Permit

Environmental Protection Act 1994

Environmental authority EPPR00364313

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

Environmental authority number: EPPR00364313

Environmental authority takes effect on the date the permit is issued.

The anniversary date of this environmental authority is 18 December. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name(s)	Registered address
Gold Coast Marine Aquaculture Pty. Ltd.	148 Marks Road WOONGOOLBA QLD 4207

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
ERA 01 - Aquaculture - 1(b) - Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 10ha but not more than 100ha	1/RP58450
ERA 27 - Seafood processing - Seafood processing (the relevant activity) consists of processing, in a year, 500t or more of seafood or seafood products	1/RP58450
ERA 01 - Aquaculture - 1(b) - Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 10ha but not more than 100ha	2/RP58450
ERA 27 - Seafood processing - Seafood processing (the relevant activity) consists of processing, in a year, 500t or more of seafood or seafood products	2/RP58450
ERA 01 - Aquaculture - 1(b) - Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 10ha but not more than 100ha	21/SP180241

Environmentally relevant activity/activities	Location(s)
ERA 27 - Seafood processing - Seafood processing (the relevant activity) consists of processing, in a year, 500t or more of seafood or seafood products	21/SP180241
ERA 01 - Aquaculture - 1(b) - Cultivating or holding crustaceans in enclosures that are on land and have a total area of more than 10ha but not more than 100ha	22/RP803826
ERA 27 - Seafood processing - Seafood processing (the relevant activity) consists of processing, in a year, 500t or more of seafood or seafood products	22/RP803826

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.

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

10 August 2026

Date

Casey Sirl
Department of the Environment, Tourism, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Permits and Licence Management
GPO Box 2454, Brisbane QLD 4001
Phone: 1300 130 372 (Option 4)
Email: palm@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access State controlled roads), the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (to clear vegetation), and the Department of Primary Industries (to clear marine plants or to obtain a quarry material allocation).

PART 1 - LICENCE(S) (WITHOUT DEVELOPMENT APPROVAL) (Section 93)

This part is for the carrying out of a level 1 environmentally relevant activity without a development approval, under chapter 4, part 3, division 2, subdivision 1 of the Environmental Protection Act 1994.

Schedule A - Activity

(A1) In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have 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 authority explicitly authorises that harm. Where there is no condition or the authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Maintenance of measures, plant and equipment

(A2) The holder 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.

Display of Environmental Authority

(A3) A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activities.

Records

(A4) Any record or document required to be kept by a condition of this environmental authority must be kept at the licensed place 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.

(A5) 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 spreadsheet and charts, then the data must be provided in that format.

Calibration

(A6) 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.

(A7) 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.

General

(A8) 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.

(A9) Where any new aquaculture species other the propagation or rearing of marine, estuarine or freshwater prawns is to be undertaken the holder of this environmental authority must notify the administering authority not less than twenty-eight (28) days prior to stocking the new species.

Note: This licence condition does not apply to species propagated or reared as a means of biologically treating effluent from the prawn farm.

(A10) Excepting any reconfiguration of wastewater treatment ponds or growout ponds to improve wastewater treatment that does not increase growout area permitted under this Environmental Authority, siting of the activities is to be in accordance with the site maps and plans included in Schedule K. In the event of any such reconfiguration, the holder must provide an updated site plan to the administering authority.

(A11) 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 licensed place is prawns.

(A12) 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.

Growout Pond Area

(A13) The maximum area of aquaculture grow out ponds permitted to be used under this environment authority is 23.5 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.

Agreements for Intake, Discharge and Treatment

(A14) Where the holder of this environmental authority requires permission for lawful use of intake and/or discharge and/or waste water treatment structures from the owner(s) of land other than that to which this authority relates, then, prior to carrying the environmentally activities, the holder must enter into and, at all times the environmentally relevant activities are undertaken, maintain a written agreement with such owner(s), to permit intake of water and treatment and discharge of waste water (as relevant), including all necessary maintenance. This must include an agreement with the owner of lot 2 on RP 170336, Parish of Albert, County of Ward for the treatment of waste water from the licensed place.

(A15) A copy of the written agreement must be forwarded to the administering authority within thirty days of it becoming available to the holder of this environmental authority.

Integrated Environmental Management System (IEMS)

(A16) The holder of this environmental authority 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.

(A17) 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/or development approvals; 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.

(A18) An up to date copy of the IEMS must be kept at the licensed place where the activities are carried out with a further copy provided to the administering authority, including provision of any amendments within 30 days of completion.

(A19) The holder of this environmental authority must not implement or amend an IEMS (including any environmental management plan) that contravenes any condition of this environmental authority or any development condition imposed by the administering authority that is applicable to carrying out the activities.

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Dust Control

(B1) In the event of a complaint about an environmental nuisance caused by release of dust beyond the boundaries of the licensed place, the holder 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.

(B2) Notwithstanding any other condition of this environmental authority, no release of contaminants from the licensed place is to cause a noxious or offensive odour beyond the boundaries of the licensed place at any odour sensitive place.

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Release of Contaminants to Waters

(C1) The only contaminants permitted to be released directly or indirectly from the licensed place at the release point are:

(i) treated waste water from the aquaculture growout ponds located on lots 1 and 2 on RP 58450; and
(ii) treated waste water from the processing of prawns; and
(iii) subject to full compliance with the conditions of the relevant development approval and the conditions of this environmental authority (including all limits and loads for expanded operations), treated waste water from proposed aquaculture on lot 2 of RP170336, lot 2 on RP 44986 and lot 22 on RP 803826 Parish of Albert, County of Ward.

Intake Points

(C2) Water may only be drawn into the aquaculture facility from the intake point(s) described below:

Intake Point I1 Water from the Logan River may only be drawn from the intake structure located on the western property boundary of the licensed place approximately 100 (one hundred metres) south of the prawn processing shed, as marked on the plan titled, “Attachment A” included in the response to the notice to provide additional information dated 13 February 2002.

Release Points

(C3) The contaminants specified in C1 may only be released either directly or indirectly from the licensed place to any waters, at the release point described below:

Release Point W1 - Release to the Logan River via a discharge structure that is located adjacent to the Logan River on the south-western boundary of the licensed place as shown on the plan titled, “Attachment A” included in the response to the notice to provide additional information dated 13 February 2002.

(C4) The release of contaminants to waters from the outfalls must be carried out in such a manner which does not erode or otherwise disturb 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.

Water Quality Release Continual Improvement Plan

(C5) Notwithstanding attainment of the release limits for total nitrogen and total phosphorus, the holder 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”.

(C6) Measures implemented under this continual improvement program must be described and submitted to the administering authority with each annual return.

(C7) 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 ration, 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 authority, compared with the relevant limits and targets specified in this authority and with the previous years 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 practice environmental management.

(C8) 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.

(C9) The total quantity of contaminants released from release point W1 during any day must not, either alone or in aggregate with any other releases that originate from any carrying out of environmentally relevant activities on Lot 2 of RP170336, lot 2 on RP 44986 and lot 22 on RP 803826 Parish of Albert, County of Ward or elsewhere connected to or via this aquaculture facility, exceed any of the load limits for each contaminant specified in the following Tables:

(a) For an interim period of three years until the end of the 2004 to 2005 prawn growing season - Schedule C Table 1 and thereafter;
(b) Schedule C Table 2.

SCHEDULE C TABLE 1 – INTERIM RELEASE QUANTITY LIMITS UNTIL END OF 2004/2005 PRAWN GROWING SEASON

CONTAMINANT	RELEASE LOAD LIMIT kg	LIMIT TYPE
Suspended Solids (kg/day)	282 kg/day	Average of daily net loads released over the prawn growing season.
Suspended Solids (kg/year)	59220 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Phosphorus (kg/day)	2.35 kg/day	Average of daily net loads released over the prawn growing season.
Total Phosphorus (kg/year)	493.5 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Nitrogen (kg/day)	18.8 kg/day with a desired target of 11.75 kg/day	Average of daily net loads released over the prawn growing season.
Total Nitrogen (kg/year)	3948 kg/annual season with a desired target of 2468 kg/annual season	Total of daily net loads released over the annual prawn growing season.

Notes to Schedule C Table 1.

- *Average of daily net loads as calculated under the load calculation conditions in schedule H.*
- *Total of daily net loads released over the annual prawn growing season means the sum of the daily loads, as calculated under the load calculation conditions in schedule H and definitions in schedule I, over the annual prawn growing season.*
- *Schedule C Table 1 ceases to have force and effect three prawn growing seasons after commencement of this licence. Upon expiry of this Table, Schedule C Table 2 applies.*
- *Desired target means the standard that all reasonable and practicable measures must be undertaken to meet. If the target is not met in these circumstances, this does not constitute non-compliance. The release load limit still applies.*
- *These loads are calculated on the basis of the historical grow out pond area of 23.5 hectares. Any expansion within this time frame may utilise these loads until Schedule C Table 2 applies.*

SCHEDULE C TABLE 2 – FINAL RELEASE QUANTITY LIMITS

CONTAMINANT	RELEASE LOAD LIMIT kg	LIMIT TYPE
Suspended Solids (kg/day)	282 kg/day	Average of daily net loads released over the prawn growing season.
Suspended Solids (kg/year)	59220 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Phosphorus (kg/day)	2.35 kg/day	Average of daily net loads released over the annual prawn growing season.
Total Phosphorus (kg/year)	493.5 kg/annual season	Total of daily net loads released over the annual prawn growing season.
Total Nitrogen (kg/day)	11.75 kg/day	Average of daily net loads released over the annual prawn growing season.
Total Nitrogen (kg/year)	2468 kg/annual season	Total of daily net loads released over the annual prawn growing season.

