Permit

Environmental Protection Act 1994

Environmental authority EPPR00841013

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

Environmental authority number: EPPR00841013

.**Environmental authority takes effect on** 23 August 2012

The anniversary date of this environmental authority is 3 December each year. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name(s)	Registered address
W.H. HECK & SONS PROPRIETARY LIMITED	124 Mill Road WOONGOOLBA QLD 4207

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 14 - Electricity generation - 2(a) - Generating electricity by using a fuel, other than gas, at a rated capacity of 10MW electrical to 150MW electrical	2/WD3160
ERA 54 - Mechanical waste reprocessing - 1 - Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	2/WD3160
ERA 14 - Electricity generation - 2(a) - Generating electricity by using a fuel, other than gas, at a rated capacity of 10MW electrical to 150MW electrical	3/RP137856
ERA 54 - Mechanical waste reprocessing - 1 - Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	3/RP137856

ABN 46 640 294 485

Queensland Government

Environmentally relevant activity/activities	Location(s)
ERA 54 - Mechanical waste reprocessing - 1 - Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	340/WD4739
ERA 14 - Electricity generation - 2(a) - Generating electricity by using a fuel, other than gas, at a rated capacity of 10MW electrical to 150MW electrical	340/WD4739
ERA 54 - Mechanical waste reprocessing - 1 - Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only	40/SP204792
ERA 14 - Electricity generation - 2(a) - Generating electricity by using a fuel, other than gas, at a rated capacity of 10MW electrical to 150MW electrical	40/SP204792

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

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

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

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

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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.



Signature

9 February 2022

Date

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

Enquiries:
Permit and Licensing/Regulatory Support
Department of Environment and Science
GPO Box 2454, Brisbane QLD 4000
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Privacy statement

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

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 Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at https://www.rshq.qld.gov.au/, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

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. If you are unsure that you have the most current version of the environmental authority relating to this site please visit https://apps.des.qld.gov.au/env-authorities/ to access all environmental authorities currently approved.

Conditions of environmental authority

This environmental consists of the following schedules of conditions:

- Agency Interest — General
- Agency Interest — Air
- Agency Interest — Water
- Agency Interest — Land
- Agency Interest — Noise
- Agency Interest — Waste
- Agency Interest — Social
- Definitions

Agency Interest — General	
Condition number	**Condition**
G1	**Prevent and/or minimise likelihood of environmental harm** In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and/or to minimise the likelihood of environmental harm being caused.
G2	**Maintenance of Measures, Plant and Equipment** The registered operator of an ERA to which this approval relates must: a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; b) maintain such measures, plant and equipment in a proper and efficient condition; and c) operate such measures, plant and equipment in a proper and efficient manner.
G3	**Alterations** 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 for by this approval
G4	**Site Based Management Plan** From commencement of an ERA to which this approval relates, 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 ERA's that are carried out. The SBMP must address the following matters: a) Environmental commitments - a commitment by senior management to achieve specified and relevant environmental goals; b) Identification of environmental issues and potential impacts; c) Control measures for routine operations to minimise likelihood of environmental harm; d) Contingency plans and emergency procedures for non-routine situations; e) Organisational structure and responsibility; f) Effective communication; g) Monitoring of contaminant releases; h) Conducting environmental impact assessments; i) Staff training; j) Record keeping; and k) Periodic review of environmental performance and continual improvement.
G5	The SBMP must not be implemented or amended in a way that contravenes any condition of this approval.

G6	This SBMP as required by condition G4 must be prepared: a) by a suitably qualified person with at least 5 years experience in the relevant area; b) in a manner that is consistent with the requirements of condition G4; and . c) having regard to, and appropriately applying, the relevant guidelines (being those applicable on a national, state or a regional basis) which the third party auditor considers should be applied in undertaking the site based management plan including relevant Environment Australia, ANZECC and administering authority guidelines where published.
G7	A copy of the SBMP must be kept at the approved place to which the plan relates and be available for examination by an authorised person upon request.
G8	**Annual Monitoring Report** An annual monitoring report prepared by an appropriately experienced person in the field relevant to the required monitoring, must be prepared each year and be provided to the administering authority with the annual return. The annual monitoring report must include, but not be limited to: a) A summary of the previous twelve (12) months monitoring results obtained in accordance with any of the monitoring requirements of this development approval and, in graphical form showing relevant limits, a comparison of the previous twelve (12) months monitoring results to both the limits specified in this development approval and to relevant prior results; and b) An evaluation/explanation of the data from any monitoring programs; and c) An evaluation/explanation on the progress of the implementation of the On-going Release Reduction Plan; and d) A summary of any record of quantities of releases required to be kept under this development approval; and e) An outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and f) A summary of amendments to any management or monitoring plans required as a result of the monitoring performed during the previous 12 months or as a result of the . incorporation of recommendations made by an appropriately experienced person in the field relevant to the required monitoring; and g) A summary of any recycled water agreements entered into or amended during the year. Note: To remove any doubt, monitoring data that has been submitted electronically to the administering authority Point Source Data Base in accordance with a written agreement with the administering authority does not need to be resubmitted in an annual monitoring report.
G9	**Spill Kit** An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.
G10	**Spill Kit Training** Anyone operating under this approval must be trained in the use of the spill kit..
G11	**Fire Management and Prevention**

	Clear access to a water supply for fire fighting vehicles to the whole site must be provided at all times.
G12	Effective fire breaks must be provided and maintained in consultation with the Regional Fire Commander.
G13	**Monitoring** All monitoring, assessments and reports required by this approval must be conducted by a person(s) with appropriate experience and/or qualification.
G14	**Trained/Experienced Operator(s)** The daily operation of the ERA(s) to which this approval relates must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of the approved activities.
G15	**Equipment Calibration** All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained.
G16	**Records** Record, compile and keep all monitoring results (for a minimum of 5 years) required by this approval and present this information to the administering authority when requested.
G17	**Notification** Telephone the administering authority's Pollution Hotline (1300 130 372) or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval or an event where environmental harm has been caused or may be threatened.
G18	Written advice detailing the following information must be provided to the administering authority within fourteen (14) business days following any notification in accordance with condition (G17): a) the name of the registered operator, including the approval number; b) the name and telephone number of a designated contact person; c) the location of the release / event; d) the time of the release / event; e) the time you became aware of the release / event; f) the suspected cause of the release / event; g) a description of the resulting effects of the release / event;. h) the results of any sampling performed in relation to the release / event; i) actions taken to mitigate any environmental harm and or environmental nuisance caused by the release / event; and j) proposed actions to prevent a recurrence of the release / event

G19	Further to the requirements of condition G17, in the event of any overflow/discharge of reclaimed water to the Bremmerhaven Drain, the following personnel (and other potentially affected parties) are to be notified immediately following any such release: • Farm Manager - Rocky Point Prawn Farm; • Farm Manger - Tomei Prawn Farm; and • Farm Manager - Gold Coast Marine Aquaculture.

Schedule B — Air	
Condition number	**Condition**
A1	**Nuisance** The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from any ERA to which this approval relates must not cause an environmental nuisance at any nuisance sensitive place.
A2	In the event of a complaint about noxious or offensive odour from a nuisance sensitive place to the administering authority, that the administering authority considers is not frivolous or vexatious, the registered operator of the activity to which this approval relates must undertake monitoring to investigate any complaint of odour nuisance upon receipt of a written request from the administering authority to carry out such monitoring.
A3	**Dust Nuisance** The release of dust and/or particulate matter resulting from any ERA to which this approval relates must not cause an environmental nuisance at any nuisance sensitive place.
A4	All material stockpiles must be maintained to minimise wind-blown emissions to the atmosphere.
A5	The unloading of materials at the approved premises must be conducted in a manner that prevents the release of dust from the approved premises.
A6	Trafficable areas within the approved premises must be maintained using all reasonable and practicable measures necessary to minimise the release of wind blown dust or traffic generated dust to the atmosphere. Reasonable and practicable measures must include but are not limited to: i using water sprays and/or a water truck; ii adopting and adhering to speed limits; and iii using dust suppressants and wind breaks.
A7	If material is deposited on any public road by vehicles leaving the approved premises, the clean-up of such material is to occur immediately.
A8	**Fuel Burning** With the exception of during the circumstance outlined in condition (A9), the only fuels to be burnt in any boiler(s) are natural gas, bagasse, vegetable oil, animal fats, woodwaste which has had no copper, chrome, arsenic or other metal based treatments and green waste.

