

Permit

Environmental Protection Act 1994

Environmental authority EPPR00663413

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

Environmental authority number: EPPR00663413

Environmental authority takes effect on: 7 March 2017

The anniversary date of this environmental authority remains as 24 December. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holder

Name(s)	Business address
The Ecovillage at Currumbin CTS 35580	639 Currumbin Creek Road CURRUMBIN VALLEY QLD 4223

Environmentally relevant activity (ERA) and location details

Environmentally relevant activity/activities	Location(s)
ERA 63 1(b)(i) - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of 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	<p>Lots 5, 6 on Plan SP177001</p> <p>Lots 889, 890 on Plan SP177002</p> <p>Lots 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 130 on Plan SP177004</p> <p>Lots 129, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140 on Plan SP177005</p> <p>Lots 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258 on Plan SP177007</p> <p>Lots 201, 232 on Plan SP177008</p>

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

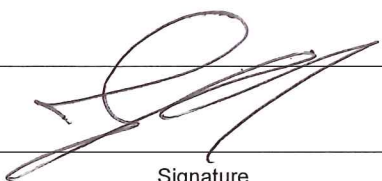
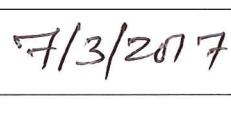
Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.


Signature
Date

Tariq Khan
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Department of Environment and Heritage
Protection
GPO Box 2454
BRISBANE QLD 4001
Phone: 1300 130 372
Fax: 07 3330 6037
palm@ehp.qld.gov.au

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)

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. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

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

Agency interest: General	
Condition number	Condition
G1	In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this environmental authority.
G2	The holder must: <ul style="list-style-type: none">i. install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; andii. maintain such measures, plant and equipment in a proper and efficient condition; andiii. operate such measures, plant and equipment in a proper and efficient manner.

G3	<p>From commencement of the activity, a Site Based Management Plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all Environmentally Relevant Activities that are carried out.</p> <p>The site based management plan must address the following matters:</p> <ol style="list-style-type: none"> Environmental commitments - a commitment by senior management to achieve environmental goals. Identification of environmental issues and potential impacts. Control measures for routine operations to minimise likelihood of environmental harm. Contingency plans and emergency procedures for non-routine situations. Organisational structure and responsibility. Effective communication. Monitoring of the contaminant releases. Conducting environmental impact assessments. Staff training. Record keeping. Periodic review of environmental performance and continual improvement.
G4	Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.
G5	<p>An annual monitoring report must be provided to the administering authority with the annual return. This report shall include but not be limited to:</p> <ol style="list-style-type: none"> a summary of the previous twelve (12) month's monitoring results, obtained under any monitoring programs required under this authority and, in graphical form showing relevant limits, a comparison of the previous twelve (12) month's monitoring results to both this authority limits and to relevant prior results; an evaluation/explanation of the data from any monitoring programs; and a summary of any record of quantities of releases required to be kept under this authority; and a summary of the record of equipment failures or events recorded for any site under this authority; and an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and the number of domestic tenements newly connected to the sewage treatment works during previous twelve (12) months; and the progressive total number of connections; and a summary of any trade waste agreements entered into or amended during the year, including the nature of the industry.
Agency interest: Air	
Condition	
A1	The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any odour sensitive place.
Agency interest: Water	

Condition	
W1	Contaminants must not be released from the site to any waters or the bed and banks of any waters except as otherwise provided by the conditions of this environmental authority.
W2	Except as otherwise provided by the conditions of this environmental authority, the environmentally relevant activity must be carried out by such reasonable and practicable means necessary to prevent the contact of incident rainfall and stormwater runoff with waste or other contaminants.
W3	Where it is not practical to prevent contact as required by condition (W2), the environmentally relevant activities must be carried out by such reasonable and practicable means necessary to minimise such contact.
W4	Any spillage of waste, contaminants or other materials 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.
W5	All stormwater treatment devices used to treat stormwater from the site must be maintained in proper and efficient working condition.
W6	Contaminant pumping stations must be fitted with stand-by pumps and pump-failure alarms as well as high level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power.
W7	All ponds used for the storage or treatment of contaminants, sewage or wastes at or on the authorised place must be constructed, installed and maintained: <ul style="list-style-type: none"> i. so as to minimise the likelihood of any release of effluent through the bed or banks of the pond to any waters (including ground water); and ii. so that a freeboard of not less than 0.5m metres is maintained at all times, except in emergencies; and iii. so as to ensure the stability of the ponds' construction.
W8	Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
W9	Ponds used to store contaminants must have a minimum combined volume of one (1.0) megalitre.
W10	Erosion and sediment controls that minimise off-site removal of sediments and divert other stormwater from entering the site, must be provided and maintained during site clearing and construction works. Such measures must include, but not be limited to, diversion drainage works, siltation fences and temporary sediment traps.

