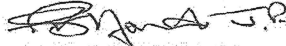


ESO-1

Environment Protection Notice 8949/1 (r1)



1/22
THIS IS THE DOCUMENT MARKED ESO-1
REFERRED TO IN THE AFFIDAVIT OF
SWORN AT HOBART IN TASMANIA THIS 21ST DAY OF
MARCH 2014 BEFORE ME:


JUSTICE OF THE PEACE
NUMBER 020

ENVIRONMENT PROTECTION NOTICE No. 8949/1

Issued under the *Environmental Management and Pollution Control Act 1994*

Issued to: **TASMANIAN WATER & SEWERAGE CORPORATION PTY LTD**
ACN 162 220 653
163 - 169 MAIN RD
MOONAH TAS 7009

Environmentally Relevant Activity: **The operation of a wastewater treatment plant (ACTIVITY TYPE: Wastewater Treatment Works)**
ORFORD WASTEWATER TREATMENT PLANT, OFF RHEBAN RD
ORFORD TAS 7190

GROUNDS

I, Alex Schaap Director, Environment Protection Authority, being satisfied in accordance with section 44(1)(d) of the *Environmental Management and Pollution Control Act 1994* (the EMPCA) and in relation to the above-mentioned environmentally relevant activity that it is desirable to vary the conditions of a permit (see table below) hereby issue this environment protection notice to the above-mentioned person as the person responsible for the activity.

Permit No.	Date Granted	Granted By
2840	11 July 1983	Director of Environmental Control
DA02047	26 August 2002	Glamorgan/Spring Bay Council

PARTICULARS

The particulars of the grounds upon which this notice is issued are:

- 1 steps must be taken to prevent, control, reduce or remediate environmental harm associated with the activity.
- 2 the person responsible has changed.
- 3 the permit conditions have been varied to require a study into the feasibility of wastewater reuse.
- 4 a permit condition has been changed to specify the authorised discharge location at Quarry Point.
- 5 the permit conditions need to be varied to reflect current or updated terminology and/or to clarify the meaning of the conditions.
- 6 the permit conditions need to be varied to reflect current regulatory practice.

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY



Date of issue:

1.7 MAR 2014

DEFINITIONS

Unless the contrary appears, words and expressions used in this Notice have the meaning given to them in Schedule 1 of this Notice and in the EMPCA. If there is any inconsistency between a definition in the EMPCA and a definition in this Notice, the EMPCA prevails to the extent of the inconsistency.

REQUIREMENTS

In accordance with s.44(3) of the EMPCA, the person responsible for the activity is required to comply with the conditions contained in Schedule 2 of this Notice. These conditions prevail over the terms of the permit to the extent of any inconsistency.

INFORMATION

Attention is drawn to **Schedule 3**, which contains important additional information.

PENALTIES

If a person bound by an environment protection notice contravenes a requirement of the notice, that person is guilty of an offence and is liable on summary conviction to a penalty not exceeding 1000 penalty units in the case of a body corporate or 500 penalty units in any other case (at the time of issuance of this Notice one penalty unit is equal to \$130.00).

NOTICE TAKES EFFECT

This notice takes effect on the date on which it is served upon you.

APPEAL RIGHTS

You may appeal to the Appeal Tribunal against this notice, or against any requirement contained in the notice, within 14 days from the date on which the notice is served, by writing to:

The Chairperson
Resource Management and Planning Appeal Tribunal
GPO Box 2036
Hobart TAS 7001

Signed:

DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

1.7 MAR 2014

Date:

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Attachments

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Attachment 2: Orford Table of Monitoring (modified: 12/03/2014 12:26)..... 3 pages



Schedule 1: Definitions

Activity means any environmentally relevant activity (as defined in Section 3 of EMPCA) to which this document relates, and includes more than one such activity.

Approved Management Method For Biosolids Reuse means the document of this title first gazetted by the Director in June 2006 as amended by the Director from time to time.

Australian Guidelines For Water Quality Monitoring And Reporting means the document of this title published as part of the *National Water Quality Management Strategy* in 2000, or any subsequent updates.

Authorized Officer means an authorized officer under section 20 of EMPCA.

Best Practice Environmental Management or 'BPEM' has the meaning described in Section 4 of EMPCA.

Biosolids means sewage sludge that has been extracted from a wastewater treatment plant and stabilised for beneficial reuse.

Director means the Director, Environment Protection Authority holding office under Section 18 of EMPCA and includes a person authorised in writing by the Director to exercise a power or function on the Director's behalf.

DRP means Decommissioning and Rehabilitation Plan

Effluent means wastewater discharged from The Land.

Emission Limit Guidelines means the *Emission Limit Guidelines for Sewage Treatment Plants that Discharge Pollutants into Fresh and Marine Waters 2001* published by the Department of Primary Industries, Water and Environment, dated June 2001, and includes subsequent versions of this document.

EMPCA means the *Environmental Management and Pollution Control Act 1994*.

Environmental Harm and **Material Environmental Harm** and **Serious Environmental Harm** each have the meanings ascribed to them in Section 5 of EMPCA.

Environmental Nuisance and **Pollutant** each have the meanings ascribed to them in Section 3 of EMPCA.

