Environmental Protection Order

This environmental protection order is issued by the administering authority pursuant to section 358 of the Environmental Protection Act 1994.

Mr Mark Pitt
Chief Executive Officer
South Burnett Regional Council
PO Box 336
KINGAROY QLD 4610

Attention: Adam Branch, Acting Manager Water and Wastewater
Email: adam.branch@sbrc.qld.gov.au; info@sbrc.qld.gov.au

Our reference: C-CPLRC-100576873, E-100577134

19/01/2024

Dear Mr Mark Pitt

Take notice: that under the *Environmental Protection Act 1994* (the Act) this environmental protection order (EPO) is issued to South Burnett Regional Council (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment, Science and Innovation (the department).

The EPO is issued with respect to the Environmentally Relevant Activity (ERA) 63 - Sewage Treatment 1(e) - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of more than 10,000 but not more than 50,000EP on land described as Lot 1/RP84673 and Lot 22/FY2137 situated at 7-33 HODGES RD, KINGAROY, SOUTH BURNETT REGIONAL, 4610 (the premises).

A. Grounds

This EPO is issued on the following grounds:

1. The department requires you to take reasonable measures to secure compliance with conditions WT1, and WT3 of the Environmental Authority EPPR02378514 (the EA) dated 30 July 2014, pursuant to section 358(d)(iii) of the Act. Conditions WT1 and WT3 are as follows:

Condition WT1

> *The only contaminants to be released to surface **waters,** excluding **bypass** releases covered by water conditions WT4 and WT5, are from the sewage treatment plant to **waters** described as Kingaroy Creek at release point M3 in accordance with Table 4—Surface water release limits and the associated requirements, Table 5 – Monitoring and release point locations and Map 1.*

Queensland Government

Table 4—Surface water release limits[8]

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

Associated requirements

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

Enterococci are to be taken in duplicates and analysed concurrently. Enterococci limits are to be determined through analysis of wastewater samples over a period of 24 months and with the agreement of the administering authority in replacement of Faecal Coliforms.

7. *Limits for free chlorine residual concentrations are set considering potential toxicity to the receiving environment, mixing zones and practical methods for treatment and measurement.*
8. *Sampling must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.*

Table 5 – Monitoring and release point locations

Release Point Names	Description	Monitoring location GDA94 Decimal degrees	
		Latitude	***Longitude***
M1	Between outlet of the secondary clarifiers and chlorination plant	26º33'07.4620"	151º49'07.2290"
M2	Outlet of the chlorination chamber	26º33'09.8988"	151º48'42.1864"
M3	Outlet of the Final Pond	26º33'11.2473"	151º48'38.3470"
M4	Inlet to the irrigation lagoons	26º33'09.7808"	151º49'06.1950"
M5	Class A Recycled Effluent	26º33'04.4170"	151º49'07.1302"

Condition WT3

*In addition to WT1, the release to **waters** must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other visually objectionable matter, excluding **bypass** releases covered by water conditions WT4 and WT5.*

2. The department requires you to take reasonable measures to secure compliance with the "general environmental duty" pursuant to section 358(d)(i) of the Act. The general environmental duty is detailed in s319 of the Act as follows:

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

The facts and circumstances forming the basis for these grounds are:

1. You are the holder of the EA which authorises sewage treatment on the premises, subject to the conditions of the EA.
2. You operate the Kingaroy wastewater treatment plant (WWTP) and are responsible for the operation and maintenance of the infrastructure, including treatment processes and water storage dams and for the discharge of treated wastewater into Kingaroy Creek (which then flows into the Stuart River).
3. On 11 January 2024, you notified the department's Pollution Hotline that the WWTP had received a large inflow of fat, oil and grease (FOG) and it is alleged that this caused a significant decline in the WWTP's ability to treat wastewater and was likely going to cause exceedance of water quality release limits required by the EA.