Agency interest: Noise	
Condition	
N1	Noise from activities must not cause an environmental nuisance at any noise-affected premises.
Agency interest: Waste	
Condition	
WS1	All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the <i>Environmental Protection Act 1994</i> .
WS2	<p>Before commencement of the activity, a Recycled Water Safety Plan as per the Queensland Guidelines for the Safe Use of Recycled Water must be developed to manage risk in the production and use of recycled water. The Recycled Water Safety Plan should embrace every stage in the production and use of recycled water. This must include:</p> <ul style="list-style-type: none"> i. source control; ii. treatment; iii. disinfection; iv. transport; v. storage; and vi. use (including both onsite and offsite health and environmental impacts).
WS3	Lockable valves or removable handles must be fitted to recycled water pipelines where there is public access to the pipelines and any part of the recycled water distribution system.
WS4	<p>Notices warning persons not to use or drink or have contact with the recycled water must be prominently displayed and must be maintained in a clearly visible and legible condition. The signs must:</p> <ul style="list-style-type: none"> i. be displayed at places where persons can gain access to, or have contact with the recycled water (e.g. at taps, cocks, valves and contaminant release area(s); and ii. be distinctively colour coded and marked with the words: WARNING RECYCLED WATER DO NOT DRINK and are to include an appropriate warning symbol as well as text; and iii. be in compliance with AS1319 — Safety Signs for the occupational environment.
Agency interest: Land	
Condition	
L1	The only contaminants permitted to be released to land are treated sewage effluent to the areas defined In Figure 1 of this environmental authority, drawing titled "Concept Recycled Water Irrigation Layout Sheet 2 of 2" in compliance with the limits stated in Table 1 - Effluent Quality Limits.

L2

Monitoring must be undertaken and records kept of contaminant releases to land for the parameters and not less frequently than specified in Table 1 - Effluent Quality Limits. All determinations of the quality of contaminants released must be:

- i. made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; and
- ii. carried out on samples that are representative of the discharge.

Table 1 – Effluent Quality Limits

Quality Characteristics	Units	Release Limit					Monitoring Frequency
		Minimum	Median ³	50 th Percentile	80 th Percentile	Maximum	
5-day Biological Oxygen Demand (inhibited)	mg/L	-	-	-	10	30	Monthly ¹
Suspended Solids	mg/L	-	-	-	10	30	Monthly ²
Dissolved Oxygen	mg/L	2	-	-	-	-	Weekly
Turbidity	NTU	-	-	-	-	2	Continuous
pH	Scale	6	-	-	-	8.5	Weekly
Total Nitrogen	mg/L	-	-	15	-	45	Monthly
Total Phosphorus	mg/L	-	-	10	-	30	Monthly
Free Chlorine	mg/L	-	-	-	-	1	Weekly
<i>E.coli</i>	cfu/100mL	-	10	-	-	-	Weekly

¹ Weekly testing is to be undertaken for the first 6 months after plant start-up then on a monthly basis subject to effluent complying with the release quality limits for 5-day Biological Oxygen Demand. Should there be a single non-compliance for 5-day Biological Oxygen Demand at a monthly monitoring frequency, monitoring shall revert to weekly monitoring until 5-day Biological Oxygen Demand complies with release quality limits for 4 consecutive monitoring events, after which monitoring frequency may revert back to a monthly basis.