Environmentally Hazardous Material means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals but excludes sewage.

Mixing Zone means a three dimensional area of the receiving waters around a point of discharge of pollutants within which it is recognised that the water quality objectives for the receiving waters may not be achieved.

Noise Sensitive Premises means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

Person Responsible is any person who is or was responsible for the environmentally relevant activity to which this document relates and includes the officers, employees, contractors, joint venture partners and agents of that person, and includes a body corporate.

Protected Environmental Value means a value or use for which it has been determined that a given area of the environment should be protected. There can, and often will be, more than one protected environmental value for a given area. A list of potential protected environmental values is provided in clause 7.1 of the *State Policy on Water Quality Management 1997*.

Reporting Period means the financial year ending on 30 June of each calendar year.

Sewage Sludge means concentrated solids separated from wastewater during the wastewater treatment process.

Sewerage System means a system of pipes, maintenance holes, pumps, treatment facilities and other items for handling wastewater.

SPWQM means the *State Policy on Water Quality Management 1997*, as amended from time to time.

Tasmanian Biosolids Reuse Guidelines means the document of this title published by the Department of Primary Industries, Water and Environment in August 1999, and includes any subsequent versions of this document.

Tasmanian Noise Measurement Procedures Manual means the Noise Measurement Procedures Manual dated July 2008 issued by the Director of Environmental Management in accordance with regulation 25 of the *Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2004* and includes any subsequent versions of the document.

The Land means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land is described by Certificate of Title reference 26237/1 and part of 148854/1 and its approximate boundaries are shown on the Site Plan at Attachment 1.

Unauthorised means has not been approved in writing by the Director or an authorised officer

Waste has the meaning ascribed to it in Section 3 of EMPCA.

Wastewater means spent or used water (whether from industrial or domestic sources) containing a pollutant and includes stormwater which becomes mixed with wastewater.

Wastewater Reuse EMP means the document entitled *Orford WWTP Effluent Re-Use Scheme Development Proposal & Environmental Management Plan*, February 2002, written by Sinclair Knight Merz together with the *Orford Wastewater Treatment Plant Effluent Reuse Scheme Amendment to DPEMP December 2002* and includes any amendment to or substitution of these documents approved in writing by the Director.

WWTP means the wastewater treatment plant located on The Land.

Schedule 2: Conditions**Maximum Quantities****Q1 Regulatory limits**

- 1 The activity must not exceed the following limits (annual fees are derived from these figures):
 - 1.1 473 kilolitres per day Capacity to treat an average dry flow of sewage or wastewater).

General**G1 Access to and awareness of conditions and associated documents**

A copy of these conditions and any associated documents referred to in these conditions must be held in a location that is known to and accessible to the person responsible for the activity. The person responsible for the activity must ensure that all persons who are responsible for undertaking work on The Land, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

G2 Complaints register

- 1 A public complaints register must be maintained and made available for inspection by an Authorized Officer upon request. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:
 - 1.1 the time at which the complaint was received;
 - 1.2 contact details for the complainant (where provided);
 - 1.3 the subject-matter of the complaint;
 - 1.4 any investigations undertaken with regard to the complaint; and
 - 1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.
- 2 Complaint records must be maintained for a period of at least 3 years.

G3 Incident response

If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all reasonable and practicable action to minimise any adverse environmental effects from the incident.

G4 No changes without approval

- 1 The following changes, if they may cause or increase the emission of a pollutant which may cause material or serious environmental harm or environmental nuisance, must only take place in relation to the activity if such changes have been approved in writing by the EPA Board following its assessment of an application for a permit under the *Land Use Planning and Approvals Act 1993*, or approved in writing by the Director:
 - 1.1 a change to a process used in the course of carrying out the activity; or
 - 1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or
 - 1.3 a change in the quantity or characteristics of materials used in the course of carrying out the activity.

G5 Change of ownership

If the person responsible for the activity is not the owner of The Land upon which the activity is carried out and the owner of The Land changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change, the person responsible must notify the Director in writing of the change of ownership.

G6 Annual Environmental Review

Unless otherwise approved by the Director a publicly available Annual Environmental Review must be submitted each year within 3 months of the end of the Reporting Period. The Annual Environmental Review must be prepared to the satisfaction of the Director using the latest version of the Annual Environmental Review Template which is available on request from the Director.

G7 Inflow and Infiltration (I&I) Management Plan

- 1 An Inflow and Infiltration ('I&I') Management Plan must be submitted by the person responsible to the Director for approval within 12 months of the date on which these conditions take effect or by a date otherwise specified in writing by the Director.
- 2 The I&I Management Plan must contain the following:
 - 2.1 Details of surveys or investigations previously undertaken to identify I&I points within the sewerage system including:
 - 2.1.1 summaries of results;
 - 2.1.2 descriptions of the methods used;
 - 2.1.3 identification of sub-catchment I&I rates; and
 - 2.1.4 I&I sources identified.
 - 2.2 An outline of future surveys or investigations to be undertaken to identify I&I points within the sewerage system;
 - 2.3 A strategy for the reduction of I&I into the sewerage system including:
 - 2.3.1 specific reduction targets;
 - 2.3.2 a table containing all of the commitments made in the strategy; and
 - 2.3.3 an implementation timetable for the strategy;
- 3 The person responsible must implement and act in accordance with the approved I&I Management Plan.
- 4 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved I&I Management Plan or approves a new I&I Management Plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

G8 Warning Signs, Broken Outfall

Within 21 days of the date on which these conditions take effect or by a date specified in writing by the Director, signage must be installed on land near the existing outfall pipeline. Signage must alert the public as to the proximity and nature of the discharge. The signage must be maintained until the pipeline is repaired and discharge via the authorised discharge location commences. The signage must be removed upon commencement of discharge from the authorised discharge location.

