

Permit

Environmental Protection Act 1994

Environmental authority EPPR00867913

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

Environmental authority number: EPPR00867913

Environmental authority takes effect on the day of the approval.

The anniversary day of this environmental authority remains **12th August**.

Environmental authority holder

Name	Registered address
Logan City Council	150 Wembley Road LOGAN CENTRAL QLD 4114

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
ERA 61 - Thermal waste reprocessing and treatment 2: Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	LOT 61 on SP135531
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	LOT 28 on RP859595
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	LOT 908 on SP315400
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	LOT 907 on SP315400

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	LOT 896 on SP108006
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	LOT 1 on SP157609
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	LOT 2 on SP175369
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Adjacent to LOT 8 on RP91276
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (g) more than 100,000EP	LOT 61 on SP135531
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	LOT 1 on RP25779 LOT 2 on RP25779 LOT 3 on RP25779 LOT 4 on RP25779 LOT 5 on RP25779 LOT 66 on W3123
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 907 on SP307980 LOT 3 on RP49296 LOT 9001 on SP307780 LOT 1 on RP43903

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 1 on RP911872
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 21 on RP209536
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 914 on RP863282
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 457 on SL5580
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 64 on RP93293
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 345 on RP845834
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 25 on SP260290
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 1 on RP207200
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 25 on RP227434
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 996 on RP813562
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 112 on RP223324
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 9 on RP158249
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 1 on RP885897
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on RP910633

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 10 on SP191350
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 3 on RP8143
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 999 on SP131514
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 900 on RP191163
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 1189 on SP154725
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 907 on SP298437
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 462 on WD4114
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 11 on RP908213
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 362 on RP852566
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 100 on RP853671
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Lot 7002 on SP291906
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 201 on RP172284
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 202 on SP292263
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 27 on RP189772

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 122 on RP93890
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 4 on RP224555
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 2 on SP111226
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on SP304499
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 1 on RP124001
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on RP809349
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on RP900141
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 485 on SL9107
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 13 on RP82892
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 900 on SP247337
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on RP119119
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 8 on RP91276
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on RP911873
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 6 on SP170641

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 36 on RP120991
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 12 on RP161279
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 4 on RP116324
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 900 on SP297485
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 73 on Rp802666
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 2 on SP149187
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 700 on SP208494
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 8 on RP106985
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 48 on MAR619
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 500 on RP853702
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 901 on RP808057
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 992 on SP208485
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 43 on RP106443
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 11 on SP290915

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 904 on SP209119
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 84 on RP45531
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 999 on SP140842
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 445 on RP890553
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 900 on RP858715
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 40 on SP247337
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 999 on SL11877
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	LOT 775 on SL5111
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Adjacent to LOT 977 on RP802979
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Lot 993 on SP243751
ERA 63 - Sewage Treatment 2: Operating a sewage pumping station mentioned in subsection (1)(b)	Lot 1 on SP199750

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.



Jacob Toe

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

Date issued: 17 March 2022

Enquiries:

Utilities and Government Organisations Assessment
Department of Environment and Science

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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 1a: Code of Environmental Compliance

With the exception of any variations, the conditions of approval for this environmental authority include standard conditions contained within the attached document entitled:

- **Code of environmental compliance for certain aspects* of sewage treatment (ERA 63) – Version 1.** Approved variation to the *Code of environmental compliance for certain aspects* of sewage treatment (ERA 63) – Version 1* is as follows:

Condition number	Condition variation
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.

The activities conducted at the locations as described in *Table 1* below must be conducted in accordance with the attached standard conditions and variation of 'Condition 10' as outlined above.

Table 1: Sites conducted in accordance with the standard conditions contained within the Code of environmental compliance for certain aspects* of sewage treatment – Version 1 and variation 'Condition 10'.

SITE NAME	ERA LOCATION		
	ADDRESS	LOT/PLAN	GPS CO-ORDINATES
SPS002	1-9 Alfred Street, SLACKS CREEK	Lot 345 on RP845834	E515811.5631; N6941240.352
SPS005	109 Logan Reserve Road, LOGAN RESERVE	Lot 992 SP208485	E511767.1332; N6936958.3733
SPS006	36 Bompa Road, BROWNS PLAINS	Lot 43 RP106443	E513939.5833; N6937156.7129
SPS009	41 Recycle Way, HERITAGE PARK	Lot 11 SP290915	E506544.2154; N6939187.9036
SPS010	80-82 Kikenny Street, CORNUBIA	Lot 901 on RP808057	E520340.56; N6939811.78
SPS012	246 Chambers Flat Road, LOGAN RESERVE	Lot 25 on SP260290	E510158.5174; N6936802.895
SPS013	76 – 132 Clarks Road, LOGANHOLME	Lot 10 on SP191350	E518183.5947; N6936906.011
SPS016	39 Coral Street, LOGANLEA	Lot 122 on RP93890	E513469.5619; N6938937.78
SPS020	34-42 Edenlea Drive, MEADOWBROOK	Lot 999 SL11877	E514157.7106; N6939710.833
SPS021	50-64 Elm Avenue, WOODRIDGE	Lot 775 SL5111	E509390.5489; N6942745.2254

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SPS022	70-84 Evergreen Avenue, LOGANLEA	Lot 457 on SL5580	512610.3284E; 6937680.4862N
SPS023	35 Excalibur Road, CORNUBIA	Lot 485 on SL9107	E519998.2; N6938256.46
SPS028	4-6 Konara Drive, LOGANHOLME	Road Reserve adjacent to Lot 73 on RP802666	517951.10 E; 6938809.92 N
SPS029	28-58 Kununurra Crescent, SHAILER PARK	Lot 914 on RP863282	E518933.753; N6942484.488
SPS032	15-17 Lorna Street, BROWNS PLAINS	Lot 112 on RP223324	505950.4568652E; 6940767.6979 N
SPS033	20 Louden Street, WOODRIDGE	Road Reserve adjacent to Lot 17 on RP136016	509596.0930 E; 6944415.3454 N
SPS039	138 -188 Parfrey Road, ROCHEDALE SOUTH	Lot 202 on SP292263	E513600.68; N6946680.68
SPS040	8A Pilbi Street, WOODRIDGE	Lot 1189 on SP154725	E511451.52; N6943311.30
SPS041	661-669 Priests Gully Park, ROCHEDALE SOUTH	Lot 2 on RP119119	E514100.74; N6947923.05
SPS042	581 Priestdale Road, WEST ROCHEDALE SOUTH	Lot 1 on RP124001	E513248.54; N6948312.40
SPS043	Scrubby Creek Road (road reserve), BROWNS PLAINS	Adjacent to Lot 8 on RP91276	E506559.86; N6939579.27
SPS044	20 St Andrews Drive, CORNUBIA	Lot 2 on RP911873	E520554.37; N6938851.73
SPS045	88 A St Andrews Dr (2), CORNUBIA	Lot 1 on RP911872	E5205602.14; N6938355.23
SPS047	246 Third Avenue, BERRINBA	Lot 40 SP247337	E509021.737; N6940556.041
SPS048	Lake Dennis Park 47 Trevallyan Drive, DAISY HILL	Lot 4 on RP116324	E514942.98; N6944255.31
SPS050	"Tygum Road 1" 135A Tygum Road, WATERFORD WEST	Lot 21 on RP209536	E513350.6; N6936263
SPS051	"Tygum Road 2" Tygum Road, WATERFORD WEST	Road reserve adjacent Lot 8 on RP106985	E 512680.4; N6936740
SPS052	1 Lancelot Street/Underwood Road, ROCHEDALE SOUTH	Lot 201 on RP172284	E513397.44; N6947422.88
SPS053	1 -15 Warana Court, BORONIA HEIGHTS	Lot 900 RP858715	E502638.7939; N6936383.0704
SPS054	Cressbrook Court, MEADOWBROOK	Adjacent to Lot 445 RP890553	E515099.604; N6939298.187

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SPS055	1-7 Windsong Court, HILLCREST	Lot 900 on RP191163	501897.9542 E; 6940370.8986 N
SPS058	20 Lake Kurwongbah Court, LOGAN RESERVE	Lot 999 SP140842	E511234.1548; N6936742.9671
SPS059	3025 Logan Road, UNDERWOOD	Lot 2 on RP910633	E510588.5015; N6947748.525
SPS0061	88 Charles Avenue, LOGAN CENTRAL	Adjacent to Lot 84 RP45531	E509578.6943; N6942627.1094
SPS067	29 Woodvale Street, BERRINBA	Lot 904 SP 209119	E507914.8808; N6940337.0756
SPS069	1-9 Alfred Street, SLACKS CREEK	Lot 345 on RP845834	E515813.32; N6941242.45
SPS070	83 Albert Street (Waterford Tamborine Road), LOGAN VILLAGE	Lot 1 on RP885897	E510771.61; N6928847.94
SPS073	1 – 27 Johanna Street, JIMBOOMBA	Lot 25 on RP227434	E502363.9341; N6921604.756
SPS074	63 Anders Street, JIMBOOMBA	Lot 362 on RP852566	E503122.1492; N6922219.742
SPS081	Anzac Ave, LOGAN VILLAGE	Lot 11 on RP908213	E510134.4807; N6928282.319
SPS082	Chambers Flat Road, PARK RIDGE	Road reserve adjacent Lot 13 on RP82892	E509098.2997; N6934333.798
SPS083	900 Logan Reserve Road, LOGAN RESERVE	On or adjacent land described as Lot on 900 SP247337	E511124.2376; N6935099.162
SPS084	905 Waterford Tamborine Road, YARRABILBA	Lot 7002 on SP291906	E511259.3662; N6925119.531
SPS090	Lot 900 Bayliss Road, PARK RIDGE	Lot 900 on SP297485	505529.891E; 6936852.336N
SPS100	27-43 Alamein Street, BEENLEIGH	Lot 2 on SP149187	E520088.9527; N6934642.1822
SPS101	40A Albert Valley Drive, BAHRS SCRUB	Lot 999 on SP131514	E518683.2196; N6931891.6745
SPS104	Bellfinch Road, EAGLEBY	Unconstructed road reserve adjacent Lot 2 on SP111226	E519664.6; N6936134
SPS107	52C Carl Heck Boulevard, WINDAROO	Lot 700 on SP208494	E518964.3122; N6930764.7340
SPS112	Eagleby Road, EAGLEBY	Within the road reserve opposite Lot 3 on RP8143	E521198.2103; N6937442.1048

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SPS114	Edinburgh Park, 2 Edinburgh Drive, BETHANIA	Lot 462 on WD4114	E514828.10; N6937052.12
SPS115	Grove Road Reserve (15 Eira Crescent), EDENS LANDING	Lot 500 on RP853702	E517506.23; N6935642.34
SPS119	319 Greenfield Street, EAGLEBY	Lot 2 on SP175369	E522089.3; N6934794
SPS127	1-17 Peacock Ave, BEENLEIGH	Lot 6 on SP170641	E519312; N6935895
SPS129	1-13 Ramu Street, EAGLEBY	Lot 1 on SP157609	E520826.1; N6934535
TBA Replacement for SPS130	216 River Hills Road, EAGLEBY	Lot 2 on RP809349	E521822.34; N6935758.43
SPS131	296-298 River Hills Road, EAGLEBY	Lot 1 on RP207200	E522582; N6935487
SPS136	Stoten Pathway, EAGLEBY	Road reserve adjacent Lot 100 on RP853671	E520783.5; N6936918
SPS140	Wilhelm Drive, WINDAROO	Lot adjacent Lot 2 on RP900141	E519370.7; N6931354
SPS142	Wren Street, EAGLEBY	Road reserve adjacent Lot 36 on RP120991	E519827.1; N6936520
SPS143	30 Yvonne Crescent, MT WARREN PARK	Lot 996 on RP813562	E519959.6020; N6931765.2803
SPS146	Brookhaven Boulevard, BAHRS SCRUB	Lot 907 on SP298437	E516412.30; N6932565.40
SPS147	249-261 Logan Reserve Road, LOGAN RESERVE	Lot 4 on RP224555	E510941.643; N6936095.943
SPS148	422A Chambers Flat Road, LOGAN RESERVE	Lot 2 on SP304499	E510435.6158; N6935168.5014
SPS149	71-81 East Street, JIMBOOMBA	Lot 9 on RP158249	E517541.02; N6957277.86
SPS154	130 Bahrs Scrub Road, BAHRS SCRUB	Lot 12 on RP161279	E517541.02; N6931815.30
SPS160	370 -398 Logan Reserve Road, LOGAN RESERVE	Lot 48 on MAR619	E511588.55; N6934381.61
SPS161	34-40 Andrew Road, GREENBANK	Lot 64 on RP93293	E503261.05; N6934784.47
TBA	1-17 Sungold Road, CHAMBERS FLAT	Lot 27 on RP189772	E508607.26; N6932291.76
SPS113	123 Castile Crescent, EDENS LANDING	Adjacent to Lot 977 on RP802979	E516734.3473 N6936105.6169

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SPS120	Woodlands District Park 1-19 Grand Terrace, WATERFORD	Lot 993 on SP243751	E514619.7005 N6934044.693
SPS134	Chris Green Park, 39 Boundary Street, BEENLEIGH	Lot 1 on SP199750	E518912.8829 N6935159.0495

Part 1b: Standard conditions

The activities conducted at the locations as described in *Table 2* below must be conducted in accordance with the *Code of environmental compliance for certain aspects of sewage treatment activities (ERA 63) – Version 1*.

