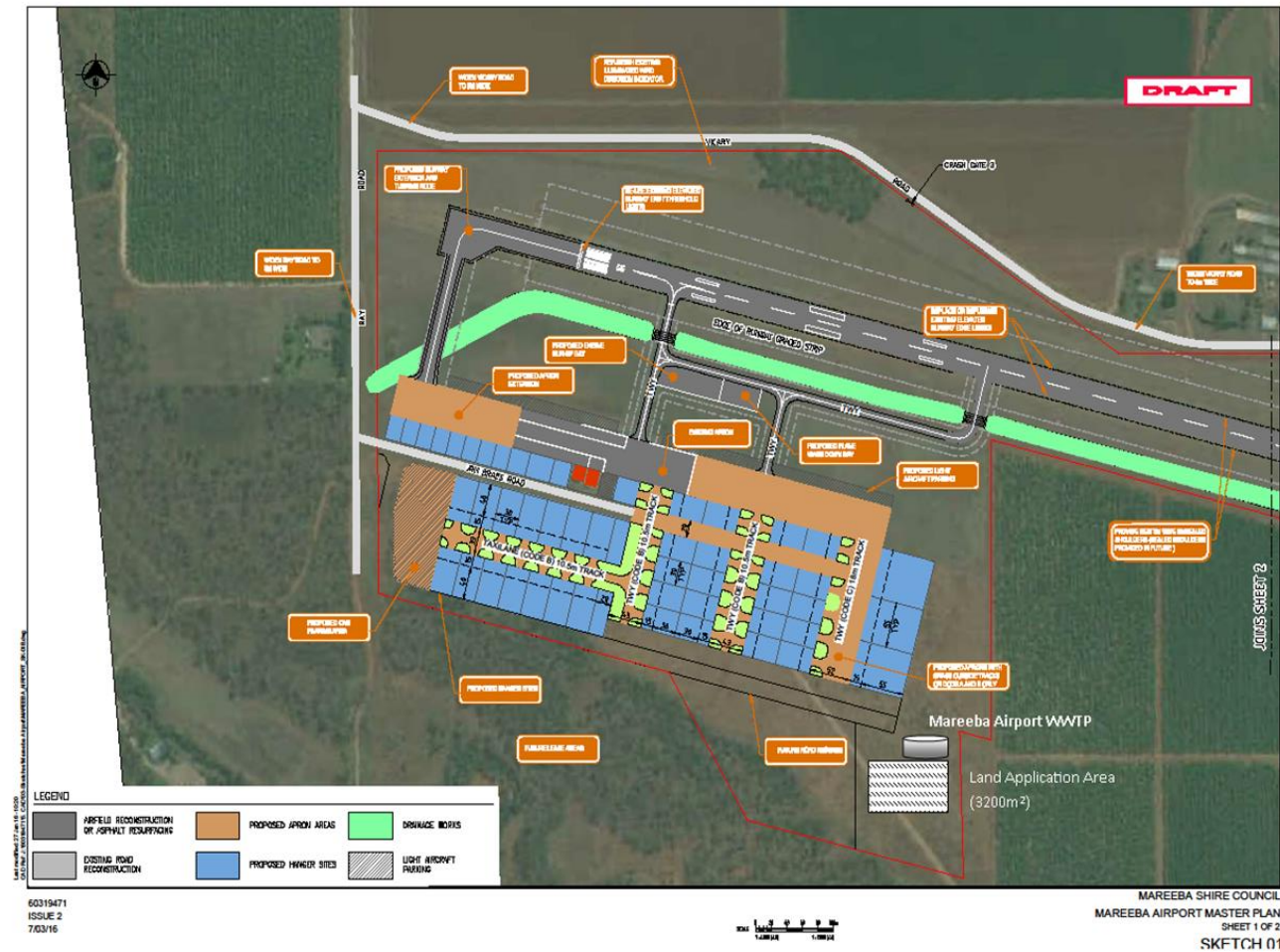
Attachment 3 – Mareeba Sewage Treatment Plant Authorised Release Point and Monitoring Point



Attachment 4 – Mareeba Water Treatment Plant Authorised Release Point



Attachment 5 – Mareeba Airport – Approved Plans



END OF PERMIT

Attachments

- *Code of environmental compliance for certain aspects* of sewage treatment activities (ERA 63)*

Code of environmental compliance

ERA 63(2)—Sewage treatment (sewage pump station)

This code of environmental compliance (code) continues to apply under s.191 of the Environmental Protection Regulation 2019. It contains the standard environmental conditions approved by the Minister, under section 549(2) of the Environmental Protection Act 1994, for carrying out the aspects of the environmentally relevant activity (ERA) specified in Section 3 of this code.