G9 Wastewater reuse scheme annual report

- 1 Unless otherwise approved by the Director a publicly available wastewater reuse scheme report must be submitted each year within 3 months of the end of the Reporting Period. The report must include the following information:

- 1.1 a list of all supplier-user agreements;
 - 1.2 the volume of treated wastewater discharged to the wastewater reuse scheme during each calendar month of the reporting period and the reuse rate as a proportion of total wastewater discharged from the WWTP;
 - 1.3 a summary of reuse activities including water and nutrient budgets;
 - 1.4 results of monitoring undertaken in accordance with the Wastewater Reuse EMP and an assessment of those results. This information should be presented in graphical form where possible and should include comparison with the results of previous reporting periods;
 - 1.5 discussion of any significant trends observable in the monitoring results over time, including comparison with previous monitoring periods, must be provided;
 - 1.6 verification that the wastewater is only being used in the manner and on crops described in the Wastewater Reuse EMP and how this has been verified; and
 - 1.7 details of any proposed variations to the operation of the reuse scheme from those described in the Wastewater Reuse EMP.
- 2 Where the Director is of the opinion that the Wastewater Reuse EMP needs updating to reflect the current practices and potential environmental impacts associated with the reuse scheme the Director may direct the person responsible to cause a new Wastewater Reuse EMP to be prepared and submitted for approval and the responsible person must comply with the direction or cease the discharge to the wastewater reuse scheme.

Decommissioning And Rehabilitation

DC1 Notification of cessation

Within 30 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to cease or has ceased.

DC2 DRP requirements

Unless otherwise approved in writing by the Director, a draft Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 30 days of the Director being notified of the planned cessation of operations or by a date specified in writing by the Director. The DRP must be prepared in accordance with guidelines provided by the Director.

DC3 Rehabilitation following cessation

- 1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, The Land must be rehabilitated including:
 - 1.1 stabilisation of any land surfaces that may be subject to erosion;
 - 1.2 removal or mitigation of all environmental hazards or land contamination, that might pose an on-going risk of causing environmental harm; and
 - 1.3 decommissioning of any equipment that has not been removed.
- 2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, decommissioning and rehabilitation must be carried out in accordance with that plan.

Effluent

EF1 Effluent discharge locations

- 1 Effluent from the activity must only be discharged at the following discharge locations:

1.1 Discharge to water: discharge to the Mercury Passage at Quarry Point, Map Grid of Australia (GDA94) zone 55G at approximately 574642 metres east and 5286455 metres north as depicted on the plan at Attachment 1:

1.1.1 Unless otherwise specified in writing by the Director the discharge to water location must be re-commissioned not later than 12 months after the date of issue of this notice.

1.2 Discharge to reuse: discharge to the reuse scheme must only be conducted in accordance with the Wastewater Reuse EMP approved in writing by the Director.

EF2 Signage of discharge location

Signage must be installed and maintained on land near to outfalls to discourage recreational activities within waters immediately around the outfall. Signage is to alert the public as to the proximity and nature of the discharge.

EF3 Effluent quality limits for discharge at Quarry Point

1 Effluent discharged at Quarry Point must comply with the water quality limits set out in the Table of Effluent Quality Limits for discharge at Quarry Point (below), at the Effluent Quality monitoring location specified in Attachment 2.

2 Table of Effluent Quality Limits for discharge at Quarry Point

Column 1	Column 2	Column 3
Substance or measure	Unit of measurement	Maximum limit or range
Biochemical Oxygen Demand	mg/L	30
Suspended Solids	mg/L	40
Ammonia Nitrogen	mg/L	25
Total Nitrogen	mg/L	40
Total Phosphorus	mg/L	10
Oil and Grease	mg/L	10
Thermotolerant Coliforms	cfu/100mL	1,000
pH	pH units	6.5 to 8.5

EF4 Effluent quality limits for discharge to the reuse scheme defined in the Wastewater Reuse EMP

1 Effluent discharged to the reuse scheme defined in the Wastewater Reuse EMP must comply with the water quality limits set out in Table 2 "Reuse Effluent Quality Limits for the discharge to the reuse scheme defined by the Wastewater Reuse EMP", at the Effluent Quality Monitoring Location specified at Attachment 2.