A9	Alcohol feints, natural gas, diesel, kerosene, reprocessed oil and fuel oil may be burned as fuel, provided the use of such fuels is for either for the start-up of the boiler or as a supplementary fuel in circumstances where the moisture content of the woodwaste, bagasse or non-chemically treated raw timber adversely affects the performance of the boilers or the emission of contaminants to the atmosphere.
A10	**Reprocessed Oil and Fuel Oil** Reprocessed oil and fuel oil used in fuel burning equipment at the premises to which this approval relates must: a) not contain more that 0.02% by weight of lead; b) not contain more that 3% by weight of sulphur; and c) be accompanied by a compliance certificate issued by the supplier of the reprocessed oil.
A11	The compliance certificate mentioned in condition A10 must: a) certify compliance with the lead and sulphur content required by conditions A10(a) and A10(b); b) give the name and company position of the person making the certificate and date certified; c) include a copy of the results for the sample tested (all determinations of the quantity or concentration of lead and sulphur must be performed by a person or body possessing appropriate qualification(s) to perform the required determinations); and d) certify that the sample was collected and tested in an appropriate manner.
A12	Copies of all compliance certificates must be kept at the place to which this approval relates
A13	**Release of Contaminants to the Atmosphere- Boiler(s) and Pollution Control Equipment** Contaminants resulting from the operation of the source(s) described in *Appendix 1- Air, Table 1- Release of Contaminants to the Atmosphere - Boiler(s) and Pollution Control Equipment*, must: • only be released to the atmosphere from the release point(s) specified in *Appendix 1- Air, Table 1- Release of Contaminants to the Atmosphere - Boiler(s) and Pollution Control Equipment*; and • be directed vertically upwards without any impedance or hindrance; and • be released to the atmosphere from a release point at a height not less than the corresponding height stated for that release point in *Appendix 1- Air, Table 1- Release of Contaminants to the Atmosphere e- Boiler(s) and Pollution Control Equipment*; and • not be released to the atmosphere from a release point at a velocity not less than the corresponding height stated for that release point in *Appendix 1- Air, Table 1- Release of Contaminants to the Atmosphere - Boiler(s) and Pollution Control Equipment.*
A14	**Emission Limits — Boiler(s) and Pollution control Equipment** Contaminants resulting from the operation of the boilers and/or pollution control equipment installed must not be released to the atmosphere from a release point at a concentration, as measured at a monitoring point specified in *Appendix 1 - Air, Table 3- Monitoring contaminant releases to atmosphere* in excess of that stated in *Appendix 1- Air, Table 2 - Release Limits of Contaminants to Atmosphere.*
A15	The registered operator of the ERA(s) to which this approval relates must conduct a monitoring program of contaminant releases to atmosphere at the release points, frequency, and for the

	parameters specified in *Appendix 1 - Air, Table 3- Monitoring contaminant releases to atmosphere*.
A16	**Contaminant Release Monitoring** Monitoring of releases to the atmosphere required by condition (A15) of this approval must be carried out in accordance with the following requirements: a) Monitoring provisions for the release points listed in *Appendix 1- Air, Table 1, Table 2 and Table 3* must comply with the Australian Standard AS 4323.1 - 1995 'Stationary source emissions Method 1: Selection of sampling positions' (or more recent editions); b) The following tests must be performed for each required determination specified in *Table 1*: i. gas velocity and volume flow rate; ii. temperature; and iii. water vapour concentration (moisture content). c) Where practicable, samples must be taken when emissions are expected to be at maximum rates; d) During the sampling period the following additional information must be gathered: i. steaming rate at the time of sampling; ii. fuel used; and reference to the actual test methods and iii. accuracy of the methods
A17	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place: a) Dust deposition of 90 micrograms per cubic metre per year, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); OR b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (pm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with: – Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method; or – any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.
A18	When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected nuisance sensitive place and at upwind control sites and must include: a) for a complaint alleging dust nuisance, dust deposition; and b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (pm) (PM10) suspended in the atmosphere over a 24 hours averaging time.

A19	If the administering authority requests monitoring to determine contaminant releases to the atmosphere, all monitoring must be performed by an independent person or body possessing appropriate experience and qualifications to perform the required measurements.
A20	If monitoring indicates that environmental nuisance is caused or threatened by the release of odour, dust and/or particulate emissions from the approved activities, then the registered operator must: a) advise the administering authority of planned abatement measures; and b) as soon as practicable implement the advised abatement measures such that the release of odour, dust and/or particulate emissions from the activity will not result in further environmental nuisance.

Schedule C — Water

Condition number	Condition
WA1	**Release of Contaminants to Waters** Contaminants must not be directly or indirectly released from the premises to which this approval relates to any waters or the bed and banks of any waters except for reclaimed water from the Rocky Point Co-generation plant from release points RI, R2 or R3 to the Southern Drainage System within the release limits specified in *Appendix 2- Water, Table 4- Release quality characteristic limits* and in accordance with the conditions of this approval: • Release Point R1 (S27°44'00", E153°19'46"): Pumped discharge from Pond 4, Pond 5 or Pond 6 into the Southern Drainage System, adjacent to the waste water treatment ponds and hence to Behm Creek; • Release Point R2 (S27°44'09", E153°20'15"): Piped discharge from Pond 5 that discharges into the Southern Drainage System, adjacent to the waste water treatment ponds and hence to Behm Creek; and • Release Point R3 (S27°44'09", E153°20'15"): Pond spillway overflow at Pond 5 that discharges into the Southern Drainage System, adjacent to the waste water treatment ponds and hence to Behm Creek
WA2	The release of contaminants as described in condition WA1 to the Southern Drainage System is permitted only in the following circumstances: a) the failure of irrigation equipment; or b) when wet weather (25mm of rainfall in 24hours) and/or high soil moisture content conditions are such that irrigation would lead to non-compliance with the conditions of this approval relating to the control of runoff and of deep drainage from irrigated land. NOTE: Where irrigation equipment failure is the cause of a release, the release is only permitted for a period of up to five (5) consecutive days unless otherwise authorised by the administering authority.
WA3	The release of contaminants as described in condition WA1 to the Southern Drainage System may exceed the release limits specified in *Appendix 2- Water, Table 4- Release quality characteristics limits* for Total Nitrogen and Total Phosphorus when the maximum Total Nitrogen and Total Phosphorus of the effluent received from the Beenleigh Waste Water Treatment Plant into the Buffer Storage Pond monitored at the release into the Buffer Storage Pond exceeds the following release limits: • Total Nitrogen (mg/L): 15

	• Total Phosphorus (mg/L): 4
WA4	Reclaimed water from the Rocky Point Cogeneration Plant must not purposefully, inadvertently, directly or indirectly be released into or percolate into the Bremerhaven Channel or any other waters associated with the aquaculture of food for human consumption.
WA5	**Pond Conditions** All ponds and storages used for the storage or treatment of reclaimed water at or on the approved place must be constructed, installed and maintained: a) so as to minimise the likelihood of any release of the contaminants through the bed or banks of the pond/basin to any waters (including ground water); b) so that a freeboard of not less than 0.5m is maintained at all times, except during rainfall events; and c) so as to ensure the stability of the pond/basins construction.
WA6	A clay layer of at least 600 millimetre thickness, which achieves a maximum permeability of not greater than 1 x 10^{-9} m/s must be maintained in Pond 5.
WA7	A Disposal Management Plan must be developed and implemented prior to the release of reclaimed water occurring to the Southern Drainage System from the release locations prescribed by condition WA1. The Disposal Management Plan must address the requirements identified by the conditions of this approval which relate to the release of reclaimed water to the Southern Drainage System.
WA8	A Wetland Management Plan must be submitted to the administering authority for comment prior to the construction of Pond 5, detailing how the design and management of Pond 5 will address the design elements recommended in the Wetland Concept and Feasibility Report prepared by Australian Wetlands, dated September 2008.
WA9	The Wetland Management Plan must include but is not limited to the following design and monitoring elements: i. The wetland area (Pond 5) must be a minimum of 1.3 hectares; ii. The flow of reclaimed water to the wetland (Pond 5) must not exceed 3,600m^3 over three consecutive days; iii. The wetland must have greater than 80% vegetation cover by wetland plants; iv. The wetland depth is to be 50 centimetres, with the bottom 20 centimetres friable soil, and the top 30 centimetres the operating water level following successful plant establishment; v. The wetland inlet structure must distribute reclaimed water across the entire horizontal plane of the wetland; vi. The wetland outlet structure must allow for changes in the water level within the wetland (+/- 2 centimetres), and be designed to enable flooding and draining of the wetland; and vii. The monitoring for heavy metals and sodicity as outlined by *Table 8- Soil Monitoring* for sediment removed from the wetland during desludging
WA10	Pump stations 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. Pump failure