Notes to Schedule C Table 2.

Average of daily net loads as calculated under the load calculation conditions in schedule H.
Total of daily net loads released over the annual prawn growing season means the sum of the daily loads, as calculated under the load calculation conditions in schedule H and definitions in schedule I, over the annual prawn growing season.
These loads are calculated on the basis of the historical grow out pond area of 23.5 hectares. Any expansion must meet these total nitrogen loads.

Quality of Contaminants Released

(C10) The release of contaminants to waters must comply, at the sampling and in flow monitoring point(s) specified in condition H7, with each of the limits specified in Schedule C, Table 3 for each quality characteristic. These limits apply to releases that arise from carrying out environmentally relevant activities at the licensed place and also any aggregate releases from elsewhere.

SCHEDULE C TABLE 3 - RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE POINT NUMBER	RELEASE LIMITS	LIMIT TYPE
pH. (pH Units)	W1	6.5 - 9	Range
Dissolved Oxygen. (mg/L)	W1	4.0 or 90% of background value, which ever is greater	Minimum
Suspended Solids. (mg/L)	W1	30	Average over prawn growing season.
Suspended Solids. (mg/L)	W1	50	Maximum
Total Nitrogen (mg/L)	W1	3 plus ambient median Total Nitrogen (mg/L)	Maximum
Total Phosphorus. (mg/L)	W1	0.3 plus ambient median Total Phosphorus (mg/L)	Maximum
Free Chlorine Residual (mg/L)	W1	0.01	Maximum

Notes to Schedule C Table 3

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 EPA ambient water quality monitoring near the facility mentioned in schedule H of this part. 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.

(C11) 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.

Pond Conditions

(C12) 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.

Times of Release

(C13) 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 except as provided by condition C14.

(C14) The release may only be continuous provided the release does not adversely affect other users of Logan River waters. If any aquaculture intake is established with 2.0 kilometres of the outfall, the holder must obtain the written agreement of the other aquaculture operator(s) for release in at the same time they are in-taking when effluent flows towards their intake(s).

Penaeid Prawn Cultivation

(C15) Excluding any contaminant releases for the sole purpose of maintaining during the non-grow out season, a stock of organisms to effect biological treatment of waste waters, 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 (excluding *Penaeus .japonicus)* grow out ponds is permitted between 14 June and 1 November in any year.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Stormwater Management

Spillage Control

(D1) 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 stormwater drainage system, roadside gutter or waters.

Storage of Chemicals and Fuels

(D2) 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 stormwater 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 licensed place in any area where resulting contaminants will or may be released to any external stormwater drain, land or waters.

Contaminant Releases Caused by Rainfall

(D7) 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 growout ponds.

(D8) Drainage through and from all trafficable areas and production activities must be designed to minimise surface flow velocities.

Pond Sludge Conditioning areas

(D9) 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 growout ponds or the wastewater treatment system.

Acid Sulfate Soil Management

(D10) 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 Sulfate Soil Investigation must be completed and a report on this investigation provided to the administering authority.

(D11) The Acid Sulfate Soil Investigation report must provide information relating to the extent of any acid sulfate soils potentially affected or disturbed by the activities, and if any such soils are detected, the proposed management procedures, which must provide for the effective and appropriate environmental management of the Acid Sulfate Soils.

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(D12) Acid sulfate soil investigations and tests are to be carried out in the manner prescribed in the "Instructions for the Treatment and Management of Acid Sulfate 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 become available.

(D13) The management of the acid sulfate soils must:

(i) comply with "Instructions for the Treatment and Management of Acid Sulfate 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 sulfate 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 sulfate soils or low pH waters.

Stockpiles

(D16) Stockpiling of treated and untreated acid sulfate 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 sulfate 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 sulfate 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.

Erosion Protection Measures and Sediment Controls

(D18) 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.

END OF CONDITIONS FOR SCHEDULE D

Schedule E – Land

Release of Contaminants to Land

(E1) There must be no release nor likelihood of release of any contaminants to land in a manner that may cause environmental harm or contribute to contamination of such land.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Noise

Emission of Noise

(F1) 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, then the emission of noise from the licensed place must not result in levels greater than those specified in Table 1 of the Noise Schedule.

SCHEDULE F 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)

(F2) 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.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Waste Management

General

(G1) The holder of this environmental authority must not:

(i) burn waste at or on the licensed place; nor
(ii) allow waste to burn or be burnt at or on the licensed place; nor
(iii) remove waste from the licensed place and burn such waste elsewhere.

(G2) Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this environmental authority.

On Site Disposal

(G3) The holder of this environmental authority must keep and maintain records for all waste disposed of on the premises, including aquaculture pond sludge other than that sludge which is used in the maintenance of ponds. 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.

Off Site Movement

(G4) The holder of this environmental authority 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.

END OF CONDITIONS FOR SCHEDULE G

Schedule H –Self Monitoring and Reporting

Complaint Recording

(H1) All complaints received by the holder of this environmental authority relating to operations at the licensed place must be recorded in a logbook 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.

Monitoring of Waters

(H2) All determinations of the quality of waters must be made in accordance with methods prescribed in the Environmental Protection Agency’s Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent editions or supplements to that document as such become available.

(H3) 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.

(H4) For the purposes of this licence 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.

Monitoring of Volume of Intake and Release to Waters

(H5) The holder of this environmental authority 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(s) specified in condition C2.

(H6) The holder of this environmental authority is responsible for ensuring the determination and keeping of records of the total daily volume of water released for the release point(s) specified in condition C3.

Monitoring of Contaminant Releases to Waters

(H7) Determinations of the quality of contaminants released to waters to check compliance with the release characteristics specified in Schedule C 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 structure located on the western property boundary of the licensed place.

SW2 Samples are to be taken from the flow of waste water prior to discharge into the Logan River at the discharge structure as shown on the plan titled, “Attachment A” included in the response to the notice to provide additional information dated 13 February 2002.

(H8) 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:

(H9) 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. The exception is on days when intake pumps operate solely at low tide periods only, in which case monitoring may be undertaken during when intake pumps are operating and at the highest state of the tide practicable. Records must be kept of the state of the tide under which in-take sampling was undertaken.

(H10) Samples of intake water quality and release quality must be taken at the discharge and intake sampling points on the same day.

(H11) The holder of this environmental authority is responsible for the making of determinations of the quality of the contaminants released at the release point described in C3, for the quality characteristics in Schedule C Table 3, at the sample point SW2 described in condition H7, and at the frequency specified in Schedule H Table 1.

Schedule H - Table 1 – Release Quality Characteristics

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.	In flow 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)	In flow 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.

(H12) The holder of this environmental authority is responsible for the making of determinations of the quality of the waters drawn into the prawn farm at the intake sampling point SW1 described in condition H8 for the quality characteristics in Schedule H Table 2. In relation to suspended solids, total nitrogen and total phosphorus, this condition applies subject to condition H13.

SCHEDULE H TABLE 2- - Intake Quality Characteristics

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

(H13) The data to be used in calculating net loads of total nitrogen, total phosphorus and suspended solids is the corresponding median result from long term ambient water quality monitoring conducted at Environmental Protection Agency site “LOG-2” in the Logan River near the facility unless the holder:

(a) in accordance with the conditions of this 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 holder must advise the administering authority of this election in writing and carry out monitoring of all quality characteristics in Schedule H Table 2. 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.

Calculation of the loads of total nitrogen, total phosphorus and total suspended solids released to waters

(H14) The daily net load (in kilograms) of the contaminants total nitrogen, total phosphorus and suspended solids released to waters per day shall be determined or calculated and records kept of such determinations or calculations.

(H15) 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 wastewater contaminant concentration (in milligrams per litre) 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 holder elects to monitor inlet water quality in accordance with the option in condition H13, "intake conc." is the contaminant concentration (in milligrams per litre) 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.

Quality Characteristic	Intake Water Concentration* (mg/L)
Suspended Solids	10 mg/L
Total Nitrogen	0.37 mg/L
Total Phosphorus	0.07 mg/L

* As calculated from long-term median results obtained from EPA ambient water quality monitoring conducted at Environmental Protection Agency site "LOG-2" in the Logan River near the facility

(H16) 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.

(H17) Records must be kept of all data used to calculate mass loads, including volumes of waste water released, dates releases occur, discharge water quality and intake water quality.

Receiving Environment Monitoring Program

(H18) The holder 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 1997 are not being met, including any water quality objectives adopted pursuant to Section 12 of that Policy.

(H19) 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.

(H20) For the purposes of ensuring usefulness and comparison with other water way 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 water ways.

(H21) All determinations of the quality of waters under the REMP must be made in accordance with methods prescribed in the Environmental Protection Agency's Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent editions or supplements to that document as such become available.