2 Table 2: Reuse Effluent Quality Limits for the discharge to the reuse scheme defined by the Wastewater Reuse EMP

Column 1	Column 2	Column 3	Column 4
Parameter	Unit of measurement	Median	Range or Maximum Limit
pH			5.5 to 8.0
Biochemical Oxygen Demand	mg/L		50
Thermotolerant Coliforms	cfu/100ml	<1,000	10,000

Effluent Management

EM1 Effluent Management

1 The person responsible must:

- 1.1** submit to the Director within 6 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director, a written undertaking to implement full effluent reuse; or
- 1.2** submit an Emission Limit Guidelines Compliance Plan to the Director for approval within 12 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director; or
- 1.3** submit a Discharge Management Plan to the Director for approval within 2 years and 6 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director.

EM2 Effluent reuse feasibility study

- 1** A feasibility study for reuse of effluent from the activity must be submitted to the Director within 6 months of the date on which these conditions take effect, or a date otherwise specified in writing by the Director. The study must be to the satisfaction of the Director and must include:
 - 1.1** a strategic evaluation of the potential for the establishment of an effluent reuse scheme;
 - 1.2** details of investigations undertaken to maximise the reuse of treated effluent discharged from the activity including identification of potential land areas and uses suitable for reuse and a summary of discussions undertaken with potential end users to enable reuse; and
 - 1.3** where reuse is feasible, a written commitment from the person responsible to implement a reuse scheme including an action plan with timelines for completion of significant actions.

EM3 Ambient monitoring of receiving waters

- 1** Where an Ambient Monitoring Report is required by these conditions, an ambient monitoring plan for receiving waters must be submitted by the person responsible to the Director for approval within 9 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director.
- 2** The ambient monitoring plan for receiving waters must:
 - 2.1** be consistent with the Australian Guidelines for Water Quality Monitoring and Reporting;

- 2.2 outline the program scope, methods, locations, parameters, frequency and duration of the proposed monitoring program, including the rationale for design features of the program such as any modelling undertaken;
 - 2.3 be designed to characterise the ambient water quality and biological conditions and to assess the impact of effluent discharged from the activity, taking into account seasonal effects and other variation in the receiving environment;
 - 2.4 be designed to take into account the Protected Environmental Values and identify sensitive receptors within the receiving environment; and
 - 2.5 incorporate an effluent plume dilution study which identifies the behaviour and dimensions of the mixing zone at the authorised discharge point;
 - 2.6 be designed to identify the location and extent of the mixing zone, taking into account seasonal effects and other variation in the receiving environment;
 - 2.7 include an implementation timetable for the plan.
- 3 Unless otherwise approved in writing by the Director, the approved ambient monitoring plan for receiving waters must be implemented within 3 months of the plan being approved in writing by the Director.
 - 4 Within 4 months of the completion of ambient monitoring as stipulated in the ambient monitoring plan for receiving waters, an Ambient Monitoring Report must be submitted to the Director which must include the following information:
 - 4.1 a description of the quality of the receiving waters environment, both in areas impacted by the discharge and in areas that are not impacted by the discharge, including graphical presentation of monitoring results collected in accordance with these conditions and an analysis of seasonal effects and other variation;
 - 4.2 observations regarding the dilution and dispersion of effluent into the receiving waters in comparison to predictions or findings of previous studies (e.g. plume dilution studies);
 - 4.3 an assessment of the dilution and dispersion patterns achieved in the receiving waters and recommendations regarding the location and extent of the mixing zone;
 - 4.4 an evaluation of the environmental impacts with consideration of Protected Environmental Values and relevant sensitive receptors, based on the monitoring results and knowledge of seasonal effects and other variation.

EM4 Discharge Management Plan

- 1 For the purposes of these conditions a Discharge Management Plan must be prepared to the satisfaction of the Director and must include the following:
 - 1.1 an assessment of the available options for improved effluent management in accordance with the hierarchy set out in Division 2: 'Management of Point Sources of Pollution' of the SPWQM;
 - 1.2 a description of the volume and quality of effluent likely to be discharged to the receiving waters with consideration of effluent loads discharged to any approved reuse schemes;
 - 1.3 an assessment of the current impact of effluent discharges from the activity on the receiving environment. The assessment must incorporate and analyse the findings of an Ambient Monitoring Report submitted to the Director in accordance with these conditions;
 - 1.4 measures to ensure that the discharge of effluent to the receiving waters does not prejudice the achievement of the recommended water quality objectives at the discharge point including:
 - 1.4.1 recommended emission limits determined in accordance with the SPWQM;



- 1.4.2 proposed effluent management measures including alternate discharge point options, seasonal discharge management and / or the establishment of a mixing zone, where necessary; and
 - 1.4.3 details of any upgrades of wastewater treatment infrastructure necessary to achieve the recommended emission limits and implement the discharge management measures.
 - 1.5 a table containing all of the major commitments made in the plan;
 - 1.6 an implementation timetable for key aspects of the plan; and
 - 1.7 a reporting schedule to regularly advise the Director of progress with implementation of the plan.
- 2 The person responsible must implement and act in accordance with the approved Discharge Management Plan.
- 3 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved Discharge Management Plan or approves a new Discharge Management Plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

Hazardous Substances

H1 Storage and handling of hazardous materials

- 1 Unless otherwise approved in writing by the Director, environmentally hazardous materials held on The Land must be:
 - 1.1 located within impervious bunded areas, spill trays or other containment systems; and
 - 1.2 managed to prevent unauthorised discharge, emission or deposition of pollutants:
 - 1.2.1 to soils within the boundary of The Land in a manner that is likely to cause serious environmental harm;
 - 1.2.2 to groundwater;
 - 1.2.3 to waterways; or
 - 1.2.4 beyond the boundary of The Land.