	alarms must be able to operate without mains power if such power failure occurs and, when in operation, must be detectable in the office or operations centre.
WA11	**Monitoring of Pond Water Levels** The registered operator of the ERA(s) to which this approval relates must implement a monitoring program [as part of the Irrigation Management Plan] to measure and record the actual daily water levels in the Buffer Storage Pond, Pond 4 and Pond 5.
WA12	**Monitoring of Quality of Releases** Monitoring of contaminants released to waters from release points R1, R2 and R3 as prescribed in condition WA1, must be undertaken at the monitoring points described below for each release point and records kept, for the quality characteristics and at the frequency specified in *Appendix 2- Water, Table 4- Release quality characteristic limits*. Monitoring Points: **SP1-** Retention area of Pond 5 (S27˚44'07", E153˚20'16")
WA13	All determinations of the quality of contaminants released must be: a) made on samples that are representative of the discharge; and b) made in accordance with methods prescribed in the latest edition of the administering authority's Water Quality Sampling Manual
WA14	Notwithstanding the quality characteristic limits specified in development condition WA1, the release of contaminants to water must not: a) have any properties nor contain any organisms or other contaminants that are capable of causing environmental harm or an environmental nuisance; and b) produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter; and c) erode or otherwise disturb aquatic plants, mangrove vegetation, the banks or bed of the waterway, the habitat in general or cause any flooding to downstream properties.
WA15	The maximum daily volume of reclaimed water released to the Southern Drainage System must not exceed 55L/sec or 4.75ML/day.
WA16	Notwithstanding condition WA15, the maximum annual volume of reclaimed water released to the Southern Drainage System is not to exceed 204ML/yr.
WA17	**Monitoring of Volume of Releases** The daily volume of contaminants released to waters must be determined or estimated by an appropriate method, for example a flow meter, and records kept of such determinations and estimates
WA18	**Quality of Contaminants Released** The total daily mass of contaminants released to waters from release points R1, R2 and R3 as prescribed in condition WA1, during any day must not exceed the load limits for each contaminant specified in *Appendix 2- Water, Table 5- Proposed Load Base Criteria*.
WA19	**Release Reduction Strategy** The registered operator of the activity to which this approval relates must implement the On-going Release Reduction Plan as described in the Response to Information Request (EPA Ref 241483)

	for Rocky Point Green Power Material Change of Use Application, dated 28th January 2009 and included in Appendix 2- Water, Table 12- Ongoing release reduction strategy to meet the load limits for each contaminant specified in *Appendix 2- Water, Table 5- Proposed Load Base Criteria*.
WA20	The registered operator of the activity to which this approval relates must submit details of any amendment to the on-going release reduction plan annually to the administering authority with the Annual Return which immediately follows the enactment of any such amendment
WA21	**Calculation of the loads of total nitrogen and total phosphorus released to waters** The yearly net load (in kilograms) of the contaminants, total nitrogen and total phosphorus released to waters per day are be determined or calculated on a weekly rolling basis and records kept of such determinations or calculations and must be less than the limits specific in *Appendix 2- Water, Table 5- Proposed Load Base Criteria*.
WA22	The registered operator of the ERA(s) to which this approval relates must calculate, on a weekly rolling basis, the annual mass load of total nitrogen and total phosphorus discharged at release points R1, R2 or R3 as prescribed in condition WA1. Mass loads must be calculated by the following formulae: Yearly Mass Load = (Yearly Median Concentration) x (Total Yearly Discharge Flow).
WA23	A Receiving Environment Monitoring Program must be implemented to the satisfaction of the administering authority and records kept to monitor the effects of the release of contaminants on the "receiving environment" to effectively determine whether environmental values are being protected. "Receiving environment" for the purpose of the Receiving Environment Monitoring Program as depicted in *Appendix 3- Land, Map 1- Receiving environment monitoring locations* includes: (i) The Southern Drain System, monitoring locations: a. SDS-SDS/Bremerhaven (S27˚44'08", E153˚20'17"); b. SDS- Short Cut Road (S27˚44'17", E153˚20'11"); c. SDS- Jacobs Well Road (S27˚44'47", E153˚19'44"); d. SDS- Gross Road (S27˚45'31", E153˚20'01"); and (ii) Behms Creek (S27˚45'38", E153˚20'40").
WA24	The Receiving Environment Monitoring Program required by condition WA23 must include but is not limited to monitoring for dissolved oxygen, turbidity, salinity, temperature, 5- day Biological Oxygen Demand, Chemical Oxygen Demand, Total Nitrogen, Total Phosphorus and Total Suspended Solids conducted on a fortnightly basis at the monitoring locations prescribed by condition WA23.
WA25	The monitoring results and an interpretation of the results from the Receiving Environment Monitoring Program required to be kept in accordance with condition WA23 must be submitted to the administering authority with the Annual Monitoring Report required by Condition G8 for review and comment.
WA26	**Cleaning and Spillages** The maintenance and cleaning of any vehicles, other equipment or plant must be carried out in areas where contaminants cannot be released into any waters, roadside gutter or stormwater drain.

WA27	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 waste, contaminants or material to any stormwater drainage system, roadside gutter or waters.
WA28	**Stormwater Management** The ERA must be carried out by such practicable measures necessary to prevent the release of or the likelihood of release of contaminated stormwater runoff to any stormwater drain, roadside gutter, waters or the bed and banks of any waters.
WA29	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.
WA30	A Stormwater Management Plan must be developed prior to construction of the wetland which addresses the operation and maintenance of the mature wetland. The Stormwater Management Plan is to be completed within twelve (12) months of the issuing of this development approval. The existing Stormwater Management Plan is to remain in place as a part of this the development approval until such time as the new Stormwater Management Plan is completed
WA 31	An up to date copy of the Stormwater Management Plan must be kept at the place to which this approval relates.
WA32	**Algal Management** A Toxic Algal Management Plan, for any reclaimed water pond must be developed and implemented which details how the holder of this approval will manage the actual and potential environmental impacts resulting from any occurrence of toxic algal outbreaks (such as toxic forms of blue-green algae) and must address at least the following matters: a) Weekly inspections to detect the presence of any bloom; b) Notification and reporting if blue-green algae blooms are confirmed; c) The collection and analysis of samples if a bloom is suspected; and d) Remedial actions.
WA33	**Contaminant Releases** The ERA(s) to which this approval relates must not have a detrimental impact on groundwater quality or levels.
WA34	**Monitoring of Groundwater Quality** The registered operator of an ERA to which this approval relates must implement an on-going Groundwater Monitoring Program (GMP), including the development of a suitable groundwater monitoring network, to monitor the quality of groundwater potentially impacted by any direct or indirect release of contaminants associated with any ongoing operations and/or any ERAs.
WA35	The groundwater monitoring network referred to in condition WA34 must: a) be designed, installed and maintained by a suitably qualified and experienced person; and b) be constructed in accordance with the Agriculture and Resource Management Council of Australia and New Zealand manual titled Minimum Construction Requirements for Water