Table 2: Sites conducted in accordance with the standard conditions contained below.

ERA	SITE NAME	SITE LOCATION	
		ADDRESS	LOT / PLAN
ERA 63 (2) – Operating a sewage pumping station mentioned in subsection (1)(b)	SPS151	907 Flagstonian Drive, FLAGSTONE QLD 4280	Lot 907 on SP307980
	SPS152	3 Wyatt Road, KAGARU QLD 4285	Lot 3 on RP49296
	SPS156	9001 Everleigh Drive, GREENBANK QLD 4124	Lot 9001 on SP307780
	SPS157	1 Olson Road, NEW BEITH QLD 4124	Lot 1 on RP43903

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Part 2: General Conditions for Wastewater Treatment Plants

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	Jimboomba Sewage Treatment Plant 35 Matt Court, Jimboomba Lot 28 on RP859595
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	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 896 on SP108006
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	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 907 on SP315400
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 908 on SP315400
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Beenleigh Water Reclamation Facility 293 and 319 Logan Street, Eagleby Lot 1 on SP175369 and LOT 2 on SP175369
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (g) more than 100,000EP	Logan City Council Water Pollution Plant, Loganholme Lot 61 on SP135531
ERA 61 - Thermal waste reprocessing and treatment 2: Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	

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

Agency interest: General	
Condition number	Condition
G1	All reasonable and practicable measures must be taken to prevent the likelihood of environmental harm being caused.
G2	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. <i>Note: This condition does not apply to exception reporting outlined in conditions G23 and G24.</i>

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G3	All records must be kept for a period of at least five years and provided to the administering authority upon request.
G4	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 .
G5	A receiving environment monitoring program (requirements outlined in conditions G5 to G16) must be designed and implemented by appropriately qualified persons to monitor the effects of the activity on the receiving environment for all sites with the exception of the WWTP located at Red Cedar Crescent, Flagstone Creek.
G6	Involvement in Regional Monitoring Studies Constitutes Compliance Subject to the alternative provided in condition (G10), to achieve compliance with the requirement for a REMP , the registered suitable operator of this environmental authority must carry out any local public health monitoring program prescribed in this environmental authority and become and remain a “participating member” in any water quality strategies and monitoring programs relevant to the “receiving environment” and endorsed in writing by the administering authority .
G7	The registered suitable operator of this environmental authority is deemed by the administering authority to be a “participating member” in regional studies in the following situations: (a) the registered suitable operator is a “contributing member”, to the regional studies of water quality and ecosystem health; and (b) the registered suitable operator is identified as a “contributing member” in a written statement to the administering authority from the authority carrying out the regional studies; and (c) the registered suitable operator continues to be a “contributing member”, of such regional studies.
G8	The registered suitable operator of this environmental authority is deemed by the administering authority to be a “contributing member” until such time as: (a) the authority carrying out the regional studies notifies the administering authority in writing that the registered suitable operator is no longer a “contributing member”; and (b) the administering authority has undertaken reasonable steps to confirm this with the registered suitable operator and the authority carrying out the regional studies; and (c) the registered suitable operator notifies the administering authority in writing that they are no longer a “contributing member”.
G9	If the registered suitable operator of this environmental authority no longer meets the criteria as a “contributing member”, submit a proposal to the administering authority that details how the registered suitable operator of this environmental authority will fulfil the requirements for carrying out a REMP and the registered suitable operator must undertake the following: (a) within thirty(30) days of ceasing to be a “contributing member”, submit a proposal to the administering authority that details how the registered suitable operator will fulfil the requirements for a REMP via one of the alternatives prescribed in condition (G10); and (b) carry out the REMP alternative that is agreed, as submitted or amended, by the administering authority , commencing within fourteen(14) days of receipt of such written advice from the administering authority or such later date specified in writing by the administering authority ; and

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	(c) from that date, otherwise comply in all respects with conditions for carrying out the alternative REMP .
G10	<p>Alternatives to Involvement in Regional Studies – Equivalent Study and Alternative Study As an alternative to participating in the regional studies, the registered suitable operator of this environmental authority may:</p> <p>(a) carry out an equivalent study, which requires that the registered suitable operator must monitor and record the same or equivalent environmental indicators at an equivalent frequency at an equivalent number of sites as the regional study; or</p> <p>(b) with the written agreement of the administering authority, carry out an alternative receiving environment monitoring program that meets the requirements of conditions (G11) to (G14).</p>
G11	<p>The receiving environment monitoring program required by condition G5, must include at least the following:</p> <p>(a) description of potentially affected environment including key communities and ambient water quality;</p> <p>(b) description of water quality objectives and biological objectives to be achieved;</p> <p>(c) description of selected physico-chemical (including pH, total nitrogen, total phosphorous, dissolved oxygen saturation, water clarity analyses) and biological indicators (including chlorophyll ‘a’ and macro algal monitoring) and reasons for their inclusion;</p> <p>(d) the locations of monitoring stations including monitoring transects away from the outfall of the authorised releases as well as any control locations;</p> <p>(e) the proposed sampling depths;</p> <p>(f) the water quality characteristics of receiving waters to be determined;</p> <p>(g) the frequency of sampling and analysis;</p> <p>(h) any historical datasets to be relied upon; and</p> <p>(i) description of the statistical basis on which conclusions are drawn.</p>
G12	<p>The proposal for the REMP must also consider, but not be limited to, the following:</p> <p>(a) water quality criteria specified in the Australian Water Quality Guidelines;</p> <p>(b) the Water EPP and any other Environmental Protection Policies enacted under Queensland’s EP Act concerning the “receiving environment”;</p> <p>(c) relevant reports produced as a consequence of the department’s Environmental Monitoring Programs;</p> <p>(d) any other requirements arising due to the inclusion of the “receiving environment”, within which the REMP is proposed, as part of any Marine Park and/or Fish Habitat Areas, if applicable;</p> <p>(e) relevant reports prepared by other governmental or professional research organisations that</p> <p>(f) relate to the “receiving environment” within which the REMP is proposed; and</p> <p>(g) spatial and temporal controls to exclude potential confounding factors</p>
G13	<p>The REMP assessment techniques must be carried out such that the experimental design allows for appropriate replication that will achieve:</p> <p>(a) an eighty percent (80%) chance of detecting an impact if one exists; and</p> <p>(b) detection of at least a twenty five percent (25%) change from ambient conditions.</p>
G14	<p>The registered suitable operator of this environmental authority must have due regard to the comments made by the administering authority in finalising the requirements of the REMP and must implement the REMP from commencement of the environmentally relevant activities or within the timeframe mentioned in condition (G9), as the case may be.</p>

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G15	At twelve monthly intervals from the date of commencement of the REMP , if carrying out an equivalent study and/or alternative study, the registered suitable operator of this environmental authority must report to the administering authority the data and findings of the REMP carried out.
G16	The report on the REMP must address at least the following: <ul style="list-style-type: none"> (a) a detailed description of the methodology used in the REMP; and (b) a detailed description and analysis of the results of the REMP; and (c) an assessment of the impact of contaminant discharge upon the receiving environment with respect to water quality objectives and biological objectives for the “receiving environment”; and (d) an assessment of the level of change in ambient conditions, if any, of the “receiving environment”; and (e) a summary of recommendations that can be drawn from the findings of the REMP, with respect to the prevention or minimisation of the impacts of the contaminant releases on the “receiving environment”.
G17	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.
G18	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.
G19	You must record the following details for all environmental complaints received: <ul style="list-style-type: none"> (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.
G20	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.
G21	The activity must be undertaken in accordance with written procedures that: <ul style="list-style-type: none"> (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.
G22	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system .
G23	Exception Reporting

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	Notify the administering authority in writing of any monitoring result which indicates an exceedance or non-compliance of any licence limit within twenty-eight days of completion of analysis.
G24	The written notification required by condition (G23) must include: (a) the full analysis results; and (b) details of investigation or corrective actions taken; and (c) any subsequent analysis.
Agency interest: Air	
Condition number	Condition
A1	Odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place .
A2	Dust and particulate matter emissions must not exceed the following concentrations at any sensitive place or commercial place : (a) dust deposition of 120 milligrams per square metre per day , when monitored in accordance with <i>Australian Standard AS 3580.10.1</i> (or more recent editions), or (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with <i>Australian Standard AS 3580.9.6</i> (or more recent editions) or any other method approved by the administering authority .
Agency interest: Water	
Condition number	Condition
WT1	Other than as permitted within this environmental authority , contaminants must not be released to any waters .
WT2	Any 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.
WT3	Pump Stations Pump stations whose failure will result in a direct release of contaminants to waters must be fitted with stand-by pumps and pump failure alarms. Pump failure alarms must be able to operate without mains power if such power failure occurs.
WT4	All duty and stand-by pumps must be inspected, tested and maintained on a regular basis to ensure they remain in a constant state of service.
WT5	Discharges from pump stations and overflow structures to the environment are only permitted as a result of the following circumstances: (a) a power outage which is in excess of the 95 th percentile of power outage for the previous five (5) years; or (b) flows in excess of 3 times the ADWF ; or (c) accidental damage to the pump station and/or ancillary equipment; or (d) other emergency event.

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WT6	The registered suitable operator of this environmental authority must maintain an updated list of all pump stations and overflow structures connected to the wastewater treatment plant. This list must contain at least the following information: (a) sewage pump station identification, e.g., pump station number by which the pump station is uniquely identified; (b) address/location of the pump station including name of street and suburb in which the pump station is located; and (c) GPS coordinates and an accurate appropriately scaled map for the location of the pump station.
WT7	The registered suitable operator of this environmental authority must forward an updated list of the information required by condition (WT6) to the administering authority with each annual return . <i>Note: If the details required by condition (WT6) have not changed since the last annual return the following statement should be included in the annual return "There has been no change to the locations or details of the pump stations connected to the WWTPs since the last annual return."</i>
WT8	The registered suitable operator of this environmental authority must take all reasonable and practicable measures to minimise the infiltration of stormwater to sewer.
WT9	Monitoring of Quantity of released treated effluent The daily quantity of contaminants released must be determined or estimated by an appropriate method, e.g. a flow meter.
WT10	Monitoring of Quantity of Recycled Water Provided to Other Person(s) The quantity of recycled water given or transferred to another person(s) must be determined by an appropriate method, for example, a flow meter.
WT11	Bypass The registered suitable operator of this environmental authority must take all reasonable and practicable measures to minimise the occurrence of bypass events.
Agency interest: Noise	
Condition number	Condition
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
L1	Other than as permitted within this environmental authority , contaminants must not be released to land .
L2	Treated sewage effluent may be removed from the site and used for an alternate purpose, with the written consent of any third party involved.
L3	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;

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	<p>(c) degradation of soil structure is minimised;</p> <p>(d) soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised;</p> <p>(e) spray drift or overspray does not carry beyond effluent disposal areas;</p> <p>(f) effluent disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake; and</p> <p>(g) sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors.</p>
Agency interest: Waste	
Condition number	Condition
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.