Monitoring

M1 Dealing with samples obtained for monitoring

- 1 Any sample or measurement required to be obtained under these conditions must be taken and processed in accordance with the following:
 - 1.1 Australian Standards, NATA approved methods, the American Public Health Association Standard Methods for the Analysis of Water and Waste Water or other standard(s) approved in writing by the Director;
 - 1.2 measurement equipment must be maintained and operated in accordance with the manufacturer's specifications;
 - 1.3 samples must be tested in a laboratory accredited by the National Association of Testing Authorities (NATA), or a laboratory approved in writing by the Director, for the specified test;
 - 1.4 results of measurements and analysis of samples and details of methods employed in taking measurements and samples must be retained for at least three years after the date of collection; and
 - 1.5 noise measurements must be undertaken in accordance with the Tasmanian Noise Measurement Procedures Manual.

M2 Flow monitoring equipment

- 1 Flow monitoring equipment must be maintained in accurate working order in accordance with the manufacturer's specifications and, unless otherwise approved in writing by the Director, must be validated at least once every 12 months.
- 2 The dates on which flow monitoring equipment has been validated must be recorded and validation records kept for a minimum of 3 years.
- 3 For the purposes of this condition:
 - 3.1 'validate' means to undertake a set of actions including inspecting the flow monitoring equipment to check that it is installed in compliance with any relevant standards and is maintained to an acceptable state of repair, which provides an acceptable level of confidence that the flow monitoring equipment operates within an acceptable range of error under normal operating conditions.
 - 3.2 'Flow monitoring equipment' means an instrument, including a flow meter, that measures and may record a flow or level of liquid and includes any ancillary device attached to or incorporated into the instrument.

M3 Monitoring reporting and record keeping

- 1 Unless otherwise specified in writing by the Director, a Monthly Monitoring Report, in an electronic format approved by the Director, must be submitted to the Director within 21 days of receipt of laboratory analyses of samples collected for the previous monthly period. As a minimum, the Monthly Monitoring Report must include the following information:
 - 1.1 the laboratories at which sample analyses were carried out;
 - 1.2 contact details for a person responsible for managing monitoring programs;
 - 1.3 the estimated or measured average daily flow to the wastewater treatment plant for the previous monthly period; and
 - 1.4 for each sampling location or site test location:
 - 1.4.1 a location name which allows the location to be clearly identifiable;
 - 1.4.2 the date and time at which each sample was taken or site test conducted;
 - 1.4.3 the indicators for which analyses or tests were carried out and the units in which the results are reported; and
 - 1.4.4 the results for all sample analyses and site tests.
- 2 A record of all monthly monitoring reports submitted to the Director must be maintained and copies of all laboratory analysis reports referenced to the relevant Monthly Monitoring Reports kept for a minimum period of three years.

M4 Signage of monitoring points

With the exception of open water sampling, all monitoring points must be clearly marked to indicate the location and name of the monitoring point.

M5 Monitoring requirements

- 1 Unless otherwise specified in writing by the Director, monitoring must be undertaken in accordance with the Table of Monitoring at Attachment 2, as follows:
 - 1.1 the items listed in Column 1 must be sampled or tested at the locations listed in Column 2 for the parameters listed in Column 3 at the frequencies listed in Column 5 using the techniques listed in Column 6; and
 - 1.2 resultant monitoring data must be reported to the Director in accordance with the requirements set out in Column 7 and in the units listed in Column 4.

M6 Groundwater Monitoring Plan

- 1 A groundwater monitoring plan must be submitted by the person responsible to the Director for approval within 6 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director.
- 2 The groundwater monitoring plan must be prepared by a suitably qualified person.
- 3 The groundwater monitoring plan must:
 - 3.1 describe the location and design of groundwater monitoring wells to be constructed or which have all ready been constructed to detect groundwater contamination caused by the activity;
 - 3.2 include a map of the Land on which the location of existing and proposed wells are marked;
 - 3.3 provide reasons as to why the location and design of proposed wells is appropriate for the purpose of detecting groundwater contamination caused by the activity;
 - 3.4 provide reasons as to why the location and design of existing wells are appropriate for the purpose of detecting groundwater contamination caused by the activity.
- 4 Where the groundwater monitoring plan requires the construction of groundwater monitoring wells, those wells must be constructed within 6 months of the date on which the Director approves the groundwater monitoring bore plan.
- 5 At the time of construction of wells required by the groundwater monitoring plan, the following information must be recorded and compiled into a groundwater monitoring well installation report:
 - 5.1 a description of the materials used for construction;
 - 5.2 initial field measurements of the groundwater for conductivity, total dissolved solids, pH and temperature;
 - 5.3 details of slot screens installed, and the depth to which they were installed;
 - 5.4 depth of gravel packing;
 - 5.5 depth of the bentonite cap;
 - 5.6 details of bore development during pumping (removal of drilling contamination);
 - 5.7 results of pump tests;
 - 5.8 aquifer levels; and
 - 5.9 a detailed geological log.
- 6 The Director must be notified of construction of the groundwater monitoring wells required by the groundwater monitoring plan within 1 month of their construction. The groundwater monitoring well installation report for each newly constructed bore must be provided with the notification.
- 7 The groundwater monitoring wells required by this condition must be established by a suitably qualified person in accordance with the Minimum Construction Requirements for Water Bores in Australia.
- 8 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved groundwater monitoring plan or approves a new groundwater monitoring plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