(H22) 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.

(H23) 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.

(H24) At twelve (12) monthly intervals from the date of commencement of the REMP, the holder carrying 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.

(H25) 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.

(H26) To remove any doubt, it is declared that the holder 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 C Table 3. Samples taken from inlet works not complying with the REMP monitoring protocols are not equivalent for REMP monitoring.

Involvement in Regional Monitoring Studies Constitutes Compliance

(H27) As an alternative to carrying out the Receiving Environment Monitoring Program specified in this schedule, the holder 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.

(H28) The holder is deemed by the administering authority to be a "participating member" in regional studies in the following situations:

(a) The holder is a 'contributing member', to the regional studies of water quality and ecosystem health; and
(b) The holder 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 holder continues to be a 'contributing member', of such regional studies.

"Contributing member" means that the holder 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 holder and the authority carrying out the regional studies. For example, the formula used in determining reasonable cost may take into account the number of grow out ponds stocked and whether or not the farms fully recycle effluent throughout the grow out season.

Chemical usage

(H29) The holder of this environmental authority must keep a record of the use of all chemicals added to the prawn growout 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 receival waters (e.g. growout pond or wastewater treatment pond) and the date of the next water release after the chemicals have been added.

Noise Monitoring

(H30) For the purposes of checking compliance with condition F1 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.

(H31) 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 holder of this environmental authority must undertake monitoring to investigate such a complaint upon written request from the administering authority.

(H32) The method of measurement and reporting of noise levels must comply with the Department of Environment and Heritage Noise Measurement Manual, Third Edition, 1 March 2000, or more recent editions or supplements to that document as become available.

(H33) 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.

Report Submission

(H34) The holder of this environmental authority 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.

Notification of Emergencies and Incidents

(H35) 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 holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.

(H36) The notification of emergencies or incidents as required by condition H35 must include but not be limited to the following:

(i) the holder of the environmental authority;
(ii) the location of the emergency or incident;
(iii) the number of the environmental authority;
(iv) the name and telephone number of the designated contact person;
(v) the time of the release;
(vi) the time the holder of the environmental authority 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 H36 is also notification under Condition H35.

(H37) 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 H36 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.

Exception Reporting

(H38) The holder of this environmental authority 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 environmental authority.

(H39) The written notification required by condition H38 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 H39 is also notification under Condition H38.

(H40) The holder of this environmental authority 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.

END OF CONDITIONS FOR SCHEDULE H

Schedule I – Definitions

For the purposes of this environmental authority the following definitions apply:

(I1) **"Act**" means the *Environmental Protection Act 1994*.

(I2) "**administering authority**" means the Environmental Protection Agency or its successor.

(I3) **"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.

(I4) "**aquaculture sludge**" means the solids or sludges which accumulate or deposit on the bottom of a pond as a result of propagation of prawns.

(I5) "**land**" means land excluding waters and the atmosphere.

(I6) "**composite sample**" means a sample consisting of equal volumes of individual samples collected under the conditions specified in the licence which are sent to the laboratory for analysis as one sample.

(I7) "**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*.

(I8) "**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.

(I9) "**grab sample**" means a single instantaneous sample which is collected in a manner that ensures that it is a representative sample.

(I10) "**mg/L**" means milligrams per litre.

(I11) "**maximum**" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

(I12) "**minimum**" means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

(I13) "**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.

(I14) "The holder" means the holder of this environmental authority.

(I15) **"total Nitrogen"** means the sum of Organic Nitrogen, Ammonia, Nitrite plus Nitrate, as mg/L of Nitrogen.

(I16) "**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.

(I17) "**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

(I18) "**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.

(I19) "**Development Condition**" has the meaning given the term in the *Environmental Protection Act 1994*.

(I20) "**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.

(I21) "**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.

(I22) "**grow out pond**" means a pond, tank, enclosure or other container for the feeding and growing of aquaculture species.

(I23) **"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.

(I24) "**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

(I25) "**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.

(I26) "**soil**" means sand, silt, mud, clay, or gravel material and for the purposes of this licence does not include aquaculture pond sludge.

(I27) "**Instructions for the Treatment and Management of Acid Sulfate Soils 2001**" means the document "Instructions for the Treatment and Management of Acid Sulfate 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 become available

Noise Definitions

(I28) "**$L_{Amax\ adj,\ T}$**" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

(I29) "**background noise level**" means either:

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

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

(I30) "**$MaxL_{pA\ T}$**" means the absolute maximum instantaneous A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

(I31) "**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.

(I32) **"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*.

(I33) "**commercial place**" means a place used as an office or for business or commercial purposes.

(I34) "**protected area**" means -

(a) a protected area under the Nature Conservation Act 1992; or
(b) a marine park under the Marine Parks Act 1982; or
(c) a World Heritage Area.

Odour definitions

(I35) "**noxious**" means harmful or injurious to health or physical well-being.

(I36) "**offensive**" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

(I37) **"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.

END OF CONDITIONS FOR SCHEDULE I

Schedule J – Disease Management

Pond Conditions

(J1) The holder of this environmental authority must notify the administering authority of any declared disease or unexplained mortality outbreak requiring treatment and possible drainage of pond contents.

(J2) Disposal of any diseased organisms as specified in condition J1 or water which has come into contact with diseased organisms must only be undertaken with the prior agreement of the Administering Authority.

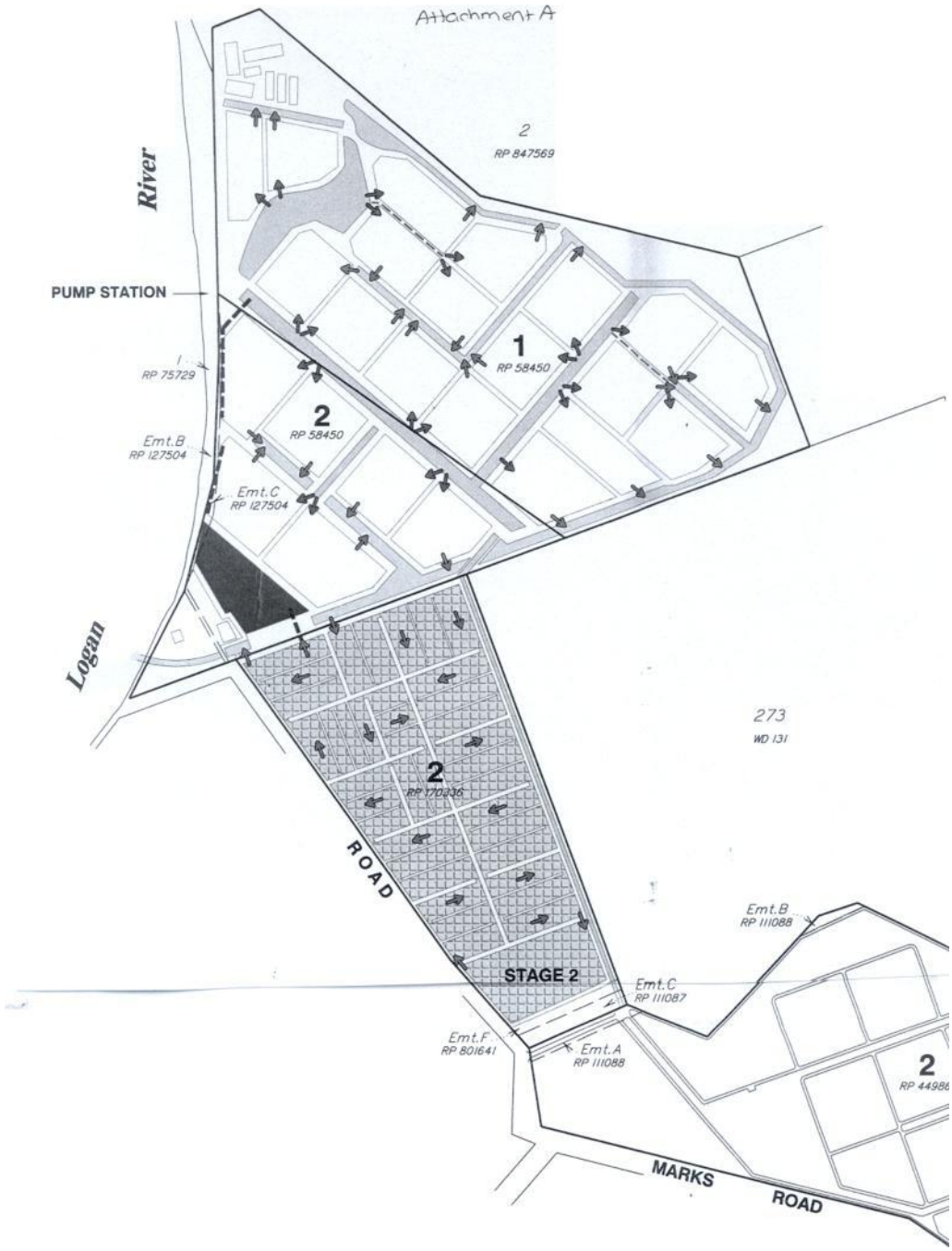
(J3) Where diseased organisms as specified in condition J1 and affected pond water requires disposal, the holder of this environmental authority must monitor and keep records of the following:

(i) description of the type of diseased organisms and/or affected water;
(ii) quantity of the diseased organisms and/or affected water;
(iii) intended treatment of the diseased organisms and/or affected water;
(iv) if the diseased organisms are buried on site, the date of burial;
(v) if the diseased organisms are transported off the premises, the name of any waste transporter and/or disposal operator that removed the diseased organisms and the disposal destination of the diseased organisms.

