Permit

Environmental Protection Act 1994

Environmental authority EPPR00582213

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

Environmental authority number: EPPR00582213

Environmental authority takes effect on 22 November 2019

Environmental authority holder(s)

Name(s)	Registered address
Paul Mengotti	49 Wrens Lane WYBERBA QLD 4382 Australia

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of, (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	Lot 53/BNT1688
Prescribed ERA, ERA 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of, (a-i) 21 to 100EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	Lot 53/BNT1689

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).

ABN 46 640 294 485

Queensland Government

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.

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

Date issued: 22 November 2019

Enquiries:
Extraction, Energy and Chemical Industries Assessment
Department of Environment and Science
Phone: 1300 130 372
Email: palm@des.qld.gov.au

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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)

Environmental authority

The anniversary day of this environmental authority remains **11 November**. The payment of the annual fee will be due each year on this day. An **annual return** will be due each year on **01 March.**

Obligations under the *Environmental Protection Act 1994*

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- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site.

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

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Environmental authority

Conditions of environmental authority

Environmentally relevant activity	Location
63 - (1a) (i) Sewage treatment > 21 to 100EP – IT or IR	Lot 53 Plan BNT1688 Lot 53 Plan BNT1689

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

Agency interest: Activity	
Condition number	**Condition**
(A2)	The holder of this development approval must: (a) install all plant and equipment necessary to ensure compliance with the conditions of this development approval; (b) maintain such plant and equipment in a proper and efficient condition; and (c) operate such plant and equipment in a proper and efficient manner. In this condition, "plant and equipment" includes: (a) plant and equipment used to prevent or minimise the likelihood of environmental harm being caused; (b) devices and structures to contain foreseeable escapes of contaminants and waste; (c) vehicles used to transport waste; (d) devices and structures used to store, handle, treat and dispose of waste; (e) monitoring equipment and associated alarms; and (f) backup systems that act in the event of failure of the primary system.
(A3)	A copy of this development approval must be kept in a location readily accessible to personnel carrying out the environmentally relevant activities.
(A4)	Any record or document required to be kept by a condition of this development approval must be kept at the site for a period of at least five (5) years and be available for examination by an authorised person. For daily and weekly records, the record retention requirements of this condition will be satisfied if any daily and weekly records are kept for a period of at least three (3) years and these records are then kept in the form of annual summaries after that period.

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(A6)	No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided by this development approval. An example of a substantial increase in the risk of environmental harm is an increase of 10% or more in the quantity of the contaminant to be released into the environment.
(A7)	All instruments and devices used for the measuring or monitoring of any parameter under any condition of this development approval must be calibrated and appropriately operated and maintained.
(A25)	All determinations of the quality and quantity of contaminants released to the environment and all measuring, monitoring, analysing and reporting that are required by this development approval, must be undertaken by a person or body possessing appropriate experience or qualifications to perform the required determinations and the required measurements.
(A8)	All persons engaged in the conduct of the environmentally relevant activities, including but not limited to employees and contract staff, must be: (a) trained in the procedures and practices necessary to: (i) comply with the conditions of this development approval; and (ii) prevent or minimise environmental harm during normal operation and emergencies; or (b) under the close supervision of such a trained person.
Agency interest: Air	
Condition number	**Condition**
(NS1)	The environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release of contaminants (including odour, dust, smoke, fume and aerosols which may cause environmental nuisance) to the atmosphere.
(NS2)	In the event of a complaint made to the administering authority regarding odour generated from a source located at the site that constitutes annoyance and the administering authority considers that complaint to be neither frivolous nor vexatious, the holder of this development approval must take measures to mitigate the odour source to minimise noxious or offensive odour being released.
(NS3)	All access roads must be maintained to the satisfaction of the administering authority in a condition which minimises the release of windblown or traffic generated dust.