	Bores in Australia, Edition 2, Revised September 2003, or more recent editions or supplements to that document as such become available
WA36	The registered operator of an ERA to which this approval relates must conduct a GMP which complies with the following requirements: a) All determinations of the quality of contaminants released to waters must be made in accordance with, but are not limited to, methods prescribed in: i. AS/NZS 5667:11:1998 — *Water Quality — Sampling — Guidance on sampling of groundwaters ,* or more recent editions or supplements to that document as such become available; and/or ii. the *"Queensland Environmental Protection Agency Water Quality Sampling Manual, 3rd Edition, December 1999",* or more recent editions or supplements to that document as such become available. b) Groundwater samples taken from the bores must be analysed for, but are not limited to, the water quality parameters required in *Appendix 2- Water, Table 6- Groundwater quality parameters and sampling frequencies*; c) Standing water levels and total well depths in metres must be measured and recorded on during each sampling event relative to the Australian Height Datum. Such measurements must be undertaken prior to any disturbance by sampling activities and must be reported as the depth in metres from the top edge of the highest point of the casing collar to the water surface within the bore; d) Groundwater samples taken from the bores must be representative of the aquifer(s); e) Groundwater quality must be monitored as often as necessary, but not less frequently than required in *Appendix 2- Water, Table 6- Groundwater quality parameters and sampling frequencies*; f) Groundwater samples must be taken from each of the bores before commencement of the ERA(s) and/or Notifiable Activities and during each sampling event; and g) In associated with the Contaminant Release Area Monitoring Program required to be conducted by condition (L36) determine the existence and rate of infiltration of reclaimed water that has been irrigated to land, and the potential or actual impacts on ground water from such infiltration, to be carried out on an annual basis.
WA37	Any record made of the results of groundwater quality monitoring made in accordance with condition WA34 must be kept for not less than fifteen (15) years from the date the record was made.
WA38	**Groundwater Monitoring Analysis Reporting** The registered operator of an ERA to which this approval relates must ensure that the groundwater monitoring data gathered in accordance with this approval is analysed and interpreted to assess the nature and extent of any environmental harm of the ERA(s) and/or Notifiable Activities. The assessment must also include, but not be limited to, the location, nature (confined, unconfined etc.) and quality of each aquifer, define groundwater contours, and indicate direction of flow. The data collation, analysis and assessment must be conducted by a suitably qualified and experienced person and must be submitted to the administering authority upon request.
Agency Interest— Land	
Condition number	**Condition**

L1	Spillage of all chemicals and fuels must be contained within an on-site containment system which is impermeable to the material/s stored 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.
L2	**Oil and Grease** Drains and bunds must be provided to ensure stormwater runoff is excluded from the plant, vehicle or equipment washing area
L3	Triple interceptor(s) and oil water separator(s) must be effectively maintained at all times and cleaned as required to ensure efficient operation of the units.
L4	**General Reclaimed water Reuse Requirements** The registered operator of an ERA to which this approval relates is only permitted to irrigate reclaimed water sourced from the retention area of Pond 5 to the defined irrigation areas shown in *Appendix 3 Land, Map 2- Irrigation release locations*, in compliance with the release limits stated in *Appendix 3 Land, Table 7 — Contaminant release limits to land* and the conditions of this approval.
L5	**Irrigation Release Locations** A minimum area of 117.50 hectares of land, excluding any necessary buffer zones, must be available to be utilised for the irrigation of reclaimed water (the Contaminant Release Area). The defined irrigation areas as depicted in *Appendix 3- Land, Map 2- Irrigation release locations* are located on land described as follows: • Lot 340 Crown Plan WD4739, County of Ward, Parish of Albert (total land area 31.8270m^2); • Lot 463 WD72, County of Ward, Parish of Albert (total land area 47.8390m^2); • Lot 379 WD5679, County of Ward, Parish of Albert (total land area 26.06m^2); • Lot 2 RP44579, County of Ward, Parish of Albert (total land area 20.2340m^2); • Lot 2 CP899020, County of Ward, Parish of Albert (total land area 28.93m^2); and • Lot 2 RP63080, County of Ward, Parish of Albert (total land area16.39m^2).
L6	**Contaminant Release Precautions** The reclaimed water can only be used for the irrigation of sugar cane.
L7	**Qualitative Characteristics for Release of Reclaimed water to Land** Monitoring of contaminants released to land must be undertaken at the monitoring point described below and records kept for the parameters and at the frequency specified in *Appendix 3- Land, Table 7- Contaminant release limits to land*. Monitoring Points: **SP1 —** Retention area of Pond 5 (S27˚44'07", **EI** 53˚20'16")
L8	Notwithstanding the quality characteristic limits specified in *Appendix 3- Land, Table 7 - Contaminant release limits to land*, releases of reclaimed water must not have any properties nor contain any organisms or other contaminants in concentrations that are capable of causing environmental harm.

L9	The daily volume of reclaimed water 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.
L10	**Release Reduction Strategy** The registered operator of the ERA to which this development approval relates must ensure that the land required to implement the On-going Release Reduction Plan as described in the Response to Information Request (EPA Ref 241483) for Rocky Point Green Power Material Change of Use Application, dated 28th January 2009 and included in *Appendix 2- Water, Table 9- Ongoing release reduction strategy*, is made available for irrigation within the timeframes stipulated by Table 9.
L11	A buffer distance to the boundary of publicly accessible area[s] and or private residence[s] must be maintained of at least 5 metres, with the following equipment and practices, either solely or in any combination thereof, being implemented/adopted to prevent spray drift from those areas that are publicly accessible or private residence(s): a) tree screens; and/ or b) anemometer switching systems; and/ or c) restricted times of irrigation; and/ or d) using irrigation systems that prevent the generation of fine mist, such as low rise sprinklers, small throw or microsprinklers, or part circle sprinklers
L12	The application of reclaimed water to land(s) must not be carried out if soil moisture conditions are such that surface runoff or ponding beyond the property boundary is likely to occur.
L13	Spray from any Reclaimed Water irrigated to land and from the cooling tower must not drift beyond the boundaries of the premises to which this Development Approval relates.
L14	Irrigation using reclaimed water must be carried out in a manner such that: • vegetation is not damaged; • soil erosion and soil structure damage is avoided; • there is no surface ponding of reclaimed water; • percolation of reclaimed water beyond the plant root zone is minimised; and • the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter as measured by oxygen demand and water is not exceeded.
L15	**General Reclaimed water Supply Requirements** The registered operator of an ERA to which this approval relates must ensure that all users of reclaimed water (i.e. registered operator of an ERA to which this approval relates and or any third party user) are provided with information regarding personal hygiene measures and appropriate health and safety procedures associated with using reclaimed water in a safe manner.
L16	Scouring, cleaning or flushing of the reclaimed water pipeline system is to be undertaken in a manner that will return resulting wastes to the Rocky Point Cogeneration Plant storage/detention ponds.
L17	Leakage of reclaimed water from any pipelines must not occur and drainage associated with pipe scouring/cleaning is only to be undertaken in a manner such as not to cause environmental harm.

L18	Pipelines and fittings used for reclaimed water irrigation system must be clearly identified. Lockable valves or removable handles must be fitted to all release pipes situated in public access areas.
L19	Childproof taps are to be used to prevent children from drinking reclaimed water.
L20	For above ground installations, reclaimed water services must not be installed within 100 millimetres of parallel potable water supply. Below ground installations of reclaimed water services must not be installed within 300 millimetres of any parallel potable water supply.
L21	Aboveground and buried facilities [pipelines, etc] in areas of public access are to be distinctively colour-coded (deep purple, wrapped).
L22	Connection of the reclaimed water system into any potable supply system is not permitted.
L23	The reclaimed water irrigation piping system is to be accordance with Australian Standard 2698.2 *Plastic Pipes and Fittings for Irrigation and Rural Applications*.
L24	Public access to any Contaminant Release Area must be denied during the release of reclaimed water to land and until the Contaminant Release Area(s) has dried.
L25	Notices warning persons not to use or drink or have contact with the reclaimed water must be prominently displayed and must be maintained in a clearly visible and legible condition. The signs must: a) be displayed at places where persons can gain access to or have contact with the reclaimed water, for example, at taps, cocks, valves and reuse areas(s); and b) be distinctively colour coded (deep purple) and marked with the words: WARNING: RECLAIMED WATER - DO NOT DRINK and are to include an appropriate warning symbol as well as text; and c) must be in compliance with AS 1319 - Safety Signs for the occupational environment; and d) all piping and conduits must be identified in accordance with AS 1345 - Identification of the Contents of Piping, Conduits and Ducts; and e) be in English, and, where necessary, in other appropriate language(s).
L26	All pressure piping used for the reclaimed water system must be readily identifiable and distinguishable from potable water piping on the same site.
L27	Reclaimed water from the irrigation system [and associated with any inadvertent overflows] must not be allowed to contaminate potable water outlets.
L28	Bores and bore water supplies used for human consumption are to be protected from contamination by reclaimed water.
L29	**General Irrigation Management Requirements/Performance Objectives** Irrigation is to be conducted in accordance with the document titled "Irrigation Management Plan", dated January 2009, prepared by Queensland Laboratory. All plans and amendments must be based on water balance modelling (eg Medli modelling) and incorporate on-site and off-site monitoring and detail how irrigation is to be managed and scheduled [and continue to manage and schedule] in a sustainable manner. The Irrigation Management Plan is to be reviewed on an