Part 3: Site Specific Conditions for Loganholme WWTP

Environmentally relevant activity	Location
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (g) more than 100,000EP	Logan City Council Water Pollution Plant, Loganholme Lot 61 on SP135531
ERA 61 - Thermal waste reprocessing and treatment 2: Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	

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

Agency interest: Water									
Condition number	Condition								
LGN – WT1	The only contaminants to be released to surface waters excluding bypass releases covered by water conditions LGN – WT4 and LGN – WT5 are from the sewage treatment plant – Release point RP1 (Loganholme wastewater treatment plant outfall pipe located at approximately 17km AMTD Logan River) to waters described as Logan River in accordance with <i>Table 1 – Surface water release limits</i> and associated requirements.								
Table 1 – Surface Water Release Limits									
Monitoring Point	Quality Characteristic	Minimum	Median	50th percentile (short term)	50th percentile (long term)	80th percentile (short term)	80th percentile (long term)	Maximum	Frequency
M1	BOD ₅ (mg L ⁻¹)	-	-	-	-	15	10	30	Weekly
	Suspended Solids (mg L ⁻¹)	-	-	-	-	15	10	30	Weekly
	Total Nitrogen (mg L ⁻¹) (from effect date of development approval)	-	-	9	6	-	-	18	Weekly
	Total Nitrogen (mg L ⁻¹) (from 31 December 2005)	-	-	7.5	5	-	-	15	Weekly
	Total Nitrogen (mg L ⁻¹) (from 31 December 2005)	-	-	7.5	5	-	-	15	Weekly
	pH (pH units)	6.5	-	-	-	-	-	8.5	Weekly
	Dissolved Oxygen (mg L ⁻¹)	2.0	-	-	-	-	-	-	Weekly
	Faecal Coliforms (organisms 100mL ⁻¹)	-	150 ¹	-	-	-	-	600 ²	Weekly
	Enterococci (organisms 100mL ⁻¹)	-	35 ¹	-	-	-	-	-	Weekly
	Free Chlorine (mg L ⁻¹)	-	-	-	-	-	-	0.5	Weekly
	Total Chlorine (mg L ⁻¹)	-	-	-	-	-	-	Monitor only ³	Weekly
Ammonia (mg L ⁻¹)	-	-	-	-	-	-	3.0	Quarterly	
Total Arsenic (mg L ⁻¹)	-	-	-	-	-	-	0.1	Quarterly	

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	Phenolic Compounds (mg L ⁻¹)	-	-	-	-	-	-	0.5	Quarterly								
	Total Cadmium (mg L ⁻¹)	-	-	-	-	-	-	0.01	Quarterly								
	Total Chromium (mg L ⁻¹)	-	-	-	-	-	-	0.5	Quarterly								
	Hexavalent Chromium (mg L ⁻¹)	-	-	-	-	-	-	0.05	Quarterly								
	Total Copper (mg L ⁻¹)	-	-	-	-	-	-	0.1	Quarterly								
	Total Lead (mg L ⁻¹)	-	-	-	-	-	-	0.1	Quarterly								
	Total Mercury (mg L ⁻¹)	-	-	-	-	-	-	0.005	Quarterly								
	Total Nickel (mg L ⁻¹)	-	-	-	-	-	-	0.5	Quarterly								
	Total Zinc (mg L ⁻¹)	-	-	-	-	-	-	0.5	Quarterly								
	Total Organophosphate Pesticides (µg L ⁻¹)	-	-	-	-	-	-	1.0	Quarterly								
	<p>¹ means median of five consecutive samples taken at not less than 30 minute intervals in 24 hours;</p> <p>² four out of five samples must contain less than 600 CFU/100mL; and</p> <p>³ monitor only (Limit to be confirmed by 28 February 2015).</p> <p>Associated requirements</p> <ol style="list-style-type: none"> 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; Indicators for TN and TP must be done as 24 hour composite samples; <i>Enterococci</i> counts are the recommended pathogen indicator for assessing potential risks to recreational water. Limits should be set based on the level of recreational use of receiving waters – either primary or secondary recreation. <i>E.coli</i> counts may be more relevant for small plants where recreational use in receiving waters is unlikely; Limits for free chlorine residual and 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 Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained; and Monitoring Point M1 described as Post Chlorine Disinfection. 																
LGN – WT2	<p>Other than during by-pass events, the total quantity of effluent released from release point RP1 must not exceed the corresponding values for wet weather days or dry weather days specified in <i>Table 2 – Permitted Release Quantities</i>.</p> <p style="text-align: center;">Table 2 – Permitted Release Quantities</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Release Point</th> <th colspan="2" style="text-align: center;">Maximum Quantity of Effluent Released</th> </tr> <tr> <th style="text-align: center;">Dry Weather Day (m³ day⁻¹)</th> <th style="text-align: center;">Wet Weather Day (m³ day⁻¹)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">RP1</td> <td style="text-align: center;">75 000</td> <td style="text-align: center;">225 000</td> </tr> </tbody> </table>									Release Point	Maximum Quantity of Effluent Released		Dry Weather Day (m ³ day ⁻¹)	Wet Weather Day (m ³ day ⁻¹)	RP1	75 000	225 000
Release Point	Maximum Quantity of Effluent Released																
	Dry Weather Day (m ³ day ⁻¹)	Wet Weather Day (m ³ day ⁻¹)															
RP1	75 000	225 000															
LGN – WT3	<p>Effluent Toxicity</p> <p>The registered suitable operator of this environmental authority must, in consultation with the administering authority, implement a strategy to:</p> <ol style="list-style-type: none"> determine the level of toxicity of effluent discharged from release point RP1; and should actual or potential toxicity be detected in the effluent, minimise such toxicity. 																

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LGN – WT4	By-Pass Events By-pass flow events must only occur for flows (calculated as an instantaneous flow) that are in excess of three times Average Dry Weather Flow.																
LGN – WT5	Bypass releases must be screened prior to being released from release point RP1.																
LGN – WT6	Total Phosphorus Targets Notwithstanding the release limits required by condition (LGN – WT1) the registered suitable operator of this environmental authority must implement and annually report on a continual improvement program with the aim of reducing phosphorous in effluent discharged from release point RP1 to 3 mg L ⁻¹ .																
LGN – WT7	Total Nitrogen Targets Notwithstanding the release limits required by condition (LGN – WT1) the registered suitable operator of this environmental authority must implement and annually report on a continual improvement program with the aim of reducing nitrogen in effluent discharged from release point RP1 to 3 mg L ⁻¹ .																
LGN – WT8	<p>Mass Loads of Total Nitrogen Notwithstanding any other environmental authority conditions, the total mass load of nitrogen release from release point RP1 must not exceed any of the limits specified in <i>Table 3 – Release Mass Load Limits</i>.</p> <p style="text-align: center;">Table 3 – Release Mass Load Limits</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Contaminant</th> <th>Release Point</th> <th>Release Limit (kg year⁻¹)**</th> <th>Limit Type</th> </tr> </thead> <tbody> <tr> <td>Total Nitrogen (as Nitrogen) (from effect date of development approval)</td> <td>RP1</td> <td>96,500</td> <td>Maximum</td> </tr> <tr> <td>Total Nitrogen (as Nitrogen) (from 1 July 2007)</td> <td>RP1</td> <td>98,000</td> <td>Maximum</td> </tr> <tr> <td>Total Nitrogen (as Nitrogen) (from 1 July 2020)</td> <td>RP1</td> <td>109,000</td> <td>Maximum</td> </tr> </tbody> </table> <p>**Calculated as per condition (LGN – WT9)</p>	Contaminant	Release Point	Release Limit (kg year ⁻¹)**	Limit Type	Total Nitrogen (as Nitrogen) (from effect date of development approval)	RP1	96,500	Maximum	Total Nitrogen (as Nitrogen) (from 1 July 2007)	RP1	98,000	Maximum	Total Nitrogen (as Nitrogen) (from 1 July 2020)	RP1	109,000	Maximum
Contaminant	Release Point	Release Limit (kg year ⁻¹)**	Limit Type														
Total Nitrogen (as Nitrogen) (from effect date of development approval)	RP1	96,500	Maximum														
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Total Nitrogen (as Nitrogen) (from 1 July 2020)	RP1	109,000	Maximum														
LGN – WT9	<p>Calculation of Mass Loads of Total Nitrogen and Total Phosphorus Released to Waters The registered suitable operator of this environmental authority must calculate the monthly and annual mass loads of total nitrogen and total phosphorus discharged at Release Point RP1 (excluding bypass) and record this data as a graph also showing the previous two years annual mass load. Mass loads must be calculated by the following formulae:</p> <p>Monthly Mass Load = (Monthly Median Concentration) x (Monthly Total Flows Discharged (excluding bypass)); Yearly Mass Load = (Yearly Median Concentration) x (Yearly Total Flows Discharged (excluding bypass)).</p>																
Agency interest: Land																	
Condition number	Condition																
LGN – L1	<p>Irrigation of Effluent to Land The only places to which the irrigation of treated effluent is authorised are defined as:</p> <p>(a) landscaped areas of the approved place; or</p> <p>(b) other areas subject to the requirements of condition (L2) within Part 2: <i>General Conditions for Wastewater Treatment Plants</i>.</p>																

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Agency interest: Air	
Condition number	Condition
LGN – A1	Other than as permitted within this environmental authority , odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place .
LGN – A2	The only waste permitted to be treated in the Biosolids Gasification Plant is: <ul style="list-style-type: none"> a) biosolids generated at the Loganholme Wastewater Treatment Plant, and b) woodchips and/or nut shells during the commissioning phase of the plant.
LGN – A3	Contaminants must only be released to air from identified point sources, being the gasification plant stack and the two (2) dryer stacks, in accordance with <i>Table 4 – Point Source Air Release Limits</i> and associated monitoring requirements.
LGN – A4	If a result or results of air emission stack testing in accordance with <i>Table 4 – Point Source Air Release Limits</i> exceed the relevant contaminant(s) limit(s): <ul style="list-style-type: none"> a) remedial action must be taken as soon as practicable to bring the contaminant(s) into compliance with the relevant limit(s); and b) follow-up stack monitoring for the non-compliant contaminant(s) must be undertaken following the remedial action; and c) requirements under subsections (a) and (b) must be carried out within 3 months of identifying the exceedance(s); and d) a report must be provided to the administering authority within 2 weeks of receiving the results of the follow-up stack monitoring conducted under subsection (b), which includes: <ul style="list-style-type: none"> i. the initial monitoring results indicating an exceedance has occurred; and ii. a description of the remedial action taken under subsection (a); and iii. results of follow-up stack monitoring for the non-compliant contaminant(s) conducted under subsection (b); and iv. a determination of whether the remedial action taken was sufficient to address the cause of the exceedance, and if further action will be required to prevent future exceedances.
LGN – A5	For monitoring of PFAS compounds, monitoring must: <ul style="list-style-type: none"> a) incorporate the determination of at least the 28 commercially available PFAS compounds on paired non oxidised samples, and corresponding total oxidisable precursor assay (TOPA) treated samples; and b) incorporate quality assurance on sampling and analysis, including on the TOPA, in accordance with the latest version of the PFAS National Environmental Management Plan; and c) use the lowest practicably achievable limits of reporting for analyses; and d) for PFAS emissions monitoring, incorporate measures to: <ul style="list-style-type: none"> i. separate, and retain for later analysis, the following: <ul style="list-style-type: none"> a. ionic PFAS compounds (e.g. resins that absorb anionic PFAS), b. neutral PFAS compounds (e.g. resins that absorb neutral PFAS), c. PFAS associated with particulate matter, and d. PFAS entrained in water vapour collected via condensation of the water vapour in emissions; and ii. include breakthrough detection in the sampling train.