Environmental authority

Agency interest: Water	
Condition number	**Condition**
(NS5)	Contaminants must not be directly or indirectly released from the site to any waters at any location.
(C15)	Pumps whose failure would or would be likely to result in a direct or indirect release of contaminants to waters must be fitted with stand-by pumps and pump-failure alarms. Pumps and pump failure alarms must be able to operate without mains if such power failure occurs and, when in operation, must be detectable to those responsible for remedial action.
Agency interest: Stormwater Management	
Condition number	**Condition**
(NS6)	The environmentally relevant activities must be carried out to: (a) prevent the flow of stormwater into treated effluent irrigation areas; (b) prevent or minimise the contact of incident rainfall and stormwater runoff with wastes or other contaminants; and (c) prevent or minimise the release or likelihood of release of any such contaminated runoff from the site.
(NS7)	Sewage, including treated sewage and any solid waste and sludges from the sewage treatment process must not be directly released to any stormwater drain or waters nor be placed in any position in which such a release is likely.
(NS11)	Any spillage of wastes, contaminants likely to cause environmental harm must be cleaned up as quickly as practicable. Such spillages must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or waters.
(NS12)	A suitable system of diversion banks and/or diversion drains must be established and maintained immediately up-slope of the irrigation area to exclude stormwater run-off from: (a) any areas used for the storage or treatment of contaminants or wastes; and (b) land used for irrigation with contaminants or wastes.

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<table>
<tr><th colspan="2">Agency interest: Land Application</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>(NS17)</td><td>The only allowable release of contaminants to land is via drip irrigation of tertiary treated effluent onto the land area marked in the Site Development Master Plan - Drawing no 9907.M1A dated 12 May 1999.</td></tr>
<tr><td>(E2)</td><td>A minimum of 25,000 square metres of land must be provided for tertiary treated effluent irrigation.</td></tr>
<tr><td>(NS18)</td><td>A minimum buffer distance of 200 metres must be maintained between the irrigation areas and Ramsay Creek.</td></tr>
<tr><td>(E4)</td><td>The quantity of tertiary treated effluent released to the irrigation area during any day must not exceed 12 cubic metres.</td></tr>
<tr><td>(E5)</td><td>The rate of application of tertiary treated effluent to the irrigation area must not exceed 10 cubic metres per hectare per day.</td></tr>
<tr><td>(E6)</td><td>The release of contaminants must comply, at the sampling and in situ monitoring point specified in condition (H3), with each of the limits specified in Table 1 - Release Quality Characteristic Limits for each quality characteristic.
Table 1 - Release Quality Characteristic Limits
<table>
<tr><th>Quality Characteristics</th><th>Sampling Point</th><th>Compliance Limit</th></tr>
<tr><td>Total Coliforms</td><td>SIW1</td><td>less than 10 organisms/100 mL</td></tr>
<tr><td>Faecal Coliforms</td><td>SIW1</td><td>less than 0 organisms/100 mL</td></tr>
<tr><td>pH</td><td>SIW1</td><td>between 6.5 - 8.5</td></tr>
<tr><td>5-Day Biological Oxygen Demand</td><td>SIW1</td><td>less than 10 mg/L</td></tr>
<tr><td>Suspended Solids</td><td>SIW1</td><td>less than 10 mg/L</td></tr>
</table></td></tr>
<tr><td>(NS19)</td><td>Except as otherwise provided by this development approval, the quality characteristic limits for contaminants released from the environmentally relevant activities must also comply with the following qualitative characteristics:
(a) the release must not have any properties nor contain any organisms or contaminants in concentrations or which are capable of causing environmental harm or environmental nuisance.</td></tr>
<tr><td>(NS20)</td><td>The irrigation area must be maintained in a proper and efficient condition so as to provide adequate assimilation, evaporation and transpiration of the released contaminants.</td></tr>
</table>