	annual basis as the data on sugar cane growth in the Woongoolba area, soil parameters (type, profile, porosity) groundwater (levels, transmissivity & quality) and wastewater composition is updated.
L30	The Irrigation Management Plan(s) must address the suitability of the proposed irrigation area(s) and how irrigation is to be managed and scheduled having regard to the results obtained from any Impact Monitoring associated with this approval.
L31	The Irrigation Management Plan must also consider, but not be limited to, issues raised in the following documents: (i) Bureau of Sugar Experimental Stations, "Irrigation of Sugarcane", 1998; (ii) National Water Quality Management Strategy, "Guidelines for Sewerage Systems - Reclaimed Water, February 2000." Agriculture and Resource Management Council of Australia and New Zealand., Australian and New Zealand Environment and Conservation Council, National Health and Medical Research Council; and (iii) Department of Natural Resources, "Interim Guidelines For Reuse Or Disposal Of Reclaimed Wastewater", 1996
L32	By the date of the first annual return, the registered operator of the ERA(s) to which this approval relates must undertake all reasonable and practicable measures to ensure that an appropriately qualified independent third party is arranged to do all things necessary to verify that the Irrigation Management Plan is being complied with and to provide to the administering authority a report to such effect in relation to compliance with the Irrigation Management Plan and whether the objectives of the Irrigation Management Plan are being met.
L33	An up-to-date copy of the Irrigation Management Plan must be kept at the approved premises, or if such is not practicable, at a place readily accessible to personnel that carry out the environmentally relevant activity, and be available for examination by an authorised person on request.
L34	**Irrigation Monitoring Program** The registered operator of this activity must implement and maintain a Contaminant Release Area Monitoring Program as a part of the Irrigation Management Program for the release of contaminants to land(s). As a minimum, the Contaminant Release Area Monitoring Program must include: a) the taking of top soil samples (to a depth of 1.5m) from a sufficient number of representative sites for the quality characteristics and at the frequency specified in *Appendix 3- Land, Table 8- Soil Monitoring*, including assessment of the soils including types, structure, phosphorus adsorption capacity, nutrient status, cation exchange capacity, heavy metals and sodium absorption ratio (SAR) of the contaminant release area(s), to be carried out at no less than six representative sites on an annual basis; b) plant analysis to assess nutrient export to be carried out on a bi-annual basis; c) determination of the quantity and quality of contaminants applied; and d) periodic re-assessment, including modelling of the water, nutrient and salt balances and irrigation rate and return period should be undertaken, if necessary, to ensure sustainable use of the contaminant release area is being achieved.
L35	Reclaimed water is permitted to be released from the site for the provision to third party users associated with third party agreements. The registered operator of an ERA to which this approval relates must ensure that reclaimed water for reuse is managed in a manner that will minimise the health and environmental risks associated with that reuse. In accordance with Queensland and

	National Recycled Water Guidelines, the registered operator of an ERA to which this approval relates must ensure that a risk based management system is implemented to manage the production and distribution of reclaimed water
L36	The registered operator of the ERA(s) to which this approval relates must keep a copy of all irrigation agreements entered into. A copy of such agreements is to be provided to the administering authority upon request.
L37	**Third Party Agreement** If the registered operator of the ERA(s) to which this approval relates gives or transfers ownership of the Reclaimed Water from the Rocky Point Co generation Plant to another person(s) or third party, the registered operator of the ERA(s) to which this approval relates must: a) only give or transfer ownership of such Reclaimed Water in accordance with a written agreement between the registered operator of an ERA to which this approval relates and that person(s) (the third party agreement); and b) include in the Third Party Agreement a commitment from the person utilising the reclaimed water to use reclaimed water in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the *Environmental Protection Act 1994*, environmental sustainability of any reclaimed water disposal and protection of environmental values of waters; and c) disclosure by the registered operator of an ERA to which this approval relates of relevant information about reclaimed water quality to enable the third party to make an informed decision about the suitability of using the reclaimed water for the intended uses; and d) the responsibility of the customer to ensure that new owners or tenants are fully informed of the responsibilities and obligations associated with the reclaimed water suppliers and users; and e) upon being notified or otherwise becoming aware that the person's use of reclaimed water is causing or threatens to cause environmental harm or is posing a human health risk, and if the person does not rectify the situation upon written request of the registered operator of an ERA to which this approval relates or the administering authority, the registered operator of an ERA to which this approval relates must cease giving and transferring responsibility for such reclaimed water.
L38	**Acid Sulphate Soils (ASS) Management** When treating and managing ASS, the registered operator of an ERA to which this approval relates must comply with: a) the Queensland Environmental Protection Agency's Instructions for the treatment and management of acid sulphate soils (2001) or more recent editions or supplements to that document as such become available; and/or b) the Queensland Department of Natural Resources and Mines Queensland Acid Sulphate Soil Technical Manual (Version 2.2 September 2004) or more recent editions or supplements to that document as such become available.
L39	Any excavation or disturbance to potential or actual ASS during the carrying out or establishment of the ERA(s) must be done in accordance with an appropriate ASS Management Plan and (if applicable) a Dewatering Management Plan, based on provisions of the *State Planning Policy 2/02 Guideline, Planning and Managing Development involving Acid Sulphate Soils* and the Queensland Department of Natural Resources and Mines *Queensland Acid Sulphate Soil Technical Manual (Version 2.2 September 2004).*

L40	Acid sulphate soils must be managed in a way so that contaminants are not directly or indirectly released to any waters, including surface and groundwater, to an extent that would cause environmental harm.
L41	All ponds used for the storage or treatment of ASS or other contaminants must be constructed, installed and maintained: a) so as to prevent any release of contaminants through the bed or banks of the pond to any waters (including groundwater) to an extent that would cause environmental harm; b) so that a freeboard of not less than 0.5 metres is maintained at all times; c) so as to ensure the stability of the ponds' construction; and d) so as to prevent the ingress of stormwater
L42	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 including ASS or other wastes.
L43	All disturbed acid sulphate soil or potential acid sulphate soil must be disposed to a landfill licensed to accept such material.
L44	Any temporary or permanent dewatering ponds or water bodies used to contain or treat ASS must not be constructed on a watercourse.
L45	Any soils below 5 metres AHD disturbed on the approved place to which this approval relates must be sampled at a frequency of at least one sample per 500 cubic metres of material disturbed and must comply with the following characteristics: 1. no sample is to exceed 0.04% by weight Peroxide Oxidisable Sulphur content; and 2. if any single sample exceeds 0.03% by weight Peroxide Oxidisable Sulphur, then the average of any six (6) consecutive samples (including the exceeding sample) are to have an average Peroxide Oxidisable Sulphur content not exceeding 0.03% by weight; and 3. If more than one sample in any six (6) consecutive sample exceeds 0.03% by weight Peroxide Oxidisable Sulphur, then the average of any six (6) consecutive samples (including the exceeding samples) are to have an average Peroxide Oxidisable Sulphur content not exceeding 0.025% by weight. Oxidisable sulphur content must be determined in accordance with methods outlined in Ahern *et al.,* 1998a and/or "Laboratory Methods" in Ahern *et al.,* 1998b or their update.
L46	If after neutralisation any material exceeds the following action levels then the material must be neutralised again: • Texture range -sands to loamy sands (less than 5 % clay) samples have less than 18 mole H^+/tonne oven dry basis; • Texture range - sandy loams to light clays (5% to 40% clay) samples have less than 18 mole H^+/tonne oven dry basis; • Texture range - medium to heavy clays and silty clays (greater than 40 % clay) samples have less than 18 mole H^+/tonne oven dry basis.
L47	For the purposes of checking conformity with condition L45 the registered operator of the ERA(s) to which this approval relates must be responsible for the making of determinations of the quality

	of the contaminants released. Such determinations must be performed for at least the following quality characteristics: Peroxide Oxidisable Sulphur (% by weight) (POCAS method).
L48	The determinations of the quality of contaminants described in condition L47, must be performed as often as necessary to check that the conditions of this approval are being complied with, but not less frequently than: One sample per five hundred (500) cubic metres of material disturbed. • texture range - sandy loams to light clays (5% to 40% clay) samples have less than 18 mole H^+/tonne oven dry basis; • texture range - medium to heavy clays and silty clays (greater than 40 % clay) samples have less than 18 mole H^+/tonne oven dry basis.
L49	For the purpose of Condition L48 clay is material <0.002 mm in size.
Agency Interest — Noise	
Condition number	**Condition**
N1	**Noise Nuisance** Noise from any ERA to which this approval relates must not cause an environmental nuisance at any noise sensitive place or commercial place.
N2	Notwithstanding condition N1, noise from the premises to which this approval relates must not cause an environmental nuisance at any noise sensitive place or commercial place.
N3	**Noise Monitoring** When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance (which in the opinion of an authorised person is not frivolous, vexatious nor based on mistaken belief), and the results notified within 14 days to the administering authority. Monitoring must include: – $L_{A\ eq,\ adj,\ 1hr}$, – $L_{A\ bg,\ T}$ or $L_{A\ 90,\ T}$, – $L_{A\ 10,\ adj,\ 10min}$, – the level and frequency of occurrence of impulsive or tonal noise; – atmospheric conditions including wind speed and direction; – effects due to extraneous factors such as traffic noise; and – location, date and time of recording.
N4	The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's Noise Measurement Manual
N5	If monitoring indicates or if it is determined by an authorised officer of the administering authority that environmental nuisance is caused or threatened by the release of noise from the approved activities, then the registered operator must:

	a) advise the administering authority of planned abatement measures; and b) as soon as practicable implement the advised abatement measures such that the release of noise emissions from the activity will not result in further environmental nuisance.
Agency Interest — Waste	
Condition number	**Condition**
W1	**General** Except as otherwise provided by the development conditions, the registered operator of the ERA(s) must not: a) allow waste to burn or be burned at or on the premises to which this approval relates; nor b) remove waste from the premises to which this approval relates and burn such waste elsewhere unless it is a facility approved to burn such waste.
W2	**Waste handling** All waste generated in the carrying out of the ERA must be stored, handled and transferred in a proper and efficient manner.
W3	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 *Environmental Protection Act 1994*.
W4	**Waste records** Where regulated waste is removed from the site (other than by a release as permitted under another condition of this approval), the registered operator of the ERA(s) must monitor and keep records of the following: c) the date, quantity and type of waste removed; and d) name of the waste transporter and/or disposal operator that removed the waste; and e) the intended treatment/disposal destination of the waste. NOTE: Trackable wastes as listed in Schedule 1 of the Environmental Protection (Waste Management) Regulation 2000 are not covered by this condition. Trackable wastes have similar recording requirements to this condition in accordance wit ha waste tracking system established under the above Regulation.
W5	**Notification of Improper Disposal of Regulated Waste** If a person removes regulated waste associated with activities at the approved place and disposes of such waste in a manner which is not authorised or is improper or unlawful then, the registered operator must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.
Agency Interest — Social	
Condition number	**Condition**

S1	The registered operator of the ERA(s) must record the following details for all complaints received and provide this information to the administering authority on request. A record of following information must be kept for a period of three (3) years: (a) time, date, name and contact details of the complainant; (b) reasons for the complaint; (c) any investigations undertaken; (d) conclusions formed; and (e) any actions taken.
S2	In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically or the area where the site is located.

Definitions

Words and phrases used throughout this permit are defined below. Where a definition for a term used in this permit is sought and the term is not defined within this permit the definitions provided in the relevant legislation shall be used.

Administering authority means the Department of Environment and Science or its predecessor or successor.

Annual return means the return required by the annual notice (under section 316 of the *Environment Protection Act 1994)* for the section 73F registration certificate that applies to the development approval.

Approval means this environmental authority.

Approved place means the place approved under this approval for the carrying out of the specified environmentally relevant activities.

Buffer Storage Pond means the pond located on Lot 3 RP1 37856 used for the storage of treated effluent supplied from the Beenleigh Waste Water Treatment Plant.

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

cfu means colony forming units.

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.

Environmental nuisance means — unreasonable interference or likely interference with an environmental value caused by:

- Aerosols, fumes, light, noise, odour, particles or smoke; or
- An unhealthy, offensive or unsightly condition because of contamination; or
- Another way prescribed by regulation

Environmental Protection Agency means the department or agency (whatever called) administering the *Coastal Protection and Management Act 1995* or the *Environmental Protection Act 1994*

$L_{A\ 1,\ adj,\ 10\ mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) that is exceeded for 1% of any 10 minute measurement period, using time-weighting 'Fast'

$L_{A\ 10,\ adj,\ 10\ mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) that is exceeded for 10% of any 10 minute measurement period, using time-weighting 'Fast'.

$L_{A,\ 90\ T}$ **or** $L_{A\ bg\ T}$ means the A-weighted sound pressure level, obtained using time-weighting 'Fast' that is exceeded for 90% of the measuring period **(T)** (not less than 15minutes).

$L_{A\ eq,\ adj,\ 1hr}$ means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character that within a 1 hour period has the same mean square sound pressure of a sound that varies with time.

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

mg/L means milligrams per litre.

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

Median means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two (2) middle values.

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

Noise sensitive place means — any of the following places:

a) a dwelling; or

b) a library, childcare centre, kindergarten, school, college, university or other educational institution; or

c) a hospital, surgery or other medical institution; or

d) a protected area, or an area identified under a conservation plan as a critical habitat or an area of major interest, under the *Nature Conservation Act 1992*; or

e) a marine park under the *Marine Parks Act 1992*; or

f) a park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment).

Noxious means harmful or injurious to heal or physical well being.

NTU means nephelometric turbidity units.

Nuisance sensitive place means — any of the following places:

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

h) a motel, hotel or hostel; or

i) a library, childcare centre, kindergarten, school, college, university or other educational institution; or

j) a hospital, surgery or other medical institution; or

k) a park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment); or

l) a protected area; or

m) a place used as an office, business or commercial purposes; and includes a place within the curtilage of such, a place reasonably used by persons at that place.

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

Pond 4 refers to the Stormwater Management Pond, which receives blow down water from the cooling tower.

Pond 5 refers to the Wetland system.

Pond 6 refers to the additional reclaimed water storage pond, located adjacent to Pond 5.

Plant and equipment includes:

a) plant and equipment used to prevent and/or minimise the likelihood of environmental harm being caused, for example, demineraliser plants, reclaimed water storage/detention systems, turbine oil centrifuges, cooling water towers; and

b) devices and structures to contain foreseeable escapes of contaminants and waste, for example bunds, containment weirs, impermeable bases and walls to waste water storage ponds; and

c) pipework, ducting and associated structures used for transfer of oil, fuel, ash Reclaimed Wastewater, cooling water blow down, demineraliser effluent, effluents, gases; and

d) devices and structures used to store, handle, treat and dispose of waste, ash dam; and

e) monitoring equipment and associated alarms, for example high level alarms on tank storage, pH sensors; and

f) backup systems that act in the event of failure of primary systems, for example stand-by pumps; and

g) irrigation equipment and associated piping; and

h) pipelines associated with the Reclaimed Wastewater

Protected area means —

a) a protected area under the *Nature Conservation Act 1992*; or

b) a marine park under the *Marine Parks Act 1992*; or

c) a World Heritage Area.

Rainfall event means 25mm of rainfall over a 24hour period.

Receiving Environment for the purposes of the Receiving Environment Monitoring Program includes the Southern Drainage System and Behms Creek.

Reclaimed Wastewater pipeline or **Effluent pipeline** means any pipelines used to convey wastewater or reclaimed water within the cogeneration development as specified by the lots mentioned on the Development Approval. It does not include any pipelines associated with the delivery of effluent to the Buffer Storage Dam

Reclaimed water means all waters collected by the buffer storage pond, stormwater management pond, cooling tower blowdown, water treatment plant effluent and Rocky Point Sugar Mill discharges

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.

Site means land or tidal waters on or in which it is proposed to carry out the development approved under this approval.

Sodium Adsorption Ratio SAR = $\frac{x_{Na}}{\sqrt{(x_{Ca} + x_{Mg})}}$

Where X_{Na}, X_{Ca} and X_{Mg} denote respective concentrations of sodium, calcium and magnesium in milligram-moles per Litre.

Southern Drainage System mean the drainage line depicted in *Appendix 3- Land, Map 1- Receiving environment monitoring locations*.

Tidal water means the sea and any part of a harbour or watercourse ordinarily within the ebb and flow of the tide at spring tides.

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.

Watercourse means a river, creek or stream in which water flows permanently or intermittently:

- In a natural channel, whether artificially improved or not; or
- In an artificial channel that has changed the course of a watercourse.

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.

Wetlands means areas of permanent or periodic/intermittent inundation, whether natural or artificial, with water that is static of flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters. To be classified as a wetland the area must have one or more of the following attributes:

a. At least periodically the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle; or
b. The substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers; or
c. The substratum is not soil and is saturated with water, or covered by water at some time.

