Permit[1]

Environmental Protection Act 1994

Environmental authority

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

Permit[1] number: EPPR00321613

Environmental authority takes effect on the day the environmental authority is issued.

The first annual fee is payable within 20 business days of the effective date.

The anniversary date of this environmental authority is the same day each year as the effective date. An annual return and the payment of the annual fee which is currently $2,318.40 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
DS Farms Pty Ltd	197 Rossman Road STAPYLTON QLD 4207

Environmentally relevant activity and location details

Environmentally relevant activity	Location(s)
1-(1b) Aquaculture >10ha but <100ha land	505 Rotary Park Road Alberton - Lot 1 Plan RP6855, Lot 2 Plan RP6855 and Lot 48 Plan RP908686

Additional information for applicants

Environmentally relevant activities

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

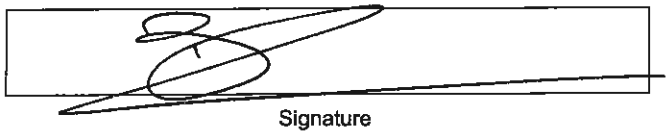
An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

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

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

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.



Signature

01/08/2013

Date

Brett Glosko
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

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Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority

Location: 505 Rotary Park Road Alberton - Lot 1 Plan RP6855, Lot 2 Plan RP6855 and Lot 48 Plan RP908686

Relevant activity:

1-(1b) Aquaculture >10ha but <100ha land.

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

Schedule A - Activity	
Condition number	**Condition**
A1	In carrying out the environmentally relevant activity, 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 be prevented, shall be carried out in a proper manner in accordance with the conditions of this environmental authority. NOTE: This environmental authority authorises the environmentally relevant activity. It does not authorise environmental harm unless a condition contained within this environmental authority explicitly authorises that harm. Where there is no condition or the environmental authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.
A2	**Display of Environmental Authority** A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activities.
A3	**Maintenance of Measures, Plant and Equipment** The operator of an ERA to which this environmental authority relates must: - install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and - maintain such measures, plant and equipment in a proper and efficient ,condition; - and operate such measures, plant and equipment in a proper and efficient manner.

A4	**Calibration** All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be appropriately calibrated, operated and maintained.
A5	No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided by this environmental authority. An example of a substantial increase in the risk of environmental harm is an increase of 10% or more in the quantity of the contaminant to be released into the environment.
A6	**Aquaculture Operation (General)**
	The licensee must ensure that the operation and maintenance of the aquaculture facility is carried out by or under the supervision of person(s) competent to operate and maintain the aquaculture facility.
A7	Where any new aquaculture species other the propagation or rearing of marine, estuarine or freshwater prawns is to be undertaken the operator of an ERA to which this environmental authority relates must notify the administering authority not less than twenty-eight (28) days prior to stocking the new species. Note: This environmental authority condition does not apply to species propagated or reared as a means of biologically treating effluent from the prawn farm.
A8	Excepting any reconfiguration of wastewater treatment ponds or grow out ponds to improve raw water storage and /or wastewater treatment, siting of the activities is to be in accordance with the operator of an ERA to which this environmental authority relates, advice of configuration and operational grow out pond area as per the site plan in Schedule I.
A9	With the exception of the chilling and packaging of any aquaculture species for live sale, the only aquaculture species permitted to be processed at the premises is prawns
A10	The environmentally relevant activities must be carried in compliance with the *"Environmental Code of Practice for Australian Prawn Farmers, September 2001"* produced by the Australian Prawn Farmers Association or more recent editions or supplements to that document as such become available.
A11	**Chemical Usage**
	The operator of an ERA to which this environmental authority relates must keep a record of the use of all chemicals added to the prawn grow out ponds or wastewater treatment system, including those added for the control of algae, parasites and diseases and those added to prawn feed including veterinary, antibiotic and prophylactic chemicals must be recorded in a table with the following details on each of the chemicals, type of chemical, date at which the chemical was added, the amount of chemical(s) added, type of receiving waters (e.g. grow out pond or wastewater treatment pond) and the date of the next water release after the chemicals have been added.
A12	**Integrated Environmental Management System (IEMS)**
	The operator of an ERA to which this environmental authority relates must implement and maintain an Integrated Environmental Management System (IEMS) which provides for the effective management by the holder of the actual and potential environmental impacts resulting from the carrying out of the activities.

A13	**The IEMS must provide for at least the following functions:** (a) monitoring of the release of contaminants into the environment including procedures, methods, record keeping and notification of results; (b) staff training and awareness of environmental issues related to carrying out the activities, which must include at least: - the environmental policy of the holder, such that all persons that carry out the activities are aware of all relevant commitments to environmental management; and - any relevant environmental objectives and targets, such that all staff are aware of the relevant performance objectives and can work towards these; and - control procedures to be implemented for routine operations for day to day activities to minimise likelihood of environmental harm, however occasioned or caused; and - contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and hazards including corrective responses to prevent and mitigate environmental harm (including any necessary site rehabilitation); and - organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to manage environmental issues effectively; and - effective communication to ensure two-way communication on environmental matters between operational staff and higher management; - their obligations in respect of monitoring, notification and record keeping obligations under the IEMS and relevant environmental authorities; and (c) conducting assessment of the environmental impact of any release of contaminants into the environment; (d) periodic conduct of energy audits and review of environmental performance and procedures adopted, not less frequently than after each season for reviewing environmental performance and once every five years for energy audits; and (e) waste prevention, treatment and disposal; and (f) a program for continuous improvement.
A14	An up to date copy of the IEMS must be kept at the premises with a further copy provided to the administering authority, including provision of any amendments within 30 days of completion.
A15	The operator of an ERA to which this environmental authority relates must not implement or amend an IEMS (including any environmental management plan) that contravenes any condition of this environmental authority.
Schedule B - Water	
Condition number	**Condition**
B1	**Agreements for Intake and Discharge** Where the operator of an ERA to which this environmental authority relates requires permission for lawful use of intake and or discharge structures from the owner(s) of land other than that to which this environmental authority relates, then, prior to carrying the environmentally activities, the operator of an ERA to which this environmental authority relates must enter into and maintain a written agreement with such owner(s), to permit intake of water and discharge of waste water (as relevant), including all necessary maintenance.
B2	A copy of the written agreement must be forwarded to the administering authority within thirty days of it becoming available to the operator of an ERA to which this environmental authority relates.

