Permit[1]

Environmental Protection Act 1994

Environmental authority EPPR00518113

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

Environmental authority number: EPPR00518113

Environmental authority takes effect on 18 September 2019

Environmental authority holder(s)

Name(s)	Registered address
MORETON BAY REGIONAL COUNCIL	2 Haskings Street CABOOLTURE QLD 4510

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-i) more than 100 but not more than 1500EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	Lot 71 on RP151538

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:

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

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- 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.

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

Date issued: 18 September 2019

Enquiries:
Heritage, Utilities and Government 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)

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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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Conditions of environmental authority

Environmentally relevant activity	Location
ERA 63 (1)(b)(i) Sewage treatment > 100 to 1500 EP – IT or IR	Caboolture Shire Council Pumicestone Rd, Toorbul – Lot 71 Plan RP151538

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

Agency interest: General	
Condition number	**Condition**
A1	**Activities** conducted under this environmental authority must not be conducted contrary to any of the following limitations: 1. inflows to the sewage treatment plant must not exceed the peak design capacity of 20kL on any **day**; 2. disposal of treated effluent is only to be carried out within the application area depicted within ***Appendix 1 - Drawing 1***, by True Water Australia for Moreton Bay Regional Council, dated 26 May 2017; and 3. disposal of treated effluent must be via subsurface irrigation to the Wisconsin Mound system within the application area.
A2	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
A3	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the activities.
A4	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
A5	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, turbidity and residual chlorine.
A6	Other than as permitted by this environmental authority, the release of a **contaminant into the environment** must not occur.
A7	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.

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A8	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations, closure and an emergency; 2. establish and maintain control **measures** that minimise the potential for environmental harm; 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; 5. ensure that staff are trained in and aware of their obligations under the *Environmental Protection Act 1994*; and 6. ensure that reviews of environmental performance are undertaken at least annually.
A9	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.
A10	**You** must record the following details of all environmental complaints received: 1. date and time the complaint was received; 2. name and contact details of the complainant when provided and authorised by the complainant; 3. nature of the complaint; 4. investigation undertaken; 5. conclusions formed; and 6. actions taken.
A11	A receiving environment monitoring program must be designed and implemented by an **appropriately qualified person(s)** to monitor the effects of the **activity** on groundwater.
A12	The receiving environment monitoring program required by **Condition A11**, must include at least the following: A **groundwater monitoring system** that must: 1. be designed and installed by an **appropriately qualified person(s)** with experience and qualifications in hydrology and **groundwater** monitoring; and 2. include a sufficient number of bores installed at locations and depths which yield representative **groundwater** samples from at least the uppermost aquifer so as to: a. detect any seepage of contaminants to **groundwater** from the site; b. establish the quality of **groundwater** affected by any seepage of contaminants; and c. include monitoring of background **groundwater** quality, with both hydraulically **up-gradient bore(s)** or **background bore(s)** that have not been affected by any release of contaminants to **groundwater** from the **activity** and hydraulically **down-gradient bore(s)** of the **activity.**
A13	An annual monitoring report must be prepared and submitted to the **administering authority** by 30 November each year, for the preceding financial year.

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Agency interest: Air	
Condition number	**Condition**
B1	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause **environmental nuisance** at a **sensitive place** or **commercial place**.
Agency interest: Water	
Condition number	**Condition**
C1	Other than as permitted within this environmental authority, **contaminants** must not be released to any **waters** outside of the 'application area' depicted in ***Appendix 1 – Drawing 1***.
C2	Contaminants must not be released to surface waters.
Agency interest: Land	
Condition number	**Condition**
D1	The only contaminants to be released to land are treated effluent in accordance with the ***Table 1 - Treated effluent release limits*** and the associated requirements.

Table 1 - Treated effluent release limits

Monitoring Location	Quality Characteristic (units)	Minimum	Median	Maximum	Minimum Frequency
Sewage treatment plant outflow GPS: 27.03168, 153.09658	Volume (L)	-	10,000	20,000	Daily
	BOD5 (mg/L)	-	-	20	Quarterly
	Total Suspended Solids (mg/L)	-	-	30	Quarterly
	Total Nitrogen (mg/L as N)	-	30	40	Quarterly
	Total Phosphorous (mg/L as P)	-	2	10	Quarterly
	pH (pH units)	6.5	-	8.5	Quarterly
	E.coli (CFU/100ml)	-	-	1000	Quarterly
	Electrical Conductivity (µS/cm)	-	-	1,600	Quarterly
	Total Chlorine (if used for disinfection) (mg/L)	-	-	1.5	Quarterly

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	Base of Mound 1 GPS: 27.03125, 153.09664	**Total Nitrogen** (mg/L as N)	-	3	-	Monthly
		Total Phosphorous (mg/L as P)	-	1	-	Monthly