4. You advised that onsite observations and onsite testing indicate elevated levels of BOD, TSS, TN and TP.
5. You also advised the biological treatment process (activated granular sludge) is not designed to treat FOG and the FOG had progressed through the plant causing problems to the:
    i. primary inlet screens;
    ii. balance tanks;
    iii. two bioreactors;
    iv. digester;
    v. dewatering facility, gravity drainage deck and belt press;
    vi. tertiary clarifier;
    vii. sludge pump station;
    viii. recycled water facility, filters and UV disinfection system; and
    ix. field instruments.
6. On 11 January 2024, during a follow up phone conversation with the department, you advised that the FOG inflows to the WWTP were first observed on 1 January 2024 and that it may take approximately one (1) month for the reactor biomass to recover to normal treatment capacity.
7. You advised that you had taken, and were intending to take, the following actions:
    i. an investigation, including sampling for RNA testing, to determine the responsible source of the FOG inflows;
    ii. pressure washing all sewer drains to remove excess FOG coming through the sewage network;
    iii. engaging vacuum trucks with oil skimmers to remove the floating FOG retained in treatment tanks at the WWTP; and
    iv. dewatering FOG in drying beds and taking the waste to a facility lawfully able to accept this waste.
8. On 12 January 2024, departmental officers conducted a site inspection of the WWTP, treatment lagoons and receiving environment.
9. During the site inspection, you advised officers that the majority of the FOG was contained within the WWTP and was recoverable from the treatment tanks.
10. During the site inspection, departmental officers also observed small globules of FOG dispersed through vegetation in the drain immediately downstream of the release point for treated effluent and this drain directs treated wastewater to Kingaroy Creek, which reports to the Stuart River.
11. You advised departmental officers that Council personnel had raked and recovered some of the FOG residue that had been discharged to the drain.
12. It is alleged that the release to waters of the globules of FOG is a contravention of condition WT3 of the EA.
13. On 18 January 2024, you submitted treated effluent monitoring results to the department which show that treated effluent quality is non-compliant with the EA release limits. See Table A below:

Table A – WWTP treated effluent monitoring

Method	Test	Units	24/00495/1 M1 Effluent 9/01/2024 13:00	24/00495/2 M3 Effluent 9/01/2024 13:30
1.004	Diss. Oxygen as O_2	mg/L	[NR]	12.3@20.5°C
1.002	pH	pH Unit	7.5	[NR]
1.007	Conductivity at 25°C	uS/cm	[NR]	2,000
1.601	Suspended Solids @ 105°C	mg/L	230	[NR]
1.604	CBOD 5 days @ 20°C	mg/L	38	[NR]
FIA.008	Ammonia N	mg/L	1.4	[NR]
FIA.010A	Nitrite N	mg/L	0.20	[NR]
Calc #	Nitrate N (Calc)	mg/L	0.14	[NR]
FIA.010B	Nitrite+Nitrate as N	mg/L	0.35	[NR]
Calc #	Total Kjeldahl Nitrogen as N Calculated	mg/L	3.7	[NR]
FIA.013	Total Nitrogen as N	mg/L	4.0	[NR]
FIA.011A	Ortho Phosphorus as P	mg/L	2.2	[NR]
FIA.011B	Total Phosphorus as P	mg/L	2.8	[NR]

14. On 16 January 2024, you provided a summary of 13 incidents, in the past 6 months, where significant FOG inflows had been observed entering the WWTP.
15. On 4 October 2023, you reported a large-scale incident involving a sewer line blockage that had occurred due to a build up of FOG in the sewer network and in response, departmental officers conducted an inspection of the incident on 5 October 2023.
16. On 9 December 2021, officers from the department inspected a large-scale incident that you reported involving a buildup of FOG resulting in a sewer main surcharging into a number of residential properties.
17. You provided a summary of 7 FOG related sewer blockages that occurred leading up to this event.
18. In response to the December 2021 FOG incident, the department sent you correspondence in March 2022 outlining matters of concern relating to the deposition of prescribed water contaminants to waters (FOG) which is an offence under section 440ZG of the Act. The department recommended that you monitor industries whose trade waste releases are suspected of adversely impacting the sewer network and causing contaminant releases to the environment. The department also recommended that timely monitoring of impacted waters be undertaken to assess the level of environmental harm from FOG releases and that appropriate remedial actions are implemented.
19. **Section 14** of the Act states—

    Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration of 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; or
    b) Whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
20. **Section 9** of the Act defines environmental value as—

    a) A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or
    b) Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
21. Environmental Values for the Stuart River, detailed in the *Water Quality Improvement Plan for the Burnett Mary Region*, include aquatic ecosystems, irrigation, farm supply, stock water, human consumption of shellfish, primary and secondary recreation, visual recreation and drinking water.
22. As described in paragraphs 10 to 12, it is likely that FOG was released to Kingaroy Creek and FOG can coat aquatic organisms and reduce dissolved oxygen, impacting environmental values.
23. Based on the information set out in facts and circumstances above, the department consider that you have failed to comply with conditions WT1 and WT3 of the EA. In addition, the department considers that you have failed to take all reasonable and practical measures to prevent or minimise the risk of environmental harm by not adequately regulating the sewer network inflows and by releasing treated effluent to Kingaroy Creek that is non-compliant with EA release limits.
24. The department considers that there are reasonable and practicable measures that can and should be implemented to ensure compliance with the EA conditions and GED. Necessary action is required to ensure the WWTP's treatment capacity is restored, and environmental impacts to the environmental values of Kingaroy Creek and Stuart River are mitigated.
25. Furthermore, the department considers that all reasonable and practicable actions must be taken to ensure FOG related incidents that compromise the treatment capability of the WWTP do not reoccur.

B. Requirements

In accordance with this EPO, you are required to do the following:

1. By **22 January 2024** you must engage/appoint an appropriately qualified person/s (AQP) to carry out the requirements of this notice and confirm the engagement to the department in writing to widebay.esr@des.qld.gov.au.
2. The written confirmation of the engagement must include each AQP's academic and professional qualifications, suitable skills, experience and training, relevant to the nominated subject matter and that the AQP can give authoritative assessment, advice and analysis of performance in relation to the subject matter using the relevant protocols, standards, methods or literature relevant to this notice.

Dealing with the impacts from FOG at the WWTP

3. By **22 January 2024** you must ensure that the AQP engaged in requirement 1:
    a. conducts a performance assessment of the WWTP and makes recommendations to achieve compliance with the requirements of the Environmental Authority EPPR02378514; and
    b. prepares an action plan, with timeframes and supporting justification for actions, to restore the WWTP treatment capacity as soon as reasonably practicable.
4. By **22 January 2024** you must require the AQP to assess the practicality and feasibility of implementing additional or alternate short term sewage treatment and disposal methods to address and minimise the impacts of the recent FOG incident. The methods to be assessed must include:
    i. additional treatment processes within the WWTP (e.g. temporary installation of a dissolved air flotation unit) or prior to the release of treated effluent (e.g. surface aerators on the final lagoon and/or creek);
    ii. the lawful transport and treatment of untreated or partially treated sewage or sewage sludge, with a high concentration of FOG, at an alternate location;
    iii. irrigation of some, or all, of the treated effluent to land to minimise impacts to the environmental values of, in particular, Kingaroy Creek and the Stuart River; and
    Note: where irrigation methods are not in accordance with current EA conditions, a temporary EA amendment may be required.
    iv. any other reasonably practical methods identified by the AQP.
5. By **22 January 2024** you must identify all reasonably practical measures to mitigate the risk of the final treated effluent holding pond becoming anaerobic.
6. By **5 February 2024** you must commence the implementation of the actions identified with regards to Requirements 3, 4 and 5 of this EPO.
7. By **12 February 2024** you must require the AQP to submit a report to the department via widebay.esr@des.qld.gov.au, which details the action plan, findings and list of actions being taken with regards to Requirements 3, 4 and 5 of this EPO.
8. By **22 January 2024** you must commence twice weekly (i.e Mondays and Thursday) monitoring of effluent inflows for Fat, Oil and Grease (mg/L) at the inlet works.