Noise Control

N1 Noise emission limits

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
 - 1.1 50 dB(A) between 0800 hours and 1800 hours (Day time); and
 - 1.2 45 dB(A) between 1800 hours and 2200 hours (Evening time); and
 - 1.3 40 dB(A) between 2200 hours and 0800 hours (Night time).
- 2 Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

Operations

OP1 Operational Procedures Manual

- 1 An Operational Procedures Manual ('the Manual') must be developed within 12 months of the date on which these conditions take effect or by a date specified in writing by the Director. The Manual must provide detailed information relating to the activity and must detail operational procedures as required to ensure compliance with these conditions.
- 2 The person responsible must take all reasonable and practicable measures to ensure that personnel, including contractors, carry out their duties in accordance with the manual.

OP2 Site security

The WWTP must be fenced to prevent entry by unauthorised persons and these fences must be adequately maintained for this purpose.

OP3 Contingency Management

- 1 Unless otherwise approved in writing by the Director, a Contingency Management Plan must be submitted by the person responsible to the Director within 3 months of the date on which these conditions take effect. The plan must detail measures to prevent and mitigate environmental harm if an unplanned event occurs. Unplanned events that must be addressed by the plan include:
 - 1.1 incidents, accidents, power failures and malfunctions with the potential to cause the release of effluent that does not comply with these conditions;
 - 1.2 pipe ruptures leading to discharge of wastewater;
 - 1.3 development of blue green algae (cyanobacteria) concentrations that have the potential to cause environmental harm; and
 - 1.4 fire and flooding.

- 2 The Contingency Management Plan must include communication procedures for ensuring that water users that may be adversely impacted, the general public and relevant government agencies are informed of any unplanned event to the extent necessary to allow them to take precautions against adverse impacts upon the environment, human health and livestock health.
- 3 As far as reasonable and practicable the Contingency Management Plan must include contact details for all water users that may be impacted by an unplanned event and must be kept up to date by the person responsible.
- 4 The person responsible must ensure that all personnel are aware of the Contingency Management Plan and their responsibilities in relation to unplanned events and have access at all times to the Contingency Management Plan.
- 5 The Contingency Management Plan must be implemented if an unplanned event occurs.

Waste Management

WM1 Sewage Sludge Management Plan

- 1 A Sewage Sludge Management Plan must be submitted to the Director for approval within 12 months of the date on which these conditions take effect, or by a date specified in writing by the Director.
- 2 The Sewage Sludge Management Plan must be prepared with reference to the Tasmanian Biosolids Reuse Guidelines and must include:
 - 2.1 actions to ensure sludge depth in sewage lagoons does not compromise plant performance; and
 - 2.2 a proposal for the appropriate end use or disposal of sewage sludge.
- 3 The Sewage Sludge Management Plan must contain a description of any onsite containment facility for sewage sludge at the WWTP including measures to prevent environmental nuisance.
- 4 Unless otherwise approved in writing by the Director, sewage sludge must be managed in accordance with the Sewage Sludge Management Plan approved in writing by the Director.

WM2 Controlled Waste Register

- 1 A Controlled Waste Register, to document storage and movement of sewage screenings, grit material, sewage sludge and biosolids, must be maintained and made available for inspection by an Authorized Officer upon request.
- 2 The Controlled Waste Register must:
 - 2.1 keep an accurate record of type and quantity of Controlled Wastes stored on The Land, with the exception of sewage sludge contained within lagoons; and
 - 2.2 record the following detail in relation to Controlled Waste removed from The Land:
 - 2.2.1 the type of Controlled Waste;
 - 2.2.2 the quantity of Controlled Waste;
 - 2.2.3 the Controlled Waste Transporter who moved the Controlled Waste;
 - 2.2.4 the date the Controlled Waste was moved;
 - 2.2.5 the recipient of the Controlled Waste; and
 - 2.2.6 The destination address of the Controlled Waste.
- 3 Controlled Waste records must be maintained for a period of at least 3 years.

Schedule 3: Information

Legal Obligations

LO1 EMPCA

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder. The conditions of this document must not be construed as an exemption from any of those requirements.

LO2 Change of responsibility

If the person responsible for the activity ceases to be responsible for the activity, they must notify the Director in accordance with Section 45 of the EMPCA.

Other Information

OI1 Notification of incidents under section 32 of EMPCA

Where a person is required by section 32 of EMPCA to notify the Director of the release of a pollutant, the Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).