(NS21)	The release of contaminants to land must not be carried out if soil moisture conditions are such that surface runoff or ponding is likely to occur.
(NS22)	Public access to any irrigation area must be denied during the release of contaminants to land and until the irrigation area has dried.
(NS23)	Notices warning the public not to use or drink the release of contaminants to land must be prominently displayed and must be maintained in a visible and legible condition.
(NS24)	Pipelines and fittings for the release of contaminants to land must be clearly identified. Standard water taps, hoses and cocks must not be fitted to contaminant release pipelines, and the treated effluent release system must not be connected to other service pipelines. Lockable valves or removable handles must be fitted to the contaminant release pipelines where there is public access to the irrigation areas.
(E12)	When weather conditions preclude the release of contaminants, the contaminants must be directed to wet weather storage tanks or the contaminants must be tankered away and disposed of to a facility that can lawfully accept such waste in accordance with an agreement with the relevant local government.
(E10)	The wet weather storage tanks must be designed to hold a volume of at least 90,000 litres.
(E16)	The holder of this development approval must ensure that the wet weather storage system is inspected at least weekly to confirm that effective storage capacity is available and keep records of: (a) the date; (b) the time inspected; (c) the effective storage capacity available; and (d) the name of the person conducting the inspection.
(NS25)	When the effective storage capacity available of the wet weather storage system is less than ten (10) days storage, the contaminants must be tankered away and disposed of at a facility that can lawfully accept such waste, or released to sewer in accordance with an agreement with the relevant local government.
(NS26)	The holder of this development approval must keep a copy of all agreements entered with the relevant local government relating to the disposal of effluent off-site and must: (a) provide a copy of the agreement to the administering authority within thirty (30) days of the agreement taking effect; and (b) advise the administering authority in writing of rescission of any agreement within thirty (30) days of such rescission.

(NS27)	Effluent from the environmentally relevant activities may only be released off-site by: (a) disposal to sewer under a trade waste agreement approved by the relevant local government; (b) pumping to an appropriate regulated waste treatment facility; (c) tankering to an appropriate regulated waste treatment facility; or (d) any third party under which an agreement has been entered into.
(NS28)	The quality effluent released to land, or given to another person for irrigation purposes or other use, must comply, at the sampling and in-situ measurement points specified in condition (H3), with each of the release limits specified in condition (E6) for each quality characteristic.
(NS29)	If the holder of this development approval gives or transfers ownership of the effluent to another person, the holder of this development approval must: (a) prior to giving such tertiary treated effluent or transferring ownership of such effluent to that person, obtain from that person details of how that person intends to comply with the general environmental duty provided for by Section 319 of the Act in respect of the use and disposal of such effluent, particularly in relation to environmental sustainability of any effluent disposal, protection of public health and protection of environmental values of waters; and (b) only give or transfer ownership of such effluent in accordance with a written agreement between the holder of this development approval and that person; and (c) upon becoming aware that the person is not or is not likely to comply with the general environmental duty provided by Section 319 of the Act, cease the giving and transferring ownership of such effluent, as the case may be.
(NS30)	The holder of this development approval must keep a copy of all agreements entered into to give or transfer ownership of effluent and must: (a) provide a copy of the agreement to the administering authority within thirty (30) days of the agreement taking effect; and (b) advise the administering authority in writing of rescission of any agreement within thirty (30) days of such rescission.
(NS31)	Prior to commissioning of the effluent treatment system, the holder of this development approval must develop an Effluent Irrigation Management Plan which details how the holder of this development approval will effectively and appropriately manage the effluent irrigation process so as to sustainably comply with all conditions of this development approval.

(NS32)	The Effluent Irrigation Management Plan must detail how the effluent irrigation is to be managed and scheduled having referred to at least the following: (a) soil moisture results; (b) weather forecasts and climate monitoring results; (c) effluent irrigation records for each effluent irrigation area; (d) water quality results for Ramsay Creek surface monitoring points; (e) water quality results for ground water monitoring points; (f) effluent quality and quantity results; (g) soil quality results for the effluent irrigation area; (h) groundwater level results; (i) crop history for each effluent irrigation area; (j) sustainable hydraulic loadings for the effluent irrigation area; (k) sustainable biological oxygen demand loadings for the effluent irrigation area; (l) sustainable nitrogen loadings for the effluent irrigation area; (m) sustainable phosphorus loadings for the effluent irrigation area; (n) sustainable salt loadings for the effluent irrigation area; and (o) production of appropriate records and reporting of results and environmental issues.
(NS33)	A copy of the Effluent Irrigation Management Plan must be provided to the administering authority prior to the commission of the effluent treatment plant.
(NS34)	A copy of the Effluent Irrigation Management Plan must be kept at the site and be available for examination by an authorised person on request.
(NS35)	The holder of this development approval must not implement an Effluent Irrigation Management Plan or amend an Effluent Irrigation Management Plan where such implementation or amendment would result in a contravention of any condition of this development approval.
(NS36)	The holder of this development approval must submit details of any amendment to the Effluent Irrigation Management Plan to the administering authority with the annual return which immediately follows the enactment of any such amendment.