Monitoring Environmental Impacts

9. By **22 January 2024** you must commence twice weekly (i.e Mondays and Thursdays) monitoring of treated effluent for all parameters listed in **Table 1** below until compliance is achieved with treated effluent release limits specified within the EA EPPR02378514.

Table 1—Monitoring parameters and locations

Quality Indicator (units)1	Measurement (units)[6]	Monitoring location[3]
BOD5 (mg/L)	(mg/L)	M1
Total Suspended Solids	(mg/L)	M1
Ammonia	(mg/L as N)	M1
NOx[6]	(mg/L as N)	M1
FRP[6]	(mg/L as P)	M1
Total Nitrogen	(mg/L as N)	M1
Total Phosphorus	(mg/L as P)	M1
pH	N/A	M1
Faecal Coliforms	(CFU/100mL)	M2
Enterococci[7]	(CFU/100mL)	M2
Free Chlorine Residual	(mg/L)	M3
Dissolved Oxygen	(mg/L)	M3
Electrical Conductivity	(µS/cm)	M3
Fat, Oil and Grease	(mg/L)	M3

10. By **22 January 2024** you must commence twice weekly monitoring (i.e Mondays and Thursdays) of the receiving environment until you have achieved compliance with requirement 9of this EPO. This monitoring must be conducted for the parameters and at the locations specified in Table 2 below:

Table 2-Monitoring parameters and locations

Monitoring Point Names	**Quality characteristic (units)[2]**
EM1, EM2, EM3	pH (pH units)
EM1, EM2, EM3	Temperature
EM1, EM2, EM3	**Total Nitrogen** (mg/L as N)
EM1, EM2, EM3	Ammonia (mg/L as N)
EM1, EM2, EM3	Nitrates (mg/L)
EM1, EM2, EM3	**Total Phosphorus** (mg/L as P)
EM1, EM2, EM3	Filterable reactive Phosphorus (mg/L)

EM1, EM2, EM3	Dissolved Oxygen (mg/L)
EM1, EM2, EM3	Electrical Conductivity (µS/cm)
EM1, EM2, EM3	BOD 5 mg/L
EM1, EM2, EM3	Fat, Oil and Grease (mg/L)

11. For at least one complete set of samples from the twice weekly rounds of monitoring under Requirements 8, 9 and 10 of this EPO:
    I. all laboratory analysis and tests required must be undertaken by a laboratory that has NATA accreditation for such analyses and tests; and
    II. you must request priority (non-standard/urgent) turnaround time for the 'Fat, Oil and Grease' samples.
12. You must provide all monitoring results obtained for Requirements 8, 9 and 10 of this EPO to the department via widebay.esr@des.qld.gov.au within one business day of receiving these from the laboratory.
13. By **22 January 2024** you must commence weekly monitoring of water flow rates in the Stuart River at Weens Bridge and make estimations of the water flow rates in Kingaroy Creek.
14. You must notify the department within 24hours via widebay.esr@des.qld.gov.au if the flows fall below 0.5ML per day in the Stuart River.