² Weekly testing is to be undertaken for the first 6 months after plant start-up then on a monthly basis subject to effluent complying with the release quality limits for Suspended Solids. Should there be a single non-compliance for Suspended Solids at a monthly monitoring frequency, monitoring shall revert to weekly monitoring until Suspended Solids complies with release quality limits for 4 consecutive monitoring events, after which monitoring frequency may revert back to a monthly basis.

³ Means median of five consecutive samples taken over 24 hours at no less than 30 minute intervals.

L3

Determinations of the quality of contaminants released to check compliance with the release limits specified in Table 1 of this environmental authority must be undertaken at the sampling and in-situ measurement points described as:

- i. the outlet of the recycled water storage lagoon for all parameters except for turbidity, *E.coli* and residual chlorine; and
- ii. for *E.coli* and residual chlorine, at the furthest point practical downpipe of the recycled water distribution pumps; and
- iii. for continuous turbidity monitoring, the wastewater stream prior to disinfection.

L4	The average dry weather hydraulic flow from the sewage treatment plant to the wet weather storage must not exceed 41.6 KL/day.
L5	The hydraulic flow from the sewage treatment plant to the wet weather storage must be determined by an appropriate method, for example a flow meter, and records kept of such determinations and estimates.
L6	A minimum of ten (10) hectares of land must be provided for the irrigation of treated effluent to land.
L7	The daily volume of contaminants released to land must be determined or estimated by an appropriate method, for example a flow meter, and records kept of such determinations and estimates.
L8	All grass/vegetation clippings must be removed from the contaminant release area upon harvesting.
L9	The irrigation of effluent must be carried out in a manner such that: <ul style="list-style-type: none"> i. vegetation is not damaged; ii. soil erosion and soil structure damage is avoided; iii. there is no surface ponding of effluent; iv. percolation of effluent beyond the plant root zone is minimised; v. the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter as measured by biochemical oxygen demand and water is not exceeded; and vi. the quality of ground water is not adversely affected
L10	When wet weather events prevent the containment of treated effluent on site, the treated effluent may be released through on site stormwater treatment devices or alternative measures taken to store/lawfully dispose of effluent (such as tanking off site to another treatment plant or sewer). A record must be kept of any removal or discharge off site, including destination, transporter, dates and volumes.
L11	Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm. NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.
L12	Within three (3) months of the date of issue of this development approval, the registered operator must develop and implement an Irrigation Management Plan (IMP) which details how the registered operator will effectively and appropriately manage the effluent irrigation process so as to ensure that the release of effluent to land is carried out in an environmentally sustainable manner.

L13	<p>The IMP should detail how irrigation will be managed and monitored so that the following occur:</p> <ul style="list-style-type: none">i. vegetation is not damaged; andii. soil erosion and soil structure damage is avoided; andiii. there is no surface ponding of effluent; andiv. effluent is evenly distributed on the irrigation area; andv. infiltration of effluent beyond the plant root zone is minimised; andvi. the capacity of the land to assimilate nitrogen, phosphorous, salts and organic matter is not exceeded; andvii. the quality of groundwater is not adversely affected; andviii. how irrigation using effluent to land will be carried out if soil moisture conditions are such that surface runoff, ponding or pooling beyond the property boundary is likely to occur and how this will be managed (e.g. use of soil moisture meters); andix. how irrigation of land will not result in adverse public health Issues (i.e. plumbing controls, signage); andx. procedures for educating and training staff about public health issues associated with using recycled water onsite.
L14	<p>A copy of the IMP must be kept at the premises to which this development approval relates and be available to an officer authorised under the <i>Environmental Protection Act 1994</i> upon request.</p>

L15

The registered operator must monitor and keep records of the soil characteristics and at the frequency specified in Table 2. Monitoring is to include the taking of top-soil and sub-soil samples from monitoring sites, MB1, MB2, MB3 and MB4 as identified in Figure 2 of this development approval, drawing titled "Sampling locations".