B3	**Intake Points** Water may only be drawn into the aquaculture facility from the intake point(s) depicted on the site plan in Schedule I.
B4	**Grow out Pond Area** The maximum area of aquaculture grow out ponds permitted to be used under this environmental authority is restricted to 14.4 Hectares. This area does not include any waste water treatment ponds such as settlement ponds or ponds containing animal or plant species whose primary purpose is biologically treating the effluent to improve its quality.
B5	**Pond Conditions** All ponds including the grow out ponds and settlement ponds must be installed and maintained to ensure the stability of the pond's construction Including measures to minimise erosion of the pond walls, for example, maintenance of the banks in a vegetated state.
B6	**Release of Contaminants to Waters** The only contaminants permitted to be released from the premises at the release point are: (i) effluent from the aquaculture grow out ponds; (ii) effluent from the wastewater treatment system(s); and (iii) waste water from the processing of prawns.
B7	**Discharge Release Point** The contaminants specified in B6 may only be released either directly or indirectly from the premises to any waters, at the release point(s) described below: Release Point SW2 Release to the Logan River via a discharge structure as marked on site plan in Schedule I.
B8	The release of contaminants to waters from the outfalls must be carried out in such a manner, which does not adversely impact on marine plants, mangrove vegetation, the banks or bed of the waterway or the habitat in general. This condition includes ensuring ongoing stabilisation of the discharge drain to ensure that no disturbance to marine plants, mangrove vegetation, the banks or bed of the waterway or the habitat in general occurs.
B9	**Nitrogen Release Limits** A nitrogen load of 1 kg/Ha/day for the total grow out pond area of 12 hectares is permitted. The total nitrogen release limit is calculated over the 210 day prawn growing season. Release of nitrogen outside of the grow out season is subject to approval from the Administering Authority.
B10	**Contaminant Release Loads** The total quantity of contaminants released from release point SW2 during any day must not, either alone or in aggregate with any other releases from environmentally relevant activities associated with the activities carried out at the licensed place, exceed any of the load limits for each contaminant specified in Schedule B Table 1.

SCHEDULE B TABLE 1 – RELEASE LOAD LIMIT

CONTAMINANT	RELEASE LOAD LIMIT	LIMIT TYPE
Suspended Solids	120 kg/day	Average of daily net loads released over the prawn growing season.
Suspended Solids	25200 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Phosphorus	1 kg/day	Average of daily net loads released over the prawn growing season.
Total Phosphorus	210 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Nitrogen	12 kg/day	Average of daily net loads released over the prawn growing season.
Total Nitrogen	2520 kg/annual season	Total of daily net loads released over the annual prawn growing season.

Notes to Schedule B Table 1

- *The contaminant release loads are calculated on the basis of the agreed grow out pond sizes as at 6 February 2004. The loads in Table 1 are calculated on the basis of the historical grow out pond area of approximately 12 hectares. Any expansion of grow out ponds is not permitted.*
- *The nitrogen release load is calculated based on 1 kg/Ha/day.*
- *Average of daily net loads as calculated under the load calculation condition in Condition B32 Load Calculation and Definitions Schedule H.*
- *Total of daily net loads released over the annual prawn growing season means the sum of the daily loads, as calculated under Load Calculation Condition B32, over the annual prawn growing season of 210 days.*
- *Approval conditions such as nitrogen load will be reviewed as per the results of the findings of the Research Project (refer Condition B36 Contribution to Research and Development).*
- *An exceedence of release load limits constitutes a non-compliance.*

B11	**Contaminant Release Limits** The release of contaminants to waters must comply, at the sampling and in flow monitoring point(s) specified in condition B25, with each of the limits specified in Schedule B, Table 2 for each quality characteristic. These limits apply to releases that arise from carrying out environmentally relevant activities at the premises and also any aggregate releases from elsewhere.

SCHEDULE B TABLE 2 - RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE POINT NUMBER	RELEASE LIMITS	LIMIT TYPE
pH (pH Units)	SW2	6.5 - 9	Range
Dissolved Oxygen (mg/L)	SW2	4.0 or 90% of background value, whichever is greater	Minimum
Suspended Solids (mg/L)	SW2	30	Average over prawn growing season
Suspended Solids (mg/L)	SW2	50	Maximum
Total Nitrogen (mg/L)	SW2	3 plus ambient median Total Nitrogen (mg/L)	Maximum
Total Phosphorus (mg/L)	SW2	0.3 plus ambient median Total Phosphorus (mg/L)	Maximum
Free Chlorine Residual (mg/L)	SW2	0.01	Maximum

Notes to Schedule B Table 2

- *Dissolved oxygen measurements must be taken at the discharge and intake sample points within one hour of each other on the same day to determine 90% of background*
- *Ambient median total nitrogen and total phosphorus means the respective values of these parameters in mg/L as calculated from the long-term median results obtained from the administering authority ambient water quality monitoring near the facility mentioned in Condition B33. As an alternative, the holder may elect in writing to utilise inlet water quality monitoring data provided that it is demonstrably representative of ambient receiving water quality and administering authority agrees to such in writing*

B12	Release of contaminants (either alone or in aggregate with other releases mentioned above) to waters must comply with the following qualitative characteristics: (a) The release must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter. (b) The release must not produce any plume or other visible evidence of the release of suspended solids or other contaminants which adversely affects the values of the receiving environment.
B13	**Times of Release** Where reasonable and practicable, the release of contaminants to waters must only occur from local high water until two (2) hours before local low water.
B14	Notwithstanding condition B13, if the release is an overflow from an effluent settlement or treatment pond due to heavy or prolonged rainfall at the premises, the release may only be continuous provided the release does not adversely affect other users of Logan River waters. This condition does not apply in circumstances of floods causing overflows or overtopping of ponds.