END OF CONDITIONS FOR SCHEDULE J

Schedule K – Site Layout Plan

Plan titled, “Attachment A” that was included in the response to the notice to provide additional information dated 13 February 2002.



END OF CONDITIONS FOR SCHEDULE K

END OF Licence Without Development Approval (Section 93) Part 1

Conditions of the development approval

As part of the concurrence agency response the following schedules of development conditions are to be attached to the development approval.

The aforementioned description of the environmentally relevant activity (ERA) for which this development approval is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this development approval. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERA, then such conditions prevail to the extent of the inconsistency.

This development approval authorises the ERA. It does not authorise environmental harm unless a concurrence agency condition within this development approval explicitly authorises that harm. Where there is no condition or the development approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Schedule A – General Conditions

Schedule B – Air

Schedule C – Water

Schedule D – Stormwater Management

Schedule E – Land Application

Schedule F – Noise

Schedule G – Waste Management

Schedule H – Monitoring and Reporting

Schedule I – Definitions

Schedule J – Maps

SCHEDULE A – GENERAL CONDITIONS

(A1) In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and/or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have be prevented, shall be carried out in a proper manner in accordance with the conditions of this development approval.

NOTE: This development approval authorises the environmentally relevant activity. It does not authorise environmental harm unless a condition contained within this authority explicitly authorises that harm. Where there is no condition or the authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm. Without limiting the measures which may be applied, examples of reasonable and practicable measures include those mentioned in the Environmental Code of Practice for Australian Prawn Farmers.

Maintenance of measures, plant and equipment

(A2) The holder must:

- install all measures, plant and equipment necessary to ensure compliance with the conditions of this development approval; 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.

Display of Development approval

(A3) A copy of this development approval must be kept in a location readily accessible to personnel carrying out the activities.

Records

(A4) Any record or document required to be kept by a condition of this development approval must be kept at the licensed place 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.

(A5) Copies of any record or document required to be kept by a condition of this development approval 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 spreadsheet and charts, then the data must be provided in that format.

Calibration

(A6) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this development approval must be appropriately calibrated, operated and maintained.

General

(A7) No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided by this development approval. An example of a substantial increase in the risk of environmental harm is an increase of 10% or more in the quantity of the contaminant to be released into the environment.

(A8) The holder of this development approval 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.

(A9) Where any new aquaculture species other than the propagation or rearing of marine, estuarine or freshwater prawns is to be undertaken the holder of this development approval must notify the administering authority not less than twenty-eight (28) days prior to stocking the new species.

Note: This condition does not apply to species propagated or reared as a means of biologically treating effluent from the prawn farm.

(A10) Excepting any reconfiguration of wastewater treatment ponds or grow out ponds to improve wastewater treatment that does not increase grow out area permitted under this Development Approval, siting of the activities is to be in accordance with the site maps and plans included in Schedule J. In the event of any such reconfiguration, the holder must provide an updated site plan to the administering authority.

(A11) The environmentally relevant activities must be carried out 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.

Grow Out Pond Area

(A12) The use of grow out ponds additional to those used in the existing associated aquaculture activity carried out on lots 1 and 2 on RP 58450, Parish of Albert, County of Ward is permitted only to the extent that the effluent quality characteristics and load limitations prescribed in Schedule C of this development permit are met in aggregate for both that existing and this new facility, and up to a maximum additional grow out area of 24 hectares. This grow out pond 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.

Agreements for Intake and Discharge

(A13) The approval for the carrying out of the environmentally relevant activity is dependant upon the owners and occupiers of the subject lands all entering into and, at all times the environmentally relevant activity is undertaken, maintaining a written agreement with the owner(s) of lots 1 and 2 on RP 58450, Parish of Albert, County of Ward to permit the use of intake and discharge structures on lots 1 and 2 on RP 58450 and further, to jointly operate waste water treatment facilities to treat wastewater generated in carrying out environmentally relevant activities on 1 and 2 on RP 58450 and on the lands subject to this development approval.

This development approval, to the extent that it authorises the carrying out of environmentally relevant activities on the land subject to this development approval, expires in the event of such agreement not being entered into within six months of the granting of this development approval and in any event of the said agreement ceasing to exist.

(A14) A copy of the written agreement must be forwarded to the administering authority within thirty days of it becoming available to the holder of this development approval.

(A15) Where the holder of development approval is required to carry out monitoring that duplicates monitoring required to be carried out by the person carrying out development for the environmentally relevant activity of aquaculture on Lots 1 & 2 on RP58450 (Parish of Albert, County of Ward), for example quality of intake water, then joint monitoring is permitted that serves both purposes.

End of Conditions for Schedule A

SCHEDULE B – AIR

(B1) In the event of a complaint about an environmental nuisance caused by release of dust beyond the boundaries of the authorised place, dust minimisation systems must be installed and operated to the extent that any environmental nuisance is prevented, e.g. water sprays, vehicle adherence to restricted speed limits.

(B2) Notwithstanding any other condition of this development approval, no release of contaminants from the authorised place is to cause a noxious or offensive odour beyond the boundaries of the authorised place.

End of Conditions for Schedule B

SCHEDULE C – WATER

Release of Contaminants to Waters

(C1) The only contaminants permitted to be released directly or indirectly from the premises subject to this development approval are treated wastewaters from:

- the aquaculture grow out ponds located on Lot 21 on SP144204 and lot 22 on SP803826; and
- the existing aquaculture grow out ponds located on lots 1 and 2 of RP58450, that are to be further treated in the waste water treatment system on lot 21 on SP144204.

(C2) The total quantity of contaminants released from release point SW2 during any day, either alone or in aggregate with any other releases from environmentally relevant activities associated with the activities carried out at the authorised place must not cause the discharge from Lot 2 RP58450 to exceed any of the load limits permitted in the approval for that site.

Intake Points

(C3) Water may only be drawn into the aquaculture facility from the intake point(s) described below:

Intake Point SW1 – Water drawn from the Logan River from the intake structure located on the western boundary of Lot 1 on RP58450 via a channel across Lots 1 & 2 on RP58450, as shown on Plan No. 1679-00-12 contained in Schedule J of this development permit.

Release Points

(C4) The contaminants specified in C1 may only be released either directly or indirectly from the premises to which this development permit relates to any waters, via the release point described below:

Release Point SW2: Release to the discharge channel on Lot 2 RP58450 as shown on Plan No. 1679-00-12 dated 15 October 2002 in Schedule J of this development approval.

(C5) The release of contaminants to waters from the outfalls must be carried out in a manner which does not erode or otherwise disturb marine plants, mangrove vegetation, the banks or bed of the waterway or the habitat in general.

(C6) The release of contaminants to waters is only permitted in cases when the quality of the waste water contained in the final section of waste water treatment system is not suitable for recirculation and when necessary to drain ponds following harvesting. Monitoring and recording must be undertaken of the quality of water in the final section of wastewater treatment system for parameters indicative of suitability for recirculation, as often as is necessary to ensure effective management of the recirculation.

Water Quality Release Continual Improvement Plan

(C7) The holder must implement all reasonable and practicable measures to reduce the mass load of Total Nitrogen and Total Phosphorus per day released to Lot 2 RP58450, 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.

(C8) Measures implemented under this continual improvement program must be described and submitted to the administering authority with each annual return.

(C9) 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 within the current year.

(viii) the net loads and concentrations of Total Nitrogen and Total Phosphorus released as measured and calculated under this development approval, compared with the relevant limits and targets specified in this development approval and with the previous years results;

(ix) practices and procedures and the steps 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 practice environmental management.

(C10) 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 development approval is zero.

(C11) The release of contaminants to Lot 2 RP58450 (either alone or in aggregate with other releases mentioned above) 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 environmental values of the receiving environment.

Pond Conditions

(C12) 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.

Times of Release

(C13) Where reasonable and practicable, the releases of contaminants to waters must only occur from local high water until two (2) hours before local low water except as provided by condition (C14).

(C14) The release may be continuous provided the release does not adversely affect other users of Logan River waters. If any aquaculture intake is established within 2.0 kilometres of the outlet, the holder must obtain written agreement of the other aquaculture operator(s) for release at the same time they are intaking where effluent flows towards their intake(s).

Penaeid Prawn Cultivation

(C15) Excluding any contaminant releases for the sole purpose of maintaining during the non-growout season a stock of organisms to effect biological treatment of waste waters, no release of contaminants from either the prawn growout ponds or the wastewater treatment system where the release is directly or indirectly derived from Penaeid prawn (excluding *Penaeus japonicus*) growout ponds is permitted between 14 June and 30 September in any year.

End of Conditions for Schedule C

SCHEDULE D – STORMWATER MANAGEMENT

Spillage Control

(D1) Any spillage, wastes, contaminants or other materials must be cleaned 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.