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LGN – A6	<p>For monitoring of PFAS compounds to determine compliance with the gasification plant limit applied in condition LGN – A7, you must:</p> <ol style="list-style-type: none"> a) monitor PFAS compounds at the following locations in the gasification plant: <ol style="list-style-type: none"> i. the duct connecting the gasifier and the thermal oxidiser; and ii. in the gasification plant stack following the thermal oxidiser.
LGN – A7	<p>The mass of any PFAS released into the atmosphere through the gasification plant stack must not exceed 0.01% of the mass of PFAS measured in the duct connecting the gasifier and the thermal oxidiser prior to its release. This applies to measurements of single PFAS compounds, and to total PFAS measured.</p>
LGN – A8	<p>In calculations required under condition LGN – A7:</p> <ol style="list-style-type: none"> a) where any PFAS compound concentration is below the detection limit: <ol style="list-style-type: none"> i. a value of zero (0) must be used for mass calculations for compliance purposes; and ii. a value of 50% of LOR must be used for making and reporting medium-bound estimates. <i>Note: Medium-bound estimates are for conservative reporting of uncertainty and not used for compliance calculations.</i> b) the calculation of mass emission of PFAS compounds must be determined using the following equation: $\text{Mass emission of PFAS (\%)} = [(MS \div MV) \times 100]$ <p><i>Note: MS is the mass of PFAS compounds measured in the gasification plant stack following the thermal oxidiser, and MV is the mass of PFAS compounds measured in the duct connecting the gasifier to the thermal oxidiser, where MS and MV are measured in the same monitoring event.</i></p>
LGN – A9	<p>You must carry out an annual investigation into the destruction efficiency of PFAS in biosolids through the gasification process. This investigation must include at least the following:</p> <ol style="list-style-type: none"> a) measurements of PFAS in the biosolids feedstock, and the gas, solid and liquid waste residuals from the process, including gasifier emissions, stack emissions, biochar, scrubber liquor, and slurry collected by the wet electrostatic precipitator. These measurements must, as far as practicable, be accurate to plus or minus 1%; and <i>Note: the 1% accuracy requirement applies to waste mass and volume estimated used in generating input for mass estimates, not error margins in analyses.</i> b) a determination of partitioning of PFAS through the biochar production process and associated pollution control system; and c) a determination of the destruction efficiency of the gasification process.
LGN – A10	<p>A report summarising the results of the investigation required by condition LGN – A9 must be prepared by an appropriately qualified person and submitted to the administering authority with the Annual Monitoring Report as required under Part 2, condition G18.</p>
LGN – A11	<p>All air emissions from the gasification plant must be treated by the following air pollution controls in series prior to release from the gasification plant stack:</p> <ol style="list-style-type: none"> a) thermal oxidiser; and b) wet scrubber with alkaline scrubbing liquor; and c) wet electrostatic precipitator.

LGN – A12	The thermal oxidiser referred to in condition LGN – A11 subsection a) must: <ul style="list-style-type: none">a) not have an operating temperature below 800°C during treatment of biosolids; andb) must be continuously monitored; andc) must have an alarm to indicate low operating temperatures during treatment of biosolids.
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Table 4 – Point Source Air Release Limits

Point Source	Minimum release height above ground (metres)	Minimum velocity (m/sec)	Minimum release temperature (°C)	Contaminant released	Maximum release (see Note 3)	Averaging period	Monitoring Frequency (see Note 5)
Gasification plant stack	10.5	20.9	43	Total Solids Particulates (TSP)	30 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Carbon Monoxide (CO)	100 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
					50 mg/Nm ³ (dry)	Daily	CEMS (see Note 4)
				Oxides of Nitrogen (as NO ₂)	400 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
					200 mg/Nm ³ (dry)	Daily	CEMS
				Sulphur Dioxide (SO ₂)	200 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
					50 mg/Nm ³ (dry)	Daily	CEMS
				Hydrogen Chloride (HCl)	60 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Total fluoride (as HF)	4 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Volatile Organic Compounds	20 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Cadmium and its compounds	0.05 mg/Nm ³ (dry)	Sampling period	Annual
				Mercury and its compounds	0.05 mg/Nm ³ (dry)	Sampling period	Annual
				Total Heavy Metals (see Note 1)	0.5 mg/Nm ³ (dry)	Sampling period	Annual
				Dioxins and furans (I-TEQ for PCDDs and PCDFs including half LOD)	0.1 ng/Nm ³ (dry)	Sampling period	Annual
Polycyclic Aromatic Hydrocarbons (PAH) (see Note 6)	-	-	Annual				
PFAS (see Note 2)	see Note 2	-	Annual				
Carbon tetrafluoride (CF ₄)	0.1 mg/Nm ³	Sampling period	Annual				
Odour concentration	-	-	Annual				
Dryer stacks	11.5	15	38	Total solid particulate	30 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Volatile organic compounds	20 mg/Nm ³ (dry)	Half hourly or sampling period	Annual
				Ammonia	-	-	Annual
				PFAS (see Note 2)	see Note 2	-	Annual
				Odour concentration	-	-	Annual

Note 1: Total heavy metals limit is for the total of antimony, arsenic, cadmium, lead, mercury, beryllium, chromium, cobalt, manganese, nickel, selenium, and vanadium and their compounds.

Note 2: Per- and poly- fluoroalkyl substances (PFAS) – refer to Condition LGN - A5 for monitoring requirements for all PFAS monitoring. Refer to conditions LGN - A6, LGN - A7, and LGN - A8 for monitoring requirements, release limits, and calculation requirements for the gasifier plant stack. No limit is applied to the dryer stacks.

Note 3: All concentration limits for the gasification plant stack refer to 11% O₂ and their units are in mg/Nm³ (dry), except dioxins which is in ng/Nm³ (dry), based on averaging period of 30 minutes or the sampling period. Dryer limits are not subject to any oxygen reference level.

Note 4: CEMS represents the continuous emissions monitoring system.

Note 5: During commissioning of the gasification plant, monitoring of contaminants must be undertaken at least once during optimisation, and twice during the performance trial, in accordance with the process described in the document entitled: *Loganholme WWTP Gasification Facility – Process and Performance (dated 29/07/2021)*; refer to *Table 5: Gasification Facility Optimisation Testing Schedule (Emissions)*, and *Table 7: Gasification Facility Performance Trial Testing Schedule (Emissions)*, with reference to *Table 9: Proposed Suite of Emissions Analysis points in Attachment 1 - Extractions from amendment application document Loganholme WWTP Gasification Facility – Process and Performance*.

Note 6: Polycyclic Aromatic Hydrocarbons (PAH) limit is for total of the 16 priority pollutants listed by the United States EPA, namely, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(α)anthracene, Chrysene, Benzo(β)fluoranthene, Benzo(k)fluoranthene, Benzo(α)pyrene, Indeno[123cd]pyrene, Dibenz[ah]anthracene and Benzo[ghi]perylene, expressed as Benzo(α)pyrene equivalents using the potency equivalence factors specified by the World Health Organisation.

Associated monitoring requirements

- 1) The gasification plant stack is located at Easting: 519451.165, Northing: 6937625.393, and the dryer stacks are located at Easting: 519462.293, Northing 6937631.348; and Easting 519463.963, Northing 6937643.135.
- 2) The release of contaminants from a point source must be directed vertically upwards without any impedance or hindrance.
- 3) Monitoring must be undertaken during a release and at the authorised release points, frequency and for the contaminants specified.
- 4) Monitoring must be undertaken when emissions are expected to be representative of actual operating conditions for the sample period.
- 5) All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions and Australian and international standards.
- 6) Air Monitoring must be in accordance with the current edition of the **administering authority's** *Air Quality Sampling Manual*, or if monitoring requirements are not described in that manual, monitoring protocols must be in accordance with a method approved by New South Wales EPA, Victorian EPA or United States EPA.
- 7) Monitoring undertaken must comply with the *Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling positions"*.
- 8) All air emission stack monitoring must be conducted by an experienced person or body which holds current National Association of Testing Authorities (**NATA**) accreditation.
- 9) The following tests must be performed and results recorded during every monitoring event:
 - (i) gas velocity and volume flow rate;
 - (ii) temperature and oxygen content; and
 - (iii) water vapour concentration.
- 10) During the sampling period, the following additional information must be gathered:
 - (i) The gasification plant's throughput rate at the time of sampling;
 - (ii) any typical factors that may influence air pollutant emissions; and
 - (iii) reference to the actual test methods and their accuracy.

Part 4: Site Specific Conditions for Beenleigh / Eagleby WWTP

Environmentally relevant activity	Location
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Beenleigh Water Reclamation Facility 293 and 319 Logan Street, Eagleby Lot 1 on SP175369 and Lot 2 on SP175369

The environmentally relevant activity 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								
BEE – WT1	Table 5 – Surface Water Release Limits								
	Monitoring Point	Quality Characteristic	Minimum	Median	50th percentile (long term)	80th percentile (short term)	80th percentile (long term)	Maximum	Monitoring Frequency
	M1	BOD5 (mg L ⁻¹)	-	-	-	-	10	15	Weekly
		Total Suspended Solids (mg L ⁻¹)	-	-	-	23	15	30	Weekly
		Dissolved Oxygen (mg L ⁻¹)	4.0	-	-	-	-	-	Weekly
		Ammonia Nitrogen (mg L ⁻¹)	-	-	-	-	-	3.0	Weekly
		Total Nitrogen (mg L ⁻¹)	-	-	5.0	-	-	7.5	Weekly
		Total Phosphorous (mg L ⁻¹)	-	-	-	3.0	2.0	4.0	Weekly
		pH (pH units)	6.5	-	-	-	-	8.5	Weekly
		Faecal (Thermotolerant Coliforms (organisms 100mL ⁻¹))	-	150 ¹	-	-	-	600 ²	Weekly
Enterococci (organisms 100mL ⁻¹)		-	-	-	-	-	-	Weekly	
<p>¹ means median of five consecutive samples taken at not less than 30 minute intervals in 24 hours</p> <p>² four out of five samples must contain less than 600 CFU/100mL</p> <p>Associated requirements</p> <ol style="list-style-type: none"> 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; Indicators for TN and TP must be done as 24 hour composite samples; <i>Enterococci</i> counts are the recommended pathogen indicator for assessing potential risks to recreational water. Limits should be set based on the level of recreational use of receiving waters – either primary or secondary recreation. <i>E.coli</i> counts may be more relevant for small plants where recreational use in receiving waters is unlikely; Sampling must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained; and Monitoring Point M1 described as Post UV Disinfection System. 									

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BEE – WT2	Table 6 – Mass Load Limits For Total Nitrogen												
	Contaminant	Release Point	Release Limit (kg/day)	Limit Type									
	Total Nitrogen (kg/day) until 30 April 2004	RP1	170	Maximum on any dry weather day									
	Total Nitrogen (kg/day) until 30 April 2004	RP1	85	Average daily load ¹									
	Total Nitrogen (kg/day) until 1 May 2004	RP1	150	Maximum on any dry weather day									
	Total Nitrogen (kg/day) until 1 May 2004	RP1	80	Average daily load ¹									
	Total Nitrogen (kg/day) from 1 May 2010	RP1	110	Maximum on any dry weather day									
	Total Nitrogen (kg/day) from 1 May 2010	RP1	50	Average dry weather daily load (Calculated Annually)									
BEE – WT3	<p>Calculation of Mass Loads of Total Nitrogen and Total Phosphorus Released to Waters</p> <p>The registered suitable operator of this environmental authority must calculate the monthly and annual mass loads of total nitrogen and total phosphorus discharged at Release Point RP1 (excluding bypass) and record this data as a graph also showing the previous two years annual mass load. Mass loads must be calculated by the following formulae:</p> <p>Monthly Mass Load = (Monthly Median Concentration) x (Monthly Total Flows Discharged (excluding bypass));</p> <p>Yearly Mass Load = (Yearly Median Concentration) x (Yearly Total Flows Discharged (excluding bypass)).</p>												
BEE – WT4	<p>Quantity of effluent</p> <p>Excluding bypass releases covered by conditions BEE–WT5 and BEE–WT6 the total quantity of treated sewage wastes released to waters via release points defined in condition (BEE-WT1) must not exceed the quantities stated in <i>Table 7 – Release Quantity Limits</i>.</p> <p style="text-align: center;">Table 7 – Release Quantity Limits</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Maximum permitted quantity of release</th> </tr> <tr> <th>Release Point</th> <th>Maximum release on dry weather day</th> <th>Maximum release on wet weather day</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">RP1</td> <td style="text-align: center;">15 000 cubic metres</td> <td style="text-align: center;">45 000 cubic metres</td> </tr> </tbody> </table>				Maximum permitted quantity of release			Release Point	Maximum release on dry weather day	Maximum release on wet weather day	RP1	15 000 cubic metres	45 000 cubic metres
Maximum permitted quantity of release													
Release Point	Maximum release on dry weather day	Maximum release on wet weather day											
RP1	15 000 cubic metres	45 000 cubic metres											
BEE – WT5	<p>Effluent Toxicity</p> <p>The registered suitable operator of this environmental authority must, in consultation with the administering authority, implement a strategy to:</p> <p>(a) determine the level of toxicity of effluent discharged from Release Point RP1; and</p> <p>(b) should actual or potential toxicity be detected in the effluent, minimise such toxicity.</p>												
BEE – WT6	<p>Bypass Events</p> <p>Bypass flow events must only occur for flows (calculated as an instantaneous flow) in excess of three times Average Dry Weather Flow.</p>												
BEE – WT7	<p>Bypass releases must be screened prior to being released from release point RP1.</p>												