B15	**Release Period (Penaeid Prawn Cultivation)** No release of contaminants from either the prawn grow out ponds or the wastewater treatment system where the release is directly or indirectly derived from Penaeid prawn grow out ponds is permitted between 14 June and 1 November in any year, excluding any contaminant release: (a) for the purpose of maintaining stocks of *Penaeus japonicus* later than 14 June for later sale or other purpose; (b) for the sole purpose of maintaining during the non-grow out season, a stock of organisms to effect biological treatment of waste waters; and (c) due to an emergency circumstance caused by inadvertent intake of contaminated river water and providing the release does not aggravate the contamination problem or affect other aquaculture operations.
B16	**Water Quality Release Continual Improvement Plan** Notwithstanding attainment of the release limits for total nitrogen and total phosphorus, the operator of an ERA to which this environmental authority relates must implement continual improvement by implementing all reasonable and practicable measures to reduce the mass load of total nitrogen and total phosphorus released per day into the receiving environment, as such measures become practicable to implement in prawn farming operations. Such measures may include but not be limited to increased recycling of effluent, additional or more effective effluent treatment, bioremediation ponds, improved food conversion ratios and use of lower protein feeds. "practicable to implement in prawn farming operations" in this condition shall mean practicable on an ongoing basis with good environmental management and shall exclude low nutrient outcomes achieved due to poor survival rates and infrequent exceptional results"
B17	Measures implemented under this continual improvement program must be described and submitted to the administering authority with each annual return.

B18	The Water Quality Release Continual Improvement Report must include the following information for each species cultivated, for the year addressed in the report: (i) number of hectares stocked; (ii) stocking rate used; (iii) survival rate; (iv) production (kg/ha); (v) feed conversion ratio; (vi) proportion of waste water recycled versus discharged (vii) comparison of preceding years stocking rate, survival rate, production, feed conversion ratio, and waste water recycling rate and the number of hectares stocked with the current year; (viii) the net loads and concentrations of Total Nitrogen and Total Phosphorus released as measured and calculated under this environmental authority, compared with the relevant limits and targets specified in this environmental authority and with the previous year's results; (ix) practices and procedures undertaken during the preceding twelve (12) months to reduce the net load of Total Nitrogen and Total Phosphorus discharged into the receiving environment; (x) practices and procedures that will be implemented to further reduce the net load of Total Nitrogen and Total Phosphorus released into the receiving environment for the following year where necessary, i.e. in cases where net loads are greater than industry benchmarks achieved using best practices environmental management.
B19	The requirement for a Water Quality Release Continual Improvement Report does not apply in the case that the environmentally relevant activity is carried out: (i) by recycling effluent during the whole of the prawn grow out season and the only contaminant releases to waters that occur (excluding any staged end of season pond drainage) are overflows of storm water runoff and waste waters from grow out and treatment ponds that are solely caused by rainfall causing overtopping of such ponds; or (ii) such that concentration limits for total nitrogen and total phosphorus are complied with and the average net load of total nitrogen released to waters as calculated under this environmental authority is zero or less.
B20	**Monitoring of Waters** All determinations of all quality of waters must be made in accordance with methods prescribed in the administering authority's Monitoring and Sampling Manual 2009, Version 2 September 2010, or more recent editions or supplements to that document as such become available
B21	All determinations of the quality of waters must be performed by a person or body possessing appropriate experience and qualifications to perform the required measurements.
B22	For the purposes of this environmental authority any determination or result recorded as less than the limit of detection is taken as at the limit of detection for that particular determination method.

B23	**Monitoring of Volume of Intake and Release to Waters** The operator of an ERA to which this environmental authority relates is responsible for ensuring the determination and keeping of records of the total daily volume of water drawn into the prawn farm at the intake point specified in Condition B3 and the total daily volume of water released from Release Point SW2.
B24	The operator of an ERA to which this environmental authority relates is responsible for ensuring the determination and keeping of records of the daily volume of water released for the release point specified in Condition B7.
B25	**Sampling and Inflow Monitoring Point Details:** Determinations of the quality of contaminants released to waters to check compliance with the release characteristics specified in Schedule B Table 2 of this environmental authority must be undertaken at the sampling and in flow monitoring point(s) described as: SW1 Samples are to be taken from the Logan River, from a position representative of waters drawn into the facility, opposite the intake channel located as marked on the site plan in Schedule I. SW2 Samples are to be taken on the prawn farm side of the discharge structure, as marked on the site plan in Schedule I.
B26	Determinations of the quality of contaminants released to waters must be undertaken at a time when it is estimated that maximum flow rate is occurring from the outlet and must include sampling during drainage of ponds contents at least twice.
B27	Samples of intake water quality and release quality must be taken at the discharge and intake points on the same day.
B28	Monitoring the quality of water drawn into the prawn farm must be limited to samples taken on the incoming tide at a time within two hours of local high water when the intake pumps are operating.
B29	The operator of an ERA to which this environmental authority relates is responsible for the making of determinations of the quality of the contaminants released at the release point described in B7, for the quality characteristics in Schedule B Table 2, at the sample point SW2 described in Condition B25, and at the frequency specified in Schedule B Table 3.