Storage of Chemicals and Fuels

(D2) 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 development approval must ensure that any storm water captured within the bund is free from contaminants prior to 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 licence place in any area where resulting contaminants will or may be released to any external storm water drain, land or waters.

(D7) A collection sump must be provided in the floor of the bunding to facilitate removal of liquids. The bund floor must be graded so that the fall is towards the collection sump.

Contaminant Releases Caused by Rainfall

(D8) 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.

(D9) Drainage through and from all trafficable areas and production activities must be designed to minimise surface flow velocities.

Pond Sludge Conditioning Areas

(D10) 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 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.

Acid Sulfate Soil Management

(D11) At least twenty-eight days prior to the commencement of disturbing, extracting, unearthing or drain maintenance of any soils below 5 metres AHD, an Acid Sulfate Soil Investigation must be completed and an Acid Sulfate Soil Investigation Report provided to the administering authority.

(D12) The Acid Sulfate Soil Investigation report must provide information relating to the extent of any acid sulfate soils potentially affected or disturbed by the activities and, if any such soils are detected, the proposed management procedures ,which must provide for the effective and appropriate environmental management of the Acid Sulfate Soils.

(D13) Acid sulfate soil investigations and tests are to be carried out in the manner prescribed in the “Instructions for the Treatment and Management of Acid Sulfate Soils 2001”.

(D14) The management of the acid sulfate soils must:

(i) comply with “Instructions for the Treatment and Management of Acid Sulfate 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.

(D15) Records must be kept of the results of all testing of acid sulfate 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.

(D16) Receiving waters must not be used as a neutralisation agent for the treatment of acid sulfate soils or low pH waters.

Stockpiles

(D17) Stockpiling of treated and untreated acid sulfate 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 sufficiently impervious to minimise release of contaminants to groundwater;
(iv) ensures that any leachate and/or stormwater runoff which has been in contact with acid sulfate 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.

(D18) Any acid sulfate soils likely to be exposed by lowering of the groundwater table must be isolated from stormwater and any leachate from these soils treated as necessary to adjust the pH to be within a range of 6.5 to 9.

Erosion Protection Measures and Sediment Controls

(D19) 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.

(D20) The erosion control and sediment control structures must operate to prevent any material loss of sediment from the premises to any stormwater drain, roadside gutter or waters and limit quality of stormwater runoff to less than 50 mg/L suspended solids.

End of Conditions for Schedule D

SCHEDULE E – LAND APPLICATION

Release of Contaminants to Land

(E1) There must be no release nor likelihood of release of any contaminants to land in a manner that may cause environmental harm or contribute to contamination of such land.

End of Conditions for Schedule E

SCHEDULE F – NOISE

Emission of Noise

(F1) In the event of a complaint about noise that constitutes intrusive noise being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then the emission of noise from the premises subject to this development approval must not result in levels greater than those specified in Table 1 of the Noise Schedule.

SCHEDULE F 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*** $L_{Amax\ adj,\ T}$
7am – 6pm	Background noise level plus 5 dB(A)
6pm – 10pm	Background noise level plus 5 dB(A)
10pm – 7am	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*** $L_{Amax\ adj,\ T}$
7am – 6pm	Background noise level plus 10 dB(A)
6pm – 10pm	Background noise level plus 10 dB(A)
10pm – 7am	Background noise level plus 8 dB(A)

(F2) 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.

End of Conditions for Schedule F

SCHEDULE G – WASTE MANAGEMENT

General

(G1) The holder of this development approval 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.

(G2) Waste must not be released to the environment, stored, transferred or disposed of contrary to any condition of this development approval.

On Site Disposal

(G3) The holder of this development approval must keep and maintain permanent records for all waste disposed of on the premises, including aquaculture pond sludge. The records must include the following information:

(i) date of disposal of the material;
(ii) description of the material;
(iii) quantity of the material;
(iv) the location where the material is disposed; and
(v) the method used to dispose the material.

Off Site Movement

(G4) The holder of this development approval 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:

(vi) date of transport;
(vii) description of waste;
(viii) quantity of waste;
(ix) destination of any pond sludge, including the owner of the property/land on which the sludge is disposed; and
(x) the purpose or proposed use of the sludge.

Disease Management

(G5) 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.

(G6) Where diseased organisms and affected pond water requires disposal, the holder of this development approval must monitor and keep records of the following:

(i) description of the type of diseased organisms and/or affected water;
(ii) quantity of the diseased organisms and/or affected water;
(iii) intended treatment of the diseased organisms and/or affected water;
(iv) if the diseased organisms are buried on-site, the date of burial;
(v) if the diseased organisms are transported off the premises, the name of any waste transporter and/or disposal operator that removed the diseased organisms and the disposal destination of the diseased organisms.

End of Conditions for Schedule G

SCHEDULE H – MONITORING AND REPORTING

Complaint Recording

(H1) All complaints received by the holder of this development approval relating to operations at the authorised place 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.

Monitoring of Waters

(H2) All determinations of the quality of waters must be made in accordance with methods prescribed in the Environmental Protection Agency's Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent editions or supplements to that document as such become available.

(H3) 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.

(H4) For the purposes of this development approval 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.

Monitoring of Volume of Intake and Release to Waters

(H5) The holder of this development approval 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(s) specified in condition C3.

(H6) The holder of this development approval is responsible for ensuring the determination and keeping of records of the total daily volume of water released for the release point(s) specified in condition C4.

Monitoring of Contaminant Releases to Waters

(H7) Determinations of the quality of contaminants released to waters to check compliance with the release characteristics specified in Schedule C of this development approval must be undertaken at the sampling and in flow monitoring point(s) described as:

SW1 Samples are to be taken in the approximate mid point of the Logan River channel, opposite the intake structure located on the western property boundary of the Lot 1 on RP 58450.

SW2 Samples are to be taken from the flow of waste water through the discharge channel located on Lot 2 RP58450 prior to discharge into the Logan River at the discharge structure as shown on Plan No. 1679-00-12 contained in Schedule J of this development permit.

(H8) 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 pond contents at least twice.

(H9) Monitoring the quality of water drawn into the prawn farm must be limited to samples on the incoming tide within two hours of local high water when the intake pumps are operating.

(H10) Samples of intake water quality and release quality must be taken at the discharge and intake sampling points on the same day.

(H11) The holder of this development approval is responsible for the making of determinations of the quality of contaminants released at the release point described in condition C4, for the quality characteristics in Schedule C Table 2, at the sample point SW2 described in condition H7 and at the frequency specified in Schedule H – Table 1.

Schedule H – Table 1 – Release Quality Characteristics

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	In flow sample	SW2	Weekly whilst discharging
Free Chlorine Residual (mg/L)	Grab Sample	SW2	Applies only if chlorine is used as a disinfectant. Daily whilst discharging disinfected wastewaters.
Dissolved Oxygen (mg/L)	In flow 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

(H12) The holder of this development approval is responsible for the making of determinations of the quality of waters drawn into the prawn farm at the intake sampling point SW1 for the quality characteristics in Schedule H - Table 2. In relation to Total Nitrogen and Total Phosphorus, this condition applies subject to condition H14.

Schedule H Table 2 – Intake Quality Characteristics

QUALITY CHARACTERISTIC DETERMINATION	SAMPLING METHOD	SAMPLE AND MONITORING POINTS	FREQUENCY
pH (pH Units)	In flow sample	SW1	Weekly whilst discharging
Dissolved Oxygen (mg/L)	In flow sample	SW1	Weekly whilst discharging
Total Nitrogen (mg/L)	Grab Sample	SW1	In the first and third week of each month whilst discharging.
Total Phosphorus (mg/L)	Grab Sample	SW1	In the first week and third of each month whilst in taking

Receiving Environment Monitoring Program

(H13) The holder must implement a Receiving Environment Monitoring Program 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 includes:

(i) Lower Logan River and
(ii) Southern Moreton Bay.

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 1997* are not being met, including any water quality objectives adopted pursuant to Section 12 of that policy.

Involvement in Regional Monitoring Studies Constitutes Compliance

(H14) Subject to the alternative provided in condition H18, to achieve compliance with the requirements for a Receiving Environment Monitoring Program, the holder must become and remain a "participating member" in the following regional water quality and ecosystem health monitoring studies, or any equivalent studies that succeed them ("the regional studies"):

(i) the Southeast Queensland Water Quality Management Strategy; and
(ii) the Ecosystem Health Monitoring Program.

(H15) The holder is deemed by the administering authority to be a "participating member" in regional studies in the following situations:

(a) The holder is a "contributing member" to the regional studies of water quality and ecosystem health; and
(b) The holder 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 holder continues to be a “contributing member” of such regional studies.

"Contributing member" means that the holder 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 holder 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.

(H16) The holder is deemed by the administering authority to be a “contributing member” until such time as:

(i) the authority carrying out the regional studies notifies the administering authority in writing that the holder is no longer a contributing member; and
(ii) the administering authority has undertaken reasonable steps to confirm this with the holder and the authority carrying out the regional studies; or
(iii) the holder notifies the administering authority in writing that they are no longer a “contributing member”.