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BEE – WT8	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.																																																																																																		
BEE – WT9	Ponds or other structures used for the storage or treatment of contaminants or wastes, including any associated pumps and control equipment, if at all possible, must not be located in any area below the one in one hundred (1 in 100) year flood level.																																																																																																		
BEE – WT10	For the purposes of demonstrating compliance with condition BEE-WT8, the registered suitable Operator of this environmental authority must: (a) establish and maintain a system which addresses the following matters: (i) the estimated level of infiltration ; (ii) the reasonable and practicable measures intended to minimise infiltration ; (iii) the actions taken to minimise infiltration ; and (iv) periodic re-estimations of the level of infiltration and, by comparison with previous infiltration estimates and connected population, an assessment of the effectiveness of the actions taken to minimise infiltration ; and (b) details of the system must be provided to the administering authority upon request.																																																																																																		
Agency interest: Land																																																																																																			
Condition number	Condition																																																																																																		
BEE – L1	Recycled water used by the registered suitable operator or supplied to another party must comply at the sampling and measurement point M1, with the release quality characteristics specified in <i>Table 8 – Treated effluent release limits to land</i> and the associated requirements. Table 8 – Treated effluent release limits to land																																																																																																		
	<table border="1"> <thead> <tr> <th>Monitoring Point</th> <th>Quality Characteristic</th> <th>Minimum</th> <th>Median</th> <th>50th percentile (long term)</th> <th>80th percentile (short term)</th> <th>90th</th> <th>Maximum</th> <th>Monitoring Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="11">M1</td> <td>BOD₅ (mg L⁻¹)</td> <td>-</td> <td>-</td> <td>-</td> <td>15</td> <td>10</td> <td>15</td> <td>Weekly</td> </tr> <tr> <td>Total Suspended Solids (mg L⁻¹)</td> <td>-</td> <td>-</td> <td>-</td> <td>23</td> <td>15</td> <td>30</td> <td>Weekly</td> </tr> <tr> <td>Dissolved Oxygen (mg L⁻¹)</td> <td>4.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>Weekly</td> </tr> <tr> <td>Ammonia Nitrogen (mg L⁻¹)</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>3.0</td> <td>Weekly</td> </tr> <tr> <td>Total Nitrogen (mg L⁻¹)</td> <td>-</td> <td>-</td> <td>5.0</td> <td>-</td> <td>-</td> <td>7.5</td> <td>Weekly</td> </tr> <tr> <td>Total Phosphorous (mg L⁻¹)</td> <td>-</td> <td>-</td> <td>-</td> <td>3.0</td> <td>2.0</td> <td>4.0</td> <td>Weekly</td> </tr> <tr> <td>pH (pH units)</td> <td>6.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>8.5</td> <td>Weekly</td> </tr> <tr> <td>Faecal (Thermotolerant Coliforms (organisms 100mL⁻¹))</td> <td>-</td> <td>150¹-</td> <td>-</td> <td>-</td> <td>-</td> <td>600²</td> <td>Weekly</td> </tr> <tr> <td>Enterococci (organisms 100mL⁻¹)</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>Weekly</td> </tr> <tr> <td>Aluminium (mg/L)</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>5.0</td> <td>6 monthly</td> </tr> <tr> <td>Arsenic (mg/L)</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>0.10</td> <td>6 monthly</td> </tr> </tbody> </table>	Monitoring Point	Quality Characteristic	Minimum	Median	50th percentile (long term)	80th percentile (short term)	90th	Maximum	Monitoring Frequency	M1	BOD ₅ (mg L ⁻¹)	-	-	-	15	10	15	Weekly	Total Suspended Solids (mg L ⁻¹)	-	-	-	23	15	30	Weekly	Dissolved Oxygen (mg L ⁻¹)	4.0	-	-	-	-	-	Weekly	Ammonia Nitrogen (mg L ⁻¹)	-	-	-	-	-	3.0	Weekly	Total Nitrogen (mg L ⁻¹)	-	-	5.0	-	-	7.5	Weekly	Total Phosphorous (mg L ⁻¹)	-	-	-	3.0	2.0	4.0	Weekly	pH (pH units)	6.5	-	-	-	-	8.5	Weekly	Faecal (Thermotolerant Coliforms (organisms 100mL ⁻¹))	-	150 ¹ -	-	-	-	600 ²	Weekly	Enterococci (organisms 100mL ⁻¹)	-	-	-	-	-	-	Weekly	Aluminium (mg/L)	-	-	-	-	-	5.0	6 monthly	Arsenic (mg/L)	-	-	-	-	-	0.10	6 monthly
Monitoring Point	Quality Characteristic	Minimum	Median	50th percentile (long term)	80th percentile (short term)	90th	Maximum	Monitoring Frequency																																																																																											
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	pH (pH units)	6.5	-	-	-	-	8.5	Weekly																																																																																											
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	Enterococci (organisms 100mL ⁻¹)	-	-	-	-	-	-	Weekly																																																																																											
	Aluminium (mg/L)	-	-	-	-	-	5.0	6 monthly																																																																																											
	Arsenic (mg/L)	-	-	-	-	-	0.10	6 monthly																																																																																											

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Beryllium (mg/L)	-	-	-	-	-	-	0.10	6 monthly
Boron (mg/L)	-	-	-	-	-	-	0.5	6 monthly
Cadmium (mg/L)	-	-	-	-	-	-	0.01	6 monthly
Chromium (mg/L)	-	-	-	-	-	-	0.15	6 monthly
Cobalt (mg/L)	-	-	-	-	-	-	0.05	6 monthly
Copper (mg/L)	-	-	-	-	-	-	0.20	6 monthly
Iron (mg/L)	-	-	-	-	-	-	1.0	6 monthly
Lead (mg/L)	-	-	-	-	-	-	0.20	6 monthly
Lithium (mg/L)	-	-	-	-	-	-	2.5	6 monthly
Manganese (mg/L)	-	-	-	-	-	-	0.2	6 monthly
Mercury (mg/L)	-	-	-	-	-	-	0.002	6 monthly
Molybdenum (mg/L)	-	-	-	-	-	-	0.01	6 monthly
Nickel (mg/L)	-	-	-	-	-	-	0.20	6 monthly
Selenium (mg/L)	-	-	-	-	-	-	0.02	6 monthly
Zinc (mg/L)	-	-	-	-	-	-	2.0	6 monthly

¹ means median of five consecutive samples taken at not less than 30 minute intervals in 24 hours.

² four out of five samples must contain less than 600 CFU/100mL.

Associated requirements

1. Monitoring must be in accordance with the **administering authority's Water Quality Sampling Manual** and all monitoring devices must be effectively calibrated and maintained.
2. BOD and Total Suspended Solids are about determining that the plant is achieving design outputs.
3. Indicators for TN and TP are recommended to be done as grab samples.
4. *Enterococci* counts are the recommended pathogen indicator for assessing potential risks to recreational water, *E. coli* counts may be more relevant for **land** irrigation where recreation is unlikely.
5. Monitoring Point M1 described as Post UV Disinfection System.

Agency interest: Waste

Condition number	Condition
BEE – W1	Emergency Storage of Sludge The registered suitable operator of this environmental authority may store sludge generated from the carrying out of the activity at the authorised place in circumstances, which would reasonably constitute emergency circumstances, for example, where contractors are unable to transport and dispose of the sludge. This condition has force and effect subject to compliance with conditions BEE-W2 and BEE-W3.
BEE – W2	As soon as practicable before storing any sludges at the authorised place, the registered suitable operator of this environmental authority must notify the administering authority in writing of the emergency storage.
BEE – W3	The notification of emergency storage of sludge as required by condition BEE-W2 must include but not be limited to the following: (a) the name of the registered suitable operator of this environmental authority ; (b) the number of this environmental authority ; (c) the location of the emergency storage of sludge at the authorised place; (d) the expected time periods in which the sludge is to be stored at the authorised place; (e) the reason for the emergency storage of sludge at the authorised place;

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	<p>(f) details of any environmental harm caused, threatened, or suspected to be caused by the</p> <p>(g) emergency storage of sludge at the authorised place; and</p> <p>(h) actions taken to prevent any environmental harm caused by the emergency storage of</p> <p>(i) sludge at the authorised place.</p>
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Part 5: Site Specific Conditions for Jimboomba WWTP

Environmentally relevant activity	Location
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	Jimboomba Sewage Treatment Plant 35 Matt Court, Jimboomba Lot 28 on RP859595

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following general conditions of approval.

Agency interest: Land	
Condition number	Condition
JIM – L1	<p>Land disposal</p> <p>The only places to which the irrigation of treated effluent is authorised are defined as:</p> <ul style="list-style-type: none"> (a) landscaped areas of the authorised premises; and (b) other areas subject to the requirements of condition (L2) within <i>Part 2: General Conditions for Wastewater Treatment Plant</i>.

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Part 6: Site Specific Conditions for Flagstone WWTP

Environmentally relevant activities	Locations
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (c) more than 1500 but not more than 4000EP	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 896 on SP108006
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	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 907 on SP315400
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (f) more than 50,000 but not more than 100,000EP	Flagstone Sewage Treatment Plan Red Cedar Crescent, Flagstone Creek Lot 908 on SP315400

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

Agency interest: Water																					
Condition number	Condition																				
FLG – WT1	Lagoons or other structures used for the storage or treatment of contaminants or wastes, including any associated pumps and control equipment, must not, where practicable, be located in any area below the one in ten-year flood level.																				
FLG – WT2	For the purposes of demonstrating compliance with condition WT8 within <i>Part 2: General Conditions for Wastewater Treatment Plants</i> , the registered suitable operator of this environmental authority must: <ul style="list-style-type: none"> (a) establish and maintain a system which addresses the following matters: <ul style="list-style-type: none"> (i) the estimated level of infiltration; (ii) the reasonable and practicable measures intended to minimise infiltration; (iii) the actions taken to minimise infiltration; and (iv) periodic re-estimations of the level of infiltration and, by comparison with previous infiltration estimates and connected population, an assessment of the effectiveness of the actions taken to minimise infiltration; and (b) details of the system must be provided to the administering authority upon request. 																				
Agency interest: Land																					
Condition number	Condition																				
FLG – L1	The only contaminants to be released to the treated effluent storage lagoon are treated effluent in accordance with <i>Table 9 – Treated effluent release limits from WWTP to Treated Effluent Storage Lagoon</i> and the associated requirements. <p style="text-align: center;">Table 9 – Treated effluent release limits from WWTP to Treated Effluent Storage Lagoon</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Monitoring Point</th> <th>Quality Characteristic</th> <th>Minimum</th> <th>Median</th> <th>50th percentile compliance</th> <th>Maximum</th> <th>Monitoring Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">M1</td> <td>5-day Biochemical Oxygen Demand (inhibited) (mg/L)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">10.0</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">Monthly</td> </tr> <tr> <td>Suspended Solids (mg/L)</td> <td style="text-align: center;">-</td> <td style="text-align: center;">10.0</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">Monthly</td> </tr> </tbody> </table>	Monitoring Point	Quality Characteristic	Minimum	Median	50 th percentile compliance	Maximum	Monitoring Frequency	M1	5-day Biochemical Oxygen Demand (inhibited) (mg/L)	-	10.0	-	-	Monthly	Suspended Solids (mg/L)	-	10.0	-	-	Monthly
Monitoring Point	Quality Characteristic	Minimum	Median	50 th percentile compliance	Maximum	Monitoring Frequency															
M1	5-day Biochemical Oxygen Demand (inhibited) (mg/L)	-	10.0	-	-	Monthly															
	Suspended Solids (mg/L)	-	10.0	-	-	Monthly															