Code of environmental compliance for certain aspects* of sewage treatment activities (ERA 63)

Version 1

* This code only applies to the aspects of the ERA that meet the criteria in Section 3 of this code.

Refer to the notes on the next page for important information about changes to how this code applies.

Code of environmental compliance

ERA 63(2)—Sewage treatment (sewage pump station)

Notes:

This code refers to ERA 63(3) for sewage pump station. On 31 March 2013, ERA 63 was amended and ERA 63(3) became ERA 63(2).

This code refers to the Environmental Protection Regulation 2008, which was repealed and replaced by the Environmental Protection Regulation 2019 on 1 September 2019. A reference to the repealed regulation or a repealed provision in this code should be read as a reference to the replacement regulation or the corresponding provision in the replacement regulation.

From 31 March 2013, codes of environmental compliance no longer have effect, and an environmental authority is required for this ERA.

The eligibility criteria and standard conditions of this code are taken to be eligibility criteria and standard conditions (an ERA Standard) for the ERA until a new ERA Standard take effect.

Any new operation commencing from 31 March 2013 that meets the eligibility criteria in Section 3 of this code and that can meet all of the standard conditions can apply for a standard approval to carry out this activity. The conditions that apply to the standard approval will be the standard conditions.

Where the operation cannot meet all the standard conditions of this code, a variation application for an environmental authority can be made. The environmental authority will include the standard conditions as modified by any approved variations.

Information on applying for an approval is at www.business.qld.gov.au.

Anyone who held a registration certificate to operate under this code immediately before 31 March 2013 is automatically taken to have an environmental authority for the ERA. The registration certificate became an environmental authority and the standard environmental conditions of this code are the conditions of the environmental authority as standard conditions. The anniversary day of the environmental authority is the anniversary day of the registration certificate.

Code of environmental compliance

ERA 63(3)—Sewage treatment

This code of environmental compliance (code) has been made under Schedule 3 of the Environmental Protection Regulation 2008. It contains the standard environmental conditions approved by the Minister, under section 549(2) of the Environmental Protection Act 1994, for carrying out the aspects of the environmentally relevant activity (ERA) specified in Section 3 of this code.

Code of environmental compliance for certain aspects* of sewage treatment activities (ERA 63)

Version 1

* This code only applies to the aspects of the ERA that meet the criteria in Section 3 of this code.

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1. Introduction

The Department of Environment and Heritage Protection (EHP) has simplified the environmental compliance framework for environmentally relevant activities (ERAs) where environmental outcomes can be achieved by developing codes of environmental compliance (codes) that set out standard environmental conditions. The use of codes expedites environmental approval processes whilst still ensuring that there are appropriate standards of environmental management and protection.

Codes are appropriate for those activities that can achieve a good level of environmental protection through established, well understood practices. The standard environmental conditions are based on these practices and require the registered operator to take the necessary measures to prevent or minimise environmental harm.

Key terms and/or phrases used in this code are bolded and defined at the end of this code. Where a term is not defined in this code, the definition in the *Environmental Protection Act 1994* (EP Act), its regulations or Environmental Protection Policies must be used. If a word remains undefined it has its ordinary meaning.

2. Authorisation of the code

The Minister responsible for the EP Act, pursuant to section 549, approved the standard environmental conditions contained in this code on 4 July 2012. Approved codes are listed in Schedule 3 of the Environmental Protection Regulation 2008 (EP Reg).

3. Scope of the code

This code applies only to certain aspects of ERA 63 — Sewage treatment activities.

The aspects of ERA 63 — Sewage treatment activities, that this code applies to is threshold 3 which is outlined below (for the full definition see Schedule 2 of the EP Reg).

ERA 63	Sewage treatment activities
Threshold 3	Operating a sewage pumping station with a total design capacity of more than 40kL in an hour, if the operation of the pumping station is not an essential part of the operation of a sewage treatment works to which ERA 63(1) or ERA 63(2) applies.

The operation of the ERA under this code must comply with all of the criteria set out in the following table at all times:

Criteria
Operating a sewage pumping station with a total design capacity of more than 40kL in an hour.

Where the operation of a particular ERA will not meet the above criteria, this code does not apply and a development approval is required to undertake the ERA.