(H17) If the holder no longer meets the criteria as a “contributing member” to the regional studies, the holder is no longer deemed to be in compliance with the requirements for carrying out a REMP and the holder must undertake the following:

(i) within thirty (30) days of ceasing to be a “contributing member”, submit a proposal to the administering authority that details how the holder will fulfil the requirements for a REMP via one of the alternatives prescribed in condition H18 of this development approval; and

(ii) carry out the REMP alternative that is agreed, submitted or amended by the administering authority; commencing within 14 days of receipt of such written advice from the administering authority or such later date specified in writing by the administering authority; and

(iii) from that date otherwise comply in all respects with conditions for carrying out the alternative REMP.

Alternatives to Involvement in Regional Studies - Equivalent Study and Alternative Study

(H18) As an alternative to participating in the regional studies, the holder may either:

(i) carry out an equivalent study, which requires that the holder must monitor and record the same or equivalent environmental indicators at an equivalent frequency and at an equivalent number of sites as the regional studies; or

(ii) with the written agreement of the administering authority, carry out an alternative receiving environment monitoring program that meets the requirements of conditions H19 to H23.

(H19) At least 30 days prior to commencing the environmentally relevant activities, or within thirty (30) days of ceasing to be a “contributing member” as the case may be, the holder must submit to the administering authority a proposal to undertake a Receiving Environment Monitoring Program (REMP) that is designed to determine the effects of contaminants released into the receiving environment from the discharge of aquaculture effluent.

(H20) The proposal for the REMP must include, but not be limited to, the following:

(i) description of potentially affected environment including key communities and ambient water quality;

(ii) description of water quality objectives and biological objectives to be achieved;

(iii) description of selected physio-chemical indicators (including pH, total nitrogen, total phosphorus, dissolved oxygen saturation, water clarity analyses) and biological indicators (including chlorophyll 'a' and macro algal monitoring) and reasons for their inclusion;

(iv) the locations of monitoring stations including monitoring transects away from the outfall of the licensed release as well as control locations;

(v) the proposed sampling depths;

(vi) the water quality characteristics of receiving waters to be determined;

(vii) the frequency of sampling and analysis;

(viii) quality assurance to be applied to sampling and analysis;

(ix) any historical data sets to be relied upon; and

(x) description of the statistical basis on which conclusions are drawn.

(H21) The REMP assessment techniques must be carried out such that the experimental design allows for appropriate replication that will achieve:

(a) an eighty percent (80%) chance of detecting an impact if one exists; and

(b) detection of at least a twenty five percent (25%) change from ambient conditions.

(H22) The proposal for the REMP must also consider, but not be limited to, the following:

(i) water quality criteria specified in the Australian & New Zealand Environment & Conservation Council's "Australian Water Quality Guidelines for Fresh and Marine Waters, December 2000";

(ii) the *Environmental Protection (Water) Policy 1997* and any other Environmental Protection Policies enacted under Queensland's *Environmental Protection Act 1994* concerning the receiving environment;
(iii) relevant reports produced as a consequence of the Environmental Protection Agency's Environmental Monitoring Programs, for example, findings of the Logan Nerang Water Quality Study, Southeast Queensland Regional Water Quality Management Strategy, and the Ecosystem Health Monitoring Program;
(iv) any other requirements arising due to the inclusion of the receiving environment, within which the REMP is proposed, as part of any Marine Park and/or Fish Habitat Areas, if applicable4;
(v) relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment within which the REMP is proposed; and
(vi) spatial and temporal controls to exclude potential confounding factors.

(H23) The holder must have due regard to comments made by the administering authority in finalising the requirements of the Receiving Environment Monitoring Program and must implement the program from commencement of the environmentally relevant activities or within the timeframe mentioned in condition H17, as the case may be.

Record Keeping and Reporting – If Carrying Out An Equivalent and Alternative Receiving Environment Monitoring Program

(H24) Where the holder is carrying out an equivalent study or an alternative study, 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.
(H25) At twelve (12) monthly intervals from the date of commencement of the REMP, the holder carrying 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.
(H26) 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 level of change in ambient conditions, if any, of the receiving environment; and
(iv) an assessment of the impact of contaminant discharge upon the receiving environment with respect to water quality objectives and biological objectives for the receiving environment; 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 contaminant releases on the receiving environment.

Chemical Usage

(H27) The holder of this development approval must keep a record of the use of all chemicals added to the growout 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 recorder in a table with the following details on each of thr chemicals, type of chemical, date at which the chemical was added, amount of chemical(s) added, type of receival waters (e.g. growout pond or wastewater treatment pond) and the date of the next water release after the chemicals have been added.

Noise Monitoring

(H28) For the purposes of checking compliance with condition F1 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:

(ix) $L_{Amax,\ Adj\ T}$;
(x) $L_{Abg,\ T}$ or $L_{A90,\ T}$;

(xi) $L_{AN, T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99);
(xii) Max $L_{pA\ T}$;
(xiii) $L_{Aeq, T}$;
(xiv) The level and frequency of occurrence of impulsive or tonal noise;
(xv) Atmospheric conditions including temperature, relative humidity and wind speed and direction; and
(xvi) Effects due to extraneous factors such as traffic noise.

(H29) 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 holder of this development approval must undertake monitoring to investigate such a complaint upon written request from the administering authority.

(H30) The method of measurement and reporting of noise levels must comply with the Department of Environment and Heritage Noise Measurement Manual, Third Edition, 1 March 2000, or more recent editions or supplements to that document as such become available.

(H31) 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.

Report Submission

(H32) The holder of this development approval must ensure that the results of all monitoring performed in accordance with this development approval 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.

Notification of Emergencies and Incidents

(H33) Within 24 hours 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 development approval, the holder of this development approval must notify the administering authority of the release by telephone or facsimile.

(H34) The notification of emergencies or incidents as required by condition H33 must include but not be limited to the following:

(i) the holder of the development approval;
(ii) the location of the emergency or incident;
(iii) the number of the development approval;
(iv) the name and telephone number of the designated contact person;
(v) the time of the release;
(vi) the time the holder of the development approval 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 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 H34 is also notification under Condition H33.

(H35) Not more than fourteen (14) days following the initial notification of emergency or incident, the holder of the development approval must provide written advice of the information supplied in accordance with condition H34 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.

Exception Reporting

(H36) The holder of this development approval 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 development approval which indicates an exceedance of any limit specified in this development approval.

(H37) The written notification required by condition H36 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 H37 is also notification under Condition H36.

(H38) The holder of this development approval must ensure that the results of all monitoring performed in accordance with this development approval for the period covered by the return are submitted with the Annual Return.

End of Conditions for Schedule H.

SCHEDULE I – DEFINITIONS

For the purposes of this development approval the following definitions apply:

(I1) **"Act"** means the *Environmental Protection Act 1994*.

(I2) **"administering authority"** means the Environmental Protection Agency or its successor.

(I3) **"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.

(I4) **"aquaculture sludge"** means the solids or sludges which accumulate or deposit on the bottom of a pond as a result of propagation of prawns.

(I5) **"land"** means land excluding waters and the atmosphere.

(I6) **"composite sample"** means a sample consisting of equal volumes of individual samples collected under the conditions specified in the licence which are sent to the laboratory for analysis as one sample.

(I7) **"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.

(I8) **"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.

(I9) **"grab sample"** means a single instantaneous sample which is collected in a manner that ensures that it is a representative sample.

(I10) **"mg/L"** means milligrams per Litre.

(I11) **"maximum"** means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

(I12) **"minimum"** means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

(I13) **"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.

(I14) **"The holder"** means the holder of this development approval.

(I15) **"Total Nitrogen"** means the sum of Organic Nitrogen, Ammonia, Nitrite plus Nitrate, as mg/L of Nitrogen.

(I16) **"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.

(I17) **"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.

(I18) **"Total of daily 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 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. 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.

(I19) **"Daily load of suspended solids"** means the discharge wastewater suspended solids concentration (in milligrams per litre) measured that day, or on the most recent sampling occasion if not measured that day, multiplied by the volume (in megalitres) of wastewater discharged that day.

(I20) **"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.

(I21) **"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.

(I22) **"grow out pond"** means a pond, tank, enclosure or other container for the feeding and growing of aquaculture species.

(I23) **"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.

(I24) **"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:

(i) a natural channel;
(ii) a natural channel artificially improved; or
(iii) 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

(I25) **"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.

(I26) **"soil"** means sand, silt, mud, clay, or gravel material and for the purposes of this licence does not include aquaculture pond sludge.

(I27) **"Instructions for the Treatment and Management of Acid Sulfate Soils 2001"** means the document "Instructions for the Treatment and Management of Acid Sulfate 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 become available.

Noise Definitions

(I28) **"$L_{Amax\ adj,\ T}$"** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

(I29) **"background noise level"** means either:

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

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

(I30) **"$MaxL_{pA\ T}$"** means the absolute maximum instantaneous A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

(I31) **"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 garden;

(I32) **"intrusive noise"** means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibrational -

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

In determining whether anoise 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.*

(I33) **"commercial place"** means a place used as an office or for business or commercial purposes.

(I34) **"protected area"** means -

(a) a protected area under the Nature Conservation Act 1992; or
(b) a marine park under the Marine Parks Act 1982; or
(c) a World Heritage Area.