Table 2 – Soil Impact Monitoring

Quality Characteristic	Units	Monitoring Frequency
pH (1:5)	pH scale	On commencement and biennially thereafter
Specific Conductance or electrical conductivity (1:5)	µS/cm	On commencement and biennially thereafter
Calcium	mg/kg	On commencement and biennially thereafter
Magnesium	mg/kg	On commencement and biennially thereafter
Potassium	mg/kg	On commencement and biennially thereafter
Cation Exchange capacity	meq/100g	On commencement and biennially thereafter
Exchangeable calcium	meq/100g	On commencement and biennially thereafter
Exchangeable magnesium	-	On commencement and biennially thereafter
Exchangeable sodium	meq/100g	On commencement and biennially thereafter
Exchangeable potassium	meq/100g	On commencement and biennially thereafter
Exchangeable aluminium	meq/100g	On commencement and biennially thereafter
Sodium Adsorption Ratio	-	On commencement and biennially thereafter
Total Nitrogen as N	mg/kg	On commencement and biennially thereafter
Extractable Phosphorus	mg/kg	On commencement and biennially thereafter
Boron	mg/kg	On commencement and biennially thereafter

L16	The registered, operator must monitor and keep records of the groundwater characteristics and at the frequency specified in Table 3 – Groundwater Impact Monitoring. Monitoring is to include the taking of samples from monitoring sites, MB1, M82, MB3 and MB4 as identified in Figure 2 of this development approval, drawing titled 'Sampling Locations'.		
	Table 3 – Groundwater Impact Monitoring		
	Quality Characteristics	Units	Frequency
	Water Level	mBTOC	Yearly
	pH	Scale	Yearly
	Electrical Conductivity	µs/cm	Yearly
	Total Nitrogen	mg/L	Yearly
	Total Phosphorus	mg/L	Yearly
	E.coli	cfu/100mL	Yearly
	5-day Biochemical Oxygen Demand	mg/L	Yearly
Agency interest: Community			
Condition			
C1	All complaints received must be recorded Including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.		

Definitions

Key terms and/or phrases used in this document are defined in this section. 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.

"administering authority" means the Environmental Protection Agency or its successor.

"you" means the holder of this Environmental Authority or owner /occupier of the land which is the subject of this Environmental Authority.

"site" means the place to which this environmental authority relates or the premises to which this development approval relates.

"authorised place" means the place authorised under this environmental authority/development approval for the carrying out of the specified environmentally relevant activities.

"this authority" means this environmental authority.

"authority" means level 1 licence (without development approval), or level 1 approval (without development approval), or level 2 approval (without development approval) under the *Environmental Protection Act 1994*.

"dust sensitive place" means:

- a dwelling; mobile home or caravan park, residential marina or other residential Place;

- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;
- a medical centre or hospital;
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a park or gardens; or
- a place used as an office or for business or commercial purposes and includes the curtilage of any such place; or
- a public thoroughfare, park or gardens; or
- 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.

"odour sensitive place" has the same meaning as a "dust sensitive place"

"dwelling" means any of the following structures or vehicles that is principally used as a residence:

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

"noxious" means harmful or Injurious to health or physical well-being.

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

"nuisance sensitive place" includes –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises;
- a dwelling; mobile home or caravan park, residential marina or other residential Place;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;
- a medical centre or hospital;
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area;
- a park or gardens;
- a place used as an office or for business or commercial purposes and includes the curtilage of any such place.
- a public thoroughfare, park or gardens; or
- 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.

"noise affected premises" means a "noise sensitive place" or a "commercial place" "noise sensitive place" means:

- a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a park or gardens; or
- and includes the curtilage of such place.

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

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

- is clearly audible to, or can be felt by, an individual; and
- annoys the individual. In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

"protected area" means

- a protected area under the Nature Conservation Act 1992; or
- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"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.

"50th percentile" means not more than three (3) of the measured values of the quality characteristic are to exceed the stated release limit for any six (6) consecutive samples for a release/monitoring point at any time during the environmental activity(ies) works.

"80th percentile" means not more than one (1) of the measured values of the quality characteristic is to exceed the stated release limit for any five (5) consecutive samples for a sampling point at any time during the environmental activity(ies) works '

"Total Nitrogen" means the sum of Organic Nitrogen, Ammonia, Nitrite plus Nitrate, as mg/L of Nitrogen.

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

"*E. coli*" means *Escherichia coli*.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"mg/L" means milligrams per litre.

"NTU" means nephelometric turbidity units

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes:

- for an element - any chemical compound containing the element; and
- anything that has contained the waste.