4. When the code takes effect

This code applies immediately to registered operators who commenced activities on or after 9 November 2012.

Registered operators who were carrying out ERA 63(3) under a development approval issued before 9 November 2012, and who continue to carry out the activity have a 12 month transitional period in which to ensure their operations comply with the code. The code becomes effective for those registered operators on 9 November 2013.

5. Enforcement of the code

This code contains standard environmental conditions for carrying out the activities that meet the criteria set out in Section 3 of this code. Failure to comply with the criteria or conditions of the code is an offence and penalties apply. A development approval is required where an ERA 63(3) activity is not self-assessable under this code—It is an offence to undertake an activity without a development approval and penalties apply. Enforcement Guidelines published by the administering authority are available at www.ehp.qld.gov.au.

6. Other requirements

In addition to the conditions in this code, the registered operator carrying out ERA 63(3) must comply with all other relevant Commonwealth, State or local government legislative requirements. Without limiting the requirements that may apply, some additional obligations under the EP Act include:

- holding a **registration certificate** issued by the **administering authority** under section 73F; and
- taking all reasonable and practicable measures to prevent or minimise environmental harm. This is referred to as the 'general environmental duty'.

7. Amendment of this code

This code may be amended from time to time by gazette notice advising that the Minister has approved new conditions. Proposed changes to the standard environmental conditions, other than changes to correct a clerical error, will be made in consultation with stakeholders. Where there is a significant change to the code, the administering authority will notify registered operators affected by the change.

8. Further information or enquiries

Further information is available at www.ehp.qld.gov.au or by contacting the relevant regional office of the administering authority.

General enquiries or suggestions for future amendments to the code should be directed to Permit and Licence Management, Implementation Support Unit on telephone 13 QGOV (13 74 68) or by email at palm@ehp.qld.gov.au.

9. Standard environmental conditions

Standard environmental condition	Advice
Condition 1 – Flooding The operator must ensure that new pumping stations are constructed to ensure that essential operational components of the pumping station are not impacted in a way which results in a failure of these components by flooding below the one in 100 year flood level. The operator must, when considering major upgrades of existing pumping stations, undertake a review of the construction of the essential operational components of the pumping station that may fail as a result of flooding below the one in 100 year flood level. The operator must consider moving these components above the one in 100 year flood level.	When constructing new pumping stations in a flood prone area, the switch gear should be located above the one in 100 year flood level, as identified at the time of the construction. When upgrading existing pumping stations in a flood prone area, the operator should consider relocating any switch gear that is below the one in 100 year flood level, as identified at the time of the upgrade. Any upgrades should be included within the sewage overflow abatement plan as required by condition 7 of this approval.
Condition 2 – Flooding The operator must ensure that new pumping stations are constructed so that storm and flood waters can not enter the pump well. The operator must, when considering major upgrades of existing pumping stations, undertake a review of the construction and consider improvements to reduce the potential for storm and flood waters to enter the pump well.	When constructing new pumping stations openings to the well (such as maintenance holes) should not be lower than the one in 100 year flood level, as identified at the time of the construction. When upgrading existing pumping stations in a flood prone area, the operator should consider upgrades to restrict water from entering the well if located below the one in 100 year flood level, as identified at the time of the upgrade. Any upgrades should be included within the sewage overflow abatement plan as required by condition 7 of this approval.
Condition 3 – Maintenance of measures, plant and equipment The operator must: (a) maintain all measures, plant and equipment in an effective condition and keep records of the maintenance (b) operate such measures, plant and equipment in an effective manner.	

