

# Permit

**Environmental Protection Act 1994**

## **Environmental authority EPPR01790513**

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

### **Environmental authority number: EPPR01790513**

#### **Environmental authority takes effect upon approval.**

The anniversary date of this environmental authority is the same day each year and remains as 30 September. Payment of the annual fee will be due each year on this day.

#### **Environmental authority holder**

<b>Name</b>	<b>Registered address</b>
Douglas Shire Council	64-66 Front Street MOSSMAN QLD 4873

#### **Environmentally relevant activity and location details**

<b>Environmentally relevant activities</b>	<b>Locations</b>
ERA 64(3) Water Treatment >10ML Raw water per day	Mossman Water Treatment Plant –Lot 1 on Plan RP741245 and Lot 2 on Plan RP741245 Gorge View Crescent, MOSSMAN 4873
ERA 60(1a) Waste Disposal Facility (any combination of regulated waste, general waste and limited regulated waste – and <5t untreated clinical wastes if in a scheduled are): <50,000t per year  ERA 60(2d) Waste Disposal Facility (any combination of general waste and no more than 10% limited regulated waste): >10,000 but <20,000t per year  ERA 56 Receiving and Storing Regulated Waste	Killaloe Landfill – Lot 170 on Plan SR865 Captain Cook Highway, KILLALOE 4873
ERA 60(2c) Waste Disposal Facility (any combination of general waste and no more than 10% limited regulated waste): >5,000 but <10,000t per year	Newell Landfill – Lot 287 on Plan SP235276 Rankin Street, NEWELL 4863

<b>Environmentally relevant activities</b>	<b>Locations</b>
ERA 60(1a) Waste Disposal Facility (any combination of regulated waste, general waste and limited regulated waste – and <5t untreated clinical wastes if in a scheduled are): <50,000t per year	Douglas Sanitary Depot – Lot 250 on Plan SR564 Mossman – Daintree Road, PORT DOUGLAS 4871 Rankin St
ERA 63(1d) Sewage Treatment >4,000 but <10,000EP ERA 58 Regulated Waste Treatment	Port Douglas Sewage Treatment Plant – Lot 8 on Plan CP890713  Port Road, PORT DOUGLAS 4871
ERA 63(1d) Sewage Treatment >4,000 but <10,000EP	Mossman Sewage Treatment Plant – Lot 22 on Plan RP800895 and part of adjacent road reserve. Junction Road, MOSSMAN 4873

## **Additional information for applicants**

### **Environmentally relevant activities**

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency. An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

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

### **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:

- (a) the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- (b) a change in the condition of the contaminated land (notice must be given within 24 hours); or
- (c) 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](http://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:

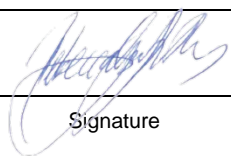
- (a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- (b) if the authority states a day or an event for it to take effect-on the stated day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

**Rebecca Griffiths**

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

23/07/2021

Date

**Enquiries:**

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### Obligations under the *Environmental Protection Act 1994*

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

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

### Other Legislative Requirements

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site.

### Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

### Conditions of environmental authority

Applicable Part	ERA	Location
Part 3	ERA 60(1a) Waste Disposal Facility (any combination of regulated waste, general waste and limited regulated waste – and <5t untreated clinical wastes if in a scheduled are): <50,000t per year	Douglas Sanitary Depot – Lot 250 on Plan SR564
Part 7	ERA 63(1d) Sewage Treatment >4000 but <10000EP ERA 58 Regulated Waste Treatment	Port Douglas Sewage Treatment Plant – Lot 8 on Plan CP890713
Part 8	ERA 63(1d) Sewage Treatment >4000 but <10000EP	Mossman Sewage Treatment Plant – Lot 22 on Plan RP800895 and part of adjacent road reserve.
Part 11	ERA 60(1a) Waste Disposal Facility (any combination of regulated waste, general waste and limited regulated waste – and <5t	Killaloe Landfill – Lot 170 on Plan SR865

	<p>untreated clinical wastes if in a scheduled are): &lt;50000t per year</p> <p>ERA 60(2d) Waste Disposal Facility (any combination of general waste and no more than 10% limited regulated waste): &gt;10000 but &lt;20000t per year</p> <p>ERA 56 Regulated Waste Storage</p>	
Part 12	ERA 60(2c) Waste Disposal Facility (any combination of general waste and no more than 10% limited regulated waste): >5000 but <10000t per year	Newell Landfill – Lot 287 on Plan SP235276
Part 18	ERA 64(3) Water Treatment >10ML Raw water per day	Mossman Water Treatment Plant – Lot 1 on Plan RP741245 and Lot 2 on Plan RP741245

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

## PART 3: DOUGLAS SANITARY DEPOT

### SCHEDULE 3.A GENERAL CONDITIONS

#### Monitoring and Measurements

- (3.A1) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this environmental authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

#### Calibration

- (3.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

#### Due Regard for Comment

- (3.A3) The holder of this environmental authority must take due regard to comments made by the administering authority prior to the implementation of any plan or program required as a condition of this environmental authority.

#### Integrated Environmental Management System (IEMS)

- (3.A4) The holder of this environmental authority must implement an IEMS which provides for the following functions:
- (a) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and
  - (b) staff training and awareness of environmental issues; and
  - (c) the conduct of environmental and energy audits; and
  - (d) waste prevention, treatment and disposal; and
  - (e) preparation and implementation of site based management plans for each licensed place covered by this environmental authority; and

#### Site-Based Management Plans

- (3.A5) Site-based management plans required by this environmental authority must provide for at least the following functions:
- (a) routine operating procedures to prevent or minimise environmental harm. This includes, amongst other matters, procedures for the removal of sewage sludges from any licensed place that minimise the risk of spillage of sludge or any other release of contaminants to the environment; and
  - (b) maintenance practices and procedures to ensure that all plant, equipment and reticulation systems used in the carrying out of the environmentally relevant activities are maintained in good working order; and
  - (c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - (d) recording and handling of environmental complaints; and
  - (e) keeping and production of environmental records and reports; and  
the monitoring of releases of contaminants into the environment and of the environmental impact caused by the releases.
    - (i) this monitoring program must address the monitoring requirements of the appropriate part of this environmental authority; and
  - (f) staff training and awareness of environmental issues to ensure that, at a minimum;

- (i) any person responsible for carrying out the environmentally relevant activities is familiar with the conditions of this environmental authority as they relate to the person's responsibilities; and
  - (ii) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activities is competent to carry out their duties; and
- (g) staff training and awareness of environmental issues to ensure that, at a minimum;
  - (i) reuse, treatment and disposal of contaminated stormwater; and
  - (ii) diversion of upstream runoff away from areas containing wastes or contaminants; and
  - (iii) minimisation of the size of contaminated areas; and
  - (iv) cleaning up of spilt contaminants without water; and
  - (v) installation of silt and rubbish traps, and first flush stormwater diversion systems; and
  - (vi) if soil is to be exposed or disturbed as a result of any works associated with an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) minimisation of the amount of soil to be exposed or disturbed by staging works; and
    - (2) revegetation of exposed or disturbed areas; and
    - (3) installation of sediment control measures such as settling basins; and
    - (4) diversion of upstream runoff from exposed or disturbed areas; and
  - (vii) if acid sulphate soils or potential acid sulphate soils exist at any licensed place or are disturbed, extracted or unearthed as a result of carrying out an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) the keeping underwater or isolation from the atmosphere by other means of any acid sulphate soils or potential acid sulphate soils disturbed, extracted or unearthed as a result of carrying out the environmentally relevant activities; and
    - (2) the maintenance in a submerged state of any acid sulphate soils or potential acid sulphate soils; and
    - (3) the maintenance of the height of the groundwater table where such lowering would be likely to expose any acid sulphate soils or potential acid sulphate soils to aerobic conditions; and
  - (viii) any other specific requirements of the Stormwater Management Schedules of the other parts of this environmental authority; and
- (h) A Waste Management Plan (WMP) which details how this environmental authority will effectively and appropriately manage the amount of waste both processed and produced at the sewage treatment plants, and must address at least the following:
  - (i) any specific requirements of the Waste Management Schedule of the relevant part of this environmental authority; and
  - (ii) provisions for carrying out an audit on compliance with the WMP within two (2) years from the date of issue of this environmental authority and thereafter every five (5) years; and
- (i) monitoring of compliance with any of the requirements of:
  - (i) the conditions of this environmental authority; or
  - (ii) any plans or programs prepared under this environmental authority; and
- (j) review and amendment or improvement of operating procedures and plans or programs where deficiencies are revealed by the monitoring program required in section (i) of this condition; and
- (k) any other specific requirements of the other parts of this environmental authority; and
- (l) preparation and submission to the administering authority of site development plans for the Douglas Shire Sanitary Depot to cover each two (2) year period from the date this environmental authority is issued until a site closure plan has been implemented. Each site development plan must be finalised and submitted at least three (3) months before the expiry of the previous plan.

**Note: Content of Site Development Plans**

Any site development plan required under the above condition of this environmental authority must include details of at least the following:

- (m) the location and accurate dimensions of any designated areas to be used for the disposal and storage of waste at the licensed place over the period covered by the site development plan; and
- (n) any area of the licensed place where precautions are taken in respect of disposal of a particular waste must be marked on the development plan immediately after the waste has been disposed of. The following information also needs to be recorded in respect of that waste:
  - (i) a description of the waste; and
  - (ii) the accurate location and depth and dimensions of the area in which this waste was disposed; and
  - (iii) date the waste was deposited; and
- (o) accurate location of any leachate storage dam or pond, pump well, collection and disposal system installed on the licensed place; and
- (p) location of any stormwater drains or diversion embankments to be constructed to achieve compliance with this environmental authority; and
- (q) location of any area to be capped, the proposed final surface levels and contours, final drainage system as part of a rehabilitation program for the licensed place over the period covered by this site development plan.

#### **Supervision**

- (3.A6) The holder of this environmental authority must ensure that the licensed place is inspected as often as is necessary so as to ensure compliance with this environmental authority.

#### **Record Keeping**

- (3.A7) The holder of this environmental authority must keep and maintain permanent records for every load of regulated waste accepted for disposal at the licensed place, and must include the following information:
- (a) date of acceptance;
  - (b) description of waste;
  - (c) cross reference to relevant waste transport documentation;
  - (d) quantity of waste;
  - (e) origin of the waste;
  - (f) results of analysis (where applicable); and
  - (g) method of waste treatment, reprocessing or disposal used (where applicable).

**Note:** Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.

#### **END OF CONDITIONS FOR SCHEDULE 3.A**

#### **SCHEDULE 3.B — AIR**

- (3.B1) Nil conditions.

#### **END OF CONDITIONS FOR SCHEDULE 3.B**

#### **SCHEDULE 3.C -WATER**

##### **Release of Leachate Prohibition**

- (3.C1) The holder of this environmental authority must not permit any direct or indirect release of any leachate generated on the licensed place to any to land beyond the boundary of the licensed place, stormwater drain or waters.



### END OF CONDITIONS FOR SCHEDULE 3.C

#### SCHEDULE 3.D - STORM WATER MANAGEMENT

##### Bunding

- (3.D1) All above ground bulk chemical, waste oil and fuel storage tanks on the licensed places must be banded so that the capacity of the bund is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the bund.
- (3.D2) All drum storages of chemical, waste oil and fuel on the licensed places must be banded so that the capacity of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- (3.D3) All bunding on the licensed places must be constructed and maintained so as to be impervious to the materials being stored within it.
- (3.D4) All bunding on the licensed places must be roofed where practicable
- (3.D5) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (3.D6) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (3.D7) All required pipework from the banded areas on licensed places must be:
- (a) directed over the bund wall; or
  - (b) effectively sealed against leakage if passing through the bund wall

##### Stormwater Management

- (3.D8) A system of suitable diversion drains or embankments must be constructed and maintained to divert surface waters away from any area of the licensed place where contact with wastes or contaminants may occur. Particular attention must be paid to any:
- (a) active waste disposal trench;
  - (b) area previously used for waste disposal.

### END OF CONDITIONS FOR SCHEDULE 3.D

#### SCHEDULE 3E - LAND APPLICATION

- (3.E1) Nil conditions.

### END OF CONDITIONS FOR SCHEDULE 3.E

#### SCHEDULE 3F - NOISE

##### Emission of Noise

- (3.F1) In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in levels greater than those specified in Table 1 of the Noise Schedule until the circumstances which gave rise to the complaint are resolved.

**Schedule 3.F – Table 1**

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax,adj,T}$	Period
Background noise level plus 5dB(A)	7 am - 6 pm
Background noise level plus 5dB(A)	6 pm - 10 pm pm - pm
Background noise level plus 3dB(A)	10 pm - 7 am

Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level L Amax ad), T	Period
Background noise level plus 10dB(A)	7 am - 6 pm
Background noise level plus 10dB(A)	6 pm - 10 pm
Background noise level plus 8dB(A)	10 pm - 7 am

**END OF CONDITIONS FOR SCHEDULE 3.E**

**SCHEDULE 3.G - WASTE MANAGEMENT**

**Waste Acceptance Criteria**

- (3.G1) This environmental authority permits only bacterial sludges and grease interceptor trap effluent and residues to be received and disposed of at the licensed place.

**General**

- (3.G2) The holder of this environmental authority must not:
- (a) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (b) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (c) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

**Off Site Movement of Regulated Wastes**

- (3.G3) Where regulated waste is removed from any licensed place covered by this environmental authority (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and keep records of the following:
- (a) the date, quantity and type of waste removed; and
  - (b) name of the regulated waste transporter and/or disposal operator removing the waste; and
  - (c) the intended treatment/disposal destination of the waste.
- (3.G4) Records of any trade waste agreements for discharge of wastes to sewers must be made available for inspection on request.

**END OF CONDITIONS FOR SCHEDULE 3.G**

**SCHEDULE 3H - SELF MONITORING AND REPORTING**

**Sampling and Analysis of Waters**

- (3.H1) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling Manual, 3<sup>rd</sup> Edition, December 1999, or more recent additions or supplements to that document as such become available.

**Recording of Monitoring Program Results**

- (3.H2) The holder of this environmental authority must keep a written record of the results of all monitoring programs required under this environmental authority. This record must:
- (a) record the results of all analyses, measurements and observations;
  - (b) record the date and time of sampling;
  - (c) be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all the records of analysis results;

- (d) have all records of analyses, measurements and observations signed by a responsible officer.

### **Report Submission**

- (3.H3) The holder of this environmental authority must submit a report to the administering authority with the annual return which shall include but not be limited to:
- (a) a summary of the previous twelve (12) month's monitoring results obtained under any monitoring programs required under this environmental authority and, in graphical form, a comparison of the previous twelve (12) month's monitoring results to both the environmental authority limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from the monitoring programs; and
  - (c) a summary of any record of quantities of discharge required to be kept under this environmental authority; and
  - (d) a summary of the record of equipment failures or events recorded for any licensed place under condition number (3.H4); and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and
  - (f) for any sewage treatment plants licensed under this environmental authority:
    - (i) the number of domestic tenements newly connected to the sewage treatment works during the previous twelve (12) months; and
    - (ii) the progressive total number of connections; and
    - (iii) a brief description of any trade waste agreements entered into or amended during the year, including the nature of the industry.

### **Environmental Event Recording**

- (3.H4) The holder of this environmental authority must keep a record, in the form of a log, of any equipment failures or events likely to have adversely affected the environmental performance of the licensed place whilst still complying with this environmental authority. This log must include at least the following details:
- (a) time, date and nature of event;
  - (b) response and investigation undertaken to deal with the event;
  - (c) name of person responsible for investigating the event; and
  - (d) action taken as a result of the event investigation, and signature of responsible person; and
  - (e) must be made available upon request to any authorised person who shall be permitted to make copies thereof.

Note: The recording of events and incidents required under this condition must also include any of the following events:

- (i) any breakdown of plant and equipment used at any waste disposal facility where such breakdown is likely to result in failure to shred, compact or cover waste in accordance with the requirements of this environmental authority.

### **Notification of Emergencies and Incidents**

- (3.H5) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, 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.
- (3.H6) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, the notification of emergencies or incidents as required by condition number (3.H5) must include but not be limited to the following:

- (a) the holder of this environmental authority;
  - (b) the location of the emergency or incident;
  - (c) the number of the environmental authority;
  - (d) the name and telephone number of the designated contact person;
  - (e) the time of the release;
  - (f) the time the holder of this environmental authority became aware of the release;
  - (g) the suspected cause of the release;
  - (h) the environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
  - (i) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (3.H7) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number (3.H6) in addition to:
- (a) proposed actions to prevent a recurrence of the emergency or incident;
  - (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

#### Exception Reporting

- (3.H8) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (3.H9) The written notification required by condition number (3.H8) above must include:
- (a) the full analysis results, and
  - (b) details of investigation or corrective actions taken, and
  - (c) results of any subsequent analysis carried out to verify the success of any corrective actions taken.

#### END OF CONDITIONS FOR SCHEDULE 3.H

### SCHEDULE 3I – DEFINITIONS

**"aquifer"** means a subsurface zone or formation of rock which contains exploitable resources of groundwater.

**"attenuate"** means the decrease in concentration of chemical species present in liquid, eg the decrease in concentration of pollutants in liquid migrating from the base of a landfill as a result of its movement through soil.

**"background noise level"** means L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response.

**"capped"** means the covering of a tipping area with a low permeability material to inhibit penetration by liquids.

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

**"cover material"** means dense, inert and incombustible material, material used to cover solid wastes deposited in landfills.

**"dust"** means earth or other matter in fine, dry particles generated by disposal of construction or demolition waste.

**"*L<sub>Amax</sub>* 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 fifteen (15) minutes, using Fast response.

**"leachate"** means liquids which have become contaminated by contacting wastes or other contaminated liquids.

**"licensed place"** in this part of this environmental authority means the Douglas Shire Sanitary Depot on Lot 250, SR564, Parish of Whyanbeel, County of Solander located at Mossman-Daintree Road, Miallo Qld 4873.

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

**"*L<sub>A</sub>* pA,T"** means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

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

**"noise sensitive place"** means:

- (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 public park or gardens.

**"permeability"** means a measure of the rate at which a fluid will pass through a medium. The coefficient of permeability of a given fluid is an expression of the rate of flow through unit area and thickness under unit differential pressure at a given temperature. Synonymous with hydraulic conductivity when the fluid is water.

**"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.

**"recyclable waste"** means clean inoffensive waste that is declared to be recyclable waste under an application for an approval granted under section 369 of the Act.

**"the holder of this environmental authority"** means Douglas Shire Council.

**"waste disposal trench"** means an trench currently being used for the disposal of wastes accepted under a condition of this environmental authority and includes all or part of a disposal trench.