SCHEDULE B TABLE 3 - SAMPLE METHOD, MONITORING POINT AND FREQUENCY FOR RELEASE

QUALITY CHARACTERISTIC DETERMINATION	SAMPLING METHOD	SAMPLE AND MONITORING POINTS	FREQUENCY
Suspended Solids (mg/L)	Grab Sample	SW2	In the first and third week of each month whilst discharging
pH (pH units)	Inflow sample	SW2	Weekly whilst discharging
Free Chlorine Residual (mg/L)	Grab Sample	SW2	Applies only if chlorine is used. Daily, whilst discharging chlorinated wastewaters
Dissolved Oxygen (mg/L)	Inflow sample	SW2	Weekly whilst discharging
Total Nitrogen as N, derived from the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen (mg/L)	Grab Sample	SW2	In the first and third week of each month whilst discharging
Total Phosphorus as P (mg/L)	Grab Sample	SW2	In the first and third week of each month whilst discharging

B30 The operator of an ERA to which this environmental authority relates is responsible for the making of determinations of the quality of the waters drawn into the prawn farm at the intake sampling point SW 1 described in condition B25 for the quality characteristics in Schedule B Table 4. In relation to suspended solids, total nitrogen and total phosphorus, this condition applies subject to condition B33.

SCHEDULE B TABLE 4 - QUALITY CHARACTERISTICS FOR INTAKE

QUALITY CHARACTERISTICS	SAMPLING METHOD	INTAKE MONITORING POINT NUMBER	FREQUENCY
pH (pH Units)	In flow sample	SW1	Weekly whilst discharging
Dissolved Oxygen (mg/L)	In flow sample	SW1	Weekly whilst discharging
Suspended Solids (mg/L)	Grab sample	SW1	In the first and third week of each month whilst in taking
Total Nitrogen (mg/L)	Grab sample	SW1	In the first and third week of each month whilst in taking
Total Phosphorus (mg/L)	Grab sample	SW1	In the first week and third of each month whilst in taking

B31 **Calculation of Loads of Total Nitrogen, Total Phosphorus and Total Suspended Solids Released**

The daily net load (in kilograms) of the contaminants suspended solids, total nitrogen and total phosphorus released to waters per day shall be determined or calculated and records kept of such determinations or calculations.

B32	The net kilograms of contaminant released each day shall be calculated for each day according to the following formula: **Daily Net Load (kg) = (Dis. Conc. – Intake Conc.) X Dis. Vol.** Where: **Dis. Conc.** = discharge waste water contaminant concentration (in mg/L) measured that day or on the most recent sampling occasion if not measured that day. **Intake Conc.** = corresponding long term median ambient intake water concentration tabulated hereunder, If the operator of an ERA to which this environmental authority relates elects to monitor inlet water quality in accordance with the option in Condition B30, "intake conc." is the contaminant concentration (in mg/L) measured that day or on the most recent sampling occasion if not measured that day. **Dis. Vol.** = the volume (in megalitres) of wastewater discharged that day.
B33	The data to be used in calculating net loads of total nitrogen, total phosphorus and suspended solids is the corresponding median result listed in Table 5 below from long term ambient water quality monitoring conducted at Administering Authority site "LOG-7,S" in the Logan River near the facility unless the operator of an ERA to which this environmental authority relates: (a) in accordance with the conditions of this environmental authority, elects to determine and keep records of suspended solids, total nitrogen and total phosphorus in inlet waters. If the holder operates under this option, the operator of an ERA to which this environmental authority relates must advise the administering authority of this election in writing and carry out monitoring of all quality characteristics in Schedule B Table 4, or; (b) carries out a long term monitoring program over at least two years to determine representative quality of waters in the main channel of the Logan River opposite the farm, in accordance with the Australian & New Zealand Environment & Conservation Council's "Australian Water Quality Guidelines for Fresh and Marine Waters", December 2000 to incorporate an amendment of the relevant values specified in this environmental authority and such amendment is made.
	SCHEDULE B TABLE 5 - LOGAN RIVER LONG TERM AMBIENT WATER QUALITY MONITORING RESULTS

QUALITY CHARACTERISTIC	INTAKE WATER CONCENTRATION* (mg/L)
Suspended Solids	15
Total Nitrogen	0.65
Total Phosphorus	0.16

* As calculated from long-term median results obtained from administering authority's ambient water quality monitoring conducted at administering authority site "LOG- 7.8"

B34	From the calculations of daily loads, calculations must be made and records kept of the following for suspended solids, total nitrogen and total phosphorus: (a) average of daily net loads released over the annual prawn growing season; (b) total of daily net loads released per month; (c) total of daily net loads released over the annual prawn growing season
B35	Records must be kept of all data used to calculate mass loads, including volumes of wastewater released, dates releases occur, discharge water quality and intake water quality.

B36	**Receiving Environment Monitoring Program** The operator of an ERA to which this environmental authority relates must implement a Receiving Environment Monitoring Program (REMP) to gauge the extent of the initial mixing zone and monitor the effects of the release of contaminants on the "receiving environment" to effectively determine whether environmental values potentially affected by the contaminant releases are being protected. These values are protection of a modified aquatic ecosystem and primary industries (protection of cultured fish, molluscs and crustaceans). "Receiving environment" for the purpose of the Receiving Environment Monitoring Program means the Logan River opposite and in the vicinity where contaminant releases occur. For the purposes of this condition, environmental values are considered to be harmed and not protected if the water quality guidelines for the indicators for environmental values prescribed in the Environmental Protection (Water) Policy 2009 are not being met, including any water quality objectives adopted pursuant to Section 6 of that Policy,
B37	The REMP must include monitoring of: (a) Total nitrogen; total phosphorus; chlorophyll 'a', dissolved oxygen, temperature, water clarity and salinity (at one site opposite the release point in receiving waters fortnightly during the grow out season and two weeks following cessation of discharge); and (b) An annual survey of an appropriate bio-indicator such as one mentioned in the Aquaculture CRC Limited Final Scientific Report on "Project E1: Pond and Effluent Management" to monitor the approximate extent of potential adverse effects the release.
B38	For the purposes of ensuring usefulness and comparison with other waterway results, sampling protocols such as position in river, depth and state of tide must comply with those followed in Regional programs that monitor southeast Queensland waterways.
B39	All determinations of the quality of waters under the REMP must be made in accordance with methods prescribed in the administering authority's Monitoring and Sampling Manual 2009, Version 2 September 2010, or more recent editions or supplements to that document as such become available.
B40	All determinations of the quality of waters and bio-indicators must be performed by a person or body possessing appropriate experience and qualifications to perform the required determinations.
B41	Records must be kept of the results of all determinations and monitoring carried out under the REMP for a period of at least 5 years.
B42	At twelve (12) monthly intervals from the date of commencement of the REMP, the operator of an ERA to which this environmental authority relates must carry out an equivalent study or an alternative study must report to the administering authority the data and findings of the receiving environment monitoring program carried out.
B43	The report on the receiving environment monitoring program (REMP) must address at least the following: (i) a detailed description of the methodology used in the REMP; and (ii) a detailed description and analysis of the results of the REMP; and (iii) an assessment of the quality of waters monitored and whether relevant environmental indicator values are complied with or exceeded; and (iv) an assessment of the estimated spatial impact of contaminant release upon the receiving environment based upon monitoring of bio-indicators; and (v) a summary of recommendations that can be drawn from the findings of the REMP with respect to the prevention or minimisation of the impacts of the contaminant releases on the receiving environment