Policy Requirements

PR1 Policy Framework

- 1 The policy framework and guidelines relevant to implementation of policy are as follows:
 - 1.1 State Policy on Water Quality Management (SPWQM);
 - 1.2 Emission Limit Guidelines for Sewage Treatment Plants That Discharge Pollutants In To Fresh And Marine Waters, June 2001;
 - 1.3 Approved Management Method For Biosolids Reuse;
 - 1.4 Tasmanian Biosolids Reuse Guidelines; and
 - 1.5 Environmental Guidelines for the Use of Recycled Water in Tasmania, December 2002.

PR2 Policy Objectives

- 1 Wastewater Treatment Plants (WWTP) in Tasmania must comply with the requirements for best practice environmental management (BP EM) and move toward implementing accepted modern technology (AMT) under the Environmental Management and Pollution Control Act 1994 (EMPCA) and the State Policy on Water Quality Management 1997 (SPWQM). The management of pollutant discharge from point sources is governed by the principles defined in clause 16.2 of SPWQM, namely:
 - 1.1 pollutant discharges must not prejudice water quality objectives (WQO) defined for the receiving waters; and
 - 1.2 pollutant discharges must be reduced to the maximum extent that is reasonable and practical having regard to Best Practice Environmental Management and in accordance with the hierarchy of waste management.

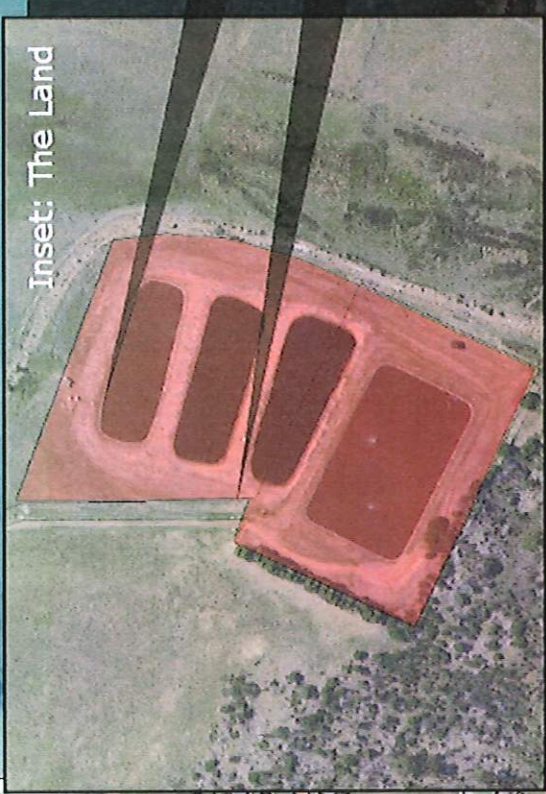


**EPN 8949/1
Attachment 1: Site Plan
Orford Wastewater Treatment Plant**

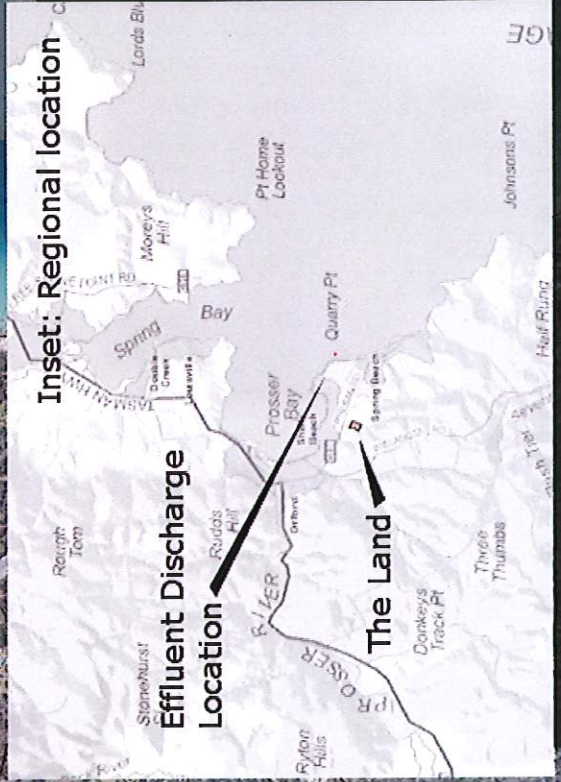
**Effluent quality monitoring location approx.
572925 m E, 5286095 m N**

**WWTP flow monitoring location approx.
572872 m E, 5286023 m N**

**Effluent discharge location approx.
574642 m E, 5286455 m N**



The Land



Inset: Regional location

Effluent Discharge Location

The Land

Table of Monitoring

For the purposes of the Table of Monitoring the following definitions apply:

Continuous measurement means automatic ongoing measurement at all times. A continuous measurement device may or may not have an integrated data logger.