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		Total Nitrogen (mg/L)	-	-	5.0	15.0	Monthly																	
		Total Phosphorous (mg/L)	-	-	3.0	9.0	Monthly																	
		Electrical Conductivity (µS/cm)	-	1600	-	-	Monthly																	
		pH	6.5	-	-	8.5	Monthly																	
		Dissolved Oxygen (mg/L)	2.0	-	-	-	Monthly																	
		Free Chlorine Residual (mg/L)	-	-	-	0.7	Monthly																	
		E.coli (cfu/100ml*)	-	150 ¹	-	600 ²	Monthly																	
	<p>¹ means median of five consecutive samples taken at not less than 30 minute intervals in 24 hours.</p> <p>² four out of five samples must contain less than 600 CFU/100mL.</p> <p>Associated requirements</p> <ol style="list-style-type: none"> 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; Indicators for TN and TP must be done as 24 hour composite samples; <i>Enterococci</i> counts are the recommended pathogen indicator for assessing potential risks to recreational water. Limits should be set based on the level of recreational use of receiving waters – either primary or secondary recreation. <i>E.coli</i> counts may be more relevant for small plants where recreational use in receiving waters is unlikely; Sampling must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained; and Monitoring point M1 described as Post Chlorine Disinfection. 																							
FLG – L2	The average daily irrigation rate (measured over a calendar month on a daily basis) must not exceed 678kL per day .																							
FLG – L3	Contaminant Release Location The defined contaminant release areas are described as Lot 907 SP315400 and Lot 908 SP315400.																							
FLG – L4	A minimum of 36 hectares of land must be provided for the treated sewage effluent release area until average irrigation volumes exceed 581kL/ day . Thereafter a minimum of 50 hectares must be provided.																							
FLG – L5	When weather conditions or soil conditions preclude the release of treated sewage effluent to land , effluent must not be irrigated to land .																							
FLG – L6	The Treated Effluent Storage Lagoon must be designed to hold a volume of not less than 28ML.																							
FLG – L7	The treated effluent storage lagoon must be fitted with high level alarms which are capable of providing the operator with an audible and/or visual warning that 95 percent capacity of the lagoon has been reached.																							
FLG – L8	Contaminant Release Precautions The contaminant release area must not be used for grazing, or as a traffic thoroughfare.																							
FLG – L9	<p>Monitoring of Contaminants Released to Land from the Treated Effluent Storage Lagoon</p> <p>The only contaminants to be released to land are treated effluent in accordance with <i>Table 10 – monitoring of contaminants released to land from the treated effluent storage lagoon</i>.</p> <p>Table 10 – monitoring of contaminants released to land from the treated effluent storage lagoon</p> <table border="1"> <thead> <tr> <th>Monitoring Point</th> <th>Quality Characteristics</th> <th>Units</th> <th>Monitoring Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="4">M2</td> <td>5-day Biochemical Oxygen Demand (inhibited) (mg/L)</td> <td>mg/L</td> <td>Six monthly</td> </tr> <tr> <td>Suspended Solids (mg/L)</td> <td>mg/L</td> <td>Six monthly</td> </tr> <tr> <td>pH</td> <td>pH scale</td> <td>Six monthly</td> </tr> <tr> <td>Free Chlorine Residual</td> <td>mg/L</td> <td>Six monthly</td> </tr> </tbody> </table>							Monitoring Point	Quality Characteristics	Units	Monitoring Frequency	M2	5-day Biochemical Oxygen Demand (inhibited) (mg/L)	mg/L	Six monthly	Suspended Solids (mg/L)	mg/L	Six monthly	pH	pH scale	Six monthly	Free Chlorine Residual	mg/L	Six monthly
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FLG – L10	<p>A soil monitoring program must be designed and implemented by appropriately qualified persons to monitor the effects of the activity on land. This monitoring should include the taking of top-soil and sub-soil samples from at least fifteen (15) representative sites for the quality characteristics and at the frequency specified in <i>Table 11 – Quality characteristics for soil monitoring</i>.</p> <p style="text-align: center;">Table 11 – Quality characteristics for soil monitoring</p> <table border="1"> <thead> <tr> <th>Quality Characteristics</th> <th>Units</th> <th>Monitoring Frequency</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH scale</td> <td>Every 2 years</td> </tr> <tr> <td>Sodium Adsorption Ratio (1:5 Soil/water mix)</td> <td>calculated</td> <td>Every 2 years</td> </tr> <tr> <td>Calcium/Magnesium Ratio (1:5 Soil/water mix)</td> <td>calculated</td> <td>Every 2 years</td> </tr> <tr> <td>Exchangeable Cations</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Total Cations</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Specific Conductance or electrical conductivity</td> <td>µS/cm</td> <td>Every 2 years</td> </tr> <tr> <td>Total Nitrogen</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Phosphorus (extractable)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Potassium (available)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Potassium (extractable)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Total Calcium (exchangeable)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Total Chloride</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Total Magnesium (exchangeable)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> <tr> <td>Total Sodium (exchangeable)</td> <td>mg/kg</td> <td>Every 2 years</td> </tr> </tbody> </table>	Quality Characteristics	Units	Monitoring Frequency	pH	pH scale	Every 2 years	Sodium Adsorption Ratio (1:5 Soil/water mix)	calculated	Every 2 years	Calcium/Magnesium Ratio (1:5 Soil/water mix)	calculated	Every 2 years	Exchangeable Cations	mg/kg	Every 2 years	Total Cations	mg/kg	Every 2 years	Specific Conductance or electrical conductivity	µS/cm	Every 2 years	Total Nitrogen	mg/kg	Every 2 years	Phosphorus (extractable)	mg/kg	Every 2 years	Potassium (available)	mg/kg	Every 2 years	Potassium (extractable)	mg/kg	Every 2 years	Total Calcium (exchangeable)	mg/kg	Every 2 years	Total Chloride	mg/kg	Every 2 years	Total Magnesium (exchangeable)	mg/kg	Every 2 years	Total Sodium (exchangeable)	mg/kg	Every 2 years
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Definitions for Parts 2 to 6

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.

Adopted middle thread distance (AMTD) means the distance from the mouth of the watercourse or the confluence of the watercourse with the main watercourse measured along the middle of the watercourse.

Annual return means the return required by the annual notice (under section 308 of the *Environment Protection Act 1994*).

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.

Approval means 'notice of environmental authority application decision' or 'notice of concurrence agency response' under the *Planning Act 2016*.

Approved place means the place to which this environmental authority approval relates.

Australian Water Quality Guidelines means the following document or more recent additions or supplements to that document as such become available: ANZECC and ARMCANZ. (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality, National Water Quality Management Strategy Paper Number 4. Australian and New Zealand Environment and Conservation Council / Agricultural and Resource Management Council of Australia and New Zealand.

Authority means environmental authority.

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.

By-pass flow events mean discharge events during which effluent which has not been fully treated is discharged to the receiving environment.

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.

Cfu means colony forming units.

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.

Composite in respect of sampling means either time based taken at hourly intervals to cover the period in the 24 hours of the sampling day during which a contaminant release occurs; or taken after set flow volumes to cover the period of the sampling day during which the contaminant release occurs.

Day means any 24 hour period.

Dry weather day means a day during which less than 1 mm of rainfall is recorded at any rainfall measuring station recognised by the Commonwealth Bureau of Meteorology within the sewered area connected to the sewage treatment plant, or if no such measuring station exists, at the nearest such station to the sewage treatment plant. The term also excludes days during which recorded rainfall over the four preceding days exceeds 100 mm.

Environmental authority has the meaning given under Schedule 4 of the *Environmental Protection Act 1994*.

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 under Chapter 1 of the *Environmental Protection Act 1994*.

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

EP Act means the *Environmental Protection Act 1994* and all legislation subordinate to this act.

Guidelines for Sewerage Systems – Use of Reclaimed Water means the following document or more recent additions or supplements to that document as such become available: ARMCANZ, ANZECC and NHMRC. (2000). Guidelines for Sewerage Systems – Use of Reclaimed Water, National Water Quality Management Strategy Paper Number 14, Agriculture and Resource Management Council of Australia and New Zealand / Australian and New Zealand Environment and Conservation Council / National Health and Medical Research Council.

Infiltration means all flows entering a sewage reticulation system other than those flows that are legally permitted to enter the sewage reticulation system. Infiltration may be from:

- (i) stormwater/groundwater ingress; or
- (ii) illegal connections.

kg/day means kilograms of contaminant released per day, calculated by multiplying the most recent measured value of the contaminant in milligrams per litre by the volume (in megalitres) of wastewater released on the same day the contaminant is sampled.

Land in the Land area of agency interest means land excluding **waters** and the atmosphere.

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

- (a) the consecutive samples are taken over a one year 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 three (3) days or greater than eleven (11) days.

Long term 80th percentile means that not more than ten (10) of the measured values of the quality characteristic are to exceed the stated release limit for any fifty-two (52) consecutive samples where:

- (a) the consecutive samples are taken over a one (1) year 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 three (3) days or greater than eleven (11) days.

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

- (a) the consecutive samples are taking over a one (1) year 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 three (3) days or greater than eleven (11) days.

Maximum means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

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.

Medium-bound estimate(s) means an estimate of concentration derived by using half of the limit of reporting (LOR) in calculating the contribution of each non-quantified congener or compound. It can be used for deriving estimates of single congener/compounds or total congeners/compounds (where quantified results and half LOR or non-quantified results are summed). For TEQ estimates, the corresponding toxic equivalence factor is applied to each single congener/compound estimate before summation.

mg/L means milligrams per litre.

Minimum means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated.

Normal cubic metre (Nm³) means the volume of dry gaseous contaminant which occupies 1 cubic metre at a temperature of zero degrees Celsius and at an absolute pressure of 101.3 kilopascals.

Nuisance sensitive place includes –

- (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) 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.

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

Operator means any of the following:

- (a) a person having the benefit of this **authority**
- (b) a registered suitable operator for this **authority**
- (c) anyone undertaking the **activity** to which this **authority** relates

Note: it is an offence to carry out work under an environmental authority without being a registered suitable operator.

Participating member means, for the purposes of an equivalent REMP, being an actively participating member in a study which is the equivalent of the REMP and any monitoring program resulting from such study.

Receiving environment means, for the purposes of the conditions of this environmental authority:

- (a) Logan River;
- (b) Albert River and
- (c) Moreton Bay.

Regulated waste means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 2019, including but not limited to, for the purpose of this authority, bacterial sludge (septic tank and sewage) and includes –

- a) for an element – any chemical containing the element; and
- b) anything that has contained a regulated waste; and
- c) regulated waste that has been treated or immobilised.

REMP means the Receiving Environmental Monitoring Program required to be developed by the environmental authority

Short term 50th percentile means that the median value of the measured values in ranked order of the quality characteristic is not to exceed the stated release limit for any five (5) consecutive samples where:

- (a) the consecutive samples are taken over a five (5) week 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 three (3) days or greater than eleven (11) days.

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

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

Sodium adsorption ratio (SAR) means the relative concentration of sodium (Na) to calcium (Ca) and magnesium (Mg) in the soil solution.

Total Nitrogen means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate, which must be reported separately, expressed as mg/L of Nitrogen.

Total Phosphorus 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.

Volatile organic compounds (VOC) means any chemical compound based on carbon chains or rings with a vapour pressure greater than 2mm of mercury (0.27 kPa) at 25°C), that participate in atmospheric photochemical reactions. The substances that are specifically excluded are: methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonate salts. This is according to the definition of VOC outlined in the Australian Government National's Pollutant Inventory.

Waters in relation to **Wastewater treatment plants** means any river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface 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 any groundwater (including confined and unconfined groundwaters) or any part thereof.

Waters in relation to **Sewage Pump Stations** 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.