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

"mean" means the arithmetic mean over the 12 month period covered by a single annual return.

Appendices

Figure 1 - Concept Recycled Water Irrigation Layout Sheet 2 of 2

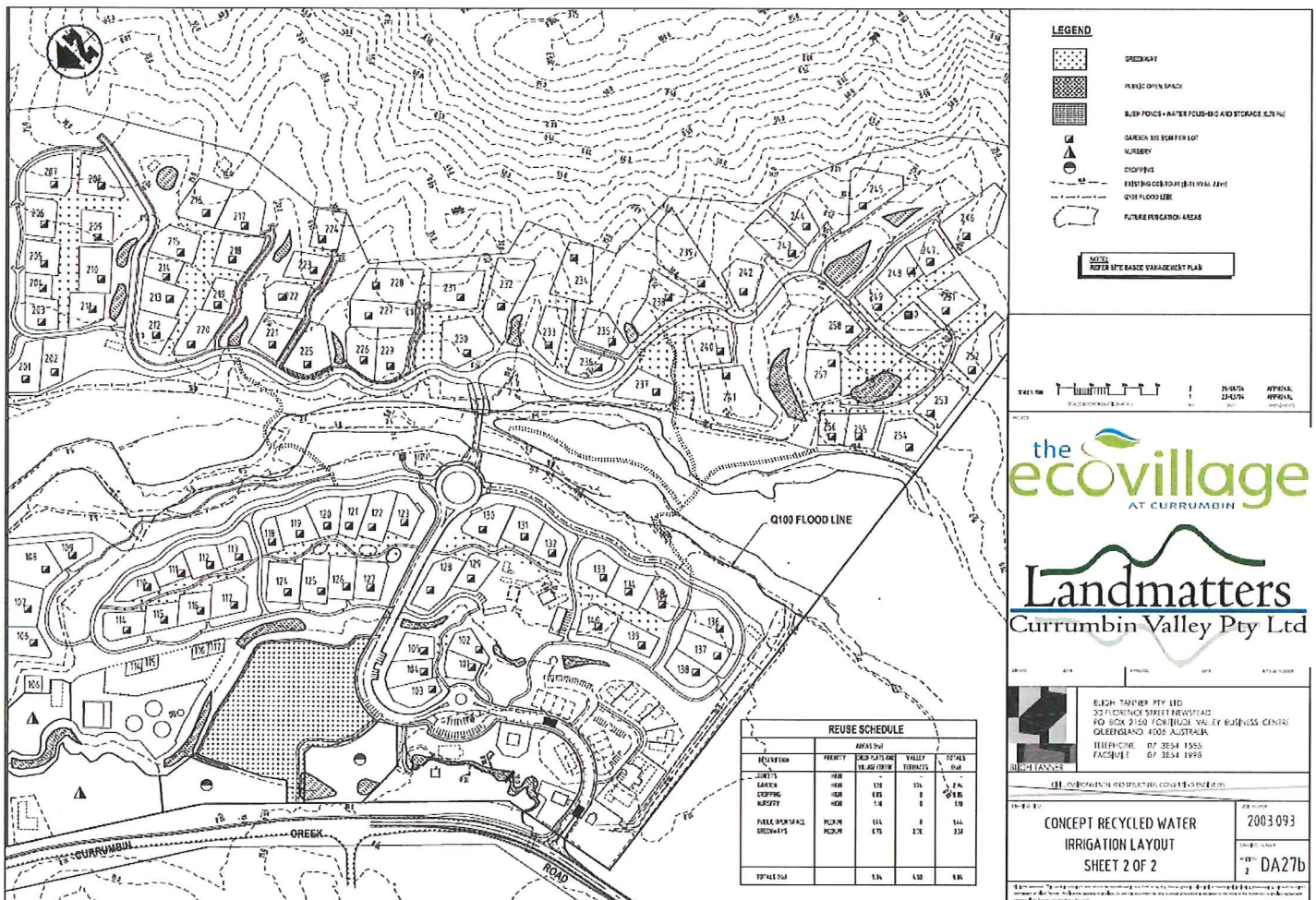


Figure 2 – Sampling Locations



END OF ENVIRONMENTAL AUTHORITY