### END OF CONDITIONS FOR SCHEDULE 3.I

## PART 7: PORT DOUGLAS SEWAGE TREATMENT PLANT

### Monitoring and Measurements

- (7.A1) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this environmental authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

### Calibration

- (7.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

### Due Regard for Comment

- (7.A3) The holder of this environmental authority must take due regard to comments made by the administering authority prior to the implementation of any plan or program required as a condition of this environmental authority.

### Integrated Environmental Management System (IEMS)

- (7.A4) The holder of this environmental authority must implement an IEMS which provides for the following functions:
- (a) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and
  - (b) staff training and awareness of environmental issues; and
  - (c) the conduct of environmental and energy audits; and
  - (d) waste prevention, treatment and disposal; and
  - (e) preparation and implementation of site based management plans for each licensed place covered by this environmental authority; and

### Site-Based Management Plans

- (7.A5) Site-based management plans required by this environmental authority must provide for at least the following functions:
- (a) routine operating procedures to prevent or minimise environmental harm. This includes, amongst other matters, procedures for the removal of sewage sludges from any licensed place that minimise the risk of spillage of sludge or any other release of contaminants to the environment; and
  - (b) maintenance practices and procedures to ensure that all plant, equipment and reticulation systems used in the carrying out of the environmentally relevant activities are maintained in good working order; and
  - (c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - (d) recording and handling of environmental complaints; and
  - (e) keeping and production of environmental records and reports; and
  - (f) The monitoring of releases of contaminants into the environment and of the environmental impact caused by the releases.

This monitoring program must address the monitoring requirements of the appropriate part of this environmental authority, and for sewage treatment plants, also address the following issues:

- (i) monitoring of metals and other parameters likely to be found in the effluent based on the type of wastes going to sewer in accordance with trade waste agreements in the catchment for the sewage treatment plant, and based on the analysis of leachate being treated; and

- (ii) monitoring of metals (eg. boron and cadmium) and other parameters which are generally found in sewage effluent and have a potential to cause harm to irrigated plants or the biodiversity of receiving waters; and
- (iii) frequency of sampling to ensure the suitability of the effluent for irrigation and/or discharge to receiving waters; and
- (iv) carrying out an annual review of the monitoring program against the trade waste agreements in effect for the sewage treatment plant to ensure that the parameters being monitored are appropriate for the types of contaminants being discharged to the sewer; and
- (v) monitoring of bacteria from sewage effluent in receiving waters to ensure that the standards appropriate to the uses of those receiving waters are being maintained; and
- (vi) monitoring in receiving waters those metals identified at item (i)
- (g) staff training and awareness of environmental issues to ensure that, at a minimum;
  - (i) any person responsible for carrying out the environmentally relevant activities is familiar with the conditions of this environmental authority as they relate to the person's responsibilities; and
  - (ii) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activities is competent to carry out their duties; and
- (h) a stormwater management plan which has the objective of avoidance and minimisation of contaminated stormwater and provides for the following functions (where applicable and appropriate):
  - (i) reuse, treatment and disposal of contaminated stormwater; and
  - (ii) diversion of upstream runoff away from areas containing wastes or contaminants; and
  - (iii) minimisation of the size of contaminated areas; and
  - (iv) cleaning up of spilt contaminants without water; and
  - (v) installation of silt and rubbish traps, and first flush stormwater diversion systems; and
  - (vi) if soil is to be exposed or disturbed as a result of any works associated with an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) minimisation of the amount of soil to be exposed or disturbed by staging works; and
    - (2) revegetation of exposed or disturbed areas; and
    - (3) installation of sediment control measures such as settling basins; and
    - (4) diversion of upstream runoff from exposed or disturbed areas; and
  - (vii) if acid sulphate soils or potential acid sulphate soils exist at any licensed place or are disturbed, extracted or unearthed as a result of carrying out an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) the keeping underwater or isolation from the atmosphere by other means of any acid sulphate soils or potential acid sulphate soils disturbed, extracted or unearthed as a result of carrying out the environmentally relevant activities; and
    - (2) the maintenance in a submerged state of any acid sulphate soils or potential acid sulphate soils; and
    - (3) the maintenance of the height of the groundwater table where such lowering would be likely to expose any acid sulphate soils or potential acid sulphate soils to aerobic conditions; and
    - (A) any other specific requirements of the Stormwater Management Schedules of the other parts of this environmental authority; and
- (i) a Waste Management Plan (WMP) which details how this environmental authority will effectively and appropriately manage the amount of waste both processed and produced at the sewage treatment plants, and must address at least the following:
  - (i) any specific requirements of the Waste Management Schedule of the relevant part of this environmental authority; and

- (ii) provisions for carrying out an audit on compliance with the WMP within two (2) years from the date of issue of this environmental authority and thereafter every five (5) years; and
- (j) monitoring of compliance with any of the requirements of the conditions of this environmental authority; or
- (i) any plans or programs prepared under this environmental authority; and
- (k) review and amendment or improvement of operating procedures and plans or programs where deficiencies are revealed by the monitoring program required in section (i) of this condition; and
- (l) any other specific requirements of the other parts of this environmental authority.

**END OF CONDITIONS FOR SCHEDULE 7A**

## **SCHEDULE 7B - AIR**

### **Odour Generation**

- (7.B1) In the event of a complaint being made about noxious or offensive odour generated on the approved place, measures must be taken, as soon as practicable after the complaint is received, to minimise the release of the odour beyond the boundaries of the approved place.

**END OF CONDITIONS FOR SCHEDULE 7B**

## **SCHEDULE 7C - WATER**

### **Release Points**

- (7.C1) Sewage or treated sewage effluent must not be directly or indirectly released from any source on the licensed place to any waters at any location other than environmental discharge of treated effluent from Release Point W1 to Dicksons Inlet at the location shown in condition number (7.J1).

### **Release Point Details**

- (7.C2) Release Point W1 must be submerged to a depth of at least one (1) metre at all times.

### **Quantity of Contaminants Released**

- (7.C3) The total quantity of contaminants released from Release Point W1 during any dry weather day must not exceed 5,700 cubic metres and during a wet weather day must not exceed 28,500 cubic metres.

### **Quality Characteristics of Release to Waters**

- (7.C4) The release of contaminants to waters from Release Point W1 must comply, at the sampling and in situ monitoring point specified in Schedule 7.H, with each of the limits specified in Schedule 7.C Table 1 for each quality characteristic.
- (7.C5) The release of contaminants to waters from Release Point W1 must not produce visible floating oil, grease, scum or litter.

**Schedule 7.C - Table 1 Release Quality Characteristic Limits**

<b>Quality Characteristics</b>	<b>Release Limit</b>	<b>Limit Type</b>
5-day Biochemical Oxygen Demand (mg/l)	5 10 30	80 <sup>th</sup> percentile (long term) 80 <sup>th</sup> percentile (short term) maximum
Suspended Solids (mg/l)	7 15 30	80 <sup>th</sup> percentile (long term) 80 <sup>th</sup> percentile (short term) maximum
pH (pH Units)	6.5 to 8.5	Range
Dissolved Oxygen (mg/l)	2	Minimum



Ammonia Nitrogen (mg/l)	1 3	80 <sup>th</sup> percentile (short term) maximum
Total Nitrogen (mg/l)	5 10	50 <sup>th</sup> percentile maximum
Total Phosphorus as P (mg/l)	1 2	50 <sup>th</sup> percentile maximum
Oil and Grease (mg/l)	10	Maximum
Faecal Coliforms (Organisms/100 ml)	1000 <sup>(1)</sup> 4000	Median <sup>(2)</sup> 80 <sup>th</sup> percentile <sup>(3)</sup>

Notes:

- (1) ANZECC standards for secondary contact recreation (boating, fishing, etc.).
- (2) Median for this quality characteristic must be based on the results of at least five (5) samples, with individual samples being collected at intervals of not less than thirty (30) minutes.
- (3) "80<sup>th</sup> percentile" for this quality characteristic means that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five (5) consecutive samples collected and used for the Median calculation in Note (2).

### **Sewage Pump Station Alarms and Standby Pump Systems**

- (7.C6) Sewage pump stations whose failure would or would be likely to result in a direct or indirect release of contaminants to waters must be fitted with stand-by pumps and pump-failure alarms as well as high level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power if such power failure occurs and, when in operation, must notify the appropriate person to respond to the alarm.

### **Sewage Pump Station Overflow Frequency**

- (7.C7) Sewage pump stations and sewage reticulation systems must have the excess capacity to not overflow in the event of a power failure of the same duration as the longest power failure in the preceding five (5) years excluding cyclonic events.

### **Screening of Sewage Pump Station Overflows**

- (7.C8) Any sewage pump station overflows must be screened to prevent the release of gross solids.

### **New Sewage Pump Stations**

- (7.C9) Any new sewage pump station installed by the holder of this environmental authority at any licensed place covered by this environmental authority must comply with the following design criteria:
- (a) overflows resulting from infiltration should not occur for less than a one in ten (10) years storm event (excluding cyclonic events); and
  - (b) all overflows and overflow control structures must, where practicable, be located away from environmentally sensitive locations including waterways and natural wetlands; and
  - (c) where practicable, basins must be installed to isolate and contain sewage pump station overflows; and
  - (d) where a retention basin is provided, the contained overflow must be able to be pumped back to the sewage treatment system or removed for offsite disposal.

**END OF CONDITIONS FOR SCHEDULE 7C**

## **SCHEDULE 7D - STORMWATER MANAGEMENT**

### **Stormwater Management Plan**

- (7.D1) The Stormwater Management Plan prepared for this licensed place must, if soil is to be exposed or disturbed as a result of any works associated with the environmentally relevant activity (eg. extension or servicing of the sewage reticulation system), also address the following issues:
- (a) minimisation of the amount of soil to be exposed or disturbed by staging works; and
  - (b) revegetation of exposed or disturbed areas; and
  - (c) installation of sediment control measures such as settling basins; and
  - (d) diversion of upstream runoff from exposed or disturbed areas.

### **Bunding**

- (7.D2) All above ground bulk chemical, waste oil and fuel storage tanks on the licensed places must be banded so that the capacity of the band is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the band.
- (7.D3) All drum storages of chemical, waste oil and fuel on the licensed places must be banded so that the capacity of the band is sufficient to contain at least 25% of the maximum design storage volume within the band.
- (7.D4) All drum storages of chemical, waste oil and fuel on the licensed places must be banded so that the capacity of the band is sufficient to contain at least 25% of the maximum design storage volume within the band.
- (7.D5) All bunding on the licensed places must be roofed where practicable.
- (7.D6) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (7.D7) A collection sump must be provided in the floor of the banded area on any licensed place to facilitate the removal of liquids. The band floor must be graded so that the fall is towards the collection sump.
- (7.D8) All required pipework from the banded areas on licensed places must be:
- (a) directed over the band wall; or
  - (b) effectively sealed against leakage if passing through the band wall.

### **END OF CONDITIONS FOR SCHEDULE 7D**

## **SCHEDULE 7E - LAND APPLICATION**

- (7.E1) The holder of this environmental authority must not discharge any sewage or treated sewage effluent to land under their control unless the discharge of the sewage or treated sewage effluent to that area of land is permitted under this schedule of this environmental authority.
- (7.E2) Where treated sewage effluent is discharged to any land vested in or under the control of a person or body other than the holder of this environmental authority, the holder of this environmental authority must have a legal agreement or contract with such body or person to dispose of treated sewage effluent onto that property or supply effluent for reuse. This agreement or contract must clearly identify the contractual obligations of the parties to the agreement or contract for any environmental harm arising from the supply or transfer or storage or reuse of the treated sewage effluent.
- (7.E3) The holder of this environmental authority must supply the administering authority with a copy of any agreement or contract held under condition number (4.E2) within thirty (30) days of the agreement or contract being finalised.

### **Investigation of Treated Sewage Effluent Irrigation Areas**

- (7.E4) Any extension of the area used for irrigation of treated sewage effluent to land (other than for maintenance of the grounds and gardens around the sewage treatment plant generating the effluent),

or supply of treated sewage effluent by the holder of this environmental authority to another person or body for irrigation to land under any new re-use scheme, may only take place after the holder of this environmental authority has carried out an investigation into:

- (a) the ecological sustainability of the irrigation or re-use proposal; and
- (b) the suitability for irrigation with treated sewage effluent of the land to be used; and
- (c) BPEM to minimise any environmental harm resulting from the irrigation.

Note: Guidelines are available from the Environmental Protection Agency, Cairns District Office on how to assess the suitability of a piece of land for wastewater irrigation and how to achieve BPEM for the irrigation.

### Control of Treated Sewage Effluent Irrigation to Land Under the Control of the Holder of this Environmental authority

- (7.E5) The irrigation with treated sewage effluent of any area under the control of the holder of this environmental authority must be carried out in such a manner that:
  - (a) vegetation is not damaged;
  - (b) soil erosion and soil structure damage is minimised;
  - (c) there is no surface ponding of effluent;
  - (d) the effluent is evenly distributed on the irrigation area;
  - (e) there is no spray drift or overspray or contaminated runoff outside the effluent disposal area approved under this schedule; and
  - (f) the infiltration of effluent beyond the plant root zone is minimised
- (7.E6) Irrigation of treated sewage effluent on any area under the control of the holder of this environmental authority must be rotated such that each portion of the irrigation area is irrigated at an application rate and frequency that optimises plant growth.
- (7.E7) Notices must be prominently displayed on any treated sewage effluent irrigation area under the control of the holder of this environmental authority warning the public that the area is irrigated with treated sewage effluent and not to use or drink the wastewater. These notices must be maintained in a visible and legible condition.
- (7.E8) The grazing of animals on any treated sewage effluent irrigation area under the control of the holder of this environmental authority must be controlled to prevent soil pugging.

### END OF CONDITIONS FOR SCHEDULE 7E

## SCHEDULE 7F - NOISE

### Emission of Noise

- (7.F1) In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in levels greater than those specified in Table 1 of the Noise Schedule until the circumstances which gave rise to the complaint are resolved.

**Schedule 7.F - Table 1**

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj, T}$	Period
background noise level plus 5dB(A)	7 am - 6 pm
background noise level plus 5dB(A)	6 pm - 10 pm
background noise level plus 3dB(A)	10 pm - 7 am
Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj, T}$	Period
background noise level plus 10dB(A)	7 am - 6 pm
background noise level plus 10dB(A)	6 pm - 10 pm
background noise level plus 8dB(A)	10 pm - 7 am

## SCHEDULE 7G - WASTE MANAGEMENT

### Regulated Waste Treatment

- (7.G1) Regulated waste treatment is limited to the treatment of leachate received from the Killaloe Waste Landfill, and also, septic tank waste received.
- (7.G2) Waste acceptance and treatment is subject to on-going risk assessment of the data obtained from leachate quality monitoring undertaken in accordance with condition 11-H14 (Killaloe Landfill).
- (7.G3) The leachate received must be pre-treated in the oxidation ditch prior to reintroduction to the treatment process at the head of works.
- (7.G4) The only release of contaminants to waters or land must be in accordance with Schedule C - Water and Schedule E - Land Application.

### Waste Management Plan

- (7.G5) The Waste Management Plan prepared for this licensed place must also address the following issues:
  - (a) minimisation of infiltration and other stormwater inflows to the sewage reticulation system, and
  - (b) the current methods of disposal of effluent and sludges, and
  - (c) proposed methods for ecologically sustainable reuse of sludges from the sewage treatment plant.

### General

- (7.G6) The holder of this environmental authority must not:
  - a) Burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - b) Allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - c) Remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

### Off Site Movement of Regulated Wastes

- (7.G7) Where regulated waste is removed from any licensed place covered by this environmental authority (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and keep records of the following:
  - (a) the date, quantity and type of waste removed; and
  - (b) name of the regulated waste transporter and/or disposal operator removing the waste; and
  - (c) the intended treatment/disposal destination of the waste.
- (7.G8) Records of any trade waste agreements for discharge of wastes to sewers must be made available for inspection on request.

### END OF CONDITIONS FOR SCHEDULE 7G

## SCHEDULE 7H - SELF MONITORING AND REPORTING

### Monitoring of Contaminant Releases to Waters

- (7.H1) The holder of this environmental authority is responsible for the making of determinations and keeping of records of the quality of the contaminants released for the release points, quality characteristics, and at not less than the frequency specified in Schedule 7.H, Table 1.

### Sampling Point Details

- (7.H2) Determinations of the quality of contaminants released to waters to check conformity with the release quality characteristics specified in Table 1 of Schedule 7.C of this environmental authority must be undertaken on samples collected from the UV sterilisation channel downstream from the UV steriliser.

**Schedule 7.H - Table 1 Release Quality Characteristic Limits**

Characteristics Determination	Frequency
5-day Biochemical Oxygen Demand	weekly
Suspended Solids	weekly
pH	weekly
Dissolved Oxygen	weekly
Ammonia Nitrogen	fortnightly
Total Oxidised Nitrogen	fortnightly
Total Nitrogen	fortnightly
Total Phosphorus as P	fortnightly
Oil and Grease	fortnightly
Faecal Coliforms (Organisms/100 ml)	fortnightly

### Monitoring of Volume of Release

- (7.H3) The daily quantity of contaminants released through Release Point W1, irrigated to land or supplied to another person for irrigation must be accurately measured.
- (7.H4) Records must be kept of the results of all determinations made in accordance with condition number (7.H3).

### Sludge Monitoring

- (7.H5) A composite sample, of the sludge generated from the licensed place since the previous sample was taken, must be taken at least once in each three (3) years and analysed for the concentrations of the following parameters:
- (a) total zinc; and
  - (b) total copper; and
  - (c) total aluminium; and
  - (d) total organochlorine pesticides.

### Environmental Impact Monitoring Program

- (7.H6) The environmental impact monitoring program required to be developed and implemented for this licensed place must consider any impacts caused by the discharge of treated sewage effluent from the licensed place on Dicksons Inlet.

### Sampling and Analysis of Waters

- (7.H7) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling

Manual, 3rd Edition, December 1999, or more recent additions or supplements to that document as such become available.

### **Recording of Monitoring Program Results**

- (7.H8) The holder of this environmental authority must keep a written record of the results of all monitoring programs required under this environmental authority. This record must:
- (a) record the results of all analyses, measurements and observations;
  - (b) record the date and time of sampling;
  - (c) be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all the records of analysis results;
  - (d) have all records of analyses, measurements and observations signed by a responsible officer.