<table>
<tr><th colspan="2">Agency interest: Noise</th></tr>
<tr><th colspan="2">Condition</th></tr>
<tr><td>(F1)</td><td>The environmentally relevant activities must be carried out by such reasonable and practicable means necessary to prevent the emission or likelihood of emission of noise that constitutes environmental nuisance.</td></tr>
<tr><td>(F2)</td><td>In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activities must not result in levels greater than those specified in Table 2 - Noise Limits until the circumstances which gave rise to the complaint are resolved.

Table 2 Noise Limits
<table>
<tr><th colspan="2">NOISE LIMITS AT A NOISE SENSITIVE PLACE</th></tr>
<tr><th>Period</th><th>Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th></tr>
<tr><td>Monday to Saturday
7 am - 6 pm</td><td>Background noise level plus 5 dB(A)</td></tr>
<tr><td>Monday to Saturday
6 pm - 10 pm</td><td>Background noise level plus 5 dB(A)</td></tr>
<tr><td>Monday to Saturday
10 pm - 7 am</td><td>Background noise level plus 3 dB(A)</td></tr>
<tr><td>All other times and public holidays</td><td>Background noise level</td></tr>
<tr><th colspan="2">NOISE LIMITS AT COMMERCIAL PLACE</th></tr>
<tr><th>Period</th><th>Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$</th></tr>
<tr><td>Monday to Saturday
7 am - 6 pm</td><td>Background noise level plus 10 dB(A)</td></tr>
<tr><td>Monday to Saturday
6 pm - 10 pm</td><td>Background noise level plus 10 dB(A)</td></tr>
<tr><td>Monday to Saturday
10 pm - 7 am</td><td>Background noise level plus 8 dB(A)</td></tr>
<tr><td>All other times and public holidays</td><td>Background noise level plus 5 dB(A)</td></tr>
</table></td></tr>
</table>

Environmental authority

Agency interest: Waste management	
Condition number	**Condition**
(NS37)	The holder of this development approval must not: (a) burn waste at or on the site; nor (b) allow waste to burn or be burnt at or on the site; nor (c) remove waste from the site and burn such waste elsewhere, other than at a facility that can lawfully burn such waste.
(NS38)	The sewage treatment plant must be operated and maintained in a proper and efficient manner.
(NS39)	The storage/treatment tanks must be desludged and/or cleaned as often as is necessary to prevent: (a) any overloading of the storage/treatment tanks; and (b) any carry over of solid materials to the effluent irrigation area likely to cause fouling or surface pooling.
(NS40)	Manholes and/or inspection covers which can be easily removed and replaced must be provided for inspection, desludging and/or cleaning of the storage/treatment tanks and any grease traps.
(NS41)	The holder of this development approval must ensure that a facility and/or equipment is available for the containment and recovery of any spillages at the loading/unloading points.
(G14)	Where regulated waste is removed from the site, the holder of this development approval must monitor and record the following: (a) the date, quantity and type of waste removed; (b) the name of the waste transporter and/or disposal operator that removed the waste; and (c) the intended treatment/disposal destination of the waste.
(G18)	If the holder of this development approval becomes aware that a person has removed regulated waste from the site and disposed of the regulated waste in a manner which is not authorised by this development approval or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