B44	To remove any doubt, it is declared that the operator of an ERA to which this environmental authority relates may use the results of ambient water quality monitoring for the purposes of calculating inlet water quality under this schedule and in calculating discharge limits for total nitrogen and total phosphorus under Schedule B Table 3, Samples taken from inlet works not complying with the REMP monitoring protocols are not equivalent for REMP monitoring,
B45	**Involvement in Regional Monitoring Studies** As an alternative to carrying out the Receiving Environment Monitoring Program specified in this schedule, the operator of an ERA to which this environmental authority relates may become and remain a "participating member" in the following regional water quality and ecosystem health monitoring studies, or any equivalent program: (i) the Southeast Queensland Regional Water Quality Management Strategy; and (ii) the Ecosystem Health Monitoring Program.
B46	The operator of an ERA to which this environmental authority relates is deemed by the administering authority to be a "participating member" in regional studies in the following situations: (a) The operator of an ERA to which this environmental authority relates is a 'contributing member', to the regional studies of water quality and ecosystem health; and (b) The operator of an ERA to which this environmental authority relates is identified as a 'contributing member' in a written statement to the administering authority from the authority carrying out the regional studies; and (c) The operator of an ERA to which this environmental authority relates continues to be a 'contributing member', of such regional studies. "Contributing member" means that the operator of an ERA to which this environmental authority relates contributes towards the reasonable cost of environmental monitoring studies undertaken relevant to potential impacts of the environmentally relevant activities whereby the amount is agreed to between the operator of an ERA to which this environmental authority relates and the authority carrying out the regional studies and the formula used in determining reasonable cost takes into account the number of grow out ponds stocked and whether or not the farms fully recycle effluent throughout the grow out season.

Schedule C - Air	
Condition number	**Condition**
C1	**Dust Control** In the event of a complaint about an environmental nuisance caused by release of dust beyond the boundaries of the licensed place, the operator of an ERA to which this environmental authority relates must install and operate dust minimisation systems to the extent that any environmental nuisance is prevented e.g. water sprays, vehicle adherence to restricted speed limits.

Schedule D - Storm water Management	
Condition number	**Condition**
D1	**Spillage Control** Any spillage of wastes, 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 external storm water drainage system, roadside gutter or waters.
D2	**Storage of Chemicals and Fuels**
	Any liquids stored on site that may cause environmental harm, including all chemicals, and fuels must be stored in an effective on-site containment system (including base and walls) that is impervious to the materials stored and sized to contain at least: - 110% of the tank's volume if a single tank storage; - 100% of the largest storage tank plus 10% of the second largest tank if a multiple tank storage; or - at least 25% of the maximum design storage volume if a drum storage.
D3	All containment systems must be roofed where practicable.
D4	Where it is impractical to completely roof a containment system area, the holder of this environmental authority must ensure that any storm water captured within the bund is free from contaminants or wastes prior to any release.
D5	All un-washed empty drums must be stored on a concrete hardstand area with their closures in place.
D6	Washing, degreasing, servicing or other maintenance of vehicles, plant, or other equipment must not occur on the premises in any area where resulting contaminants will or may be released to any external storm water drain, land or waters.
D7	**Contaminant Releases Caused by Rainfall** Diversion drains, appropriate grades or equivalent must be installed to ensure surface waters from disturbed areas, including operational or trafficable areas and pond walls, are diverted to either the wastewater treatment system or grow out ponds.
D8	Drainage through and from all trafficable areas and production activities must be designed to minimise surface flow velocities.
D9	**Pond Sludge Conditioning Areas** Diversion drains, appropriate grades or equivalent must be installed to ensure that runoff from pond sludge conditioning areas, areas containing pond sludge (including areas where pond sludge has been used as fill), and any leachate derived from these areas must be diverted to either grow out ponds or the wastewater treatment system.
D10	**Acid Sulphate Soil Management**
	At least twenty-eight days prior to the commencement of disturbing, extracting or unearthing or drain maintenance of any soils below 5 metres AHD, an Acid Sulphate Soil Investigation must be completed and an Acid Sulphate Soil Investigation Report on this investigation provided to the administering authority.