Standard environmental condition	Advice
Condition 4 – Integrated environmental management system For new pumping stations the operator must document and comply with an integrated environmental management system (IEMS) prior to the commencement of this activity. For existing pumping stations the operator must document and comply with an IEMS within 12 months of the date this approval takes effect. The IEMS must identify all causes of environmental harm including, but not limited to, the actual and potential release of any contaminants, the nature of the environmental harm and the actions that will be taken to prevent environmental harm being caused. The IEMS must achieve the following outcomes: (a) environmental aspects and potential impacts are identified (b) a contingency plan and emergency response plan are in place (c) a network plan of the sewage collection system including connected pumping stations and likely overflow points is maintained (d) control measures that minimise the potential for environmental harm are in place (e) organisational structures, accountability and responsibilities are recorded (f) effective, practical communication arrangements, including documentation of such (g) all contaminant releases, and an estimate of their impact on the receiving environment are recorded (h) staff are trained and aware of the requirements of this approval.	The IEMS is a commitment to complying with the approval. It is generally for the benefit of the operator in helping them to clarify and comply with the approval requirements. The IEMS may not necessarily be site specific. It should provide guiding principles to help plan ways to manage risks and minimise any potential environmental harm. For example, by identifying: • what contaminants could be released • where any contaminants released would go and their impact • that actions could be taken to contain any release • what precautions could be taken to prevent a release. This information can then be used to include procedures for prioritising responses to overflow events based on the risk to the receiving environment and the extent of the release. An IEMS may be used for a sewage network. However, any IEMS used for a network must be updated to reflect a new activity to which this approval applies. An IEMS may also be used to demonstrate compliance with the general environmental duty for other pumping stations which are not licensed but may still have the potential to cause environmental harm.

Standard environmental condition	Advice
Condition 5 – Contingency plan For new pumping stations the operator must document and comply with a contingency plan prior to the commencement of this activity. For existing pumping stations the operator must document and comply with a contingency plan within 24 months of the date this approval takes effect. The contingency plan must provide for: (a) standard connections for emergency by-pass pumping (b) standard connections for mobile generators, or a back-up power source that automatically starts in the event of power failure (c) stand-by pumping equipment and associated controls (d) identification of critical components and a system to ensure adequate and timely access to spare parts (e) access for maintenance and emergency activities (f) testing and validation of any relevant equipment used or related to the contingency plan as necessary.	The detail of the contingency plan should reflect the complexity and risk of the activity at the site specific location. Where an IEMS has been developed for a sewage network there may be a contingency plan applicable to many pumping stations within the network based on the level of risk posed by the pumping stations. In this instance the one contingency plan can be used but must be updated to reflect the addition of the new activity to which this approval applies. While this condition requires the contingency plan to include provision for certain requirements, these are not intended to be restrictive. Where these requirements can be met in an alternative way or might not be relevant to a site specific activity this should be clearly documented. If you are proposing alternative arrangements you should consult the administering authority.

Standard environmental condition	Advice
Condition 6 – Emergency response plan For new pumping stations the operator must document and comply with an emergency response plan prior to the commencement of this activity. For existing pumping stations the operator must document and comply with an emergency response plan within 24 months of the date this approval takes effect. The emergency response plan must provide for: (a) an implementation manual (b) staff training (c) identification of the part of the environment to which a sewage release may occur (for example, for water bodies, a description of where contaminants may enter the particular water body) (d) remediation and clean up of areas affected by sewage releases (e) receiving environment (surface waters/land) monitoring program for all notifiable releases to examine and assess environmental impacts (f) ongoing investigation and review to establish the cause of sewage releases, initiate corrective and/or preventative measures, and report on the effectiveness of such corrective and/or preventative measures.	The detail of the emergency response plan should reflect the complexity and risk of the activity at the site specific location. Where an IEMS has been developed for a sewage network there may be an emergency response plan applicable to many pumping stations within the network based on the level of risk posed by the pumping stations. In this instance the one emergency response plan can be used but must be updated to reflect the addition of the new activity to which this approval applies. While this condition requires the emergency response to include provision for certain requirements, these are not intended to be restrictive. Where these requirements can be met in an alternative way or might not be relevant to a site specific activity this should be clearly documented. If you are proposing alternative arrangements you should consult the administering authority. A receiving environment monitoring program must be sufficient to demonstrate the extent of the contamination and the time taken for the receiving environment to return to normal. For a release to waters, upstream and downstream monitoring may be required.
Condition 7 – Sewage overflow abatement plan For new pumping stations the operator must document and comply with a sewage overflow abatement plan within 12 months of the date this approval takes effect. For existing pumping stations the operator must document and comply with a sewage overflow abatement plan within 24 months of the date this approval takes effect. The sewage overflow abatement plan must consider the existing performance and trends, and the potential receiving environment of the pumping station. It must: (a) identify where the greatest risks of causing environmental harm are (b) identify and evaluate measures in place to reduce the incidence of overflows (c) develop a program of works with a timetable for implementation (d) assess performance and trends for any implemented works.	The detail of the sewage overflow abatement plan should reflect the complexity and risk of the activity at the site specific location. Where an IEMS has been developed for a sewage network there may be a sewage overflow abatement plan applicable to many pumping stations within the network based on the level of risk posed by the pumping stations. In this instance the one sewage overflow abatement plan can be used but must be updated to reflect the addition of the new activity to which this approval applies. Where flooding issues have been identified (as outlined in conditions 1 and 2), upgrades must be included within the sewage overflow abatement plan.