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Agency interest: Monitoring and Reporting	
Condition number	**Condition**
(H1)	All complaints received by the holder of this development approval relating to releases of contaminants from activities at the site must be recorded and kept with the following details: (a) time, date and nature of complaint; (b) type of communication e.g. telephone, letter, personal; (c) name, contact address and contact telephone number of complainant; (d) response and investigation undertaken as a result of the complaint; (e) name of person responsible for investigating complaint; and action taken as a result of the complaint investigation and signature of responsible person.
(H3)	The holder of this development approval must conduct and keep records of monitoring of water quality at the sampling locations defined below for the quality characteristics, and at the frequency specified in *Table 3 - Quality Characteristics and Monitoring Frequency for Water.* • Sampling Point SIW1 - Source Irrigation Water 1: water sample from the tertiary treated effluent prior irrigation; and • Sampling Point USC1 - Up Stream Creek 1: water sample from Ramsay Creek upstream of the site; and • Sampling Point DSC1 - Down Stream Creek 1: water sample from Ramsay Creek downstream of the site; • Sampling Point USG1 - Up Stream Ground Water 1: water sample from groundwater upstream of the effluent irrigation area; • Sampling Point DSG1 - Down Stream Ground Water 1: water sample from groundwater downstream of the effluent irrigation area.

<table>
<tr><td>(H3)</td><td>Table 3 - Quality Characteristics and Monitoring Frequency for Water
<table>
<tr><th>Quality Characteristics</th><th>Units</th><th>Monitoring Frequency</th></tr>
<tr><td>5-Day Biochemical Oxygen Demand (inhibited)</td><td>mg/L</td><td>Quarterly</td></tr>
<tr><td>Electrical Conductivity or Total Dissolved Solids</td><td>μS/cm or mg/L</td><td>Quarterly</td></tr>
<tr><td>Faecal Coliforms</td><td>organisms/100mL</td><td>Quarterly</td></tr>
<tr><td>Chloride</td><td>mg/L</td><td>Quarterly</td></tr>
<tr><td>pH</td><td>pH scale</td><td>Quarterly</td></tr>
<tr><td>Suspended Solids</td><td>mg/L</td><td>Quarterly</td></tr>
<tr><td>Total Coliforms</td><td>organisms/100mL</td><td>Quarterly</td></tr>
<tr><td>Total Nitrogen (as Nitrogen)</td><td>mg/L</td><td>Quarterly</td></tr>
<tr><td>Total Phosphorus (as Phosphorus)</td><td>mg/L</td><td>Quarterly</td></tr>
</table>
* This monitoring frequency can be revised after three (3) years of data has been assessed by the administering authority.</td></tr>
<tr><td>(H5)</td><td>The determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Science Monitoring and Sampling Manual, June 2018, or more recent editions or supplements to that document as such become available.</td></tr>
<tr><td>(NS42)</td><td>The daily quantity of contaminants released must be determined or estimated by an appropriate method, for example, a flow meter.</td></tr>
<tr><td>(NS43)</td><td>The holder of this development approval must keep records of the volume, date, time of commencement and duration of each occasion on which any release of contaminants is made to the effluent irrigation area</td></tr>
<tr><td>(NS44)</td><td>The holder of this development approval must develop and implement a Effluent Irrigation Area Monitoring Program to effectively monitor the condition of the land to which contaminants are released.</td></tr>
</table>

(NS45) Monitoring required must include the taking of top soil and sub-soil samples from at least 1 site within each zone for the quality characteristics and at the frequency specified in *Table 4 - Quality Characteristics and Monitoring Frequency for Soil*. Samples for each layer may be analysed as composite samples i.e. top soil samples from the three zones may be analysed as a composite sample.

Table 4 - Quality Characteristics and Monitoring Frequency for Soil

Quality Characteristics	Units	Monitoring Frequency
Calcium/Magnesium Ratio (1:5 soil/water mix)	calculated	prior to the commission of effluent irrigation area and every 18 months thereafter
Exchangeable Cations	mg/L	
pH	pH scale	
Phosphorus (extractable)	mg/L	
Potassium (available)	mg/L	
Potassium (extractable)	mg/L	
Sodium Adsorption Ratio (1:5 soil/water mix)	calculated	
Specific Conductance or Electrical Conductivity	µS/cm	
Total Calcium (exchangeable)	mg/L	
Total Cations	mg/L	
Total Chloride	mg/L	
Total Magnesium (exchangeable)	mg/L	
Total Nitrogen	mg/L	
Total Sodium (exchangeable)	mg/L	

* This monitoring frequency can be revised after three (3) years of data has been assessed by the administering authority.