Water Quality Sampling Manual means the following document or more recent additions or supplements to that document as such become available: the Department of Environment and Science's, Monitoring and Sampling Manual Environmental Protection (Water and Wetland Biodiversity) Policy 2019, Brisbane, Australia.

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

80th percentile compliance means that not more than three (3) of the measured values of the quality characteristic are to exceed the stated release limit for any twelve (12) consecutive samples where:

- (a) the consecutive samples are taken over a one year 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 twenty five days.

50th percentile compliance means that the median value of the measured values in ranked order of the quality characteristic is not to exceed the stated release limit for any twelve (12) consecutive samples where:

- (a) the consecutive samples are taken over a one year 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 twenty- five days.

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Part 7: Conditions for Cedar Grove Sewage Treatment Plant

Environmentally relevant activity	Location
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	Cedar Grove Sewage Treatment Plant Lot 1 on RP25779 - Dennis Road, Cedar Grove Lot 2 on RP25779 - Dennis Road, Cedar Grove Lot 3 on RP25779 – Rogers Road, Cedar Grove Lot 4 on RP25779 – Rogers Road, Cedar Grove Lot 5 on RP25779 – 441-489 Cedar Grove Road, Cedar Grove Lot 66 on W3123 – Dennis Road, Cedar Grove

The environmentally relevant activity conducted at the locations as described above must be conducted in accordance with the following general conditions of approval.

Agency interest: General	
Condition number	Condition
CG-G1	<p>Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations:</p> <p>(a) Inflows must not exceed the peak design capacity of 5 times the Design Average Dry Weather Flow (DADWF) of 16.5ML/day (DADWF = 3.3ML/day) on any day unless the standard treatment processes of the plant are bypassed.</p> <p>(b) A constructed treatment wetland must be installed and maintained.</p>
CG-G2	All reasonable and practicable measures must be taken to prevent the likelihood of environmental harm being caused.
CG-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.
CG-G4	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
CG-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.
CG-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.
CG-G7	A receiving environment monitoring program must be designed and implemented by appropriately qualified persons to monitor the effects of the activity on waters .
CG-G8	<p>The receiving environment monitoring program required by condition CG-G7 must include at least the following:</p> <p>(a) description of potentially affected receiving waters including key communities and background water and sediment quality characteristics based on accurate and reliable</p>

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	<p>monitoring data that takes into consideration any temporal variation (e.g. seasonality); and</p> <p>(b) description of applicable environmental values and sediment and water quality objectives to be achieved; and</p> <p>(c) consideration of 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</p> <p>(d) establish water and sediment quality targets within the receiving environment to be achieved, and clarification of contaminant concentrations or levels indicating adverse environmental impacts during the monitoring program¹; and</p> <p>(e) detail actions to be taken to reduce the environmental impact of releases from the activity should adverse impacts to the receiving environment be found.</p> <p>¹The monitoring program should be developed using the administering authority's <i>Receiving Environment Monitoring Program Guideline (EM1260) 2014</i> or more recent versions as they become available.</p>
CG-G9	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for in situ monitoring of pH and dissolved oxygen.
CG-G10	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.
CG-G11	<p>You must record the following details for all environmental complaints received:</p> <p>(a) date and time complaint was received;</p> <p>(b) name and contact details of the complainant;</p> <p>(c) nature of the complaint;</p> <p>(d) investigations undertaken;</p> <p>(e) conclusions formed; and</p> <p>(f) actions taken.</p>
CG-G12	When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a complaint not considered by the administering authority to be frivolous or vexatious, of environmental nuisance arising from the activity. The monitoring results must be provided to the administering authority upon request.
CG-G13	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
CG-G14	<p>The activity must be undertaken in accordance with written procedures that:</p> <p>a) identify potential risks to the environment from the activity during routine operations, closure and an emergency;</p> <p>b) establish and maintain control measures that minimise the potential for environmental harm;</p> <p>c) ensure plant, equipment and measures are maintained in a proper and effective condition;</p> <p>d) ensure plant, equipment and measures are operated in a proper and effective manner;</p> <p>e) ensure that staff are trained in and aware of their obligations under the <i>Environmental Protection Act 1994</i>; and</p> <p>f) ensure that reviews of environmental performance are undertaken at least annually.</p>
CG-G15	Treated sewage effluent may be removed from the site and used for an alternate purpose, with the written consent of any third party involved.

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Agency interest: Water																																																																			
Condition number	Condition																																																																		
CG-WT1	From beginning of releases to waters you must achieve at least 100% nutrient offset of any releases from the activity into the Logan River.																																																																		
CG-WT2	<p>Treated sewage effluent must only be released from the Cedar Grove Sewage Treatment Plant to waters from the following release point:</p> <ul style="list-style-type: none"> Release Point W1 - release of effluent from the constructed treatment wetland to waters described as Logan River at a location described as downstream of the Cedar Grove Weir in accordance with Table 1 - Release limits <i>and</i> the associated requirements. <p style="text-align: center;">Table 1- release limits – Logan River Outfall</p> <table border="1"> <thead> <tr> <th>Release Point Name</th> <th>Quality characteristic (units)</th> <th>Minimum⁵</th> <th>Long-term 50th percentile⁵</th> <th>Short-term Median⁵</th> <th>Maximum⁵</th> </tr> </thead> <tbody> <tr> <td rowspan="11">W1- Logan River Outfall</td> <td>BOD5 (mg/L)¹</td> <td></td> <td>10</td> <td>-</td> <td>30</td> </tr> <tr> <td>Total Suspended Solids (mg/L)</td> <td></td> <td>10</td> <td></td> <td>30</td> </tr> <tr> <td>Total Nitrogen (mg/L as N)²</td> <td>-</td> <td>1</td> <td></td> <td>3</td> </tr> <tr> <td>Ammonia (mg/L as N)</td> <td>-</td> <td>1</td> <td></td> <td>3</td> </tr> <tr> <td>NOx (mg/L)⁶</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Total Phosphorus (mg/L as P)²</td> <td>-</td> <td>0.5</td> <td>-</td> <td>1</td> </tr> <tr> <td>FRP (mg/L as P)⁶</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>pH (pH units)</td> <td>6.5</td> <td>-</td> <td>-</td> <td>8.5</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>2</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Enterococci ^{3,8} (primary/secondary) (cfu/100mL)</td> <td>-</td> <td>-</td> <td>35</td> <td>150⁷</td> </tr> <tr> <td>Total Chlorine Residual (mg/L)⁴</td> <td>-</td> <td>-</td> <td>-</td> <td>0.1</td> </tr> </tbody> </table> <p>Associated requirements</p> <ol style="list-style-type: none"> 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. Indicators for TN and TP must be done as 24 hour composite samples, with contributing samples taken hourly. <i>Enterococci</i> counts are the recommended pathogen indicator for assessing potential risks to recreational water. Limits should be set based on the level of recreational use of receiving waters – either primary or secondary recreation. <i>E.coli</i> counts may be more relevant for small plants where recreational use in receiving waters is unlikely. Limits for free chlorine residual and total chlorine concentrations are set considering potential toxicity to the 					Release Point Name	Quality characteristic (units)	Minimum ⁵	Long-term 50 th percentile ⁵	Short-term Median ⁵	Maximum ⁵	W1- Logan River Outfall	BOD5 (mg/L) ¹		10	-	30	Total Suspended Solids (mg/L)		10		30	Total Nitrogen (mg/L as N) ²	-	1		3	Ammonia (mg/L as N)	-	1		3	NOx (mg/L) ⁶	-	-	-	-	Total Phosphorus (mg/L as P) ²	-	0.5	-	1	FRP (mg/L as P) ⁶	-	-	-	-	pH (pH units)	6.5	-	-	8.5	Dissolved Oxygen (mg/L)	2	-	-	-	Enterococci ^{3,8} (primary/secondary) (cfu/100mL)	-	-	35	150 ⁷	Total Chlorine Residual (mg/L) ⁴	-	-	-	0.1
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	<p>receiving environment, mixing zones and practical methods for treatment and measurement.</p> <ol style="list-style-type: none"> 5. Sampling must be in accordance with the <i>Water Quality Sampling Manual</i> and all monitoring devices must be effectively calibrated and maintained. 6. Ammonia, NOx and Filterable Reactive Phosphorus (FRP) should be measured whenever TN and TP are monitored. 7. "Maximum" for <i>Enterococci</i> means 4 out of 5 samples. 8. Measured at the outlet of the sewage treatment plant (prior to the constructed treatment wetland). 																																				
CG-WT3	<p>The annual loads of Total Nitrogen and Total Phosphorous released to waters from release point W1 – Logan River Outfall must comply with the limits listed in Table 2 - Contaminated Release to Waters – Annual Load limits.</p> <p style="text-align: center;">Table 2 – Contaminated Release to Waters – Annual Load – Logan River Outfall</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Release Point Name</th> <th style="text-align: center;">Indicator</th> <th style="text-align: center;">Limit Type</th> <th style="text-align: center;">Release Limit</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">W1 – Logan River Outfall</td> <td style="text-align: center;">Total Nitrogen (TN) Annual Mass Load (dry weather)</td> <td style="text-align: center;">Maximum</td> <td style="text-align: center;">1204.5 kg</td> </tr> <tr> <td style="text-align: center;">Total Phosphorus (TP) Annual Mass Load (dry weather)</td> <td style="text-align: center;">Maximum</td> <td style="text-align: center;">602.25 kg</td> </tr> </tbody> </table>	Release Point Name	Indicator	Limit Type	Release Limit	W1 – Logan River Outfall	Total Nitrogen (TN) Annual Mass Load (dry weather)	Maximum	1204.5 kg	Total Phosphorus (TP) Annual Mass Load (dry weather)	Maximum	602.25 kg																									
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CG-WT4	<p>Calculate and keep records of dry weather annual load releases of Total Nitrogen and Total Phosphorus released to waters from release point W1 - Logan River Outfall. Loads must be calculated using the following method:</p> <p>Annual Mass Load (Dry Weather) (kg) = Annual Average Daily Dry Weather Day Release Volume (ML) x 365 x Long Term Median Concentration (mg/L).</p> <p><i>Note: calculations should be undertaken on a rolling basis based on nutrient sampling</i></p>																																				
CG-WT5	<p>Calculate and keep records of wet weather annual load releases of Total Nitrogen and Total Phosphorus released to waters from release point W1 - Logan River Outfall. Loads must be calculated using the following method:</p> <p>Annual Mass Load (Wet Weather) (kg) = Sum of all wet weather day Daily Mass Loads.</p> <p>Where Daily Mass Load = Total Daily Release Volume (ML) x 24 hour Composite Sample Concentration (mg/L) for that day.</p>																																				
CG-WT6	<p>Monitoring of contaminants releases from the constructed wetland to waters must be undertaken in accordance with Table 3 – Monitoring frequency and the associated monitoring requirements and records of the results must be kept.</p> <p style="text-align: center;">Table 3 – Monitoring frequency</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Quality Indicator¹</th> <th style="text-align: center;">Measurement (units)</th> <th style="text-align: center;">Minimum frequency^{1, 2}</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">BOD5</td> <td style="text-align: center;">(mg/L)</td> <td style="text-align: center;">Weekly</td> </tr> <tr> <td style="text-align: center;">Total Suspended Solids</td> <td style="text-align: center;">(mg/L)</td> <td style="text-align: center;">Weekly</td> </tr> <tr> <td style="text-align: center;">Volume (inflow³)</td> <td style="text-align: center;">(ML)</td> <td style="text-align: center;">Daily</td> </tr> <tr> <td style="text-align: center;">Volume (outflow⁴)</td> <td style="text-align: center;">(ML)</td> <td style="text-align: center;">Daily</td> </tr> <tr> <td style="text-align: center;">Volume (release⁵)</td> <td style="text-align: center;">(ML)</td> <td style="text-align: center;">Daily</td> </tr> <tr> <td style="text-align: center;">Total Nitrogen</td> <td style="text-align: center;">(mg/L as N)</td> <td style="text-align: center;">Weekly and on wet weather days</td> </tr> <tr> <td style="text-align: center;">Total Phosphorus</td> <td style="text-align: center;">(mg/L as P)</td> <td style="text-align: center;">Weekly and on wet weather days</td> </tr> <tr> <td style="text-align: center;">NOx</td> <td style="text-align: center;">(mg/L as N)</td> <td style="text-align: center;">Weekly</td> </tr> <tr> <td style="text-align: center;">FRP</td> <td style="text-align: center;">(mg/L as P)</td> <td style="text-align: center;">Weekly</td> </tr> <tr> <td style="text-align: center;">pH</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">Weekly</td> </tr> <tr> <td style="text-align: center;">Dissolved Oxygen</td> <td style="text-align: center;">(mg/L)</td> <td style="text-align: center;">Weekly</td> </tr> </tbody> </table>	Quality Indicator ¹	Measurement (units)	Minimum frequency ^{1, 2}	BOD5	(mg/L)	Weekly	Total Suspended Solids	(mg/L)	Weekly	Volume (inflow ³)	(ML)	Daily	Volume (outflow ⁴)	(ML)	Daily	Volume (release ⁵)	(ML)	Daily	Total Nitrogen	(mg/L as N)	Weekly and on wet weather days	Total Phosphorus	(mg/L as P)	Weekly and on wet weather days	NOx	(mg/L as N)	Weekly	FRP	(mg/L as P)	Weekly	pH	N/A	Weekly	Dissolved Oxygen	(mg/L)	Weekly
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	Enterococci ⁶	(cfu/100ml)	Weekly
	Total Chlorine Residual	(mg/L)	Weekly if chlorination is occurring
Associated monitoring requirements			
<ol style="list-style-type: none"> 1. Monitoring must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained. 2. Monitoring must be undertaken when the activity is in operation and samples must be taken during a release. 3. Total inflow before bypass release point. 4. Total outflow is treated discharges and excludes flows that are bypassed. 5. Release is the outlet to the Logan River. 6. Enterococci counts are the recommended pathogen indicator for assessing potential risks to recreational water. Monitoring should be set based on the level of recreational uses of receiving waters – either primary or secondary recreation. E.coli counts may be more relevant for small plants where recreation is unlikely. 			
CG-WT7	In addition to CG-WT2, 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.		
CG-WT8	Bypass releases must be screened prior to being released to the constructed treatment wetland.		
CG-WT9	The administering authority must be notified within 24 hours of any bypass release ceasing.		
CG-WT10	The following details must be recorded in relation to each bypass release: <ol style="list-style-type: none"> (a) the start time, date and duration of the release; (b) the estimated volume of the bypass release; (c) the level of treatment at the sewage treatment plant prior to discharge; (d) the cause of the release; and (e) any monitoring of the water quality released. 		
Agency interest: Noise			
Condition number	Condition		
CG-N1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place .		
Agency interest: Air			
Condition number	Condition		
CG-A1	Odours or airborne contaminants must not cause environmental nuisance at a sensitive place or commercial place.		
Agency interest: Waste			
Condition number	Condition		
CG-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.		