Associated requirements

1. **Medians** are to be taken as a **Long Term Rolling (limit),** meaning a limit applied to consecutive samples taken over a 6 month period (on a rolling basis for limit calculations) where consecutive samples are taken at the minimum frequency specified in ***Table 1 - Treated effluent release limits.***
2. The minimum application area of 2100 square metres consists of a Wisconsin Mound system having a combined basal area of at least 1065 square metres with a nutrient uptake belt of at least 1025 square metres as detailed in ***Appendix 1 - Drawing 1***.
3. Releases of sewage effluent must not occur outside of the application area.
4. Monitoring must be in accordance with the **administering authority's** Water Quality Sampling Manual and any additional relevant guidelines if necessary and all monitoring devices must be effectively calibrated and maintained.
5. Monitoring must be undertaken when treated sewage effluent is being released to land, unless releases have ceased for longer than the relevant parameters specified minimum frequency (e.g. if TSS was only required to be monitored once a week, then a TSS sample would not be required after the first week following cessation of the release).
6. Indicators for TN and TP are recommended to be done as grab samples.

D2	Groundwater impacted by releases of total phosphorus and total nitrogen to land must be treated through the establishment and maintenance of a nutrient uptake belt planted with vetiver grass and revegetation area with a minimum area of 1000 square metres planted with *Casuarina Glauca* or similar tree in accordance with ***Appendix 2 – Drawing 2***.
D3	Treated effluent released to **land** must be done in accordance with documentation that ensures: 1. drainage to **groundwater** is minimised and subsurface flows of **contaminants** to surface waters are prevented; 2. surface pondage and run-off of effluent is prevented; 3. degradation of soil structure is minimised; 4. soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised; 5. the nutrient uptake belt is maintained with Vetiver grass in a viable state for transpiration and nutrient uptake; 6. the revegetation area is maintained with an appropriate crop in a viable state for transpiration and nutrient uptake; 7. the western boundary of the revegetation area is maintained with *Casuarina Glauca* trees in a viable state for transpiration and nutrient uptake, depicted in ***Appendix 2 – Drawing 2***; 8. sufficient buffer zones are maintained between irrigation sites and sensitive environmental receptors; 9. the treated effluent must be distributed evenly within the land application area; and

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	10. Biomass removed from plants growing on the nutrient uptake belt area and revegetation area must be removed from the site for disposal.
D4	When weather conditions or soil conditions preclude the release of treated sewage effluent to **land,** effluent must not be irrigated to **land**.
D5	An audit of the Wisconsin Mound system's structural integrity and performance must be undertaken annually by an **appropriately qualified person(s)**. The audit must include at least the following: 1. determination of the ongoing capacity of the Wisconsin Mound system to sustainably assimilate nutrient loads from the release of treated effluent; 2. identification of trigger indicators that are suitable for early detection of degrading mound structural integrity. These indicators must include: a. detection of physical damage to the mounds; b. detection of seepage from the toe of the mounds; c. detection of groundcover damage on the mounds; d. detection of uneven distribution of treated effluent within the mounds; and e. detection of weeds on the mounds. 3. identification of trigger indicators that are suitable for early detection of reduced mound performance; 4. determination of whether indicators in previous audits have been triggered; 5. development of trigger action response procedures to rectify mound structure and performance issues; and 6. development of a routine monitoring plan for trigger indicators to be carried out by the holder of the EA prior to the next audit required by this condition.
D6	Where the audit required by **Condition D5** shows that indicators have been triggered in the Wisconsin Mound system, trigger action response procedures developed under **Condition D5** must be implemented within **four weeks** of the holder of this environmental authority receiving the results of the audit.
D7	Where the audit required by **Condition D5** shows that indicators have been triggered in the Wisconsin Mound system, the **administering authority** must be notified of the indicators that have been triggered within **seven days** of receiving the results of the audit.
D8	**You** must implement the routine monitoring plan for trigger indicators developed under **Condition D5, part 6**.
Agency interest: Noise	
Condition number	**Condition**
E1	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**.

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Agency interest: Waste	
Condition number	**Condition**
F1	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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Definitions

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

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

Administering authority means the Department of Environment and Science or its successors or predecessors.

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

Background bore means **groundwater** monitoring bore, constructed in accordance with the relevant standard, and used to sample **groundwater** from an aquifer the water quality of which may be potentially affected by the **activity**. This may be an **up-gradient bore**, **down-gradient** bore or bore in the same aquifer in a nearby location unaffected by the **activity**.

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.

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.

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

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

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

Long Term Rolling (limit) means a limit applied to consecutive samples taken over a 6 month period (on a rolling basis for limit calculations) where consecutive samples are taken at the minimum frequency specified in ***Table 1 - Treated effluent release limits*** of approximately equal periods.

Measures have the broadest interpretation and include plant, equipment, physical objects, 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 mean of the two middle values.