This definition is based on the broad wetland definitions set out in the Convention on Wetlands (Ramsar, Iran, 1971) or what is more commonly referred to as the Ramsar Convention, and the Strategy for the Conservation and Management of Queensland Wetlands (1999).

Works or **operation** means the development approved under this development approval.

You means the registered operator of the ERA(s) to which this approval relates or owner / occupier of the land which is the subject of this development approval.

APPENDIX 1- AIR

TABLE 1 – Release of Contaminants to the Atmosphere- Boiler(s) and Pollution Control Equipment

RELEASE POINT NUMBER(S)	SOURS DESCRIPTION	MINIMUM RELEASE HEIGHT (metres) ABOVE GROUND LEVEL	MINIMUM EFFLUX"' VELOCITY (metres/second) @ MAXIMUM CONTINUOUS RATING
RS1	30 MW	60 metres	20 ms^{-1}

"Efflux is a calculated value exiting the stack.

TABLE 2 – Release Limits of Contaminants to Atmosphere

Contaminant	Release Point Number	Release, Limit	Release Limit Units
Particulate Concentration Emission '	RS1	0.25	g/Nm^3
NOx[2]	RS1	0.5	g/Nm^3

[1] 12% CO_2 reference level

[2] Nitrogen oxides calculated as NO_2 at a 7 percent oxygen level

TABLE 3 – Monitoring of contaminant releases to the atmosphere

Contaminant	Release Point Number	Units	Monitoring Frequency
Particulate	RS1	g/Nm^3	Annually
NOx	RS1	g/Nm^3	Annually

APPENDIX 2 - WATER

TABLE 4 - RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE LIMIT	LIMIT TYPE	RELEASE POINT	MONITORING POINT	MONITORING. FREQUENCY
5- day Biochemical Oxygen Demand (mg/L)	20	Maximum	R1, R2 or R3	SP1	Weekly
Suspended Solids (mg/L)	50	Maximum			
pH (pH Units)	6.5-8.5	Range			
Total Nitrogen (mg/L)	12	Maximum			
	6	Maximum as from 2010 at maturation of wetland			
Total Phosphorus (mg/L)	4	Maximum			
	2.8	Maximum as from 2010 at maturation of wetland			
Dissolved Oxygen (mg/L)	4	Minimum			Daily
Free Chlorine Residual (mg/L)	0.7	Maximum			Weekly
Thermotolerant Coliforms (organisms/100ml)	<150	The median value of 5 consecutive samples			
	600	Maximum			
Enterococci (organisms/100ml)	N/A	N/A			
Total Copper (ug/L	50	Maximum			
Total Chromium (ug/L)	50	Maximum			
Total Arsenic (ug/L)	50	Maximum			
Total Dissolved Salts (mg/L)	3,000	Maximum			
Conductivity (uS/cm)	N/A	N/A			Daily

Table 5- Proposed Load Based Criteria

Parameter	Timeframe	Release Limit
Annual load based criteria – result assessed against 3 yearly rolling median		
Total Nitrogen	At approval of DA	Median <1122kg/yr1
	At 9 years from approval of DA	Median <156kg/yr*
Total Phosphorus	At approval of DA	Median <350kg/yr1
	At 9 years from approval of DA	Median <93kg/yr*

* This median release limit has been based on a maximum reclaimed water discharge volume of 78ML/yr.

Table 6 — Groundwater Water Quality Parameters and Sampling Frequencies

Water Quality Parameter	Monitoring Frequency
pH (pH scale)	Every month for the first two (2) years from the date of issuing of this development approval and then annually thereafter.
Major Anions (Chloride, Sulphate, Fluoride) (mg/L)	
Major Cations (Calcium, Magnesium, Sodium, Potassium, iron) (mg/L)	
Electrical Conductivity (mS/cm)	
Total Dissolved Solids (mg/L)	
Total Nitrogen (as Nitrogen, mg/L)	
Nitrite Nitrogen (as Nitrogen, mg/L)	
Nitrate Nitrogen (as Nitrogen, mg/L)	
Total Phosphorus (mg/L as Phosphorus)	

APPENDIX 3- LAND

Table 7 — Contaminant release limits to land

Quality Characteristic	Release Limit (long term trigger value LTV (up to 100yrs)	Limit Type	Monitoring Frequency	Monitoring location
pH (pH units)	6.5 to 8.5	range	Monthly	SP1
Electrical Conductivity (dS/m)	2.2	maximum	Monthly	SP1
Total Dissolved Solids (mg/L)	1,500	maximum	Monthly	SP1
Sodium Adsorption Ratio (SAR)	10	maximum	Quarterly	SP1
Residual alkali (RA) (meq/L)	0-0.6	range	Quarterly	SP1
Suspended Solids (mg/L)	50	maximum	Monthly	SP1
Biochemical Oxygen Demand [filtered], [inhibited] (mg/L)	20	maximum	Monthly	SP1
Dissolved Oxygen (mg/L)	2.0	minimum	Quarterly	SP1
Total Nitrogen (mg/L)	N/A	N/A	Quarterly	SP1
Nitrate- Nitrogen (mg/L)	N/A	N/A	Quarterly	SP1
Total Phosphorus (mg/L)	N/A	N/A	Quarterly	SP1
Thermotolerant [Faecal] Coliforms Colony forming units [cfu] per 100 mL [expressed as a median]	N/A	N/A	Quarterly	SP1
Aluminium (mg/L)	5.0	maximum	Annually	SP1
Arsenic (mg/L)	0.10	maximum	Annually	SP1
Beryllium (mg/L)	0.10	maximum	Annually	SP1
Boron (mg/L)	4.0	maximum	Quarterly	SP1
Cadmium (mg/L)	0.01	maximum	Annually	SP1
Calcium (milli-equivalents/L)	N/A	N/A	Quarterly	SP1
Chloride (mg/L)	N/A	N/A	Quarterly	SP1
Chromium VI (mg/L)	1.0	maximum	Annually	SP1
Cobalt (mg/L)	0.05	maximum	Annually	SP1
Copper (mg/L)	0.20	maximum	Annually	SP1
Fluoride (mg/L)	1	maximum	Annually	SP1
Iron (mg/L)	1.0	maximum	Annually	SP1
Lead (mg/L)	0.20	maximum	Annually	SP1
Lithium (mg/L)	2.5	maximum	Annually	SP1
Magnesium (milli-equivalents/L)	N/A	N/A	Quarterly	SP1
Manganese (mg/L)	2.0	maximum	Annually	SP1
Mercury (mg/)	0.002	maximum	Annually	SP1

Molybdenum (mg/L)	0.01	maximum	Annually	SP1
Nickel (mg/L)	0.20	maximum	Annually	SP1
Selenium (mg/L)	0.02	maximum	Annually	SP1
Sodium (milli-equivalents/L)	N/A	N/A	Quarterly	SP1
Sulphate (mg/L)	N/A	N/A	Annually	SP1
Toxic Algae (cell/mL)	N/A	N/A	Upon detection	SP1
Uranium (mg/L)	0.01	-	-	SP1
Vanadium (mg/L)	0.1	-	-	SP1
Zinc (mg/L)	2.0	maximum	Annually	SP1
Reclaimed water application rate per lot (mm/ha/yr)	-	-	continuous	SP1