D11	The Acid Sulphate Soil Investigation report must provide information relating to the extent of any acid sulphate soils potentially affected or disturbed by the activities, any if any such soils are detected, the proposed management procedures must provide for the effective and appropriate environmental management of the Acid Sulphate Soils.
D12	Acid sulphate soil investigations and tests are to be carried out in the manner prescribed in the "Instructions for the Treatment and Management of Acid Sulphate Soils 2001" or more recent editions or supplements to that document as such become available.
D13	The management of the acid sulphate soils must: (i) comply with "Instructions for the Treatment and Management of Acid Sulphate Soils 2001"; and (ii) be such that contaminants are not directly or indirectly released, as a result of the activity, to any waters or the bed and banks of any waters.
D14	Records must be kept of the results of all testing of acid sulphate material for at least the following details: (i) date soil sample collected; (ii) location of soil sample; (iii) laboratory where soil sample analysis undertaken; and (iv) results of soil sample analysis
D15	Receiving waters must not be used as a neutralisation agent for the treatment of acid sulphate soils or low pH waters.
D16	**Stockpiles** Stockpiling of treated and untreated acid sulphate materials must be carried out in such a manner that: (i) minimises the surface area of materials exposed to oxidation; (ii) provides for a system of suitable diversion drains or embankments to divert surface waters away from the stockpiles; (iii) the base of treatment and stockpile areas are limed before materials are stockpiled and is sufficiently impervious to minimise release of contaminants to groundwater; (iv) ensures that any leachate and/or storm water runoff which has been in contact with acid sulphate materials or contaminants is collected and not released to any storm water drain or waters (including groundwater), for example effective and appropriate bunding; and (v) stockpiles must not be located on top of marine plants and/or native vegetation.
D17	Any acid sulphate soils likely to be exposed by lowering of the groundwater table must be isolated from storm water and any leachate from these soils treated as necessary to adjust the pH to be within a range of 6.5 to 9
D18	**Erosion Protection Measures and Sediment Controls** Prior to any site clearing or construction, erosion protection measures and sediment controls must be installed and thence maintained to effectively minimise any likelihood of erosion and release of sediments from the premises during all site clearing, construction and operation. Procedures must be implemented to check and, if necessary, repair or replace the erosion control and sediment control structures after each rain event likely to adversely affect the efficiency of those structures.
D19	The erosion control and sediment control structures must operate to prevent any material loss of sediment from the premises to any storm water drain, roadside gutter or waters and limit quality of storm water runoff to less than 50 mg/L suspended solids.

Schedule E - Noise

Condition number	Condition
E1	In the event of a complaint about noise that constitutes annoyance being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then the emission of noise from the premises must not result in levels greater than those specified in Schedule E Table 1.

SCHEDULE E TABLE 1

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	***Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax\ adj,\ T}$
7 am - 6 pm	Background noise level plus 5 dB(A)
6 pm - 10 pm	Background noise level plus 5 dB(A)
10 pm - 7 am	Background noise level plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	***Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax\ adj,\ T}$
7 am - 6 pm	Background noise level plus 10 dB(A)
6 pm - 10 pm	Background noise level plus 10 dB(A)
10 pm - 7 am	Background noise level plus 8 dB(A)

E2	The use of noise generating equipment such as scare guns or firearms must not cause unreasonable intrusive noise at any noise sensitive or commercial place.
E3	**Noise Monitoring** For the purposes of checking compliance with Condition E1 and for investigation of any complaint of unreasonable intrusive noise, monitoring and recording of the noise levels from the activities must be undertaken for the following descriptors, characteristics and conditions: (i) $L_{Amax,\ Adj\ T}$; (ii) $L_{Abg,\ T}$ or $L_{A90,\ T}$; (iii) $L_{AN,\ T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99); (iv) Max $L_{PA\ T}$; (v) $L_{Aeq,\ T}$; (vi) The level and frequency of occurrence of impulsive or tonal noise; (vii) Atmospheric conditions including temperature, relative humidity and wind speed and direction; and (viii) Effects due to extraneous factors such as traffic noise
E4	In the event of a complaint about noise that constitutes unreasonable intrusive noise being made to the administering authority that the administering authority considers is not frivolous or vexatious, the operator of an ERA to which this environmental authority relates must undertake monitoring to investigate such a complaint upon written request from the administering authority.

E5	The method of measurement and reporting of noise levels must comply with the administering authority's Noise Measurement Manual, Third Edition, 1 March 2000, or more recent editions or supplements to that document as become available.
E6	The measurement and reporting of noise levels must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required measurements.

Schedule F – Waste Management	
Condition number	**Condition**
F1	The operator of an ERA to which this environmental authority relates must not: (i) burn waste at or on the premises; nor (ii) allow waste to burn or be burnt at or on the premises; nor (iii) remove waste from the premises and burn such waste elsewhere.
F2	Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this environmental authority
F3	**Release of Contaminants to Land** There must be no release or likelihood of release of any contaminants to land in a manner that may cause environmental harm or contribute to contamination of such land.
F4	**Disease Management** Disposal of any diseased organisms or water which has come into contact with diseased organisms must only be undertaken with the prior agreement of the administering authority.
F5	Where diseased organisms and affected pond water requires disposal, the operator of an ERA to which this environmental authority relates must monitor and keep records of the following: (i) the date of burial on the premises or transport off the premises of the diseased organisms; (ii) description of the type of diseased organisms; (iii) quantity of the diseased organisms; (iv) name of any waste transporter and/or disposal operator that removed diseased organisms; and (v) the intended treatment/disposal destination of the diseased organisms.
F6	**Records of On Site Disposal** The operator of an ERA to which this environmental authority relates must keep and maintain permanent records for all waste including aquaculture pond sludge disposed of on the premises. The records must include the following information: (a) date of disposal of the material; (b) description of the material; (c) quantity of the material; (d) the location where the material is disposed; and (e) the method used to dispose the material