### **Report Submission**

- (7.H9) The holder of this environmental authority must submit a report to the administering authority with the annual return which shall include but not be limited to:
- (a) a summary of the previous twelve (12) month's monitoring results obtained under any monitoring programs required under this environmental authority and, in graphical form, a comparison of the previous twelve (12) month's monitoring results to both the environmental authority limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from the monitoring programs; and
  - (c) a summary of any record of quantities of discharge required to be kept under this environmental authority; and
  - (d) a summary of the record of equipment failures or events recorded for any licensed place under condition number (7.H10); and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and
  - (f) for any sewage treatment plants licensed under this environmental authority:
    - (i) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
    - (ii) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
    - (iii) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

### **Environmental Event Recording**

- (7.H10) The holder of this environmental authority must keep a record, in the form of a log, of any equipment failures or events likely to have adversely affected the environmental performance of the licensed place whilst still complying with this environmental authority. This log must include at least the following details:
- (a) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (b) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (c) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

Note: The recording of events and incidents required under this condition must also include any of the following events:

1. any breakdown of plant and equipment used at any waste disposal facility where such breakdown is likely to result in failure to shred, compact or cover waste in accordance with the requirements of this environmental authority

#### **Notification of Emergencies and Incidents**

- (7.H11) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, 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.
- (7.H12) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, the notification of emergencies or incidents as required by condition number (7.H11) must include but not be limited to the following:
- (a) the holder of this environmental authority;
  - (b) the location of the emergency or incident;
  - (c) the number of the environmental authority;
  - (d) the name and telephone number of the designated contact person;
  - (e) the time of the release;
  - (f) the time the holder of this environmental authority became aware of the release;
  - (g) the suspected cause of the release;
  - (h) the environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
  - (i) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (7.H13) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number (7.H12) in addition to:
- (a) proposed actions to prevent a recurrence of the emergency or incident;
  - (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

#### **Exception Reporting**

- (7.H14) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (7.H15) The written notification required by condition number (7.H14) above must include:
- (a) the full analysis results, and
  - (b) details of investigation or corrective actions taken, and
  - (c) results of any subsequent analysis carried out to verify the success of any corrective actions taken.

**END OF CONDITIONS FOR SCHEDULE 7H**

## SCHEDULE 7I – DEFINITIONS

Words and phrases used throughout part 7 of this Environmental Authority are defined below.

**“50th percentile”** means that the measured values of the quality characteristic must not be greater than the release limit for any more than three out of six consecutive samples where the time interval between the taking of each consecutive sample is not less than three (3) days.

**“80th percentile (long term)”** means that not more than ten (10) of the measured values of the quality characteristic are to exceed the stated release limit for any fifty (50) consecutive samples where:

- (a) the consecutive samples are taken over a one (1) year period;
- (b) the consecutive samples are taken at approximately equal periods; and
- (c) the time interval between the taking of each consecutive sample is not less than six (6) days.

**“80th percentile (short term)”** means that not more than one (1) of the measured values of the quality characteristic are to exceed the stated release limit for any five (5) consecutive samples where:

- (a) the consecutive samples are taken over a five (5) week period;
- (b) the consecutive samples are taken at approximately equal periods; and
- (c) the time interval between the taking of each consecutive sample is not less than six (6) days.

**“aquifer”** means a subsurface zone or formation of rock which contains exploitable resources of groundwater.

**“attenuate”** means the decrease in concentration of chemical species present in liquid, eg the decrease in concentration of pollutants in liquid migrating from the base of a landfill as a result of its movement through soil.

**“background noise level”** means L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response.

**“BPEM”** means Best Practice Environmental Management.

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

**“composite”** in respect of sampling means either time based taken at hourly intervals to cover the period in the twenty-four (24) hours of the sampling day during which a contaminant release occurs; or taken after set flow volumes to cover the period of the sampling day during which the contaminant release occurs

**“dry weather day”** refers to a day during which no rain falls within the catchment of the sewage treatment plant from the commencement of measurement for that day. The term also excludes days during which measurement is made which occur within three (3) days following cumulative rainfall of 100 mm over the three (3) preceding days.

**“dust”** means earth or other matter in fine, dry particles generated by disposal of construction or demolition waste.

**“grab”** sample means one sample collected at any point in time.



**“L<sub>Amax adj,T</sub>”** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

**“licensed place”** in this part of this environmental authority means the Port Douglas Sewage Treatment Plant on Lot 8, SR1891, Parish of Salisbury, County of Solander, located at Port Road, Port Douglas Qld 4871 and includes any pump stations, reticulation systems and other ancillary works associated with the plant.

**“maximum”** means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

**“MaxL<sub>pA,T</sub>”** means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

**“median”** means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

**“mg/l”** means milligrams per litre.

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

**“noise sensitive place”** means:

- (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 public park or gardens.

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

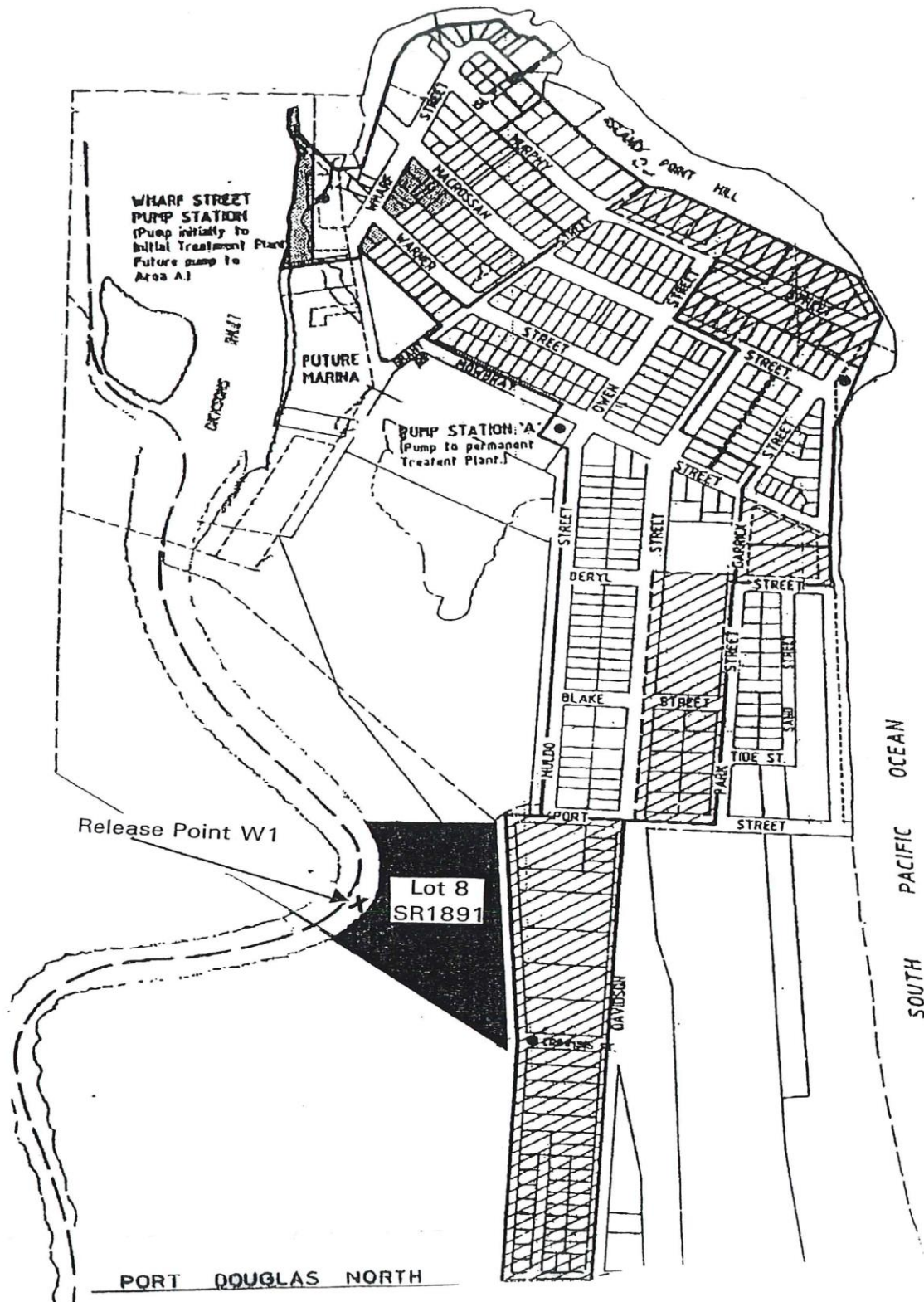
**“the holder of this environmental authority”** means Douglas Shire Council.

**“total nitrogen”** means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen

**“wet weather day”** refers to any day other than a dry weather day.

## SCHEDULE 7J - SITE PLANS

(7.J1) Port Douglas Sewage Treatment Plant - Licensed Place and Location of Release Point W1



End of Part 7

## **PART 8: MOSSMAN SEWAGE TREATMENT PLANT**

### **SCHEDULE 8A - GENERAL CONDITIONS**

#### **Monitoring and Measurements**

- (8.A1) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this environmental authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

#### **Calibration**

- (8.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

#### **Due Regard for Comment**

- (8.A3) The holder of this environmental authority must take due regard to comments made by the administering authority prior to the implementation of any plan or program required as a condition of this environmental authority.

#### **Integrated Environmental Management System (IEMS)**

- (8.A4) The holder of this environmental authority must implement an IEMS which provides for the following functions:
- (a) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and
  - (b) staff training and awareness of environmental issues; and
  - (c) the conduct of environmental and energy audits; and
  - (d) waste prevention, treatment and disposal; and
  - (e) preparation and implementation of site based management plans for each licensed place covered by this environmental authority; and

#### **Site-Based Management Plans**

- (8.A5) Site-based management plans required by this environmental authority must provide for at least the following functions:
- (a) routine operating procedures to prevent or minimise environmental harm. This includes, amongst other matters, procedures for the removal of sewage sludges from any licensed place that minimise the risk of spillage of sludge or any other release of contaminants to the environment; and
  - (b) maintenance practices and procedures to ensure that all plant, equipment and reticulation systems used in the carrying out of the environmentally relevant activities are maintained in good working order; and
  - (c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - (d) recording and handling of environmental complaints; and
  - (e) Keeping and production of environmental records and reports; and
  - (f) the monitoring of releases of contaminants into the environment and of the environmental impact caused by the releases.  
This monitoring program must address the monitoring requirements of the appropriate part of this
    - (i) monitoring of bacteria from sewage effluent in receiving waters to ensure that the standards appropriate to the uses of those receiving waters are being maintained; and
  - (g) staff training and awareness of environmental issues to ensure that, at a minimum;

- (i) any person responsible for carrying out the environmentally relevant activities is familiar with the conditions of this environmental authority as they relate to the person's responsibilities; and
  - (i) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activities is competent to carry out their duties.
- (8.A6) **Activities** conducted under this environmental authority must not be conducted contrary to the following limitation:

Inflows must not exceed the peak design capacity of three times the **Design Average Dry Weather Flow** (DADWF) of 1.65 ML/day - equating to 4.95 ML/day - on any day unless the standard treatment processes of the plant are **bypassed**.

**END OF CONDITIONS FOR SCHEDULE 8A**

## SCHEDULE 8B – AIR

- (8.B1) Nil conditions.

**END OF CONDITIONS FOR SCHEDULE 8B**

## SCHEDULE 8C - WATER

### Release Points

- (8.C1) Sewage or treated sewage effluent must not be directly or indirectly released from any source on the licensed place to any waters at any location other than:
- (a) overflows from sewage pump stations in accordance with the requirements of this environmental authority; and
  - (b) the discharge of treated effluent from Release Point W2 to the Mossman River at a location described as upstream of the junction of the Mossman and South Mossman Rivers at 5.4 kilometres AMTD and shown in condition number (8.J1).

### Release Point Details

- (8.C2) Release Point W2 must be submerged to a depth of at least one (1) metre at all times.

### Quality Characteristics of Release to Waters

- (8.C3) The only contaminants to be released to surface waters, excluding **bypass** releases covered by water conditions 8C5 and 8C6, are from the sewage treatment plant to Release Point W2, in accordance with Schedule 8.C Table 1 - *Surface water release limits*.
- (8.C4) In addition to 8C3, the release to waters from Release Point W2 must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter, or other visually objectionable matter, excluding bypass releases covered by water conditions.

**Schedule 8.C - Table 1 Release Quality Characteristic Limits**

Quality Characteristics	Release Limit	Limit Type
5-day Biochemical Oxygen Demand (mg/l)	15 23 45	80 <sup>th</sup> percentile (long term) 80 <sup>th</sup> percentile (short term) maximum
Suspended Solids (mg/l)	20 30 60	80 <sup>th</sup> percentile (long term) 80 <sup>th</sup> percentile (short term) maximum
pH (pH Units)	6.0 to 8.5	Range
Dissolved Oxygen (mg/l)	2	Minimum
Free Residual Chlorine (mg/l)	0.7 <sup>(1)</sup>	Maximum
Ammonia Nitrogen (mg/l)	1	Maximum

Total Nitrogen (mg/l)	5 15	50 <sup>th</sup> percentile maximum
Total Phosphorus as P (mg/l)	5 8	50 <sup>th</sup> percentile maximum
Total Nitrogen Annual Mass Load (dry weather) (kg)	2099	maximum
Total Phosphorus Annual Mass Load (dry weather) (kg)	2099	maximum
Oil and Grease (mg/l)	10	Maximum
Faecal Coliforms (Organisms/100 ml)	1000 <sup>(2)</sup> 4000	median <sup>(3)</sup> 80 <sup>th</sup> percentile <sup>(4)</sup>

Notes:

- (1) Measured at the chlorine contact tank after a minimum twenty (20) minutes detention period.
- (2) ANZECC standards for secondary contact recreation (boating, fishing, etc.).
- (3) Median for this quality characteristic must be based on the results of at least five samples, with individual samples being collected at intervals of not less than thirty (30) minutes.
- (4) "80th percentile" for this quality characteristic means that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five consecutive samples collected and used for the Median calculation in Note (3).
- (5) Annual Mass Load must be calculated on a rolling fortnightly basis.
- (6) Sampling must be in accordance with the Water Quality Sampling Manual

### Bypass Releases

- (8.C5) Bypass releases must be screened prior to being released.
- (8.C6) The administering authority must be notified within 24 hours of any bypass release ceasing.

### Sewage Pump Station Alarms and Standby Pump Systems

- (8.C7) Sewage pump stations whose failure would or would be likely to result in a direct or indirect release of contaminants to waters must be fitted with stand-by pumps and pump-failure alarms as well as high level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power if such power failure occurs and, when in operation, must notify the appropriate person to deal with the alarm.

### Sewage Pump Station Overflow Frequency

- (8.C8) Sewage pump stations and sewage reticulation systems must have the excess capacity to not overflow in the event of a power failure of the same duration as the longest power failure in the preceding five (5) years excluding cyclonic events.

### Screening of Sewage Pump Station Overflows

- 8.C9) Any sewage pump station overflows must be screened to prevent the release of gross solids.

### New Sewage Pump Stations

- (8.C10) Any new sewage pump station installed by the holder of this environmental authority at any licensed place covered by this environmental authority must comply with the following design criteria:
- (a) overflows resulting from infiltration should not occur for less than a one in ten (10) years storm event (excluding cyclonic events); and
  - (b) all overflows and overflow control structures must, where practicable, be located away from environmentally sensitive locations including waterways and natural wetlands; and

- (c) where practicable, basins must be installed to isolate and contain sewage pump station overflows; and
- (d) where a retention basin is provided, the contained overflow must be able to be pumped back to the sewage treatment system or removed for off site disposal.

**END OF CONDITIONS FOR SCHEDULE 8C**

## **SCHEDULE 8D - STORMWATER MANAGEMENT**

### **Bunding**

- (8.D1) All above ground bulk chemical, waste oil and fuel storage tanks on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the bund.
- (8.D2) All drum storages of chemical, waste oil and fuel on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- (8.D3) All bunding on the licensed places must be constructed and maintained so as to be impervious to the materials being stored within it.
- (8.D4) All bunding on the licensed places must be roofed where practicable.
- (8.D5) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (8.D6) A collection sump must be provided in the floor of the bunded area on any licensed place to facilitate the removal of liquids. The bund floor must be graded so that the fall is towards the collection sump.
- (8.D7) All required pipework from the bunded areas on licensed places must be:
  - (a) directed over the bund wall; or
  - (b) effectively sealed against leakage if passing through the bund wall.

**END OF CONDITIONS FOR SCHEDULE 8D**

## **SCHEDULE 8E - LAND APPLICATION**

No conditions prescribed under this schedule

**END OF CONDITIONS FOR SCHEDULE 8E**

## **SCHEDULE 8F - NOISE**

### **Emission of Noise**

- (8.F1) In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in levels greater than those specified in Table 1 of the Noise Schedule until the circumstances which gave rise to the complaint are resolved.

**Schedule 8.F - Table 1**

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj, T}$	Period
background noise level plus 5dB(A)	7 am - 6 pm
background noise level plus 5dB(A)	6 pm - 10 pm
background noise level plus 3dB(A)	10 pm - 7 am
Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj, T}$	Period
background noise level plus 10dB(A)	7 am - 6 pm
background noise level plus 10dB(A)	6 pm - 10 pm

background noise level plus 8dB(A)	10 pm - 7 am
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**END OF CONDITIONS FOR SCHEDULE 8F**

## **SCHEDULE 8G - WASTE MANAGEMENT**

### **Waste Management Plan**

- (8.G1) The Waste Management Plan prepared for this licensed place must also address the following issues:
- (a) minimisation of infiltration and other stormwater inflows to the sewage reticulation system, and
  - (b) the current methods of disposal of effluent and sludges, and
  - (c) proposed methods for ecologically sustainable reuse of sludges from the sewage treatment plant.

### **General**

- (8.G2) The holder of this environmental authority must not:
- (a) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (b) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (c) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

### **Off Site Movement of Regulated Wastes**

- (8.G3) Where regulated waste is removed from any licensed place covered by this environmental authority (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and keep records of the following:
- (a) the date, quantity and type of waste removed; and
  - (b) name of the regulated waste transporter and/or disposal operator removing the waste; and
  - (c) the intended treatment/disposal destination of the waste.
- 8.G4) Records of any trade waste agreements for discharge of wastes to sewers must be made available for inspection on request.

**END OF CONDITIONS FOR SCHEDULE 8G**

## **SCHEDULE 8H - SELF MONITORING AND REPORTING**

### **Monitoring of Contaminant Releases to Waters**

- (8.H1) The holder of this environmental authority is responsible for the making of determinations and keeping of records of the quality of the contaminants released for the release points, quality characteristics, and at not less than the frequency specified in Schedule 8.H, Table 1.