(NS46) The holder of this development approval must submit with the first annual return a report on the Effluent Irrigation Area Monitoring Program including the irrigation design with the zones and sampling point locations and depths clearly marked.

(NS47) The holder of this development approval must submit with every annual return a report on the Irrigation Area Monitoring Program including an assessment of the impact and sustainability

	of the application of treated effluent to the irrigation area. This report shall include an interpretation of the results and conclusions by an expert in the field of effluent irrigation onto land.
(H17)	For the purposes of investigating any complaint made about unreasonable and or intrusive noise, monitoring and recording of the noise levels from the environmentally relevant activities must be undertaken for the following descriptions, characteristics and conditions: (a) $L_{Amax,\ adj\ T;}$ (b) $L_{Abg,\ T}$ (or $L_{A90,\ T}$); (c) $L_{AN,\ T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99); (d) Max $L_{pA,\ T;}$ (e) $L_{Aeq,\ T;}$ (f) the level and frequency of occurrence of impulsive or tonal noise; (g) atmospheric conditions including temperature, relative humidity and wind speed and direction; and (h) effects due to extraneous factors such as traffic noise.
(H18)	In conjunction with the monitoring and recording of noise, at least the following parameters and conditions must be recorded: (a) location; (b) date; and (c) time of recording.
(H21)	The method of measurement and reporting of noise levels must comply with the Department of Environment and Science Noise Measurement Manual, Fourth Edition, August 2013, or more recent editions or supplements to that document as become available.
(NS48)	Monitoring must be undertaken to investigate any complaint which constitutes environmental nuisance upon receipt of a written request from the administering authority to carry out such monitoring.
(H16)	A record must be maintained of events including but not limited to: (a) the time, date and duration of equipment malfunctions, where the failure of the equipment resulted in the release of contaminants reasonably likely to cause environmental harm; (b) any uncontrolled release of contaminants reasonably likely to cause environmental harm; (c) any emergency involving the release of contaminants reasonably likely to cause material or serious environmental harm requiring the use of firefighting equipment; and (d) any shut-downs of equipment upon which the environmental performance of the site depends.

(H18)	As soon as practicable after becoming aware that serious or material environmental harm is caused or threatened by the holder's or someone else's act, the holder of this development approval must give written notice to the administering authority of the event.
(H19)	The notification of an event as required by the condition directly above must include but not be limited to the following information: (a) the holder of the development approval; (b) the nature and the circumstances in which the event happened; (c) the location of the event; (d) the number of the development approval; (e) the name and telephone number of the designated contact person; (f) the time of the event; (g) the time the holder of the development approval became aware of the event; (h) the suspected cause of the event; (i) the environmental harm caused, threatened, or suspected to be caused by the event; and (j) actions taken to prevent further similar and or associated events and mitigate any environmental harm caused by the event.
(H20)	Not more than fourteen (14) days following the initial notification of an event, the holder of this development approval must provide written advice of the information supplied in accordance with the condition directly above in addition to: (a) proposed actions to prevent a recurrence of the emergency or incident; and (b) outcomes of actions taken at the time to prevent or minimise environmental harm.
(NS49)	As soon as practicable, but not more than six (6) weeks following the conduct of any environmental monitoring performed in relation to the event, which results in serious or material environmental harm being caused or threatened, the holder of this development approval must provide written advice of the results of any such monitoring performed to the administering authority.
(H21)	The holder of this development approval must notify the administering authority in writing within twenty-eight (28) days of completion of analysis of any result of a monitoring program required by a condition of this development approval which indicates an exceedance of any limit specified in this development approval.
(H22)	The written notification required by the condition directly above must include: (a) the full analysis results; (b) details of investigation or corrective actions taken; and (c) any subsequent analysis.