On-line means measurements or analyses are carried out automatically and the results are electronically recorded for remote viewing and analysis

Flow Meter means an instrument that measures and may record a flow or level of liquid and includes any ancillary device attached to or incorporated into the instrument

Field test / on-site test means either in situ testing or analysis of samples immediately with appropriate instrumentation

Grid references are expressed as Map Grid of Australia Zone 55G GDA94

Grab sample means a discrete sample collected in a manner that ensures it is a representative sample

Flow-weighted 24-hour composite means a composite sample consisting of grab samples taken continuously over a 24 hour period at a rate proportional to wastewater flow.

¹ If concentration is greater than or equal to 5ug/L then further investigation is required into speciated forms

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Item	Sampling Locations	Parameter	Unit of measure	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements
WWTP flow	WWTP flow location as depicted at Attachment 1 Approximate grid reference: 572872 m E, 5286023 m N	Flow	ML/day	Continuous measurement	Flow Meter.	Results to be included: (a) in the monthly monitoring report as total daily flow; and (b) in the Annual Environmental Review as monthly flows for each calendar month, based on daily flows for that month.
Flow to reuse scheme defined by the Wastewater Reuse EMP	As specified in in the approved Wastewater Reuse EMP	Flow	ML/day	As specified in in the approved Wastewater Reuse EMP	As specified in in the approved Wastewater Reuse EMP	Results to be included: (a) in the monthly monitoring report as total daily flow; and (b) in the Annual Environmental Review as monthly flows for each calendar month, based on daily flows for that month; and (c) in the Wastewater reuse scheme annual report.



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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Item	Sampling Locations	Parameter	Unit of measure	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements
Effluent quality	Effluent quality monitoring location as depicted at Attachment 1 Approximate grid reference: 572925 m E, 5286095 m N	pH	-	Monthly	Field test / on-site test or On-line.	Results to be included: (a) in a monthly monitoring report; and (b) in the Annual Environmental Review; and (c) in the Wastewater reuse scheme annual report.
		Temperature	°C		Grab sample, Field test / on-site test or On-line or Flow-weighted 24 hour composite.	
		Conductivity	dS/m			
Biochemical Oxygen Demand		mg/L	Grab sample or Flow-weighted 24 hour composite.			
Suspended Solids		mg/L				
Ammonia-Nitrogen		mg/L				
Nitrate-Nitrogen		mg/L				
Nitrite-Nitrogen		mg/L				
Total Nitrogen		mg/L				
Total Phosphorus		mg/L				
Oil and Grease		mg/L				
Thermotolerant Coliforms		cfu/100mL	Grab sample.			
Enterococci		cfu/100mL				
Blue-green algae	cfu/100mL					
		Arsenic	mg/L	Annually	Grab sample or Flow-weighted 24 hour composite.	Results to be included: (a) in a monthly monitoring report; and (b) in the Annual Environmental Review; and (c) in the Wastewater reuse scheme annual report.
		Barium	mg/L			
		Cadmium	mg/L			
		Chromium (total) ¹	mg/L			
		Copper	mg/L			
		Lead	mg/L			
		Manganese	mg/L			
		Mercury	mg/L			
		Nickel	mg/L			
		Selenium	mg/L			
		Silver	mg/L			
		Zinc	mg/L			
		Alkalinity (as bicarbonate)	mg/L	Annually, in any reporting period during which discharge occurs to the reuse scheme defined by the Wastewater Reuse EMP	Grab sample or Flow-weighted 24 hour composite.	Results to be included: (a) in a monthly monitoring report; and (b) in the Annual Environmental Review; and (c) in the Wastewater reuse scheme annual report.
		Boron	mg/L			
		Calcium	mg/L			
		Chloride	mg/L			
		Magnesium	mg/L			
		Molybdenum	mg/L			
		Potassium	mg/L			
		Sodium	mg/L			
Sulphate	mg/L					

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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Item	Sampling Locations	Parameter	Unit of measure	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements
Sludge	Sludge / Biosolids generated on The Land	In accordance with the Tasmanian Biosolids Reuse Guidelines 1999 ("the TBRG"); or as approved in writing by the Director.	In accordance with the TBRG; or as approved in writing by the Director.	In accordance with the TBRG; or as approved in writing by the Director.	In accordance with the TBRG; or as approved in writing by the Director.	a) As required in the Annual Environmental Review; or b) As otherwise approved by the Director.
Groundwater	As specified in in the approved Groundwater Monitoring Plan	Groundwater elevation	metres below ground level (mbgl)	Annually	Field test	To be reported in the Annual Environmental Review.
		Conductivity	dS/m		Grab sample	
		pH	-			
		Temperature	°C			
		Total Dissolved Solids	mg/L			
		Ammonia Nitrogen	mg/L			
		Nitrite Nitrogen	mg/L			
		Nitrate Nitrogen	mg/L			
		Total Nitrogen	mg/L			
		Total Phosphorus	mg/L			
		Filterable reactive phosphorus	mg/L			
		Calcium	mg/L			
		Sodium	mg/L			
		Magnesium	mg/L			
		Potassium	mg/L			
		Hardness	mg/L			
		Fluoride	mg/L			
Carbonate	mg/L					
Bicarbonate	mg/L					
Chloride	mg/L					
Sulphate	mg/L					
Thermotolerant Coliforms	cfu/100ml					
Enterococci	cfu/100ml					