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Agency interest: Offset																			
Condition number	Condition																		
CG-01	To comply with condition CG-WT1 until 30 June 2026, an offset nutrient reduction action must be undertaken in accordance with the document entitled <i>Planning & Investigation Report, Cedar Grove WWTP Offset Proposal, Task Number: LS-303, September 2019</i> .																		
CG-02	<p>The offsite nutrient reduction action referred to in condition CG-01 must generate offset credits for total nitrogen and total phosphorus in the quantities specified in <i>Table 4 – Offset credit requirement</i>.</p> <p style="text-align: center;">Table 4 – Offset credit requirement</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4">Offset Credit Requirement (tonnes)</th> </tr> <tr> <th colspan="2">Total Nitrogen</th> <th colspan="2">Total Phosphorus</th> </tr> <tr> <th>TN released during wet weather days</th> <th>TN released during dry weather days</th> <th>TP released during wet weather days</th> <th>TP released during dry weather days</th> </tr> </thead> <tbody> <tr> <td>1.5 times the monitored Annual Mass Load (wet weather) of TN released¹</td> <td>The monitored Annual Mass Load (dry weather) of TN released²</td> <td>1.5 times the monitored Annual Mass Load (wet weather) of TP released¹</td> <td>The monitored Annual Mass Load (dry weather) of TP released²</td> </tr> </tbody> </table> <p>¹ As per relevant calculations defined in condition CG-WT5. ² As per relevant calculations defined in condition CG-WT4.</p>			Offset Credit Requirement (tonnes)				Total Nitrogen		Total Phosphorus		TN released during wet weather days	TN released during dry weather days	TP released during wet weather days	TP released during dry weather days	1.5 times the monitored Annual Mass Load (wet weather) of TN released ¹	The monitored Annual Mass Load (dry weather) of TN released ²	1.5 times the monitored Annual Mass Load (wet weather) of TP released ¹	The monitored Annual Mass Load (dry weather) of TP released ²
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CG-03	The amount of total nitrogen and total phosphorus prevented from entering the Logan River due to the offsite nutrient reduction action must be calculated yearly, based on monitoring from a LiDAR survey or a photogrammatic survey.																		
CG-04	For compliance with condition CG-WT1, the amount of total nitrogen and total phosphorus prevented from entering the Logan River must be equal to or exceed the calculated offset credit requirements for total nitrogen and total phosphorus for the period from beginning of releases to waters to 30 June 2026.																		
CG-05	Where the calculated nutrient offset is determined to be less than 90%, this must be reported to the administering authority within 24 hours, and action must be taken to address this within four weeks.																		
CG-06	The calculated nutrient offset must not be less than 80%.																		
CG-07	The holder of this environmental authority must appropriately maintain the offsite nutrient reduction action from beginning of releases to waters to 30 June 2026.																		

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CG-08	<p>An offsite nutrient reduction action monitoring report must be prepared by an appropriately qualified person and submitted to the administering authority by 30 November each year, for the preceding financial year. This report must include:</p> <ul style="list-style-type: none"> a) A determination of the offset credit requirement for the preceding financial year; and b) A determination of the offset credit requirement for the period from beginning of releases to waters to the end of the preceding financial year; and c) A determination of the amount of total nitrogen and total phosphorus prevented from entering the Logan River for the preceding financial year; and d) A determination of the amount of total nitrogen and total phosphorus prevented from entering the Logan River for the period from beginning of releases to waters to the end of the preceding financial year; and e) Calculations of the nutrient offset delivered for the preceding financial year, and for the period from beginning of releases to waters to the end of the preceding financial year; and f) A comparison of the calculated nutrient offsets for the preceding financial year, and for the period from beginning of releases to waters to the end of the preceding financial year, to the relevant offset credit requirements; and g) A summary of the results of monitoring of the condition of the offsite nutrient reduction action undertaken in accordance with the document entitled <i>Planning & Investigation Report, Cedar Grove WWTP Offset Proposal, Task Number: LS-303, September 2019</i>; and h) Should the nutrient offset delivered have been below 90% at any time, a summary of the actions taken to rectify this; and i) With reference to the results of the receiving environment monitoring program required under condition CG-G7, a determination of whether nutrient releases from the STP have caused adverse impacts on environmental values of the receiving environment.
CG-09	<p>A review of the effectiveness of the offsite nutrient reduction action must be prepared by an appropriately qualified person and submitted to the administering authority by 30 November 2025. This report must:</p> <ul style="list-style-type: none"> a) Be based on monitoring results obtained for the delivery of the offsite nutrient reduction action over the preceding years; and b) With reference to results of the receiving environment monitoring program required under condition CG-G7 during the time the offsite nutrient reduction action has been in place, determine if the delivery of the offsite nutrient reduction action has been effective in preventing or mitigating harm from releases of nutrients from the activity on the receiving environment; and c) Determine whether the method of delivery of the offset, being a wet-weather offset, was successful in offsetting dry weather releases; and d) Provide recommendations for the continued delivery of an offsite nutrient reduction action following June 30 2026.

Definitions for Part 7

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.

Beginning of releases to waters means the date of the first approved release of contaminants from W1 to Logan River occurs.

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

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

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.

Day means any 24 hour period.

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

Dry weather day means a day which less than 1 mm of rainfall is recorded at any rainfall measuring station recognised by the Commonwealth Bureau of Meteorology within the sewered area connected to the sewage treatment plant, or if no such measuring station exists, at the nearest such station to the sewage treatment plant. The term also excludes days during which recorded rainfall over the four preceding days exceeds a cumulative rainfall of 50mm.

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

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

Long Term (limit) means a limit applied to 52 consecutive samples taken over a one year or 52 week period (on a rolling basis for limit calculations) where consecutive samples are taken on a weekly basis of approximately equal periods (plus or minus 2 days).

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.

Nutrient offset, expressed as a percentage, means the amount of total nitrogen and/or total phosphorus prevented from entering the receiving environment through an **offsite nutrient reduction action**, as a percentage of the amount of total nitrogen and/or total phosphorus release to the receiving environment from the activity.

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

Offset credit means a unit of pollution reduction, expressed in tonnes per year, equivalent to the pollutant load prevented from entering the receiving environment by an **onsite nutrient reduction action**.

Onsite nutrient reduction action means an action taken to counter-balance a point source nutrient release as agreed to by the holder of this environmental authority and the **administering authority**.

Prescribed contaminants means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2019.

Release of a contaminant into the environment means to:

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

Reuse means using treated effluent for beneficial purposes such as agricultural and landscape irrigation, industrial processes, toilet flushing and other non-potable applications provided those uses comply with relevant legislative requirements.

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 (limit) means a limit is applied to five consecutive samples taken not less than 30 minute intervals within a 24 hour period.

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

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

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

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

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

You means the holder of the environmental authority.

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

Attachments

1. Extractions from amendment application document *Loganholme WWTP Gasification Facility – Process and Performance*.
2. Code of environmental compliance for certain aspects* of sewage treatment (ERA 63) – Version 1.

END OF PERMIT

Attachment 1: Extractions from amendment application document Loganholme WWTP Gasification Facility – Process and Performance.

Table 5: Gasification Facility Optimisation Testing Schedule (Emissions)

Quality Characteristic	Location / Description	Sample Type	Frequency
Gasification Exhaust Stack			
Exhaust emissions SoX	Gasification – Exhaust Stack	Online	Online
Exhaust emissions NoX	Gasification – Exhaust Stack	Online	Online
Exhaust emissions CO	Gasification – Exhaust Stack	Online	Online
*Pollutant - Other (refer Appendix A)	Gasification – Exhaust Stack Gasification – Gasifier outlet	Grab	1 x during period
*Heavy Metals (refer Appendix A)	Gasification – Exhaust Stack Gasification – Gasifier outlet	Grab	1 x during period

* Refer to Appendix A – Air Emissions Monitoring

Table 7: Gasification Facility Performance Trial Testing Schedule (Emissions)

Quality Characteristic	Location / Description	Sample Type	Frequency
Gasification Exhaust Stack			
Exhaust emissions SoX	Gasification – Exhaust Stack	Online	Online
Exhaust emissions NoX	Gasification – Exhaust Stack	Online	Online
*Pollutant - Other (refer Appendix A)	Gasification – Exhaust Stack Gasification – Gasifier outlet	Grab	2 x during period
*Heavy Metals (refer Appendix A)	Gasification – Exhaust Stack Gasification – Gasifier outlet	Grab	2 x during period

2.4 * Refer to Appendix A – Air Emissions Monitoring: Table 9

Table 9: Proposed Suite of Emissions Analysis points

Location	Pollutant – Heavy Metals	Pollutant - Other
Exhaust Stack Gasifier Outlet	Lead	Hydrogen chloride (HCl)
	Antimony	Total fluorine compounds (as HF)
	Arsenic	Polycyclic aromatic hydrocarbons (PAHs)
	Mercury	Polychlorinated Dioxins and Furans
	Cadmium	Total volatile organic compounds (VOCs as n-propane)
	Nickel	PFAS extended suite containing 28 compounds
	Silver	Nitrogen oxides
	Barium	Carbon monoxide
	Copper	Sulphur dioxide
	Chromium VI	Sulphur trioxide including sulphuric acid (as SO ₃)
	Beryllium	Hydrogen sulphide (H ₂ S)
	Cobalt	Total solid particulate matter
	Manganese	Fine particulates (PM ₁₀)
	Nickel	Fine particulates (PM _{2.5})
	Selenium	Odour concentration using AS:4323.3, 2001
	Vanadium	