### **Sampling Point Details**

- (8.H2) Monitoring of contaminant releases to **waters**, excluding bypass releases covered by water conditions 8C5 and 8C6, must be undertaken in accordance with Table 1 of Schedule 8.C and associated requirements. I.

**Schedule 8.H - Table 1**

<b>Quality Characteristic Determination</b>	<b>Frequency</b>
5-day Biochemical Oxygen Demand	fortnightly
Suspended Solids	fortnightly
pH	weekly
Dissolved Oxygen	weekly
Ammonia Nitrogen	fortnightly
Free residual chlorine	fortnightly
Total Nitrogen	fortnightly
Total Phosphorus as P	fortnightly
Oil and Grease	fortnightly
Faecal Coliforms (Organisms/100 ml)	fortnightly

**Associated Requirements**

1. Samples are to be collected from the clarifier (for 5-day Biochemical Oxygen Demand) and from the end of the chlorine contact tank for all other parameters.
2. Monitoring must be undertaken when the activity is in operation and samples must be taken during a release.

**Monitoring of Volume of Release**

- (8.H3) The daily quantity of contaminants released through Release Point W2, irrigated to land or supplied to another person for irrigation must be determined by the use of a flow recorder.
- (8.H4) Records must be kept of the results of all determinations made in accordance with condition number (8.H3).

**Sludge Monitoring**

- (8.H5) A composite sample, of the sludge generated from the licensed place since the previous sample was taken, must be taken at least once in each three (3) years and analysed for the concentrations of the following parameters:
- (a) total zinc; and
  - (b) total copper; and
  - (c) total aluminium; and
  - (d) total organochlorine pesticides.

**Environmental Impact Monitoring Program**

- (8.H6) The environmental impact monitoring program required to be developed and implemented for this licensed place must consider any impacts caused by the discharge of treated sewage effluent from the licensed place on the Mossman River.

**Sampling and Analysis of Waters**

- (8.H7) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling



Manual, 3rd Edition, December 1999, or more recent additions or supplements to that document as such become available.

### **Recording of Monitoring Program Results**

- (8.H8) The holder of this environmental authority must keep a written record of the results of all monitoring programs required under this environmental authority. This record must:
- (a) record the results of all analyses, measurements and observations;
  - (b) record the date and time of sampling;
  - (c) be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all the records of analysis results;
  - (d) have all records of analyses, measurements and observations signed by a responsible officer.

### **Report Submission**

- (8.H9) The holder of this environmental authority must submit a report to the administering authority with the annual return which shall include but not be limited to:
- (a) a summary of the previous twelve (12) month's monitoring results obtained under any monitoring programs required under this environmental authority and, in graphical form, a comparison of the previous twelve (12) month's monitoring results to both the environmental authority limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from the monitoring programs; and
  - (c) a summary of any record of quantities of discharge required to be kept under this environmental authority; and
  - (d) a summary of the record of equipment failures or events recorded for any licensed place under condition number (8.H10); and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and
  - (f) for any sewage treatment plants licensed under this environmental authority:
    - (i) the number of domestic tenements newly connected to the sewage treatment works during the previous twelve (12) months; and
    - (ii) the progressive total number of connections; and
    - (iii) a brief description of any trade waste agreements entered into or amended during the year, including the nature of the industry.

### **Environmental Event Recording**

- (8.H10) The holder of this environmental authority must keep a record, in the form of a log, of any equipment failures or events likely to have adversely affected the environmental performance of the licensed place whilst still complying with this environmental authority. This log must include at least the following details:
- (a) time, date and nature of event;
  - (b) response and investigation undertaken to deal with the event;
  - (c) name of person responsible for investigating the event; and
  - (d) action taken as a result of the event investigation, and signature of responsible person; and
  - (e) must be made available upon request to any authorised person who shall be permitted to make copies thereof.

Note: The recording of events and incidents required under this condition must also include any of the following events:

- (i) any breakdown of plant and equipment used at any waste disposal facility where such breakdown is likely to result in failure to shred, compact or cover waste in accordance with the requirements of this environmental authority.

### Notification of Emergencies and Incidents

- (8.H11) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, 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.
- (8.H12) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, the notification of emergencies or incidents as required by condition number (8.H11) must include but not be limited to the following:
- (a) the holder of this environmental authority;
  - (b) the location of the emergency or incident;
  - (c) the number of the environmental authority;
  - (d) the name and telephone number of the designated contact person;
  - (e) the time of the release;
  - (f) the time the holder of this environmental authority became aware of the release;
  - (g) the suspected cause of the release;
  - (h) the environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
  - (d) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (8.H13) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number (8.H12) in addition to:
- (a) proposed actions to prevent a recurrence of the emergency or incident;
  - (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

### Exception Reporting

- (8.H14) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (8.H15) The written notification required by condition number (8.H14) above must include:
- (a) the full analysis results, and
  - (b) details of investigation or corrective actions taken, and
  - (c) results of any subsequent analysis carried out to verify the success of any corrective actions taken.

### END OF CONDITIONS FOR SCHEDULE 8.H

## SCHEDULE 8.I – DEFINITIONS

Words and phrases used throughout part 8 of this Environmental Authority are defined below.

**"50th percentile"** means that the measured values of the quality characteristic must not be greater than the release limit for any more than three out of six consecutive samples where the time interval between the taking of each consecutive sample is not less than three (3) days.

**"80th percentile (long term)"** means that not more than ten (10) of the measured values of the quality characteristic are to exceed the stated release limit for any fifty (50) consecutive samples where:

- (a) the consecutive samples are taken over a one (1) year period;
- (b) the consecutive samples are taken at approximately equal periods; and
- (c) the time interval between the taking of each consecutive sample is not less than six (6) days.

**"80th percentile (short term)"** means that not more than one (1) of the measured values of the quality characteristic are to exceed the stated release limit for any five (5) consecutive samples where:

- (a) the consecutive samples are taken over a five (5) week period;
- (b) the consecutive samples are taken at approximately equal periods; and
- (c) the time interval between the taking of each consecutive sample is not less than six (6) days.

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

**"aquifer"** means a subsurface zone or formation of rock which contains exploitable resources of groundwater.

**"attenuate"** means the decrease in concentration of chemical species present in liquid, eg the decrease in concentration of pollutants in liquid migrating from the base of a landfill as a result of its movement through soil.

**"background noise level"** means L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response.

**"BPEM"** means Best Practice Environmental Management.

**"bypass"** means when the standard treatment processes of the plant do not occur as a result of wet weather and inflows that are in excess of the peak design capacity for inflow resulting in the release of untreated or partially treated effluent from the sewage treatment plant to the environment.

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

**"composite"** in respect of sampling means either time based taken at hourly intervals to cover the period in the twenty-four (24) hours of the sampling day during which a contaminant release occurs; or taken after set flow volumes to cover the period of the sampling day during which the contaminant release occurs

**"Design Average Dry Weather Flow"** (DADWF) means the average dry weather flow of the treatment plant at the design horizon.

**"dry weather day"** refers to a day during which no rain falls within the catchment of the sewage treatment plant from the commencement of measurement for that day. The term also excludes days during which measurement is made which occur within three days following cumulative rainfall of 100 mm over the three preceding days.

**"dust"** means earth or other matter in fine, dry particles generated by disposal of construction or demolition waste.

**"grab"** sample means one sample collected at any point in time.

**"L<sub>Amax adj,T</sub>"** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

**"licensed place"** in this part of this environmental authority means the Mossman Sewage Treatment Plant on Lot 22, RP800895 and Lot 165, SR808148, Parish of Victory, County of Solander, located at Junction Road, Mossman Qld 4873 and includes any pump stations, reticulation systems and other ancillary works associated with the plant.

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

**"MaxL pA,T"** means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

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

**"mg/l"** means milligrams per litre.

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

**"noise sensitive place"** means:

- (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 public park or gardens.

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

**"the holder of this environmental authority"** means Douglas Shire Council

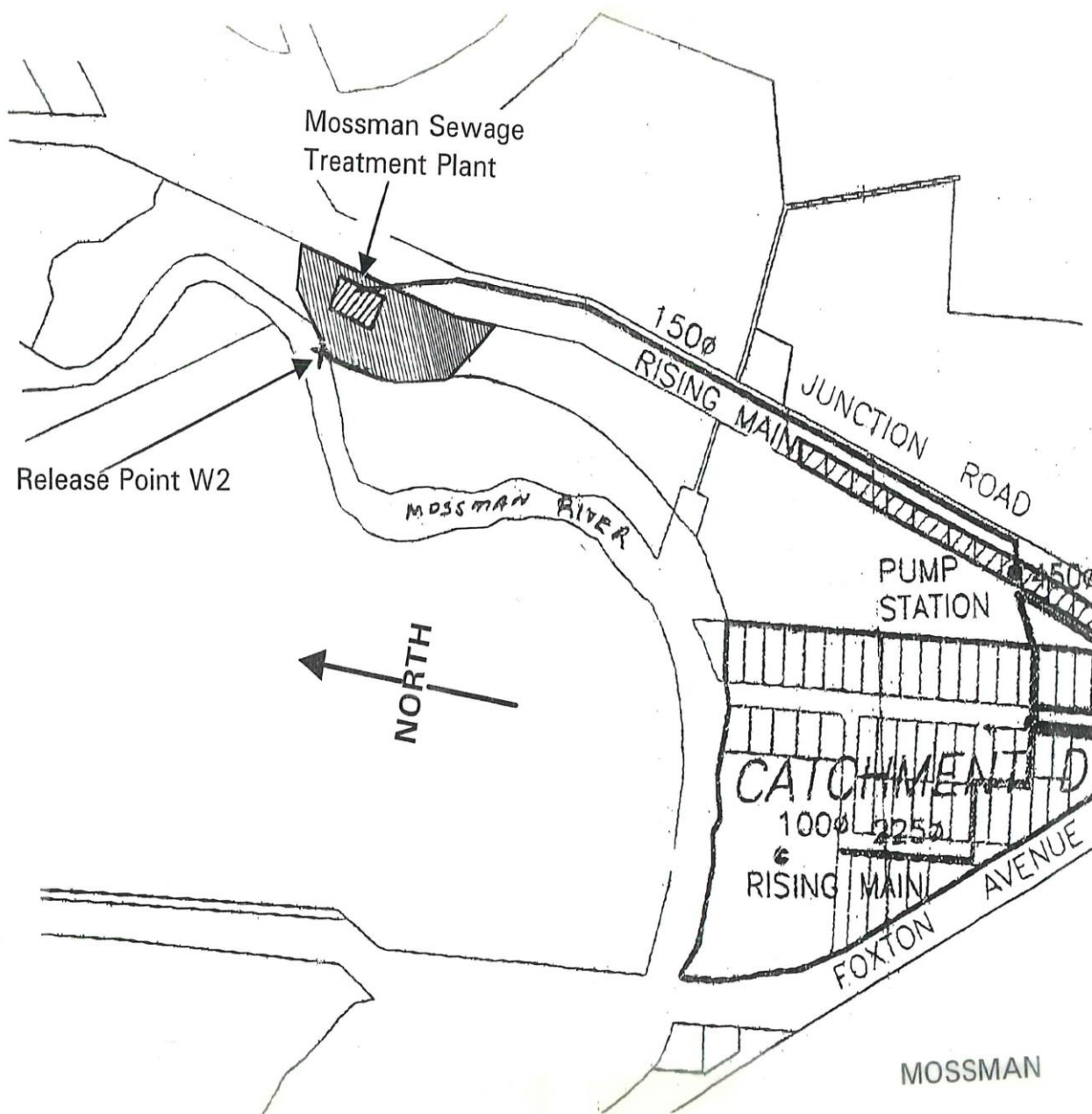
**"total nitrogen"** means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen

**"wet weather day"** refers to any day other than a dry weather day.

**END OF CONDITIONS FOR SCHEDULE 8I**

## SCHEDULE 8J - SITE PLANS

(8.J1) Mossman Sewage Treatment Plant - Location of Release Point W2



End of Part 8

## Part 11: Killaloe Refuse Tip

### SCHEDULE 11A - GENERAL CONDITIONS

#### Monitoring and Measurements

- (11.A1) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this environmental authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

#### Calibration

- (11.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

#### Due Regard for Comment

- (11.A3) The holder of this environmental authority must take due regard to comments made by the administering authority prior to the implementation of any plan or program required as a condition of this environmental authority.

#### Integrated Environmental Management System (IEMS)

- (11.A4) The holder of this environmental authority must implement an IEMS which provides for the following functions:
- (a) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and
  - (b) staff training and awareness of environmental issues; and
  - (c) the conduct of environmental and energy audits; and
  - (d) waste prevention, treatment and disposal; and
  - (e) preparation and implementation of site based management plans for each licensed place covered by this environmental authority; and

#### Site-Based Management Plans

- (11.A5) Site-based management plans required by this environmental authority must provide for at least the following functions:
- (a) routine operating procedures to prevent or minimise environmental harm. This includes, amongst other matters, procedures for the removal of sewage sludges from any licensed place that minimise the risk of spillage of sludge or any other release of contaminants to the environment; and
  - (b) maintenance practices and procedures to ensure that all plant, equipment and reticulation systems used in the carrying out of the environmentally relevant activities are maintained in good working order; and
  - (c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - (d) recording and handling of environmental complaints; and
  - (e) keeping and production of environmental records and reports; and
  - (f) the monitoring of releases of contaminants into the environment and of the environmental impact caused by the releases.
    - (i) this monitoring program must address the monitoring requirements of the appropriate part of this environmental authority; and
  - (g) staff training and awareness of environmental issues to ensure that, at a minimum;

- (i) any person responsible for carrying out the environmentally relevant activities is familiar with the conditions of this environmental authority as they relate to the person's responsibilities; and
  - (ii) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activities is competent to carry out their duties; and
- (h) a stormwater management plan which has the objective of avoidance and minimisation of contaminated stormwater and provides for the following functions (where applicable and appropriate):
  - (i) reuse, treatment and disposal of contaminated stormwater; and
  - (ii) diversion of upstream runoff away from areas containing wastes or contaminants; and
  - (iii) minimisation of the size of contaminated areas; and
  - (iv) cleaning up of spilt contaminants without water; and
  - (v) installation of silt and rubbish traps, and first flush stormwater diversion systems; and
  - (vi) if soil is to be exposed or disturbed as a result of any works associated with an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) minimisation of the amount of soil to be exposed or disturbed by staging works; and
    - (2) revegetation of exposed or disturbed areas; and
    - (3) installation of sediment control measures such as settling basins; and
    - (4) diversion of upstream runoff from exposed or disturbed areas; and
  - (vii) if acid sulphate soils or potential acid sulphate soils exist at any licensed place or are disturbed, extracted or unearthed as a result of carrying out an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) the keeping underwater or isolation from the atmosphere by other means of any acid sulphate soils or potential acid sulphate soils disturbed, extracted or unearthed as a result of carrying out the environmentally relevant activities; and
    - (2) the maintenance in a submerged state of any acid sulphate soils or potential acid sulphate soils; and
    - (3) the maintenance of the height of the groundwater table where such lowering would be likely to expose any acid sulphate soils or potential acid sulphate soils to aerobic conditions; and
  - (viii) any other specific requirements of the Stormwater Management Schedules of the other parts of this environmental authority; and
- (i) a Waste Management Plan (WMP) which details how this environmental authority will effectively and appropriately manage the amount of waste both processed and produced at the sewage treatment plants, and must address at least the following:
  - (i) any specific requirements of the Waste Management Schedule of the relevant part of this environmental authority; and
  - (ii) provisions for carrying out an audit on compliance with the WMP within two (2) years from the date of issue of this environmental authority and thereafter every five (5) years; and
- (j) monitoring of compliance with any of the requirements of:
  - (i) the conditions of this environmental authority; or
  - (ii) any plans or programs prepared under this environmental authority; and
- (k) review and amendment or improvement of operating procedures and plans or programs where deficiencies are revealed by the monitoring program required in section (i) of this condition; and
- (l) any other specific requirements of the other parts of this environmental authority; and

- (m) preparation and submission to the administering authority of site development plans for the Killaloe Refuse Tip to cover each two (2) year period from the date this environmental authority is issued until a site closure plan has been implemented. Each site development plan must be finalised and submitted at least three (3) months before the expiry of the previous plan.

Note:

**Content of Site Development Plans**

Any site development plan required under the above condition of this environmental authority must include details of at least the following:

- (n) the location and accurate dimensions of any designated areas to be used for the disposal and storage of waste at the licensed place over the period covered by the site development plan; and
- (o) any area of the licensed place where precautions are taken in respect of disposal of a particular waste must be marked on the development plan immediately after the waste has been disposed of. The following information also needs to be recorded in respect of that waste:
- (i) a description of the waste; and
  - (ii) the accurate location and depth and dimensions of the area in which this waste was disposed; and
  - (iii) date the waste was deposited; and
- (p) accurate location of any leachate storage dam or pond, pump well, collection and disposal system installed on the licensed place; and
- (q) location of any stormwater drains or diversion embankments to be constructed to achieve compliance with this environmental authority; and
- (r) location of any area to be capped, the proposed final surface levels and contours, final drainage system as part of a rehabilitation program for the licensed place over the period covered by this site development plan.

**Supervision**

- (11.A15) The holder of this environmental authority must ensure that, at all times while the licensed place is open, at least one person is present who is responsible for ensuring that only wastes received and deposited at the licensed place are those permitted under this environmental authority.

**END OF CONDITIONS FOR SCHEDULE 11A**

**SCHEDULE 11B - AIR**

**Dust Control**

- (11.B1) Any stockpiles of inert cover material must be managed so as to minimise windblown dust emissions.
- (11.B2) The holder of this environmental authority must ensure that all wastes accepted onto the licensed place are handled, disposed of or stockpiled in such a way as to minimise dust generation.

**END OF CONDITIONS FOR SCHEDULE 11B**

**SCHEDULE 11C - WATER**

**Release of Leachate Prohibited**

- (11.C1) The holder of this environmental authority must not allow any direct or indirect release of any leachate generated on the licensed place to any land beyond the boundary of the licensed place, stormwater drain or waters.

**END OF CONDITIONS FOR SCHEDULE 11C**



## SCHEDULE 11D - STORMWATER MANAGEMENT

### Stormwater Diversion

- (11.D1) A system of suitable diversion drains or embankments must be constructed and maintained to divert surface waters away from any area of the licensed place where contact with wastes or contaminants may occur. Particular attention must be paid to:
- (a) the active disposal area; and
  - (b) any waste storage areas; and
  - (c) any area previously used for waste disposal; and
  - (d) any leachate collection pond (if applicable).