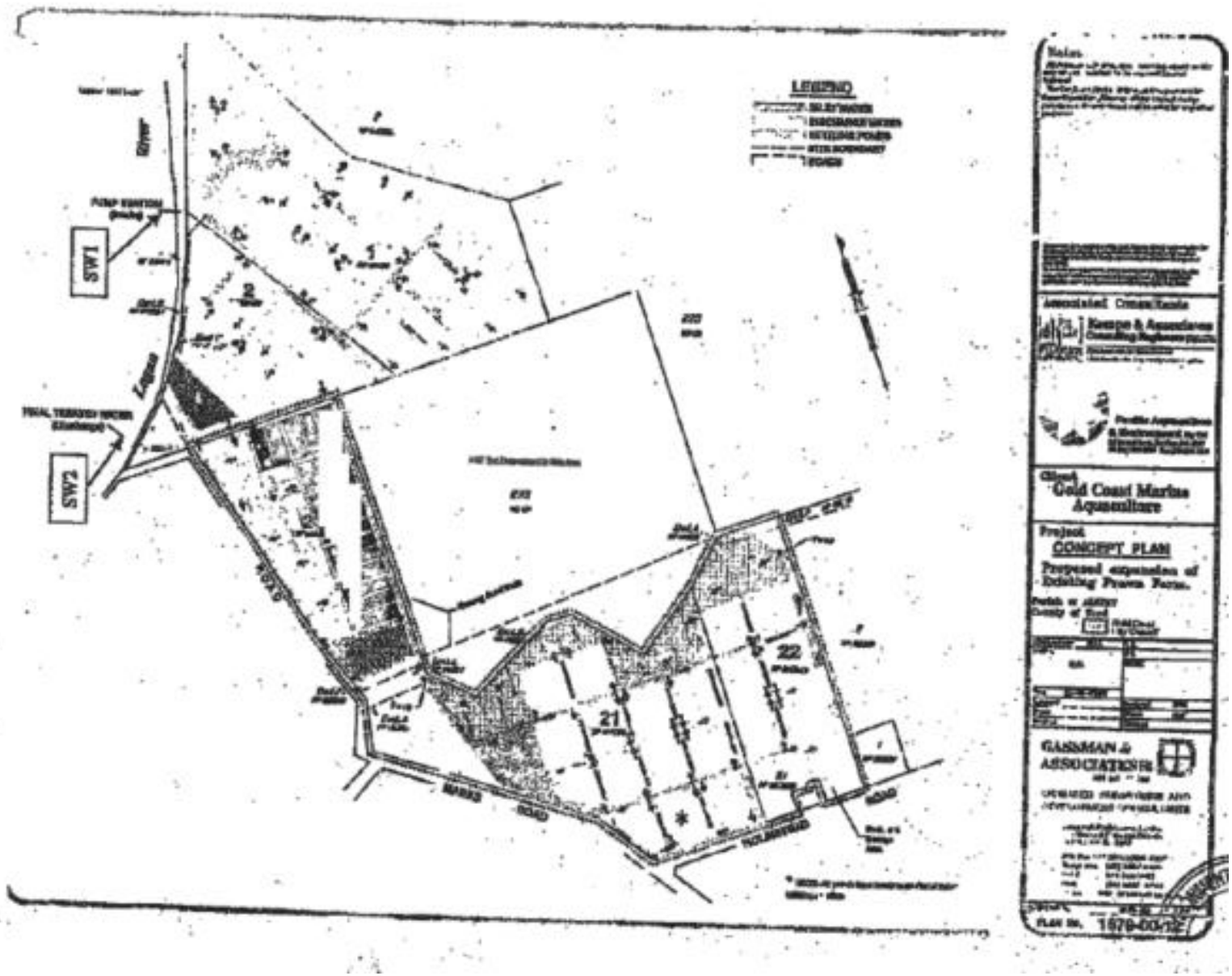
Odour definitions

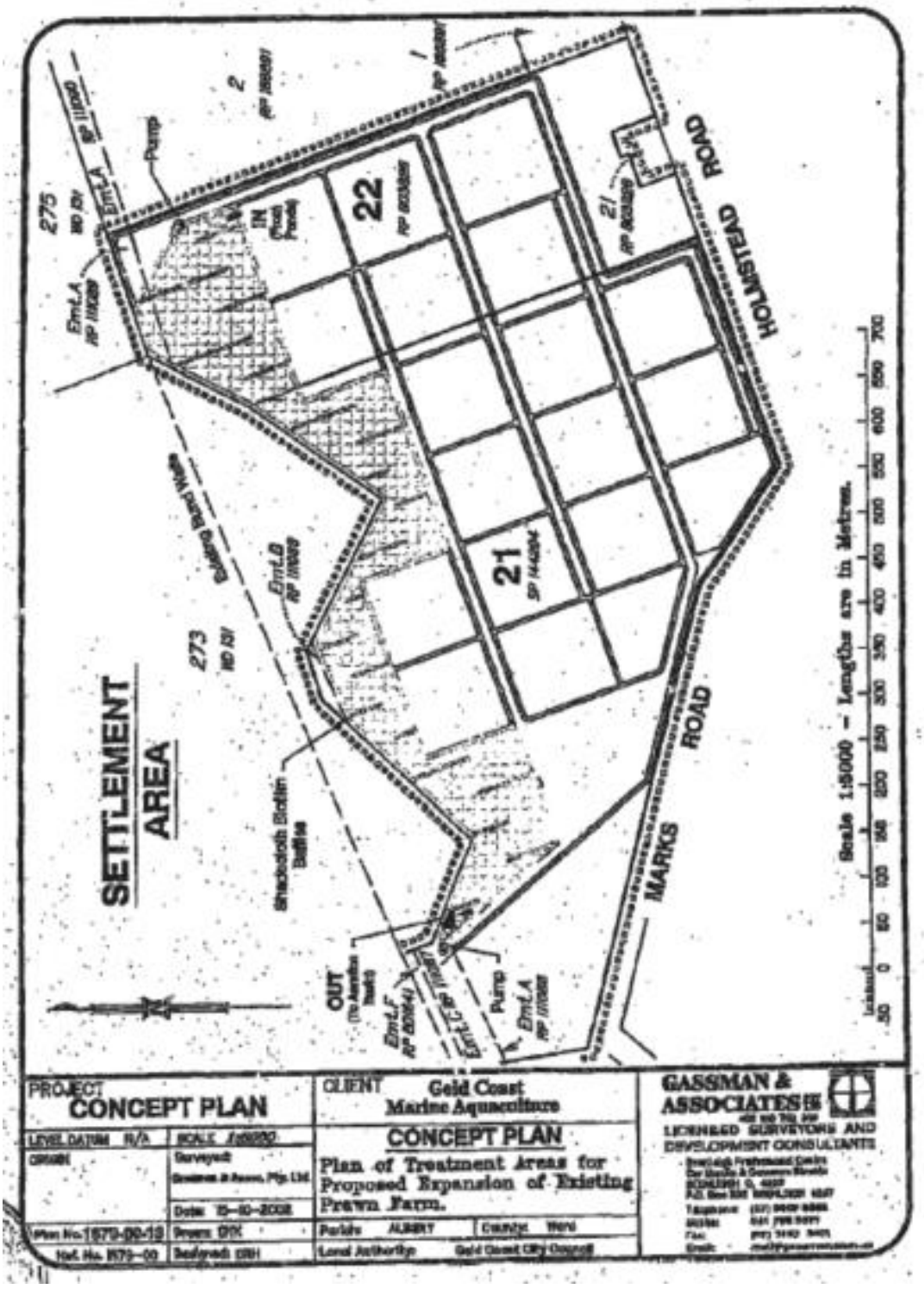
(I35) **"noxious"** means harmful or injurious to health or physical well-being.