F7	**Records of Off Site Movement** The operator of an ERA to which this environmental authority relates must keep and maintain permanent records for every load of regulated waste and aquaculture pond sludge transported off the premises. The records must include the following information: (a) date of transport; (b) description of waste; (c) quantity of waste; (d) destination of any aquaculture pond sludge, including the owner of the property/land on. Which the sludge is disposed; and (e) the purpose or proposed use of the sludge.
Schedule G - Self Monitoring and Reporting	
Condition number	**Condition**
G1	Any record or document required to be kept by a condition of this environmental authority must be kept at the premises for a period of at least five (5) years and be available for examination by an authorised person. Excluding any environmental monitoring results, the record retention requirements of this condition will be satisfied if any daily and weekly records are kept for a period of at least three (3) years and these records are then kept in the form of annual summaries after that period.
G2	Copies of any record or document required to be kept by a condition of this environmental authority must be provided to any authorised person or the administering authority on request. Where the administering authority requires this data to be provided in a specified format, for example, a designated spread sheet and charts, then the data must be provided in that format.
G3	**Report Submission** The operator of an ERA to which this environmental authority relates must ensure that the results of all monitoring performed in accordance with this environmental authority are submitted with the initial Annual Return. Each subsequent Annual Return must include details of the results of monitoring performed during the 12 months preceding that Annual Return.
G4	**Complaint Recording** All complaints received by the operator of an ERA to which this environmental authority relates regarding operations at the premises must be recorded in a log book with the following details: (i) time, date and nature of complaint; (ii) type of communication (telephone, letter, personal etc.); (iii) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded); (iv) response and investigation undertaken as a result of the complaint; (v) name of person responsible for investigating complaint; and (vi) action taken as a result of the complaint investigation and signature of responsible person.
G5	**Notification of Emergencies and Incidents** As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the operator of an ERA to which this environmental authority relates must notify the administering authority of the release by telephone or facsimile.

G6	The notification of emergencies or incidents as required by Condition G5 must include but not be limited to the following: (i) the holder of the registration certificate; (ii) the location of the emergency or incident; (iii) the number of the registration certificate; (iv) the name and telephone number of the designated contact person; (v) the time of the release; (vi) the time the operator of an ERA to which this environmental authority relates became aware of the release; (vii) the suspected cause of the release; (viii) the environmental harm caused, threatened, or suspected to be caused by the release; and (ix) actions taken to prevent further any release and mitigate any environmental harm caused by the release. NOTE: Any relevant notification given under Section 320 or Section 350 of the Act that contains the information specified in Condition G6 is also notification under Condition G5
G7	Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the environmental authority must provide written advice of the information supplied in accordance with Condition G6 in addition to: (i) proposed actions to prevent a recurrence of the emergency or incident; and (ii) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.
G8	**Exception Reporting** The operator of an ERA to which this environmental authority relates must notify the administering authority within twenty-eight (28) days of completion of analysis of any result of a monitoring program required by a condition of this environmental authority which indicates an exceedance of any limit specified in this approval.
G9	The written notification required by Condition G8 above must include: (i) the full analysis results; (ii) details of investigation or corrective actions taken; and (iii) any subsequent analysis. NOTE: Any relevant notification given under Section 320 or Section 350 of the Act that contains the information specified in Condition G9 is also notification under Condition G8.
G10	The operator of an ERA to which this environmental authority relates must ensure that the results of all monitoring performed in accordance with this environmental authority for the period covered by the return are submitted with the Annual Return.

Schedule H - Definitions

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

"Act" means the *Environmental Protection Act 1994.*

"administering authority" means the Department of Environment and Heritage Protection or its successor.

"AHD" means Australian Height Datum, which has been adopted by the National Mapping Council as the datum to which all vertical control for mapping is to be referenced.

"aquaculture sludge" means the solids or sludge which accumulate or deposit on the bottom of a pond as a result of propagation of prawns.

"land" means land excluding waters and the atmosphere.

"composite sample" means a sample consisting of equal volumes of individual samples collected under the conditions specified in the environmental authority which are sent to the laboratory for analysis as one sample.

"disease" means a disease or notifiable event that is listed on a Declared Disease List prepared by the Department of Primary Industries under the *Fisheries Act 1994.*

"in flow sample" means an instantaneous readout from an electronic probe immersed in the flow of liquid, at a location that is representative of the characteristics of the flow.

"grab sample" means a single instantaneous sample which is collected in a manner that ensures that it is a representative sample.

"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.

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

"range" means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

"The holder" means the holder of this environmental authority.

"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.

"Average of daily net loads released over the prawn growing season" means the arithmetic average of the daily net loads of total nitrogen released per day, where the daily net loads are calculated in accordance with the load calculation conditions of schedule H and the averaging period commences on the first day on which grow out pond waste water is released and continues until the last day of the growing season on which waste water is released, for example, drainage of the last grow out pond holding water. In addition, the growing season for the purpose of this calculation commences no earlier than 1 November each year and continues until no later than 14 June the following calendar year.

"**Total of daily net loads released over the prawn growing season**" means the sum of the daily net loads of total nitrogen released per day, where the daily net loads are calculated in accordance with the load calculation conditions of schedule H commencing from the first day on which grow out pond waste water is released and continuing until the last day on which waste water is released, for example, drainage of the last grow out pond holding water.

"**Average over prawn growing season**" means the arithmetic average of water quality results obtained for monitoring of the quality characteristic, where the monitoring is undertaken at approximately equal time intervals, for example fortnightly, and the averaging period commences on the first day on which grow out pond waste water is released and continues until the last day of the growing season on which waste water is released, for example, drainage of the last grow out pond holding water.

"**Environmental Code of Practice for Australian Prawn Farmers**" means the "Environmental Code of Practice for Australian Prawn Farmers, September 2001" produced by the Australian Prawn Farmers Association or more recent editions or supplements to that document as such become available.

"**grow out pond**" means a pond, tank, enclosure or other container for the feeding and growing of aquaculture species.

"**waters**" includes the bed and/or banks of any water(s), storm water runoff and any part of a river, stream, lake, lagoon, pond, dam, swamp, wetland, unconfined surface water, underground water, unconfined water, natural or artificial watercourse, non-tidal or tidal waters (including the sea), storm water channel, storm water drain, roadside gutter.

"**watercourse**" includes land on which rainwater or storm water runoff concentrates and land on or over which rainwater or storm water runoff usually or occasionally flows in concentration in a defined channel, whether:

(a) a natural channel;
(b) a natural channel artificially improved; or
(c) an artificial channel that has changed the course of a natural channel
The term does not include a closed conduit conveying storm water.