### Bunding

- (11.D2) All above ground bulk chemical, waste oil and fuel storage tanks on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the bund.
- (11.D3) All drum storages of chemical, waste oil and fuel on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- (11.D4) All bunding on the licensed places must be constructed and maintained so as to be impervious to the materials being stored within it.
- (11.D5) All bunding on the licensed places must be roofed where practicable.
- (11.D6) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (11.D7) A collection sump must be provided in the floor of the bunded area on any licensed place to facilitate the removal of liquids. The bund floor must be graded so that the fall is towards the collection sump.
- (11.D8) All required pipework from the bunded areas on licensed places must be:

### END OF CONDITIONS FOR SCHEDULE 11.D

## SCHEDULE 11E - LAND APPLICATION

### Release of Contaminants to Land

- (11.E1) The holder of this environmental authority must ensure that no leachate or vehicle washdown water is released to land through any septic tank absorption trenches installed on the licensed place.

### END OF CONDITIONS FOR SCHEDULE 11E

## SCHEDULE 11F - NOISE

### Emission of Noise

- (11.F1) In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in levels greater than those specified in Table 1 of the Noise Schedule until the circumstances which gave rise to the complaint are resolved.

Schedule 11.F - Table 1

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj,T}$	Period
Background noise level plus 5dB(A)	7 am - 6 pm
Background noise level plus 5dB(A)	6 pm - 10 pm
Background noise level plus 3dB(A)	10 pm - 7 am

Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj, T}$	Period
Background noise level plus 10dB(A)	7 am - 6 pm
Background noise level plus 10dB(A)	6 pm - 10 pm
Background noise level plus 8dB(A)	10 pm - 7 am

#### END OF CONDITIONS FOR SCHEDULE 11F

## SCHEDULE 11G - WASTE MANAGEMENT

### Waste Acceptance Criteria

- (11.G1) This environmental authority permits only the following wastes to be received for disposal at the licensed place:
- (a) construction wastes and demolition waste;
  - (b) minor quantities of regulated wastes incidental to and commingled with domestic refuse;
  - (c) asbestos sheeting and tyres;
  - (d) solid inert waste;
  - (e) putrescible wastes and domestic garbage.
- Note:
- (i) paper covered plasterboard must only be received at the licensed place if it is generated by construction and demolition activities and delivered to the licensed place as part of a mixed load of materials;
  - (ii) regulated waste containers which have not been triple rinsed, pressure rinsed or thoroughly cleaned may be temporarily stored on the licensed place; and
  - (iii) car bodies and other recyclable solid wastes may be temporarily stored on the licensed place.
- (11.G2) This environmental authority permits only the following wastes to be received and temporarily stored at the licensed place:
- (a) wet cell batteries;
  - (b) solvents;
  - (c) waste oil;
  - (d) tyres;
  - (e) regulated waste containers; and
  - (f) dewatered sewage sludge.
- (11.G3) Notwithstanding condition numbers (11.G1) and (11.G2), the following wastes must not be received onto the licensed place:
- (a) pyrophoric wastes (where co-disposed with other potentially combustible material);
  - (b) untreated infectious wastes;
  - (c) explosives and ammunition, pyrotechnics or propellants, apart from trace residues no longer capable of supporting combustion or an explosive reaction;
  - (d) liquescent waste streams or any waste capable of yielding free liquids; and
  - (e) regulated wastes other than those specified under condition number (11.G2).

### General

- (11.G4) The holder of this environmental authority must not:
- (a) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor

- (b) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
- (c) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

#### **Off Site Movement of Regulated Wastes**

- (11.G5) Where regulated waste is removed from any licensed place covered by this environmental authority (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and keep records of the following:
  - (a) the date, quantity and type of waste removed; and
  - (b) name of the regulated waste transporter and/or disposal operator removing the waste; and
  - (c) the intended treatment/disposal destination of the waste.
- (11.G6) Records of any trade waste agreements for discharge of wastes to sewers must be made available for inspection on request.

#### **Soil Permeability**

- (11.G7) Soils or other materials used in the construction of any future waste disposal cells, leachate storage pond, leachate evaporation area and above ground perimeter embankment on the licensed place must achieve a maximum in situ hydraulic conductivity of no greater than  $1 \times 10^{-9}$  metres per second so as to effectively prevent or minimise the release of leachate through the base and embankments.
- (11.G8) Where waste is disposed of on the surface of a completed waste disposal cell, existing cover material must be ripped or removed so as to allow leachate and contaminated stormwater to percolate through the wastes deposited below.

#### **Construction of Disposal Cell Embankments**

- (11.G9) Where an active disposal cell or any part thereof is installed above ground, the embankments must be maintained to ensure the stability and integrity of construction.

#### **Leachate Management**

- (11.G10) The holder of this environmental authority must ensure that all reasonable and practical measures are taken to ensure all waste disposal cells are operated and managed so as to prevent or minimise the generation of leachate.
- (11.G11) The holder of this environmental authority must ensure that, from the date this environmental authority takes effect, the head of leachate above the base of any waste disposal cell (as measured at the leachate pump well located within that cell) is measured and recorded in accordance with condition numbers (11.H6), (11.H7) and (11.H8).
- (11.G12) Where the head of leachate above the base of any waste disposal cell exceeds 0.3 metres, the holder of this environmental authority must ensure that leachate collected above the base of the cell is intercepted and:
  - (a) conveyed to a leachate storage dam or pond; or
  - (b) disposed of in accordance with condition number (11.G16).
- (11.G13) The holder of this environmental authority must ensure that leachate or contaminated stormwater generated on the waste shredding and vehicle washdown area is either intercepted and:
  - (a) conveyed to a leachate collection dam or pond; or
  - (b) disposed of in accordance with condition number (11.G16).

#### **Leachate Storage Ponds or Dams**

- (11.G14) The holder of this environmental authority must ensure any leachate storage pond or dam installed on the licensed place is constructed and managed so that a freeboard capable of preventing overspill is maintained at all times.
- (11.G15) Where any leachate storage pond or dam or any part thereof is installed above ground on the licensed place, the embankments must be maintained to ensure their stability and integrity.

#### **Leachate Disposal**

- (11.G16) Leachate and stormwater runoff which has been in contact with waste materials in the landfill unit, must be collected in the leachate storage facility and be:
  - (a) treated in the leachate treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility; or
  - (b) recirculated through waste disposed in the landfill unit; or
  - (c) treated by alternative technologies agreed by the administering authority for offsite disposal, discharge, or on-site reuse;
  - (d) disposed of at a facility that is approved to receive such waste; or
  - (e) evaporated on the licensed place.
- (11.G17) Leachate must not be disposed of on the surface areas of the licensed place that have received their final cover of topsoil or on any revegetated areas unless the quality of the leachate is such that it will not cause any environmental harm through soil contamination or damage to vegetation.

#### **Active Disposal Cell Management**

- (11.G18) The holder of this environmental authority must ensure that waste disposal activities do not extend beyond the boundary of the licensed place.
- (11.G19) The holder of this environmental authority must take effective measures to ensure that all wastes accepted for disposal at the licensed place are not disposed of:
  - (a) beyond the perimeter of any active waste disposal cell; and
  - (b) into waters or leachate collected at the base of any active waste disposal cell; and
  - (c) beyond the catchment of any leachate collection drains installed as part of a leachate collection system.
- (11.G20) All large metal articles accepted for disposal must be effectively compacted before being deposited at the base of any active waste disposal cell.

#### **Evaporation of Leachate**

- (11.G21) The holder of this environmental authority must ensure any area used for evaporation of leachate is:
  - (a) located in an unshaded area; and
  - (b) constructed so as to promote evaporation; and
  - (c) operated and managed so as to prevent overspill occurring at any time the area is being used.

#### **Cover Material**

- (11.G22) The holder of this environmental authority must ensure that wastes deposited in any active waste disposal cell are consolidated and covered with a layer of inert earthen material or other non combustible inert material as often as is necessary to effectively minimise the quantity of wind blown litter, odour and fly nuisance as a result of exposure of putrescible waste.
- (11.G23) Other than during periods of equipment failure of the waste shredder, the holder of this environmental authority must ensure that any domestic wastes accepted for disposal at the

licensed place are effectively shredded and disposed of in any active disposal cell on the same day as the wastes are received at the licensed place.

- (11.G24) Where the shredder is out of operation due to equipment failure and where the holder of this environmental authority has taken steps to have the shredder repaired as soon as practicable, the waste may be deposited in the active waste disposal cell without shredding if the waste has been compacted to achieve conditions of this environmental authority prior to placement in that cell.
- (11.G25) Wastes deposited in any active waste disposal cell must be effectively consolidated and covered with a layer of inert earthen material or other non combustible, inert material on the same day as the wastes are received at the licensed place.

### **Tyre Storage**

- (11.G26) Waste tyres may be stored in temporary above ground heaps on the licensed place provided that there are no more than 500 waste tyres at any time in any one heap.
- (11.G27) Where there is more than one heap of waste tyres, the holder of this environmental authority must establish and maintain a separation distance between the heaps so as to prevent fire from spreading:
- (a) from one tyre storage heap to another; and
  - (b) to other waste stored or disposed of at the licensed place.

### **Battery Storage**

- (11.G28) Used wet cell batteries may only be temporarily stored on the licensed place in:
- (a) the area designated for this purpose; and
  - (b) a covered enclosure which has been bunded to contain spillages and leakages.

### **Oil Storage**

- (11.G29) Used oil may be temporarily stored in drums or other containers at the licensed place, provided that the drums or containers:
- (a) are stored in the area designated for this purpose; and
  - (b) are bunded to contain spillages and leakages; and
  - (c) are securely sealed when full to prevent rainwater entry and spillage (if knocked over); and
  - (d) have a filling mechanism which prevents rainwater entry.

### **Disposal of Asbestos Wastes**

- (11.G30) All asbestos wastes disposed of at the waste disposal facility must be contained in a designated area of the licensed place that is not less two (2) metres from the surface and not less than two (2) metres in from any above ground perimeter embankment.
- (11.G31) The holder of this environmental authority must ensure the location of any area of the licensed place used to dispose of asbestos waste is marked on the site development plan immediately after disposal has taken place.

### **Regulated Waste Containers**

- (11.G32) Regulated waste containers accepted at the licensed place which have not been triple rinsed, pressure rinsed or have not been thoroughly cleaned may only be temporarily stored in an area:
- (a) designated for this purpose; and
  - (b) bunded in accordance with the conditions of this environmental authority.

### **Record Keeping**

- (11.G33) The holder of this environmental authority must keep and maintain permanent records for every load of regulated waste accepted for disposal at the licensed place, and must include the following information:
- (a) date of acceptance;
  - (b) description of waste;
  - (c) cross reference to relevant waste transport documentation;
  - (d) quantity of waste;
  - (e) origin of the waste;
  - (f) results of analysis (where applicable); and
  - (g) method of waste treatment, reprocessing or disposal used (where applicable).

Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.

### **Mechanical Plant**

- (11.G34) Wastes deposited on to any active waste disposal cell must be evenly and effectively consolidated and covered by mechanical plant capable of ensuring compliance with this environmental authority.

### **Access Roads**

- (11.G35) The holder of this environmental authority must ensure all weather access roads are constructed and maintained so that at all times whilst the licensed place is open for receiving wastes, vehicles have access to any active waste disposal cell.
- (11.G36) The holder of this environmental authority must ensure that access roads are constructed and maintained so as to minimise dirt and mud being carried off the licensed place by vehicles leaving the licensed place.

### **Signs**

- (11.G37) The holder of this environmental authority must cause signs, maintained in good repair and giving the following information, to be erected at the entrance to the licensed place and/or in prominent locations on the licensed place:
- (a) the name of the licensed place and site contact telephone number (if applicable);
  - (b) the hours and days the licensed place will be open for receiving wastes;
  - (c) the wastes permitted to be received at the licensed place;
  - (d) advise that when the licensed place is closed to the public that unauthorised dumping of waste is prohibited (citing the penalty);
  - (e) prohibition of the lighting of unauthorised fires on the licensed place; and
  - (f) directing traffic to the location of the active disposal cell, recycling area and storage areas.

### **Fencing**

- (11.G38) Fences, gates or barriers must be erected and maintained at the licensed place so as to prevent unauthorised vehicle access to the waste disposal facility (except during official operating hours), and, where necessary, to prevent the escape of waste materials onto adjoining land.
- (11.G39) The holder of this environmental authority must ensure all gates installed at the licensed place are kept locked except during official operating hours.

### **Litter Control**

- (11.G40) Relocatable litter screens or other methods of litter control must be provided at the active disposal cell and at the waste shredding area in order to effectively capture paper or other wind blown litter generated by waste disposal activities on the licensed place.
- (11.G41) A regular programme of litter collection must be conducted so as to ensure that the licensed place, all fences, gates, any litter screens and the surrounds of the licensed place are kept in a tidy.

### **Public Health Issues**

- (11.G42) The holder of this environmental authority must make provision to ensure that the operation of the waste disposal facility does not create a public health problem. The holder of this environmental authority must carry out any works required by the administering authority to prevent or abate any public health problem or nuisance which may arise as a result of the operation of the licensed place.
- (11.G43) The holder of this environmental authority must take all practical measures to ensure that the environmental relevant activity is conducted at all times in a nuisance free manner, particularly regarding fly breeding, mosquito breeding and rat harbourage and breeding.

### **Fire Control**

- (11.G44) The holder of this environmental authority must ensure a fire break is established around the active waste disposal area to prevent fire spreading to adjoining land.
- (11.G45) In the event of any fire occurring at the licensed place the holder of this environmental authority must extinguish the fire, when it is safe to do so.

### **Final Cover**

- (11.G46) Any completed waste disposal cell must be capped with low permeability material and compacted so as to effectively minimise infiltration of stormwater.
- (11.G47) Soils or other materials used to construct the capping of any completed waste disposal cell must achieve a maximum in situ hydraulic conductivity of no greater than  $1 \times 10^{-8}$  metres per second.
- (11.G48) Any completed and capped waste disposal area must be progressively covered with clean earth to a depth of at least 250 millimetres capable of supporting shallow rooted vegetation. A thicker top soil may be necessary to support deeper rooted vegetation and also to prevent root penetration of the cap.
- (11.G49) The final surface of any completed disposal cell on the licensed place must, after covering as specified in condition number (11.G48) be graded, drained and vegetated so as to:
  - (a) minimise erosion;
  - (b) divert clean stormwater away from the completed disposal area; and
  - (c) prevent ponding of stormwater.
- (11.G50) In the areas awaiting rehabilitation or those in the process of being rehabilitated, vehicle access must be restricted by suitable barriers to prevent surface disturbance.

### **Post Closure Care Plan**

- (11.G51) The holder of this environmental authority must develop a Post Closure Care Plan for the licensed place which extends for a nominal period of at least thirty (30) years after cessation of waste disposal activities and must be implemented until it can be demonstrated to the administering authority that the site will not release contaminants to the environment.
- (11.G52) The Post Closure Care Plan must include, but not necessarily limited to the following:
  - (a) the continuation of a monitoring program if required as a result of the groundwater evaluation, surface water evaluation; and
  - (b) maintenance of the integrity and effectiveness of any low permeability final cover material; and

- (c) maintenance of vegetation planted on the completed capped and drained disposal areas.
- (11.G53) At least six (6) months before the cessation of waste disposal activities at the licensed place, the holder of this environmental authority must submit the Post Care Closure Plan to the administering authority for review and comment.

**END OF CONDITIONS FOR SCHEDULE 11G**

## **SCHEDULE 11H - SELF MONITORING AND REPORTING**

### **Groundwater Monitoring**

- (11.H1) The holder of this environmental authority must implement a groundwater monitoring plan for the Killaloe Landfill. The groundwater monitoring plan must include details of a groundwater monitoring system.
- (11.H2) The groundwater monitoring system installed at the licensed place must monitor the impact of the waste disposal facility on underlying aquifers. The system must include, but not be limited to, a sufficient number of bores installed at locations and depths which yield representative groundwater samples from at least the uppermost aquifer so as to:
- (a) establish the quality of groundwater that has not been affected by any potential leakage of contaminants to groundwater from the licensed place; and
  - (b) detect any potential leakage of contaminants to groundwater from the licensed place including groundwater passing the point(s) of compliance.
- Note: For the purposes of groundwater monitoring, the point(s) of compliance must be a point being the closer of 150 metres from any deposited waste, leachate storage and reticulation facility, or the property boundary of the licensed place.
- (11.H3) The holder of this environmental authority must, monitor and record the quality of groundwater to detect any possible release(s) of contaminants. This monitoring must be undertaken for, at least, the following indicator water quality characteristics:
- pH; and
  - electrical conductivity; and
  - nitrate; and
  - Bicarbonate ( $\text{HCO}_3$ ) ; and
  - ammonia (as nitrogen); and
  - manganese; and
  - sulphate; and
  - iron; and
  - lead; and
  - zinc; and
  - Chemical Oxygen Demand (COD); and
  - Total organochlorine pesticides.
- (11.H4) The holder of this environmental authority must monitor groundwater quality with samples collected from all monitoring bores on the licensed place at least on one (1) occasion each quarter.
- (11.H5) The holder of this environmental authority must ensure that all groundwater monitoring bores are maintained in an operative condition. The monitoring devices referred to in this condition must be accessible at all reasonable times to any authorised person.

### **Leachate Levels**

- (11.H6) The measurement of the head of leachate above the base of any waste disposal cell must be taken from each of the leachate pump wells installed at the licensed place.
- (11.H7) The level of leachate above the base of any waste disposal cell must be calculated (in metres) from measurements taken from the top edge any leachate pump well to the surface of the leachate contained within the pump well being measured.
- (11.H8) The depth from the top edge of the leachate pump well to the base of each disposal cell must be accurately measured (in metres) for each leachate pump well from which a leachate head measurement is to be calculated.



- (11.H9) The holder of this environmental authority must ensure that records of leachate head measurements required under this environmental authority include:
- (a) head of leachate above the base of the waste disposal cell is recorded in metres for any measurement obtained from a leachate head measuring bore; and
  - (b) location of the leachate head measuring bore from which the leachate head measurement was obtained; and
  - (c) date and time any leachate head measurement was obtained.

#### **Frequency of Leachate Head Monitoring**

- (11.H10) Where the leachate head above the base of any waste disposal cell (as calculated from measurements taken at any leachate pump well located within a disposal cell) is higher than 0.3 metres, then the head of leachate at that leachate pump well must be measured at least once every twenty-four (24) hours until the head of leachate drops below 0.3 metres.
- (11.H11) Where the head of leachate above the base of any waste disposal cell (calculated from measurements taken at any leachate pump well located within a disposal cell ) is 0.3 metres or lower, the leachate head at that leachate pump well must be measured on at least a weekly basis.
- (11.H12) The head of leachate above the base of the waste disposal cell must be calculated from any leachate pump well from which a leachate quality sample is obtained. Measurement of the leachate head obtained from a leachate pump well must be undertaken prior to any disturbance by sampling.
- (11.H13) The holder of this environmental authority must ensure that all leachate pump wells installed on the licensed place are maintained in an operative condition. The leachate pump wells referred to in this condition must be accessible at all times to any authorised person.