(NS52)	The holder of this development approval must monitor surface and groundwater quality as often as is necessary but not less frequently than every three (3) months. *This monitoring frequency can be revised after three (3) years of data has been assessed by the administering authority
(NS53)	The results of monitoring along with a description of the sampling points (via words and plans) must be submitted to the administering authority with the first annual return and each annual return thereafter.
(NS54)	The holder of this development approval must submit with each annual return a report on the Receiving Environment Monitoring Program including an assessment of the impact of releases of effluent to the irrigation area. This report shall include an interpretation of the results and conclusions by an expert in the field of surface and groundwater monitoring and assessment as to whether there is any contamination, and if so, the level of environmental harm caused as a result of such contamination
(NS55)	All monitoring wells and points must be maintained in an operative condition and be reasonably accessible at all times to any authorised person.
(NS56)	Each groundwater monitoring bore must be fitted with a locked cap at all times other than at the time of sampling.
(NS57)	In addition to the above required mandatory monitoring, the holder of this development approval must carry out the monitoring proposed in the document entitled *Environmental Assessment Report dated 13 August 1997 in Appendix D under the heading Water Quality Monitoring.*

Definitions

Key terms and/or phrases used in this document are defined in this section and underlined 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 (ies) 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.

Authorised person means a person holding office as an authorised person under an appointment under the Environmental Protection Act 1994 by the chief executive.

Background noise level means either:

(a) $L_{A90,\,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response; or

(b) $L_{Abg,\,T}$ being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than fifteen (15) minutes, using Fast response.

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

Environmental nuisance (the Act) is unreasonable interference or likely interference with an environmental value caused by: added

(a) aerosols, fumes, light, noise, odour, particles or smoke; or

(b) an unhealthy, offensive or unsightly condition because of contamination; or

(c) another way prescribed by regulation.

Environmental value (the Act) is:

(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.

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

Intrusive noise means a noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration:

(a) is clearly audible to, or can be felt by, an individual; and

(b) annoys the individual.

Land in the Land Application Schedule, means land excluding waters and the atmosphere.

$L_{Amax\ adj,\ T}$ means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

$MaxL_{pA\ T}$ means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

mg/L means milligrams per litre.

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

Noise sensitive place means:

(a) a dwelling, mobile home or caravan park, residential marina or other residential premises; or

(b) a motel, hotel or hostel; or

(a) a kindergarten, school, university or other educational institution; or

(b) a medical centre or hospital; or

(c) a protected area; or

(d) a park or gardens.

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

Regulated waste means non-domestic waste mentioned in Schedule 9 of the Environmental Protection Regulation 2019 (whether or not it has been treated or immobilised), and includes:

- for an element - any chemical compound containing the element; and
- anything that contains residues of the waste, including, for example, a container contaminated with the waste.

Release of a contaminant into the environment means to:

- deposit, discharge, emit or disturb the contaminant
- cause or allow the contaminant to be deposited, discharged, emitted or disturbed
- fail to prevent the contaminant from being deposited, discharged emitted or disturbed
- allow the contaminant to escape
- fail to prevent the contaminant from escaping.

Sewage treatment works includes pump stations and other ancillary works.

Site means the place to which this environmental authority relates.

Sodium Absorption Ratio means the relative activity of sodium ions in exchange reactions with soil, indicating the sodium or alkali hazard to the soil. It is calculated from the expression SAR = Na+/[1/2(Ca2+ + Mg2+)]1/2. Concentrations are in milliequivalents per litre.

Total Nitrogen means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen.

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

Unreasonable noise means noise that:

(a) causes unlawful environmental harm; and

(b) is unreasonable, having regard to the following matters -

(i) its characteristics;

(ii) its intrusiveness;

(iii) the time at which it is made;

(iv) where it can be heard;

(v) other noises ordinarily present at the place where it can be heard; and

(c) is not declared to be reasonable in Schedule 2 of the *Environmental Protection (Noise) Policy 1997*.

Waters means Queensland waters and includes bed and banks of waters.

You means the holder of the environmental authority.

End of Environmental Authority