Standard environmental condition	Advice
Condition 8 – Records The operator must record, compile and keep all maintenance and monitoring results, plans and documents required by this approval and present this information to an authorised person or the administering authority when requested.	Records should verify the provision of training programs and schedules of routine inspections.
Condition 9 – Records All records required by this approval must be kept for five years.	
Condition 10 – Release to land and waters The operator must ensure that contaminants are not released to land or waters (including the bed and banks of any waters) as a result of the activity .	The administering authority acknowledges that a typical design for sewerage system capacity is three to five times average daily dry weather flow and that overflows may occur in wet weather when the design capacity of the sewerage system is exceeded.
Condition 11 – Notifiable release The operator must notify the administering authority via the 24 hour Pollution Hotline or the district office no later than three hours after becoming aware of a sewage release that: (a) poses a threat to public health (for example, contamination of waters with primary recreation values); (b) results in any observable environmental impact (for example, fish kill, distress to wildlife, marine plants or other aquatic life); (c) discharges to, or is likely to impact, a sensitive environment (for example, Ramsar wetland, marine park, or area designated as a conservation zone under a relevant planning scheme); or (d) is 10 000 L or more during dry weather.	The administering authority may need to respond quickly to some spills with the potential to cause environmental harm. Priority should be given to notifying the administering authority of these spills immediately after they occur. The 24 hour Pollution Hotline number is 1300 130 372. Where an event has occurred that causes or threatens serious or material environmental harm the duty to notify environmental harm requirements as per ss. 320-320G of the EP Act will also apply. Where reporting under ss. 320-320G is provided and satisfies the notification conditions of this approval, it is not necessary to report again against this approval. The administering authority's district office is the office responsible for the local government area where the release has occurred. Where the volume of the release is unknown an estimate is to be provided.

Standard environmental condition	Advice
Condition 12 – Notifiable release Within 24 hours after becoming aware of a notifiable release in accordance with condition 11, email or written notification of the release must be submitted to the administering authority outlining the event, its nature and the circumstances in which it happened.	Where there has been a threat to public health this notification should include evidence that owners or occupiers of the affected land have been notified. This can be by public notification.
Condition 13 – Notifiable release A final report must be provided to the administering authority within 14 business days of the conclusion of the spill response and remediation of a notifiable release, but no later than 20 business days after the commencement of the release.	Any additional information such as sampling results maybe added to the report in the form of attachments at any time. If the commencement of the release is unknown, an estimation of the time and date of the commencement of the release is to be provided.
Condition 14 – General release reporting All releases must be reported to the administering authority in the form of an annual report by 30 September covering the period 1 July – 30 June of the previous year.	All discharges include notifiable releases and all other releases from the pumping station. These should be clearly identified in the report. Where the activity is part of a sewage network, annual reporting for the network may be provided to satisfy this condition.
Condition 15 – General release reporting Annual reports outlining all releases in accordance with condition 14 must clearly identify: (a) the waste water treatment plant which the pumping station is connected to (b) the number of releases (c) the volume (or estimate of the volume) of each release (d) the location of each release by suburb post code (e) if the release was reported under ss. 320-320G of the <i>Environmental Protection Act 1994</i>.	Reporting should be provided in a way in which the data is easy to handle and review. It would be beneficial to also include the reason for the release when reporting. An example would be in an excel spreadsheet.
Condition 16 – Monitoring The operator must ensure that all monitoring, assessments and reports required by this approval are conducted by a person with appropriate experience and/or qualifications. Water monitoring must be undertaken in accordance with the administering authority's Water Quality Sampling Manual and other relevant standards.	

Standard environmental condition	Advice
Condition 17 – Trained/experienced operator(s) The operator must ensure that the daily operation and maintenance of the pumping station is carried out by a person with experience and/or qualifications appropriate to ensuring the effective operation of the pumping station.	
Condition 18 – Equipment calibration The operator must ensure that all instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval are calibrated, operated and maintained in accordance with the manufacturer's specifications.	
Condition 19 – Complaint response The operator must record the following details for all complaints received and this information must be provided to an authorised person or the administering authority on request: (a) time, date, name and contact details of the complainant (b) reasons for the complaint (c) any investigation undertaken (d) conclusions formed (e) any actions taken.	If the complainant does not wish to have their name and contact details recorded, note this as an anonymous complaint.
Condition 20 – Air nuisance The operator must ensure that the release of odours or airborne contaminants resulting from the activity do not cause environmental nuisance at a nuisance sensitive place or commercial place .	
Condition 21 – Noise nuisance The operator must ensure that noise resulting from the activity does not cause environmental nuisance at a nuisance sensitive place or commercial place .	