#### **Leachate Quality Monitoring**

- (11.H14) In accordance with the following requirements, the holder of this environmental authority must carry out a monitoring program of leachate quality from any leachate pump well in which leachate has collected and from any pond or dam where leachate is stored:
- (a) samples of leachate must be taken from leachate collected at the base of the active waste disposal cell and any pond or dam used for leachate storage at least one occasion in each of the months of March and October each year; and
  - (b) the samples obtained in accordance with paragraph (a) of this condition must be analysed for the following parameters:
    - (i) electrical conductivity; and
    - (ii) pH; and
    - (iii) nitrate; and
    - (iv) ammonia (as nitrogen); and
    - (v) calcium; and
    - (vi) sulphate; and
    - (vii) iron; and
    - (viii) lead; and
    - (ix) zinc; and
    - (x) Chemical Oxygen Demand (COD); and
    - (xi) total organochlorine pesticides; and
    - (xii) copper.

#### **Sampling and Analysis of Waters**

- (11.H15) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling Manual, 3<sup>rd</sup> Edition, December 1999, or more recent additions or supplements to that document as such become available.

- (a) record the results of all analyses, measurements and observations;
- (b) record the date and time of sampling;
- (c) be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all the records of analysis results;
- (d) have all records of analyses, measurements and observations signed by a responsible officer.

### **Recording of Monitoring Program Results**

- (11.H16) The holder of this environmental authority must keep a written record of the results of all monitoring programs required under this environmental authority. This record must:
- (a) a summary of the previous twelve (12) month's monitoring results obtained under any monitoring programs required under this environmental authority and, in graphical form, a comparison of the previous twelve (12) month's monitoring results to both the environmental authority limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from the monitoring programs; and
  - (c) a summary of any record of quantities of discharge required to be kept under this environmental authority; and
  - (d) a summary of the record of equipment failures or events recorded for any licensed place under condition number (11.H18); and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

### **Environmental Event Recording**

- (11.H18) The holder of this environmental authority must keep a record, in the form of a log, of any equipment failures or events likely to have adversely affected the environmental performance of the licensed place whilst still complying with this environmental authority. This log must include at least the following details:
- (a) time, date and nature of event;
  - (b) response and investigation undertaken to deal with the event;
  - (c) name of person responsible for investigating the event; and
  - (d) action taken as a result of the event investigation, and signature of responsible person; and
  - (e) must be made available upon request to any authorised person who shall be permitted to make copies thereof.

Note: The recording of events and incidents required under this condition must also include any of the following events:

- (i) any breakdown of plant and equipment used at any waste disposal facility where such breakdown is likely to result in failure to shred, compact or cover waste in accordance with the requirements of this environmental authority; and
- (ii) any leachate pump failures at the Killaloe waste disposal facility.

### **Notification of Emergencies and Incidents**

- (11.H19) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, 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.
- (11.H20) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, the notification of emergencies

or incidents as required by condition number (11.H19) must include but not be limited to the following:

- (a) the holder of this environmental authority;
- (b) the location of the emergency or incident;
- (c) the number of the environmental authority;
- (d) the name and telephone number of the designated contact person;
- (e) the time of the release;
- (f) the time the holder of this environmental authority became aware of the release;
- (g) the suspected cause of the release;
- (h) the environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
- (i) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.

(11.H21) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number (11.H20) in addition to:

- (a) proposed actions to prevent a recurrence of the emergency or incident;
- (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

#### **Exception Reporting**

(11.H22) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any environmental authority limit within twenty-eight (28) days of completion of analysis.

(11.H23) The written notification required by condition number (11.H22) above must include:

- (a) the full analysis results, and
- (b) details of investigation or corrective actions taken, and
- (c) results of any subsequent analysis carried out to verify the success of any corrective actions taken.

#### **END OF CONDITIONS FOR SCHEDULE 11H**

## SCHEDULE 11I – DEFINITIONS

Words and phrases used throughout part 11 of this Environmental Authority are defined below.

**"active disposal cell"** means any cell currently being used for the disposal of wastes accepted under a condition of this environmental authority and includes all or part of a waste disposal cell.

**"aquifer"** means a subsurface zone or formation of rock which contains exploitable resources of groundwater.

**"attenuate"** means the decrease in concentration of chemical species present in liquid, eg the decrease in concentration of pollutants in liquid migrating from the base of a landfill as a result of its movement through soil.

**"background noise level"** means  $L_{A90,T}$  being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response.

**"BPEM"** means Best Practice Environmental Management.

**"capped"** means the covering of a tipping area with a low permeability material to inhibit penetration by liquids.

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

**"compaction"** means increasing the density of solid waste in landfills by the repeated passage of heavy machinery over its surface.

**"composite"** in respect of sampling means either time based taken at hourly intervals to cover the period in the twenty-four (24) hours of the sampling day during which a contaminant release occurs; or taken after set flow volumes to cover the period of the sampling day during which the contaminant release occurs

**"construction or demolition waste"** means waste resulting from carrying out a construction or demolition activity, but does not include paper, cardboard, unseasoned timber and regulated waste.

**"cover material"** means dense, inert and incombustible material. material used to cover solid wastes deposited in landfills

**"dust"** means earth or other matter in fine, dry particles generated by disposal of construction or demolition waste.

**"grab"** sample means one sample collected at any point in time.

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

**"leachate recirculation"** means the practice of returning leachate to the upper layers of a landfill, from which it has been abstracted, usually by direct spraying or pump well injection.

**"leachate"** means liquids which have become contaminated by contacting wastes or other contaminated liquids.

**"licensed place"** in this part of this environmental authority means the Killaloe Refuse Tip on Lot 170, SR865, Parish of Victory, County of Solander located at Captain Cook Highway, Killaloe Qld 4873 as shown in condition number (1.J1).

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

**"mg/l"** means milligrams per litre.

**"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 public park or gardens.

**"permeability"** means a measure of the rate at which a fluid will pass through a medium. The coefficient of permeability of a given fluid is an expression of the rate of flow through unit area and thickness under unit differential pressure at a given temperature. Synonymous with hydraulic conductivity when the fluid is water.

**"pyrophoric wastes"** means wastes which, in the absence of a separate ignition source, may spontaneously ignite.

**"recyclable waste"** means clean inoffensive waste that is declared to be recyclable waste under an application for an approval granted under section 369 of the Act.

**"solid inert waste"** means hard waste and dry vegetative material which has a negligible activity or effect on the environment.

**"the holder of this environmental authority"** means Douglas Shire Council

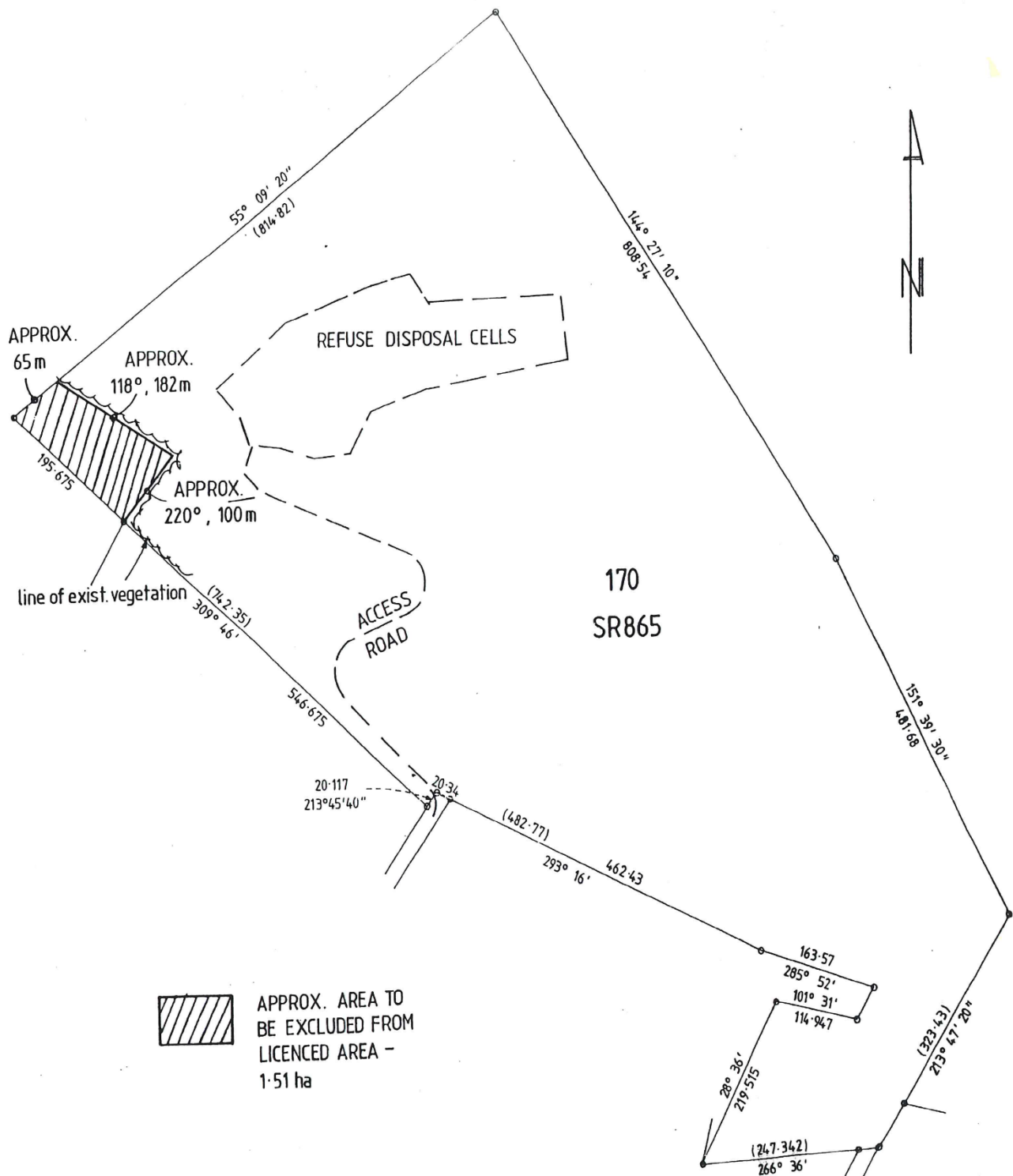
**"total nitrogen"** means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen

**"waste disposal activities"** means all activities relating to waste disposal and includes the shredding of waste (where applicable), stockpiling of cover material, temporary waste storage, leachate collection and disposal, litter control and cell, trench or disposal area construction.

#### END OF CONDITIONS FOR SCHEDULE 11I

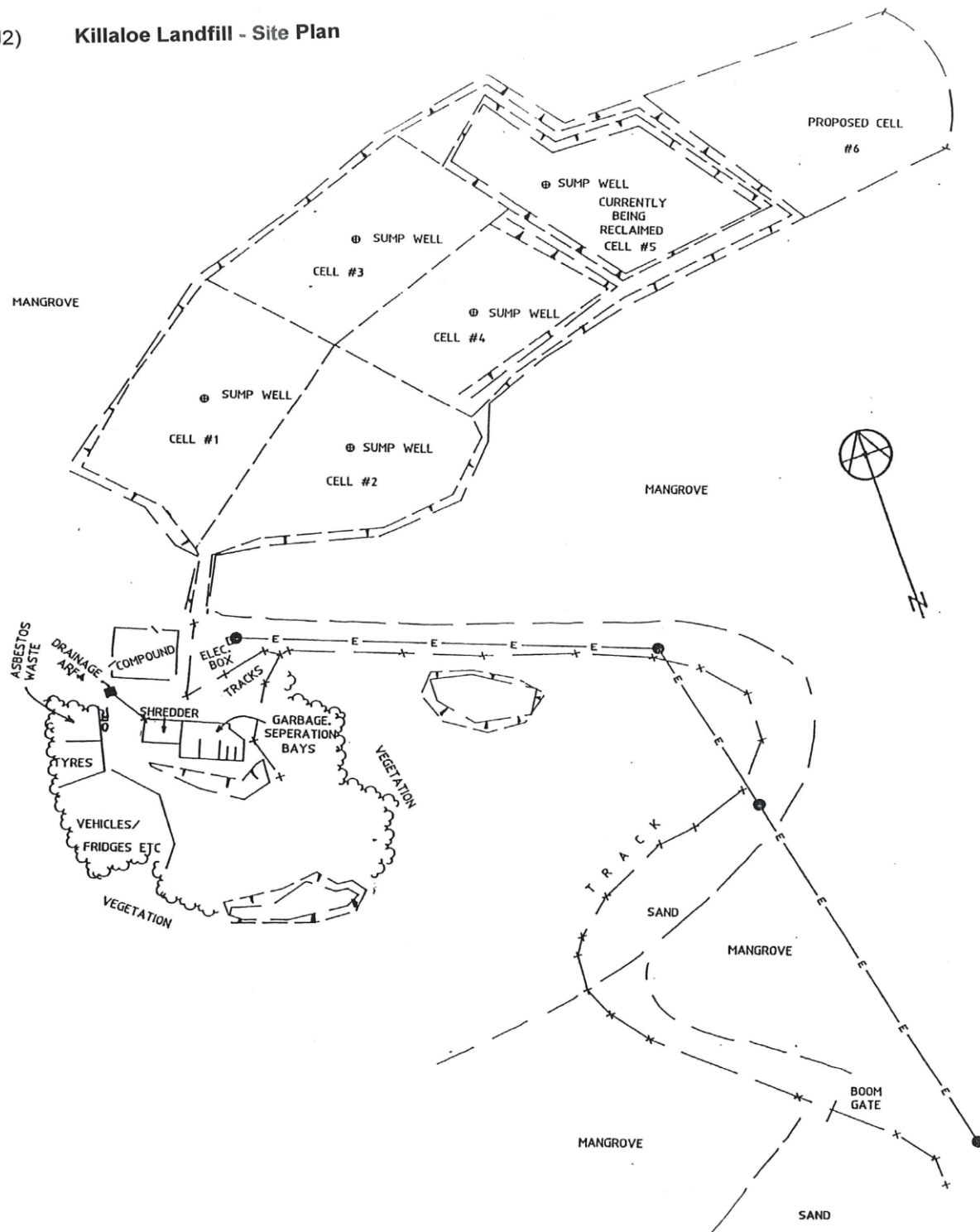
## SCHEDULE 11J - SITE PLANS

(11.J1) Killaloe Landfill - Licensed Place



(11.J2) Killaloe Landfill - Site Plan

(1.J2) Killaloe Landfill - Site Plan



End of Part 11

## **PART 12: NEWELL REFUSE TIP**

### **SCHEDULE 12A - GENERAL CONDITIONS**

#### **Monitoring and Measurements**

- (12.A1) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this environmental authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

#### **Calibration**

- (12.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained.

#### **Due Regard for Comment**

- (12.A3) The holder of this environmental authority must take due regard to comments made by the administering authority prior to the implementation of any plan or program required as a condition of this environmental authority.

#### **Integrated Environmental Management System (IEMS)**

- (12.A4) The holder of this environmental authority must implement an IEMS which provides for the following functions:
- (a) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and
  - (b) staff training and awareness of environmental issues; and
  - (c) the conduct of environmental and energy audits; and
  - (d) waste prevention, treatment and disposal; and
  - (e) preparation and implementation of site based management plans for each licensed place covered by this environmental authority.

#### **Site-Based Management Plans**

- (12.A5) Site-based management plans required by this environmental authority must provide for at least the following functions:
- (a) routine operating procedures to prevent or minimise environmental harm. This includes, amongst other matters, procedures for the removal of sewage sludges from any licensed place that minimise the risk of spillage of sludge or any other release of contaminants to the environment; and
  - (b) maintenance practices and procedures to ensure that all plant, equipment and reticulation systems used in the carrying out of the environmentally relevant activities are maintained in good working order; and
  - (c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - (d) recording and handling of environmental complaints; and
  - (e) keeping and production of environmental records and reports; and
  - (f) the monitoring of releases of contaminants into the environment and of the environmental impact caused by the releases.
    - (i) this monitoring program must address the monitoring requirements of the appropriate part of this environmental authority and
  - (g) staff training and awareness of environmental issues to ensure that, at a minimum;



- (i) any person responsible for carrying out the environmentally relevant activities is familiar with the conditions of this environmental authority as they relate to the person's responsibilities; and
  - (ii) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activities is competent to carry out their duties; and
- (h) a stormwater management plan which has the objective of avoidance and minimisation of contaminated stormwater and provides for the following functions (where applicable and appropriate):
  - (i) reuse, treatment and disposal of contaminated stormwater; and
  - (ii) diversion of upstream runoff away from areas containing wastes or contaminants; and
  - (iii) minimisation of the size of contaminated areas; and
  - (iv) cleaning up of spilt contaminants without water; and
  - (v) installation of silt and rubbish traps, and first flush stormwater diversion systems; and
  - (vi) if soil is to be exposed or disturbed as a result of any works associated with an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) minimisation of the amount of soil to be exposed or disturbed by staging works; and
    - (2) revegetation of exposed or disturbed areas; and
    - (3) installation of sediment control measures such as settling basins; and
    - (4) diversion of upstream runoff from exposed or disturbed areas; and
  - (vii) if acid sulphate soils or potential acid sulphate soils exist at any licensed place or are disturbed, extracted or unearthed as a result of carrying out an environmentally relevant activity, the Stormwater Management Plan for that licensed place must also address:
    - (1) the keeping underwater or isolation from the atmosphere by other means of any acid sulphate soils or potential acid sulphate soils disturbed, extracted or unearthed as a result of carrying out the environmentally relevant activities; and
    - (2) the maintenance in a submerged state of any acid sulphate soils or potential acid sulphate soils; and
    - (3) the maintenance of the height of the groundwater table where such lowering would be likely to expose any acid sulphate soils or potential acid sulphate soils to aerobic conditions; and
  - (viii) any other specific requirements of the Stormwater Management Schedules of the other parts of this environmental authority; and
- (i) a Waste Management Plan (WMP) which details how this environmental authority will effectively and appropriately manage the amount of waste both processed and produced at the sewage treatment plants, and must address at least the following:
  - (i) any specific requirements of the Waste Management Schedule of the relevant part of this environmental authority; and
  - (ii) provisions for carrying out an audit on compliance with the WMP within two (2) years from the date of issue of this environmental authority and thereafter every five (5) years; and
- (j) monitoring of compliance with any of the requirements of:
  - (i) the conditions of this environmental authority; or
  - (ii) any plans or programs prepared under this environmental authority; and
- (k) review and amendment or improvement of operating procedures and plans or programs where deficiencies are revealed by the monitoring program required in section (i) of this condition; and
- (l) any other specific requirements of the other parts of this environmental authority; and

- (m) preparation and submission to the administering authority of site development plans for the Newell Refuse Tip to cover each two (2) year period from the date this environmental authority is issued until a site closure plan has been implemented. Each site development plan must be finalised and submitted at least three (3) months before the expiry of the previous plan.