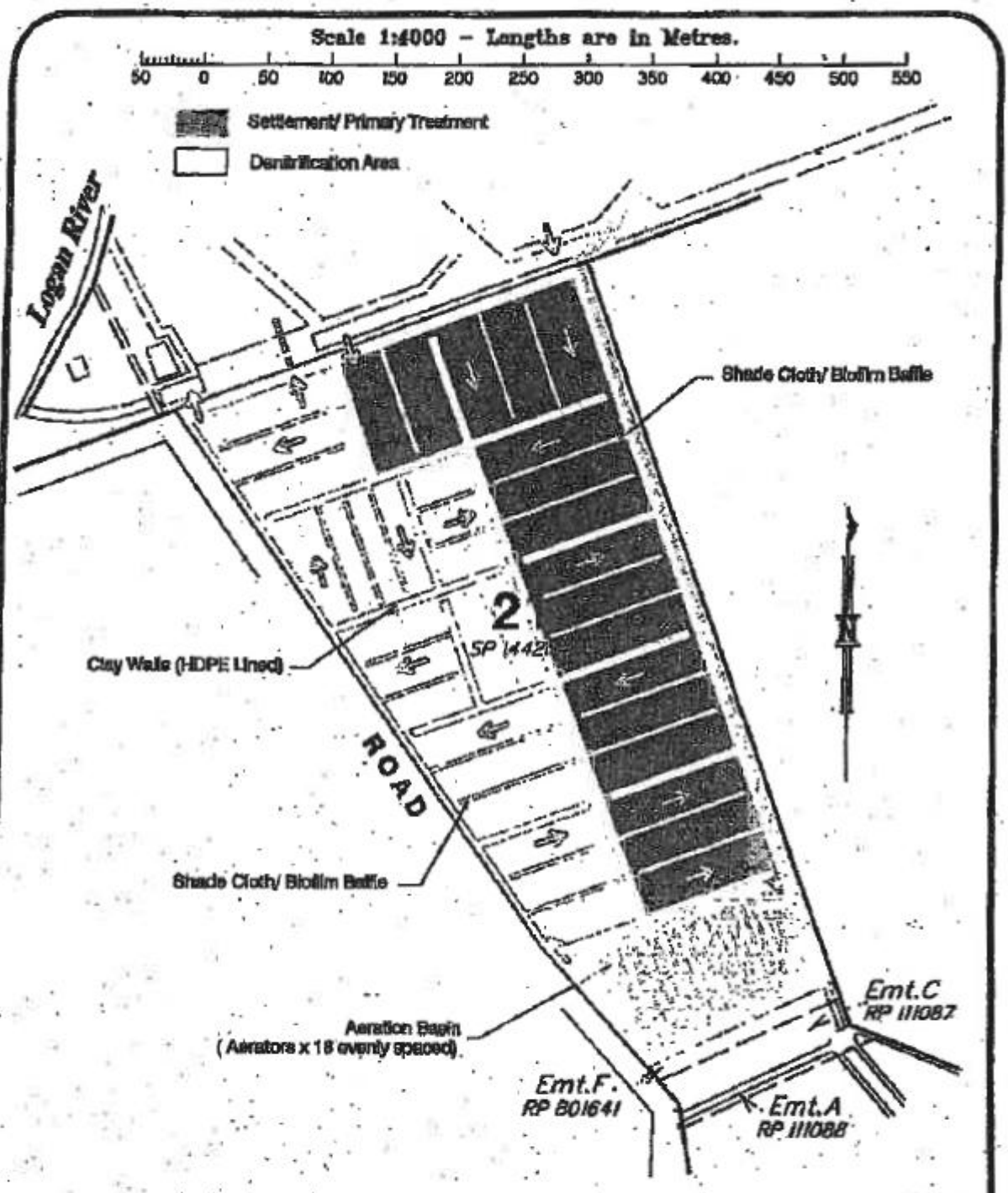
(I36) **"offensive"** means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

End of Conditions for Schedule I

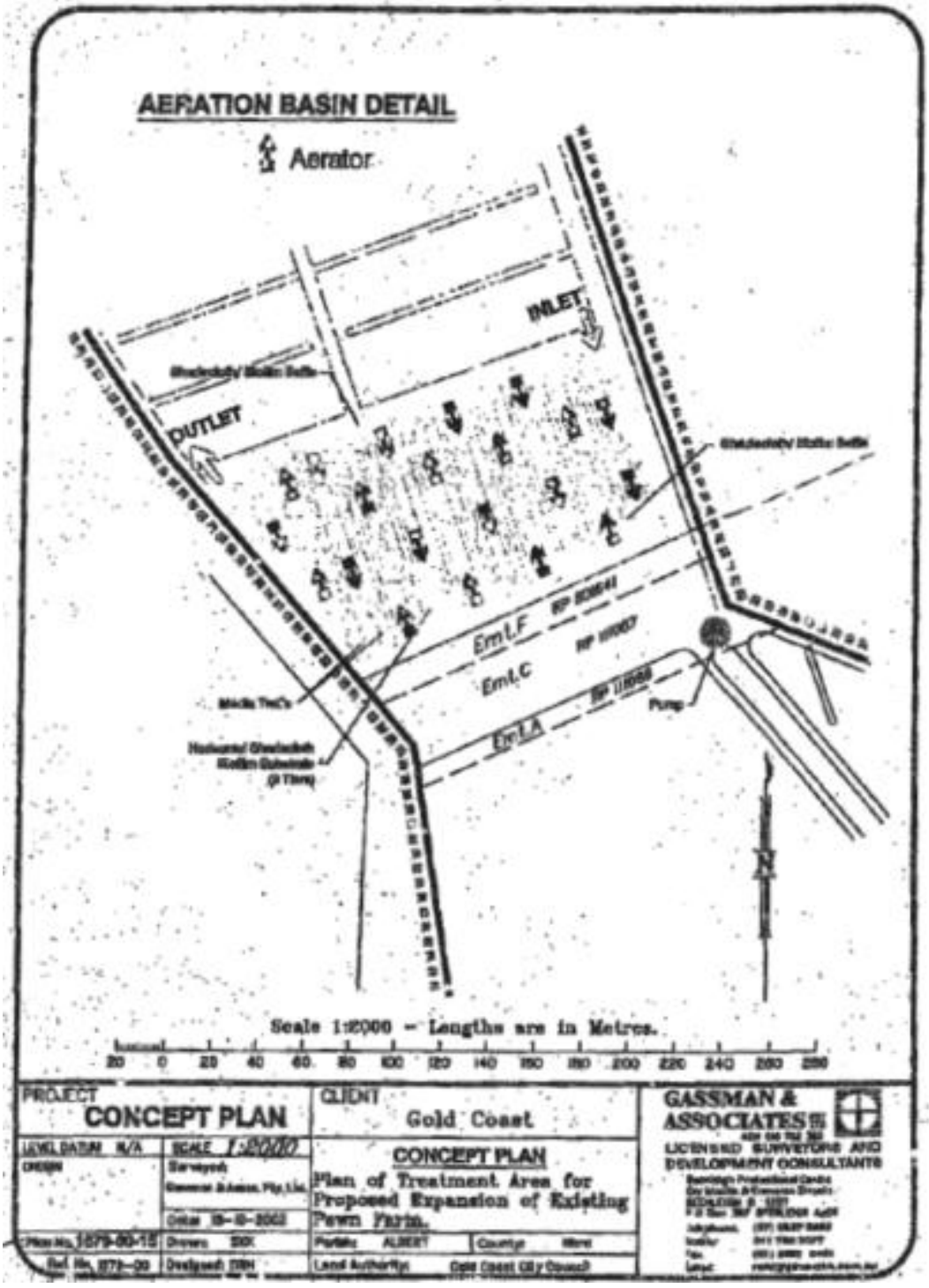
Schedule J - Maps
The following plans are included:
Plan No. 1679-00-12 dated 15 October 2002
Plan No. 1679-00-13 dated 15 October 2002
Plan No. 1679-00-14 dated 15 October 2002
Plan No. 1679-00-15 dated 15 October 2002


LEGEND
SW1
SW2
21
22
Gold Coast Marina Aquaculture
CONCEPT PLAN
Proposed expansion of Existing Prawn Farm.
GASSMAN & ASSOCIATES PL
1979-00-12


HOLMSTEAD ROAD
MARKS ROAD
SETTLEMENT AREA
22
21
21
IN
OUT
Pump
Pump
EmtA
EmtB
EmtF
Scale 1:5000 – Lengths are in Metres.
PROJECT
CONCEPT PLAN
CLIENT
Gold Coast Marine Aquaculture
CONCEPT PLAN
Plan of Treatment Areas for Proposed Expansion of Existing Prawn Farm.
GASSMAN & ASSOCIATES
LICENSED SURVEYORS AND DEVELOPMENT CONSULTANTS



PROJECT **CONCEPT PLAN**		CLIENT Gold Coast Marine Aquaculture	GASSMAN & ASSOCIATES Pty Ltd LICENSED SURVEYORS AND DEVELOPMENT CONSULTANTS Beenleigh Professional Centre Cnr Nicklin & Cornelius Streets BEENLEIGH Q. 4207 P.O Box 302 BEENLEIGH 4207 Telephone: (07) 3807 0333 Mobile: 041 748 7007 Fax: (07) 3287 9401 Email:
LEVEL DATUM N/A	SCALE 1:4000	**CONCEPT PLAN**	
ORIGIN	Surveyed: Gassman & Assoc. Pty. Ltd.	Plan of Treatment area of Proposed Expansion of Existing Prawn Farm.	
	Date: 15-10-2002		
Plan No. 1679-00-14	Drawn: SKK	Parish: ALBERT County: Ward	
Ref. No. 1679-00	Designed: DBH	Local Authority: Gold Coast City Council	


AERATION BASIN DETAIL
Aerator
INLET
OUTLET
Em1.F
Em1.C
Em1.A
Pump
N
Scale 1:2000 – Lengths are in Metres.
20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280
PROJECT
CONCEPT PLAN
CLIENT
Gold Coast
CONCEPT PLAN
Plan of Treatment Area for Proposed Expansion of Existing Pawn Farm.
LEVEL DATUM N/A
SCALE 1:2000
DESIGN
Surveyed:
Drawn: SDI
Dwg No. 1879-00-15
Ref. No. 872-00
Developed: DBH
Portion: ALBERT
Locality:
Land Authority: Gold Coast City Council
GASSMAN & ASSOCIATES
LICENSED SURVEYORS AND DEVELOPMENT CONSULTANTS