Standard environmental condition	Advice
Condition 22 – Noise monitoring When requested by the administering authority, the operator must undertake noise monitoring to investigate any complaint of noise nuisance. The monitoring must be undertaken and results must be notified to the administering authority in the format and within the time specified by the administering authority. Monitoring must include: (a) measurement of L_{A90}, adj, 15 mins (b) measurement of L_{A10}, adj, 10 mins (c) measurement of L_{Aeq}, adj, 10 mins (d) the level and frequency of occurrence of impulsive or tonal noise (e) atmospheric conditions including wind speed and direction (f) effects due to extraneous factors such as traffic noise (g) the location, date and time of monitoring.	
Condition 23 – Noise monitoring The operator must ensure that the method of measurement and reporting of noise levels complies with the latest edition of the administering authority's Noise Measurement Manual.	The administering authority's Noise Measurement Manual is available at www.ehp.qld.gov.au.
Condition 24 – Responding to potential releases The operator must ensure that there are appropriate physical systems in place to anticipate a potential release.	This may include an alarm system using one or more of the following; pump-failure alarms or level alarms for sewage contained in the pump well.
Condition 25 – Responding to potential releases Any system developed in line with condition 24 must be able to operate for a sufficient time to allow for notification of the potential release to the operator and an appropriate response.	This may include having back up power available or providing additional detention capacity.
Condition 26 – Responding to potential releases Any identification of a potential release must be responded to by the operator.	Response times should consider the potential for environmental harm based on site specific details and the potential volume of release from the pumping station.

10. Definitions

Words and phrases used throughout this guideline are defined below. Where a definition for a term used in this guideline is sought and the term is not defined the administering authority may be contacted to provide clarification.

One in 100 year flood level means the level reached by a flood event with an annual recurrence interval of one in 100 years.

Activity means ERA 63 (3).

Administering authority means the Department of Environment and Heritage Protection, or the department responsible for administering the *Environmental Protection Act 1994*.

Authorised person means a person authorised under the *Environmental Protection Act 1994*.

Approval means this code of environmental compliance.

Commercial place means a place used as an office or for business or commercial purposes.

Environmental harm (as defined in Section 14 of the *Environmental Protection Act 1994*) is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes **environmental nuisance**. **Environmental harm** may be caused by an activity:

- a) whether the harm is a direct or indirect result of the activity
- b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.

Environmental nuisance (as defined in Section 15 of the *Environmental Protection Act 1994*) means—‘unreasonable interference or likely interference with an environmental value’ caused by:

- a) aerosols, fumes, light, noise, odour, particles or smoke
- b) an unhealthy, offensive or unsightly condition because of contamination
- c) another way prescribed by regulation.

Existing pumping stations means pumping stations that were constructed before 1 January 2009.

L_{A 90}, adj, 15 mins means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 90 per cent of any 15 minute measurement period, using fast response.

L_{A 10}, adj, 10 mins means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10 per cent of any 10 minute measurement period, using fast response.

L_{A eq} means the equivalent continuous A-weighted sound pressure level of the residual noise determined over a specified time interval.

Major upgrades means upgrades which will involve expenditure in excess of \$150 000. This figure is relevant as of 1 January 2012 and will increase by three per cent as of 1 January hereafter.

New pumping stations means pumping stations that were constructed on or after 1 January 2009.

Operation means the development approved under this **approval**.

Operator means any of the following:

- a) a person having the benefit of this **approval**

- b) the holder of a registration certificate for this **approval**
- c) anyone undertaking the **activity** to which this **approval** relates

Note: it is an offence to carry out work under an **approval** without a relevant registration certificate.

Sensitive place means:

- a) a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel)
- b) a library, childcare centre, kindergarten, school, university or other educational institution
- c) a medical centre, surgery or hospital
- d) a protected area
- e) a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment.

Waters means all Queensland waters and includes rivers, streams, lakes, lagoons, ponds, swamps, wetlands, surface waters, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), any ground water and any part thereof.