Note:

**Content of Site Development Plans**

Any site development plan required under the above condition of this environmental authority must include details of at least the following:

- (n) the location and accurate dimensions of any designated areas to be used for the disposal and storage of waste at the licensed place over the period covered by the site development plan; and
- (o) any area of the licensed place where precautions are taken in respect of disposal of a particular waste must be marked on the development plan immediately after the waste has been disposed of. The following information also needs to be recorded in respect of that waste:
- (i) a description of the waste; and
  - (ii) the accurate location and depth and dimensions of the area in which this waste was disposed; and
  - (iii) date the waste was deposited; and
- (p) accurate location of any leachate storage dam or pond, pump well, collection and disposal system installed on the licensed place; and
- (q) location of any stormwater drains or diversion embankments to be constructed to achieve compliance with this environmental authority; and
- (r) location of any area to be capped, the proposed final surface levels and contours, final drainage system as part of a rehabilitation program for the licensed place over the period covered by this site development plan.

**Supervision**

- (12.A6) The holder of this environmental authority must ensure that the licensed place is inspected as often as is necessary so as to ensure compliance with this environmental authority.

**END OF CONDITIONS FOR SCHEDULE 12A**

**SCHEDULE 12B - AIR**

**Dust Control**

- (12.B1) Any stockpiles of inert cover material must be managed so as to minimise wind blown dust emissions.
- (12.B2) The holder of this environmental authority must ensure that all wastes accepted onto the licensed place are handled, disposed of or stockpiled in such a way as to minimise dust generation.

**END OF CONDITIONS FOR SCHEDULE 12B**

**SCHEDULE 12C - WATER**

**Release of Leachate Prohibited**

- (12.C1) The holder of this environmental authority must not permit any direct or indirect release of any leachate generated on the licensed place to any land beyond the boundary of the licensed place, stormwater drain or waters.

**END OF CONDITIONS FOR SCHEDULE 12C**

## SCHEDULE 12D - STORMWATER MANAGEMENT

### Bunding

- (12.D1) All above ground bulk chemical, waste oil and fuel storage tanks on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the bund.
- (12.D2) All drum storages of chemical, waste oil and fuel on the licensed places must be bunded so that the capacity of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- (12.D3) All bunding on the licensed places must be constructed and maintained so as to be impervious to the materials being stored within it.
- (12.D4) All bunding on the licensed places must be roofed where practicable.
- (12.D5) The holder of this environmental authority must ensure that any stormwater captured within any bund required by this environmental authority is free from contaminants or wastes prior to any release to the environment.
- (12.D6) A collection sump must be provided in the floor of the bunded area on any licensed place to facilitate the removal of liquids. The bund floor must be graded so that the fall is towards the collection sump.
- (12.D7) All required pipework from the bunded areas on licensed places must be:
- directed over the bund wall; or
  - effectively sealed against leakage if passing through the bund wall.

### Stormwater Diversion

- (12.D8) A system of suitable diversion drains or embankments must be constructed and maintained to divert surface waters away from any area of the licensed place where contact with wastes or contaminants may occur. Particular attention must be paid to:
- the active disposal area; and
  - any waste storage areas; and
  - any area previously used for waste disposal.

### END OF CONDITIONS FOR SCHEDULE 12D

## SCHEDULE 12E - LAND APPLICATION

- (12.E1) Nil conditions.

### END OF CONDITIONS FOR SCHEDULE 12E

## SCHEDULE 12F - NOISE

### Emission of Noise

- (12.F1) In the event of a complaint about noise that the administering authority considers is reasonable, then the emission of noise from the activity must not result in levels greater than those specified in Table 1 of the Noise Schedule until the circumstances which gave rise to the complaint are resolved.

**Schedule 12.F - Table 1**

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj,T}$	Period
Background noise level plus 5dB(A)	7 am - 6 pm
Background noise level plus 5dB(A)	6 pm - 10 pm
Background noise level plus 3dB(A)	10 pm - 7 am

Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax adj, T}$	Period
background noise level plus 10dB(A)	7 am - 6 pm
background noise level plus 10dB(A)	6 pm - 10 pm
background noise level plus 8dB(A)	10 pm - 7 am

**END OF CONDITIONS FOR SCHEDULE 12F**

## **SCHEDULE 12G - WASTE MANAGEMENT**

- (12.G1) The base and embankments of any future waste disposal cell on the licensed place must be constructed and maintained so as to prevent or minimise the release of leachate through such base or embankments.

### **Construction of Disposal Area**

- (12.G2) The holder of this environmental authority must ensure any waste disposal area installed on the licensed place is constructed so as to allow plant and machinery access to any active waste disposal area so that wastes can be effectively consolidated and covered.
- (12.G3) Where waste are disposed of on the surface of a completed waste disposal area the existing cover material must be ripped or removed so as to allow leachate and contaminated stormwater to percolate through the wastes deposited below.

### **Construction of Disposal Area Embankments**

- (12.G4) Where an active disposal area or any part thereof is installed above ground the embankments must be maintained to ensure the stability and integrity of construction.

### **Leachate Management**

- (12.G5) The holder of this environmental authority must ensure that all reasonable and practical measures are taken to ensure any active waste disposal area is operated and managed so as to prevent or minimise the generation of leachate.

### **Leachate Collection System**

- (12.G6) A leachate collection system must be installed at the licensed place to effectively intercept leachate and contaminated stormwater migrating from the perimeter embankments of any waste disposal area.
- (12.G7) The holder of this environmental authority must ensure that leachate or contaminated stormwater intercepted by any leachate collection system installed at the licensed place is:
- (a) conveyed to a leachate collection dam or pond, or
  - (b) disposed of in accordance with condition number (12.G10).

### **Leachate Storage Ponds or Dams**

- (12.G8) The holder of this environmental authority must ensure any leachate storage pond or dam installed on the licensed place is constructed and managed so that a freeboard capable of preventing overspill is maintained at all times.
- (12.G9) Where any leachate storage pond or dam or any part thereof is installed above ground on the licensed place, the embankments must be maintained to ensure their stability and integrity.

### **Leachate Disposal**

- (12.G10) The holder of this environmental authority may only dispose of leachate or contaminated stormwater generated on the licensed place:

- (a) by evaporation on the licensed place; or
  - (b) by recirculation back into the areas of the licensed place where waste disposal is taking place; or
  - (c) by irrigation over exposed wastes on the licensed place; or
  - (d) to sewer under Council's Trade Waste Policy.
- (12.G11) Leachate must not be disposed of on the surface areas of the licensed place that have received their final cover of topsoil or on any revegetated areas unless the quality of the leachate is such that it will not cause any environmental harm through soil contamination or damage to vegetation.

#### **Evaporation of Leachate**

- (12.G12) The holder of this environmental authority must ensure any area used for evaporation of leachate is:
- (a) located in an unshaded area; and
  - (b) constructed so as to promote evaporation; and
  - (c) operated and managed so as to prevent overspill occurring at any time the area is in use.

#### **Active Disposal Area Management**

- (12.G13) The holder of this environmental authority must ensure that waste disposal activities do not extend beyond the boundary of the licensed place.
- (12.G14) The holder of this environmental authority must take effective measures to ensure that all wastes accepted for disposal at the licensed place are not disposed of:
- (a) beyond any designated active waste disposal area; and
  - (b) into waters or leachate collected at the base of any active waste disposal area; and
  - (c) beyond the catchment of any leachate collection drains installed as part of a leachate collection system.
- (12.G15) All large metal articles received for disposal at the licensed place must be effectively compacted before being deposited in any active waste disposal area.

#### **Green Wastes**

- (12.G16) The holder of this environmental authority must ensure that green waste uncontaminated with other wastes is received for disposal or storage on the area defined as the green waste disposal area in the site development plan.

#### **Mechanical Plant**

- (12.G17) Wastes deposited into any active disposal area must be evenly and effectively consolidated, compacted and covered by mechanical plant capable of ensuring compliance with this environmental authority.

#### **Cover Material**

- (12.G18) The holder of this environmental authority must ensure that wastes deposited into any active disposal area are consolidated, compacted and covered with a layer of inert earthen material or other inert synthetic material as often as is necessary to effectively prevent or minimise the quantity of wind blown litter, odour and fly nuisance from exposed putrescible wastes.

#### **Access Roads**

- (12.G19) The holder of this environmental authority must ensure all weather access roads are constructed and maintained so that at all times whilst the licensed place is open for receipt of wastes, vehicles have access to any active disposal area.

- (12.G20) The holder of this environmental authority must ensure that access roads are constructed and maintained so as to minimise dirt and mud being carried off the licensed place by vehicles leaving the licensed place.

### **Public Health Issues**

- (12.G21) The holder of this environmental authority must make provision to ensure that the operation of the licensed place does not create a public health problem. The holder of this environmental authority must carry out any works required by the administering authority to prevent or abate any public health problem or nuisance which may arise as a result of the operation of the licensed places.
- (12.G22) The holder of this environmental authority must take all practical measures to ensure that the waste disposal activities are conducted at all times in a nuisance free manner, particularly regarding fly breeding, mosquito breeding and rat harbourage and breeding.

### **Signs**

- (12.G23) The holder of this environmental authority must cause signs, maintained in good repair and giving the following information, to be erected at the entrance to the licensed place and/or in prominent locations on the licensed place:
- (a) the name of the licensed place and site contact telephone number; (where applicable)
  - (b) the hours and days the licensed place will be open for receiving wastes;
  - (c) the wastes permitted to be received at the licensed place;
  - (d) advise that when the licensed place is closed to the public that unauthorised dumping of waste is prohibited (citing the penalty);
  - (e) prohibition of the lighting of unauthorised fires on the licensed place; and
  - (f) directing traffic to the location of the active disposal area and recycling area.

### **Fire**

- (12.G24) The holder of this environmental authority must establish and maintain a fire break around the active waste disposal area to prevent the spread of fire to adjoining property.
- (12.G25) In the event of any fire occurring at the licensed place the holder of this environmental authority must extinguish the fire, when it is safe to do so.

### **Litter Control**

- (12.G26) Litter screens must be provided and maintained at any waste disposal area in order to capture paper and other wind blown material generated by carrying out the waste disposal activity.

### **Fencing**

- (12.G27) Fences, gates or barriers must be erected and maintained at the licensed place so as to prevent unauthorised vehicle access to the waste disposal facility (except during official operating hours), and, where necessary, to prevent the escape of waste materials onto adjoining land.
- (12.G28) The holder of this environmental authority must ensure all gates installed at the licensed place are kept locked except during official operating hours.

### **Final Cover**

- (12.G29) Any completed waste disposal area must be capped with low permeability material and compacted so as to effectively minimise infiltration of stormwater.
- (12.G30) Soils or other materials used to construct the capping of any completed waste disposal area must achieve a maximum in situ hydraulic conductivity of no greater than  $1 \times 10^{-8}$  metres per second.

- (12.G31) Any completed and capped waste disposal area must be progressively covered with clean earth to a depth of at least 250 millimetres capable of supporting shallow rooted vegetation. A thicker top soil may be necessary to support deeper rooted vegetation and also to prevent root penetration of the cap.
- (12.G32) The final surface of any completed waste disposal area at the licensed places must, after covering as specified in condition number (12.G31) be graded, drained and vegetated so as to:
- (a) minimise soil erosion; and
  - (b) prevent stormwater ponding.
- (12.G33) In the areas awaiting rehabilitation or those in the process of being rehabilitated, vehicle access must be restricted by suitable barriers to prevent surface disturbance.

#### **Post Closure Care Plan**

- (12.G34) The holder of this environmental authority must develop a Post Closure Care Plan for the licensed place which extends for a nominal period of at least thirty (30) years after cessation of waste disposal activities and must be implemented until it can be demonstrated to the administering authority that the site will not release contaminants to the environment.
- (12.G35) The Post Closure Care Plan must include, but not necessarily limited to the following:
- (a) the continuation of any monitoring program applicable to the post closure care of the licensed place; and
  - (b) maintenance of the integrity and effectiveness of any low permeability final cover material; and
  - (c) maintenance of vegetation installed as part of the site revegetation plan.
- (12.G36) At least six (6) months before the cessation of waste disposal activities at the licensed place, the holder of this environmental authority must submit the Post Care Closure Plan to the administering authority for review and comment.

#### **General**

- (12.G37) The holder of this environmental authority must not:
- (a) burn waste at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (b) allow waste to burn or be burnt at or on any licensed place covered by this environmental authority unless otherwise approved by the administering authority; nor
  - (c) remove waste from any licensed place covered by this environmental authority and burn such waste elsewhere except in accordance with the requirements of the *Environmental Protection Act 1994*.

#### **Off Site Movement of Regulated Wastes**

- (12.G38) Where regulated waste is removed from any licensed place covered by this environmental authority (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and keep records of the following:
- (d) the date, quantity and type of waste removed; and
  - (e) name of the regulated waste transporter and/or disposal operator removing the waste; and
  - (f) the intended treatment/disposal destination of the waste.
- (12.G39) Records of any trade waste agreements for discharge of wastes to sewers must be made available for inspection on request.

#### **END OF CONDITIONS FOR SCHEDULE 12G**

## **SCHEDULE 12H - SELF MONITORING AND REPORTING**

### **Sampling and Analysis of Waters**

- (12.H1) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the Department of Environment and Heritage Water Quality Sampling Manual, 3<sup>rd</sup> Edition, December 1999, or more recent additions or supplements to that document as such become available.

### **Recording of Monitoring Program Results**

- (12.H2) The holder of this environmental authority must keep a written record of the results of all monitoring programs required under this environmental authority. This record must:
- (d) record the results of all analyses, measurements and observations;
  - (e) record the date and time of sampling;
  - (f) be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all the records of analysis results;
  - (g) have all records of analyses, measurements and observations signed by a responsible officer.

### **Report Submission**

- (12.H3) The holder of this environmental authority must submit a report to the administering authority with the annual return which shall include but not be limited to:
- (a) a summary of the previous twelve (12) month's monitoring results obtained under any monitoring programs required under this environmental authority and, in graphical form, a comparison of the previous twelve (12) month's monitoring results to both the environmental authority limits and to relevant prior results;
  - (b) an evaluation/explanation of the data from the monitoring programs; and
  - (c) a summary of any record of quantities of discharge required to be kept under this environmental authority; and
  - (d) a summary of the record of equipment failures or events recorded for any licensed place under condition number (12.H4); and
  - (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs; and
  - (f) for any sewage treatment plants licensed under this environmental authority:
    - (i) the number of domestic tenements newly connected to the sewage treatment works during the previous twelve (12) months; and
    - (ii) the progressive total number of connections; and
    - (iii) a brief description of any trade waste agreements entered into or amended during the year, including the nature of the industry.

### **Environmental Event Recording**

- (12.H4) The holder of this environmental authority must keep a record, in the form of a log, of any equipment failures or events likely to have adversely affected the environmental performance of the licensed place whilst still complying with this environmental authority. This log must include at least the following details:
- (a) time, date and nature of event;
  - (b) response and investigation undertaken to deal with the event;
  - (c) name of person responsible for investigating the event; and
  - (d) action taken as a result of the event investigation, and signature of responsible person; and
  - (e) must be made available upon request to any authorised person who shall be permitted to make copies thereof.



Note: The recording of events and incidents required under this condition must also include any of the following events:

- (i) sewage pump failures, sewage pump station overflows or any other incident resulting in the release of raw sewage to the environment; and
- (ii) any breakdown of plant and equipment used at any waste disposal facility where such breakdown is likely to result in failure to shred, compact or cover waste in accordance with the requirements of this environmental authority; and
- (iii) any leachate pump failures at the Killaloe waste disposal facility.

#### **Notification of Emergencies and Incidents**

- (12.H5) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, 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.
- (12.H6) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, the notification of emergencies or incidents as required by condition number (12.H5) must include but not be limited to the following:
- (a) the holder of this environmental authority;
  - (b) the location of the emergency or incident;
  - (c) the number of the environmental authority;
  - (d) the name and telephone number of the designated contact person;
  - (e) the time of the release;
  - (f) the time the holder of this environmental authority became aware of the release;
  - (g) the suspected cause of the release;
  - (h) the environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
  - (i) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (12.H7) Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the Environmental Protection Act, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number (12.H6) in addition to:
- (a) proposed actions to prevent a recurrence of the emergency or incident;
  - (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

#### **Exception Reporting**

- (12.H8) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any environmental authority limit within twenty-eight (28) days of completion of analysis.
- (12.H9) The written notification required by condition number (12.H8) above must include:
- (a) the full analysis results, and
  - (b) details of investigation or corrective actions taken, and
  - (c) results of any subsequent analysis carried out to verify the success of any corrective actions taken.

**END OF CONDITIONS FOR SCHEDULE 12H**

## SCHEDULE 12I – DEFINITIONS

Words and phrases used throughout part 12 of this Environmental Authority are defined below.

**“active disposal area”** means an area currently being used for the disposal of wastes received under a condition of this environmental authority and includes all or part of a disposal area.

**“aquifer”** means a subsurface zone or formation of rock which contains exploitable resources of groundwater.

**“attenuate”** means the decrease in concentration of chemical species present in liquid, eg the decrease in concentration of pollutants in liquid migrating from the base of a landfill as a result of its movement through soil.

**“background noise level”** means L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than fifteen (15) minutes, using Fast response.

**“capped”** means the covering of a tipping area with a low permeability material to inhibit penetration by liquids.

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

**“compaction”** means increasing the density of solid waste in landfills by the repeated passage of heavy machinery over its surface.

**“construction or demolition waste”** means waste resulting from carrying out a construction or demolition activity, but does not include paper, cardboard, unseasoned timber and regulated waste.

**“cover material”** means dense, inert and incombustible material. material used to cover solid wastes deposited in landfills

**“dust”** means earth or other matter in fine, dry particles generated by disposal of construction or demolition waste.

**“L<sub>Amax adj,T</sub>”** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than fifteen (15) minutes, using Fast response.

**“leachate recirculation”** means the practice of returning leachate to the upper layers of a landfill, from which it has been abstracted, usually by direct spraying or pump well injection.