NATA means National Association of Testing Authorities.

Release of a contaminant into the environment means to:

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1. deposit, discharge, emit or disturb the **contaminant**;
2. cause or allow the **contaminant** to be deposited, discharged, emitted or disturbed;
3. fail to prevent the **contaminant** from being deposited, discharged emitted or disturbed;
4. allow the **contaminant** to escape; or
5. fail to prevent the **contaminant** from escaping.

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

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

Total Chlorine means the sum of Free Chlorine and Combined Chlorine.

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

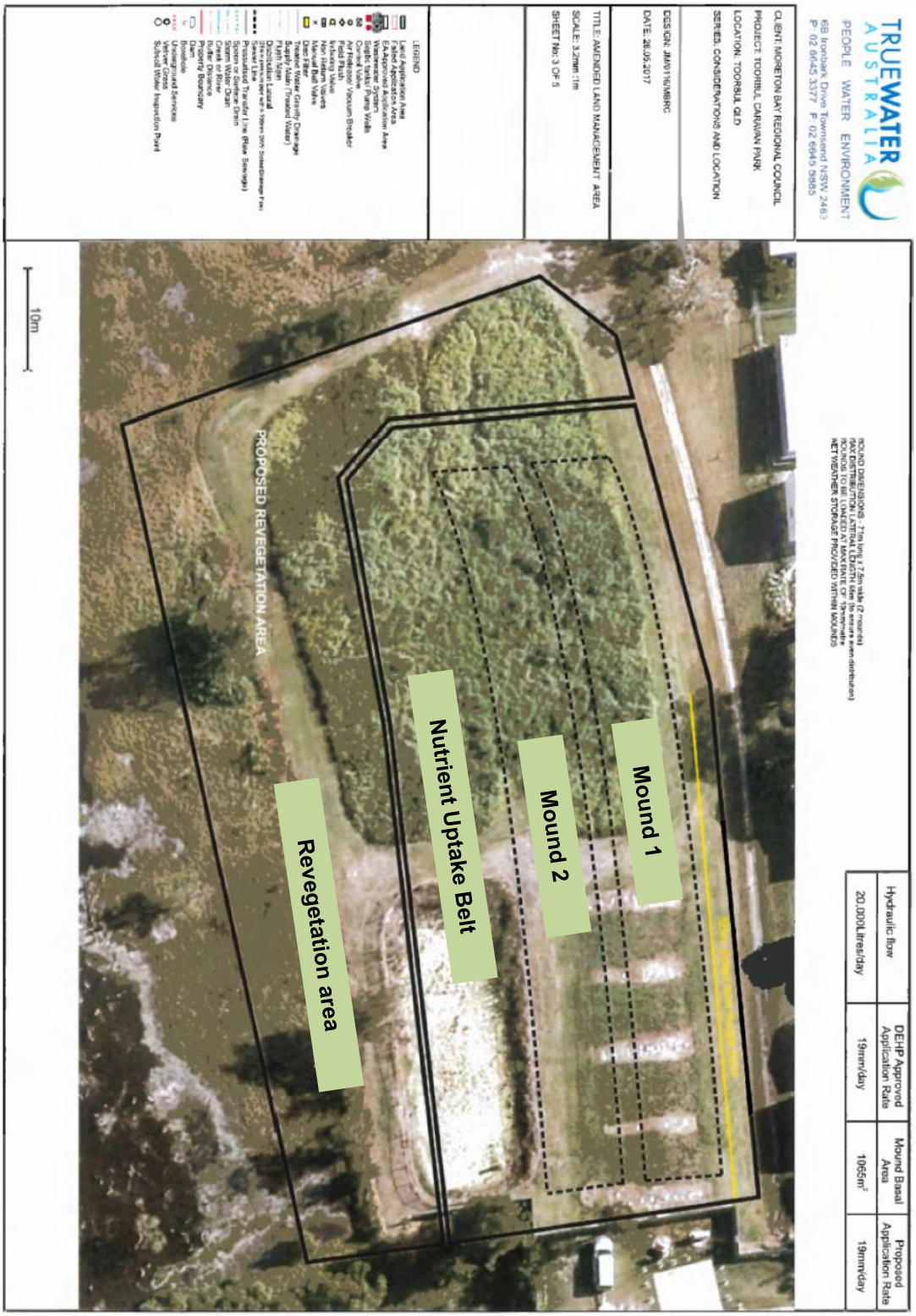
Up-gradient bore means a **background bore**, in a location hydraulically up gradient of all potential influences of the **activity** that may affect **groundwater** quality.

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

You means the holder of the environmental authority.

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Appendix 1 – Drawing 1



Note: the 'application area' includes Mound 1, Mound 2, the nutrient uptake belt and the proposed revegetation area.

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Appendix 2 – Drawing 2



END OF ENVIRONMENTAL AUTHORITY

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