Acid Sulphate Soils definitions.

"**acid sulphate soil**" means a soil, sand, mud or clay containing significant levels of pyrite (iron sulphide), which on exposure to oxidising conditions has resulted in or has the capacity to result in the generation of sulphuric acid in quantities greater than the inherent buffer capacity of the soil.

"**soil**" means sand, silt, mud, clay, or gravel material and for the purposes of this environmental authority does not include aquaculture pond sludge.

"**Instructions for the Treatment and Management of Acid Sulphate Soils 2001**" means the document "Instructions for the Treatment and Management of Acid Sulphate Soils 2001 ", produced by the Queensland Environmental Protection Agency in consultation with the Department of Natural Resources and Mines and the Department of Primary Industries, or more recent additions or supplements to that document as such becomes available.

Noise Definitions

"**LAmax adj, T** " means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

"**background noise level**" means either:

LA90, T being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response, or

LAb9, T being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than 15 minutes, using Fast response.

"**MaxLpA** T" means the absolute maximum instantaneous A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

"**noise sensitive place**" means –

(a) a dwelling, mobile home or caravan park, residential marina or other residential premises; or
(b) a motel, hotel or hostel; or
(c) a kindergarten, school, university or other educational institution; or
(d) a medical centre or hospital; or
(e) a protected area; or
(f) a park or gardens.

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

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

In determining whether a noise annoys an individual, regard must be had to *Australian Standard 1055.2 - 1989 Acoustics - Description and Measurement* of *Environmental Noise Part 2 Application to Specific Situations* or more recent editions or supplements to that document as such become available.

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

"**protected area**" means -
(a) a protected area under the Nature Conservation and Other Legislation Amendment Act 2013; or
(b) a marine park under the Marine Parks Act 2004; or
(c) a World Heritage Area.

Odour definitions

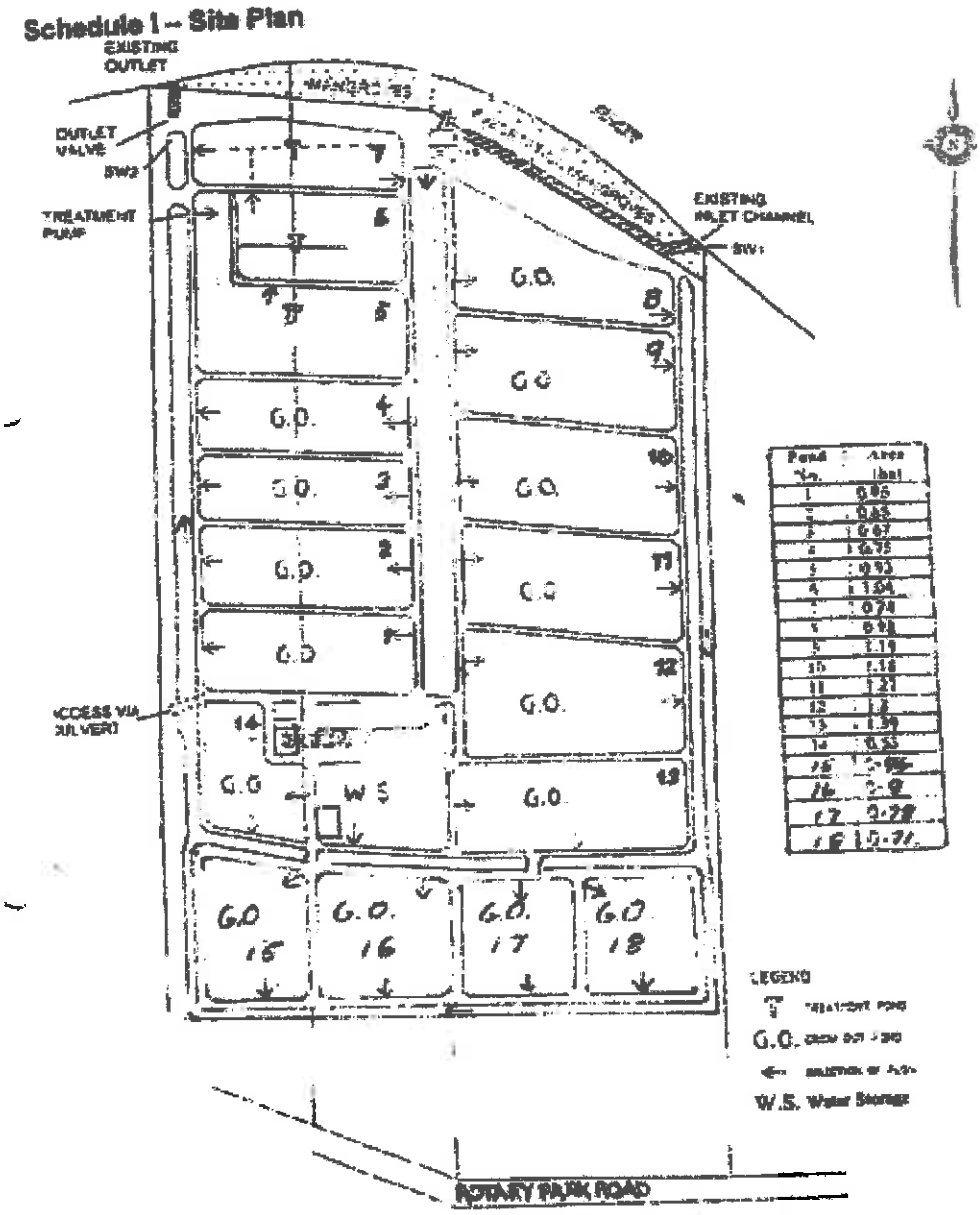
"**noxious**" means harmful or injurious to health or physical well-being.

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

"**odour 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;
- 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.

Schedule I— Site Plan



END OF PERMIT