Managing Trade Waste Inputs

15. By **26 February 2024** an independent AQP must be engaged to:
    a. conduct an audit of all Kingaroy trade waste inputs and identify any potential FOG or other industrial waste inputs that may adversely impact the WWTP treatment capacity; and
    b. make recommendations to manage trade waste inputs at the trade premises (e.g. treatment of trade waste prior to release to sewer or at the WWTP.
16. By **26 February 2024** written confirmation of the engagement must be submitted to the department via widebay.esr@des.qld.gov.au and include the AQP's academic and professional qualifications, suitable skills, experience and training, relevant to the nominated subject matter and that the AQP can give authoritative assessment, advice and analysis of performance in relation to the subject matter using the relevant protocols, standards, methods or literature relevant to this notice.
17. By **29 April 2024** you must prepare and submit a report to the department via widebay.esr@des.qld.gov.au, that is based on the audit and recommendations required by Requirement 14 and which details measures you will implement to prevent a reoccurrence of a significant FOG inflow into the WWTP. This report must include, but not be limited to the following:
    1. Identification of high-risk trade waste inputs;
    2. details of existing Kingaroy trade waste standards, regulations or requirements and measures you take to ensure compliance with these; and
    3. an action plan with associated timeframes that you will implement to prevent the reoccurrence of a significant FOG inflow into the WWTP.

18. This EPO remains in effect until **30 April 2024.**

C. Obligations

If you propose to dispose of the place or business to which the EPO relates, you **must** advise the buyer of the existence of this EPO.

If you cease to carry out the activity to which this EPO relates, you **must** give written notice of ceasing to carry out the activity to the department within 10 days of ceasing the activity.

Take notice:

- the requirements of this order take effect immediately upon service of the order;
- failure to comply with this order is an offence under the Act;
- this order remains in force until further notice from the administering authority.

D. Penalty

It is important that you know the impact to you personally as an individual or as a corporation for not meeting your obligations.

Failure to comply with an EPO is an offence.

- The maximum penalty for wilfully contravening an EPO is 6250 penalty units, totalling $967,500 or five years imprisonment for an individual or $4,837,500 for a corporation.
- The maximum penalty for contravening an EPO is 4500 penalty units, totalling $696,600 for an individual or $3,483,000 for a corporation.

Failure to provide written notice to the buyer of the existence of the order is an offence.

- The maximum penalty is 50 penalty units, totalling $7,740 for an individual or $38,700 for a corporation.

Failure to provide written notice to the department within 10 business days of ceasing the activity to which an environmental protection order relates is an offence.

- The maximum penalty is 50 penalty units, totalling $7,740 for an individual or $$38,700 for a corporation.

Section 3 of the *Penalties and Sentences Regulation 2015* prescribes the monetary value of a penalty unit.

E. Reviews and appeals

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the Act.

A person who is dissatisfied with an original decision made by the Department of Environment, Science and Innovation (the department) may apply to have that decision internally reviewed.

Information about initiating an appeal in relation to this notice is contained within the Internal Reviews and Appeals Information Sheet (available at www.qld.gov.au using the publication number ESR /2015/1742 as a search term)

A request for review or appeal is to be made using the approved form 'Application for review of original decision' (available at www.qld.gov.au using the publication number ESR/2015/1573 as a search term.

Applications for reviews are to be sent to Permit and Licence Management, Department of Environment, Science and Innovation: via email at palm@des.qld.gov.au , or by mail to the following address: GPO. Box 2454, Brisbane, QLD, 4001.

Where an application has been made for a decision to be reviewed, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review.

Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

You may have other legal rights or obligations and should seek your own legal advice.

Pursuant to section 540 of the Act, the department is required to maintain a register of certain documents and information authorised under the Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the Act. There is no general discretion allowing the department to withhold documents or information required to be kept on the public register. For more information on the department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

Should you have any queries in relation to the notice, please contact Carol Hardy, Senior Environmental Officer of the Maryborough Compliance Centre on 07 4302 8589 telephone number.



Signature

19/01/2024

Date

Cate Puschmann

Compliance Delivery Manager

Delegate of the Chief Executive

Department of Environment, Science and Innovation

Environmental Protection Act 1994

Enquiries: Carol Hardy

COMPLIANCE CENTRE: Maryborough
Ph: (07) 4302 8589
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