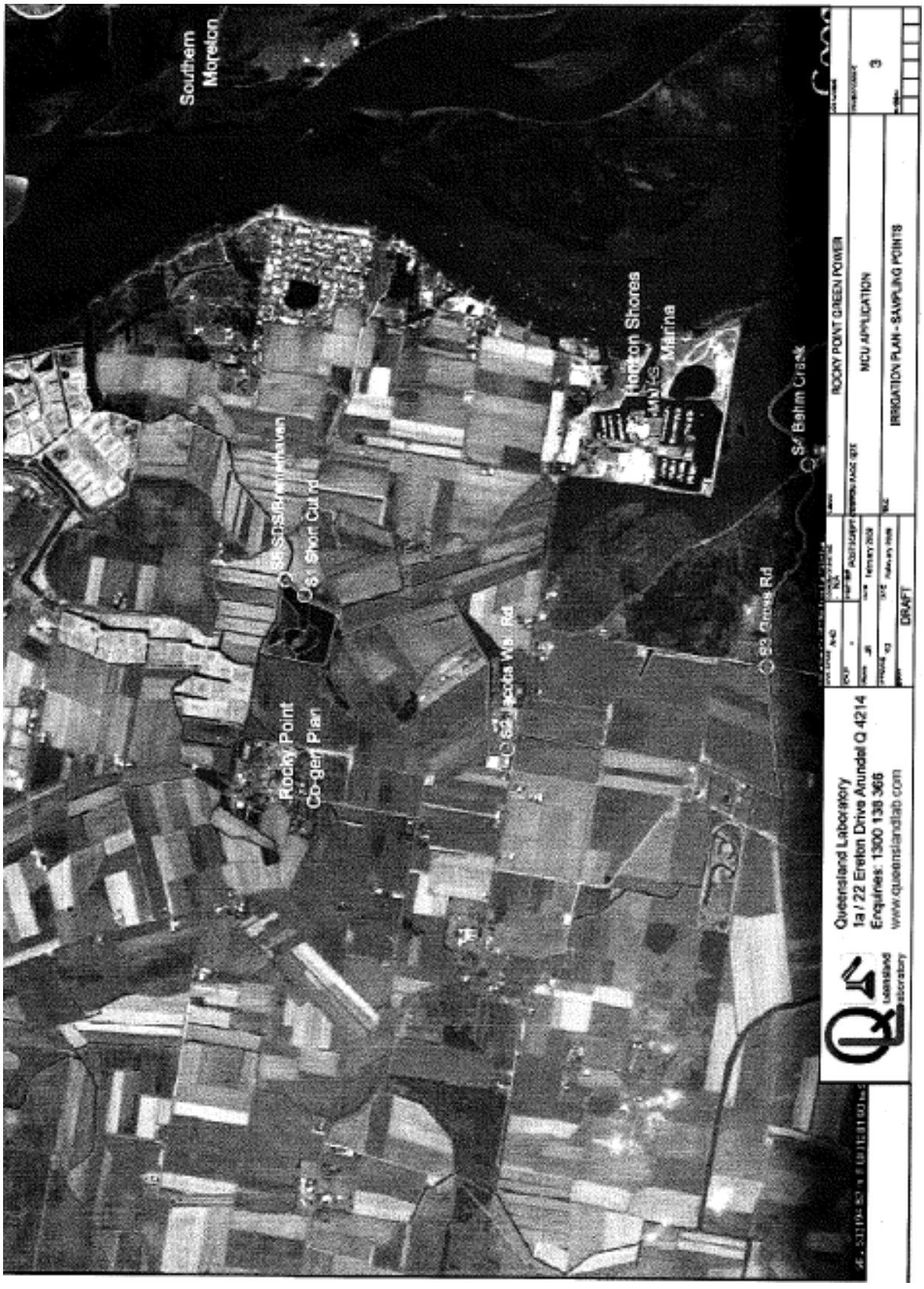
Table 8 – Soil Monitoring

Quality Characteristics	Units	Monitoring Frequency
pH	pH scale	Six monthly for the first two years, then annually
Salinity (EC)	dS/m	
Sodicity [ESP]		
Heavy metals [Aluminium, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium VI, Cobalt, Copper, Fluoride, Iron, Lead, Lithium, Mercury, Manganese, Mercury (inorganic), Molybdenum, Nickel, Selenium, Uranium, Vanadium, Zinc]	mg/kg	

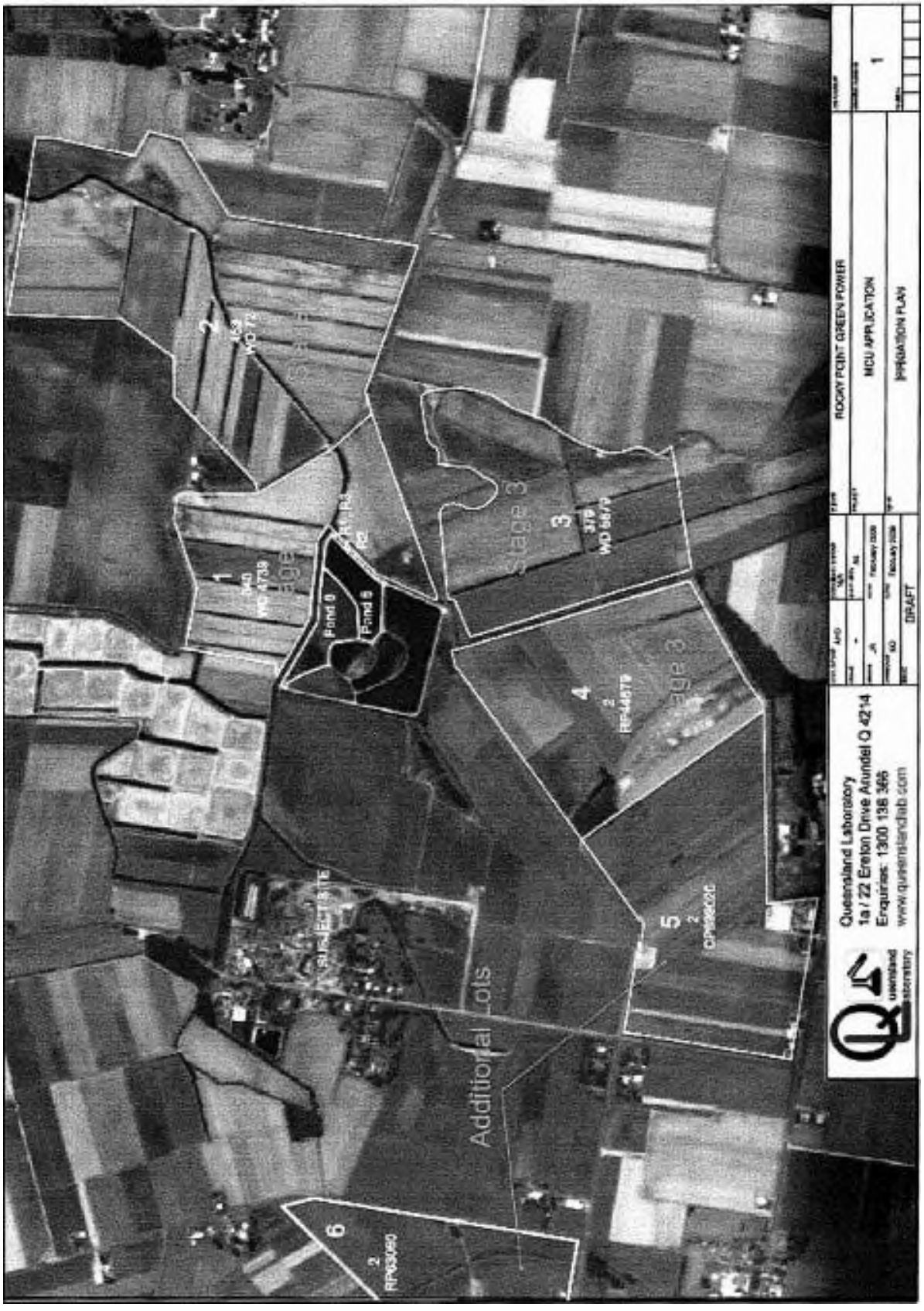
TABLE 9 – On-going release reduction strategy

Stage	Works	Commence	Completion
Stage 2	• Implementation of irrigation infrastructure and commencement of irrigation onto Lot 463 WD72 (total area 47.8390m^2); and	31st July 2009	
	• Implement pipe work to the far east of Pond 5 and the initiation of Stage 3		31st August 2009
Stage 3	• Investigation into the plants capacity to provide sufficient volumes of water for Stage 3 whilst maintaining the wetland operating at optimal		31st January 2010
	• Commencement of irrigation onto Lot 379 WD5679 (total area 26.06m2) and Lot 2 RP44579 (total area 20.2340m2) dependent on the plants capacity to maintain the wetland with sufficient water to operate at optimal efficiency; • Additional irrigation land available if required – Lot 2 CP899020, (total area 28.9300m^2) and Lot 2RP63080 (total area 16.39m^2).		30th November 2013

Map 1- Receiving environment monitoring locations



Map 2 – Irrigation release locations



APPENDIX 4 – NOISE

Table 10 – Noise limits

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10,adj,\ 10\ mins}$	Bkg + 5	Bkg + 5	Bkg + 0	Bkg + 5	Bkg + 5	Bkg + 0
$L_{A1,adj,\ 10\ mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
	Noise measured at a 'Commercial place'					
$L_{A10,adj,\ 10\ mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
$L_{A1,adj,\ 10\ mins}$	Bkg + 15	Bkg + 15	Bkg + 10	Bkg + 15	Bkg + 15	Bkg + 10

END OF ENVIRONMENTAL AUTHORITY