**“leachate”** means liquids which have become contaminated by contacting wastes or other contaminated liquids.

**“licensed place”** in this part of this environmental authority means the Newell Refuse Tip on Lot 287, SR864 Parish of Whyanbeel, County of Solander located at Rankin Street, Newell Qld 4873.

**“maximum”** means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

**“MaxL pA,T”** means the maximum A-weighted sound pressure level measured over a time period of not less than fifteen (15) minutes, using Fast response.

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

**“noise sensitive place”** means:

- (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 public park or gardens.

**“permeability”** means a measure of the rate at which a fluid will pass through a medium. The coefficient of permeability of a given fluid is an expression of the rate of flow through unit area and thickness under unit differential pressure at a given temperature. Synonymous with hydraulic conductivity when the fluid is water.

**“pyrophoric wastes”** means wastes which, in the absence of a separate ignition source, may spontaneously ignite.

**“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.

**“recyclable waste”** means clean inoffensive waste that is declared to be recyclable waste under an application for an approval granted under section 369 of the Act.

**“solid inert waste”** means hard waste and dry vegetative material which has a negligible activity or effect on the environment.

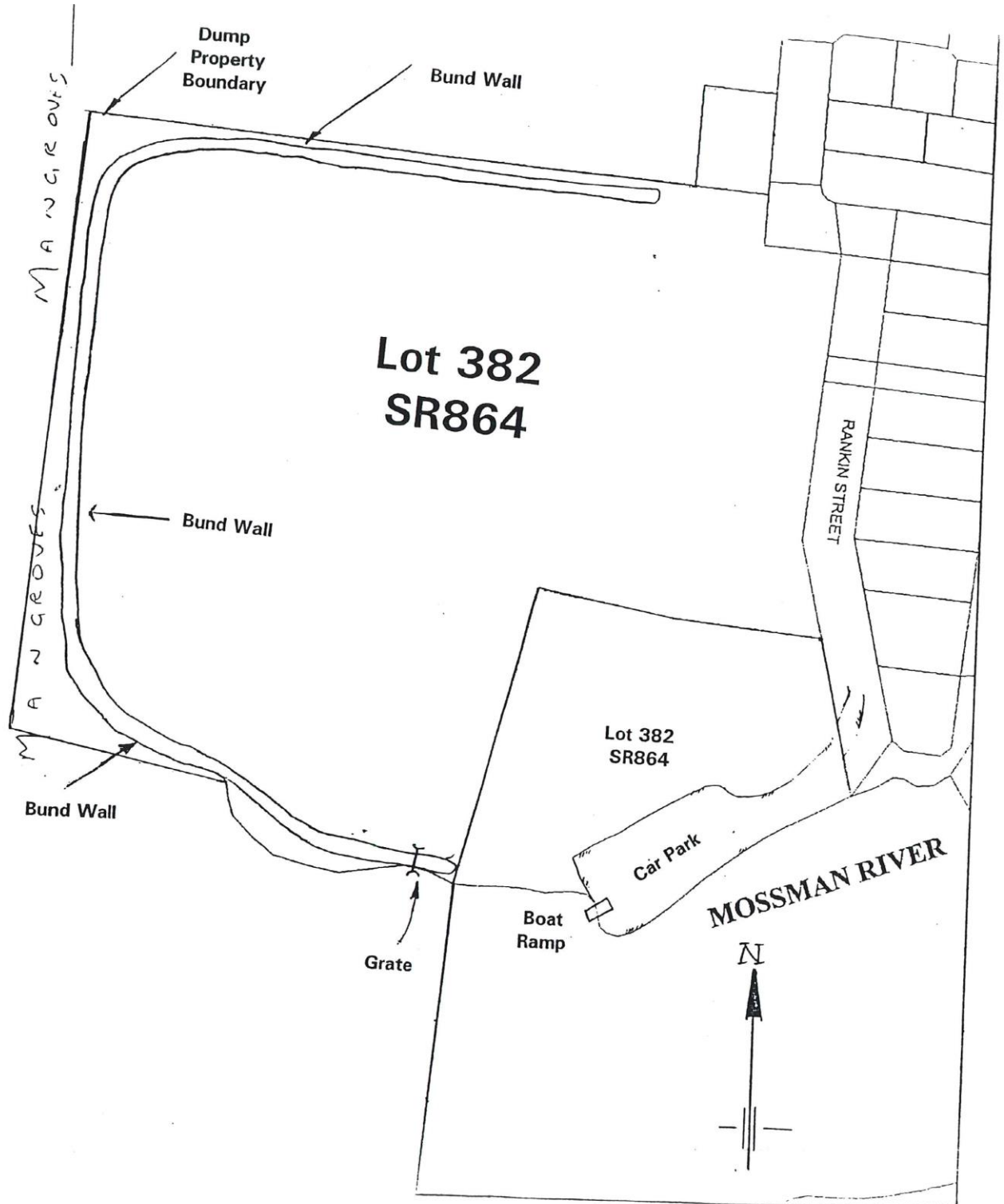
**“the holder of this environmental authority”** means Douglas Shire Council

**“waste disposal activities”** means all activities relating to waste disposal and includes the shredding of waste (where applicable), stockpiling of cover material, temporary waste storage, leachate collection and disposal, litter control and cell, trench or disposal area construction.

**END OF CONDITIONS FOR SCHEDULE 12I**

## SCHEDULE 12J - SITE PLANS

(12.J1) Newell Landfill



End of Part 12

## PART 18: MOSSMAN WATER TREATMENT PLANT

### SCHEDULE 18.A - GENERAL CONDITIONS

#### Competency

- (18.A1) The operation and maintenance of the Mossman water treatment plant must be carried out by or under the supervision of a person competent to operate and maintain the plant.

#### Calibration

- (18.A2) All instruments and devices used for the measurement or monitoring of any parameter under any condition of this development permit must be calibrated, and appropriately operated and maintained.

#### Site-Based Management Plan

- (18.A3) The holder of this development approval must, before commissioning and operating of the plant, develop and implement a Site-Based Management Plan which provides for the following functions:
- a) routine operating procedures to prevent or minimise environmental harm; and
  - b) maintenance practices and procedures; and
  - c) contingency plans and emergency procedures to deal with foreseeable risks and hazards; and
  - d) staff training and awareness of environmental issues to ensure that, at the minimum;
    - (i) any person responsible for carrying out the environmentally relevant activity is familiar with the conditions of this development approval as they relate to the person's responsibilities; and
    - (ii) any person responsible for the operation and maintenance of plant and equipment used in carrying out the environmentally relevant activity is competent to carry out their duties.
- (18.A4) An evaluation of the long term cumulative impacts of backwash discharges to Marrs Creek must be undertaken by an appropriately qualified person. A report must be prepared and submitted to the administering authority prior to the implementation of a backwash recovery system, or 30 September 2018, whichever occurs first. The report should address at least the following:
- a) a current description of the affected receiving waters including key communities and water and sediment quality characteristics; and
  - b) a description of applicable environmental values and sediment and water quality objectives to be achieved whilst the discharge regime is in place; and
  - c) a description of the likely receiving environment including key communities and water and sediment quality characteristics that would have existed in absence of the discharge regime; and
  - d) a description of the likely impacts on receiving waters of the cessation of the discharge regime; and
  - e) proposed measures to mitigate impacts described at d) and to facilitate transition to ephemeral flows, in the event that a backwash recovery system is introduced.

#### END OF CONDITIONS FOR SCHEDULE 18.A

### SCHEDULE 18.B - AIR

- (18.B1) Nil conditions.

#### END OF CONDITIONS FOR SCHEDULE 18.B

## SCHEDULE 18.C - WATER

- (18.C1) The environmentally relevant activity must be carried out so as to prevent the release of any wastewater runoff or contaminated stormwater runoff from the approved place to any stormwater drain or waters or the bed or banks of any such waters.
- (18.C2) The only contaminants to be released to surface waters are backwash waters from the water treatment plant from release point W3 (16° 28.248' S, 145 ° 21.805'E) to Marr Creek, in accordance with Schedule 18, Table 1 Surface Water Release Limits, and associated requirements.

**Table 1 - Surface Water Release Limits**

Quality characteristic (Units)	Maximum/ Range
BOD5 (mg/L)	45
Turbidity (NTU)	25
pH	Within 0.2 pH units of the pH of water extracted from Rex Ck
daily volume	Not to exceed 14% of total daily production or 2.5 ML - whichever is less.

### Associated Requirements

1. Sampling must be in accordance with the Water Quality Sampling Manual.

- (18.C3) Any chemically enhanced backwash water must be discharged to sewer.

### ENEND OF CONDITIONS FOR SCHEDULE 18.C

## SCHEDULE 18.D - STORMWATER MANAGEMENT

### General

- (18.D1) The environmentally relevant activity must be carried out so as to prevent the contact of incident rainfall and stormwater runoff with wastes.

### Bunding

- (18.D2) All above ground bulk chemical, waste oil and fuel storage tanks on the approved place must be banded so that the capacity of the bund is sufficient to contain at least 100% of the largest storage tank plus 10% of the second largest tank within the bund.
- (18.D3) All drum storages of chemical, waste oil and fuel on the approved place must be banded so that the capacity of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- (18.D4) Any stormwater captured within a bund must be free from contaminants or wastes prior to any release.

### Maintenance and Clean-up

- (18.D5) Any spillage must be cleaned up as quickly as practicable. Spillages must be cleaned up by dry methods wherever possible or by other appropriate methods to prevent such spills entering the stormwater system and discharging from the site.

### END OF CONDITIONS FOR SCHEDULE 18.D

## SCHEDULE 18.E - LAND APPLICATION

### Release of Contaminants to Land

- (18.E1) Nil conditions.

### END OF CONDITIONS FOR SCHEDULE 18.E

## SCHEDULE 18.F - NOISE

- (18.F1) In the event of a complaint made to the administering authority (which is neither frivolous or vexatious) about noise generated in carrying out the environmentally relevant activity, and the noise is considered by the administering authority to be an unreasonable release, the holder of this development approval must take steps to ensure that noise is no longer an unreasonable release.

### END OF CONDITIONS FOR SCHEDULE 18.F

## SCHEDULE 18.G - WASTE MANAGEMENT

### Off Site Movement of Regulated Wastes

- (18.G1) Where sludges from the water treatment plant or other regulated wastes are removed from the approved place, the holder of this development approval must ensure that:
- The removal and transport of such regulated waste, where it constitutes an environmentally relevant activity under the Environmental Protection Regulation 1998, is carried out by a person licensed for carrying out this activity under the *Environmental Protection Act 1994*; and
  - Records are kept of the following:
  - The date, quantity and type of waste removed; and
  - Name of the waste transporter and/or disposal operator that removed the waste; and
  - The intended treatment/disposal destination of the waste.

**Note:** Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition of the development permit.

### Notification of Improper Disposal of Regulated Waste

- (18.G2) If the holder of this development approval becomes aware that a person has removed waste from the approved place and disposed of that waste in a manner which is not authorised by this development approval, or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

### END OF CONDITIONS FOR SCHEDULE 18.G

## SCHEDULE 18.H - MONITORING AND REPORTING

### Complaint Recording

- (18.H1) All complaints received by the holder of this development approval relating to releases of contaminants from operations at the approved place must be recorded and kept with the following details:
- Time, date and nature of complaint;
  - Type of communication (telephone, letter, personal etc.);
  - 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);
  - Response and investigation undertaken as a result of the complaint;
  - Name of person responsible for investigating complaint; and
  - Action taken as a result of the complaint investigation and signature of responsible person.

### Notification of Emergencies and Incidents

- (18.H2) 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 development approval, the holder of this development approval must notify the administering authority of the release by telephone or facsimile.
- (18.H3) The notification of emergencies or incidents as required by condition number (18.H2) must include but not be limited to the following:
- The holder of this development approval;
  - The location of the emergency or incident;
  - The number of the development approval;
  - The name and telephone number of the designated contact person;
  - The time of the release;
  - The time the holder of this development approval became aware of the release;
  - The suspected cause of the release;
  - The environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and
  - Actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (18.H4) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this development approval must provide written advice of the information supplied in accordance with condition number (18.H3) in addition to:
- proposed actions to prevent a recurrence of the emergency or incident; and
  - outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.
- (18.H5) Monitoring of contaminant releases to surface waters must be undertaken in accordance with Schedule 18H Table 1 - Monitoring Frequency, and the associated monitoring requirements.

**Schedule 18H Table 1 - Monitoring Frequency**

Quality Indicator	Measurement (units)	Minimum frequency
BOD5	(mg/L)	Monthly
Turbidity	(NTU)	Monthly
pH	pH	Monthly

**Associated Monitoring Requirements**

- Monitoring must be in accordance with the Water Quality Sampling Manual.
- Monitoring must be undertaken when the **activity** is in operation and samples must be taken during a release.

**END OF CONDITIONS FOR SCHEDULE 18.H****SCHEDULE 18.I – DEFINITIONS**

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

- (18.I1) **"approved place"** means the Mossman Water Treatment Plant, Lot 1 & 2, Plan RP741245, Parish of Victory, County of Solander, located at Georgeview Crescent, Mossman Qld 4873.
- (18.I2) **"the holder of this development approval"** means Douglas Shire Council.
- (18.I3) **"chemically enhanced backwash water"** means backwash water containing chlorine or other cleaning agents.



## **SCHEDULE 18.J - SITE PLANS**

**(18.J1) Mossman Water Treatment Plant - backwash discharge location W3**



**End of Part 18**

## DEFINITIONS - ALL SITES

Words and phrases used throughout this permit<sup>1</sup> are defined below. Where a definition for a term used in this permit<sup>1</sup> is sought and the term is not defined within this permit<sup>1</sup> the definitions provided in the relevant legislation shall be used.

**"administering authority"** means the Department of Environment and Science or its successor.

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

**"approval"** means 'notice of development application decision' or 'notice of concurrence agency response' under the *Sustainable Planning Act 2009*.

**"approved plans"** means the plans and documents listed in the approved plans section in the notice attached to this development approval.

**"authorised place"** authorised under this development approval for the carrying out of the specified environmentally relevant activities.

**"background noise"** means  $L_{A90, T}$  being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response.

**"by-pass flow events"** means discharge events for wet weather related flows that are in excess of the hydraulic capacity of the treatment plant (3 x ADWF), which bypasses some effluent treatment processes and is discharged to the receiving environment.

**"cfu"** means colony forming units.

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

**"contaminant"** means (Section 11 of the EP Act) -

- (a) a gas, liquid or solid; or
- (b) an odour; or
- (c) an organism (whether alive or dead), including a virus; or
- (d) energy, including noise, heat, radioactivity and electromagnetic radiation; or
- (e) a combination of contaminants.

**"dry weather day"** means a day during which less than 5 mm of rainfall is recorded at any rainfall measuring station recognised by the Commonwealth Bureau of Meteorology within the sewered area connected to the sewage treatment plant, or if no such measuring station exists, at the nearest such station to the sewage treatment plant. The term also excludes days during which recorded rainfall over the 35 preceding days exceeds a cumulative rainfall of 80 mm.

**"dry weather flow"** means flow which occurs from the STP to the designated receiving water during a dry weather day.

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

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

**"equivalent person (EP)"** means a wastewater flow of 200 litres per person per day at daily design capacity of 2300 kilolitres per day.

**"Department of Environment and Science"** means the department or agency administering the *Environmental Protection Act 1994*.

**"Effluent"** means treated wastewater.

**"Environmental harm"** means any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance. Environmental harm may be caused by an activity –

- (a) whether the harm is a direct or indirect result of the activity; or
- (b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.

**"Environmental nuisance"** means unreasonable interference or likely interference with an environmental value caused by –

- (c) aerosols, fumes, light, noise, odour, particles or smoke; or
- (d) an unhealthy, offensive or unsightly condition because of contamination; or
- (e) another way prescribed by regulation.

**"Environmentally relevant activity (ERA)"** means an activity prescribed by regulation as an ERA.

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

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

**" $L_{A\ 10, \text{adj}, 10 \text{ mins}}$ "** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

**" $L_{A\ 1, \text{adj}, 10 \text{ mins}}$ "** means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response.

**" $L_{A, \text{max adj}, T}$ "** means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

**" $L_{A \text{ eq}, \text{adj}, 10 \text{ mins}}$ "** means the A-weighted equivalent continuous sound pressure level, (adjusted for tonal character and impulsiveness of the sound) of any 10 minute measurement period

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

**"mg/L"** means milligrams per litre.

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

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

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

**"nuisance sensitive place"** includes –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

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

**"PM<sub>10</sub>"** means particulate matter with an aerodynamic diameter of less than 10µm or equal to (PM<sub>10</sub>).

**"site"** means land on or in which it is proposed to carry out the development approved under this development approval.

**"release"** of a contaminant into the environment, includes—

- to deposit, discharge, emit or disturb the contaminant; and
- to cause or allow the contaminant to be deposited, discharged emitted or disturbed; and
- to fail to prevent the contaminant from being deposited, discharged, emitted or disturbed; and
- to allow the contaminant to escape; and
- to fail to prevent the contaminant from escaping.

**"regulated waste"** means waste that is prescribed under a regulation as regulated waste.

**"REMP"** means the Receiving Environmental Monitoring Program.

**"long term 50th percentile"** means not more than thirteen (13) of the measured values of the quality characteristic are to exceed the stated release limit for any twenty-six (26) consecutive samples for a release/monitoring point at any time where:

- (i) the consecutive samples are taken over a 1 year period;
- (ii) the consecutive samples are taken at approximately equal periods; and
- (iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

**"short term 80th percentile"** means that not more than one (1) of the measured values of the quality characteristic are to exceed the stated release limit for any five (5) consecutive samples where —

- (i) the consecutive samples are taken over a five (5) week period;
- (ii) the consecutive samples are taken at approximately equal periods; and
- (iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

**“long term 80<sup>th</sup> percentile”** means that not more than five (5) of the measured values of the quality characteristic are to exceed the stated release limit for any twenty-six (26) consecutive samples where —

- (i) the consecutive samples are taken over a one (1) year period;
- (ii) the consecutive samples are taken at approximately equal periods; and
- (iii) the time interval between the taking of each consecutive sample is not less than three (3) days or greater than eleven (11) days.

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

**“Total Phosphorus”** means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus.

**“watercourse”** means a river, creek or stream in which water flows permanently or intermittently-

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

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

**“wet weather day”** means a day which is not a dry weather day.

**“works” or “operation”** means the development approved under this development approval.

**“you”** means the holder of this development approval or owner / occupier of the land which is the subject of this development approval.

**End of DEFINITIONS**  
**END OF PERMIT**