DEPARTMENT of PRIMARY INDUSTRIES, WATER and ENVIRONMENT
Tasmania

ENVIRONMENT PROTECTION NOTICE 7072/1

Issued under section 44 of the *Environmental Management and Pollution Control Act 1994*

Issued to:

The General Manager
Waratah-Wynyard Council
PO Box 168
Wynyard TAS 7325

Environmentally Relevant Activity:

A wastewater treatment plant located off Honeysuckle Avenue at Sisters Beach Tasmania, Tasmap reference: 1:25000, Sheet 3646 Mawbanna, AMG: E 379 180; N 5469 230, which discharges treated wastewater to a 500 metre coastal outfall pipe in Bass Strait at Sisters Beach with the pipe diffuser located at E 379 142; N 5469 887. The major components of the plant are inlet works, sequence batch reactor and balancing tanks and an ocean outfall.

I, Warren Jones, Director of Environmental Management, being satisfied in accordance with section 44 (1)(a) of the *Environmental Management and Pollution Control Act 1994* (the Act) and in relation to the above-mentioned environmentally relevant activity that it is desirable to issue this environment protection notice to the above-mentioned person as the person responsible for the activity.

GROUNDS

This environment protection notice is issued on the grounds that it is desirable:

(a) to ensure conformity with the *Environmental Guidelines for Sewage Treatment Plants that Discharge Pollutants into Fresh and Marine Waters* - DPIWE June 2001, and the *Accepted Modern Technology Guidelines for Sewage Treatment Plants that Operate in Sensitive Areas* - DPIWE June 2001; and

(b) to ensure that there are adequate safeguards against environmental harm or nuisance being caused by the activity.

The further grounds upon which this Notice is issued are listed in **Schedule 4** of this Notice.

DEFINITIONS

Unless the contrary appears, words and expressions used in this environment protection 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 the environment protection notice, the EMPCA prevails to the extent of the inconsistency.

REQUIREMENTS

In accordance with s.44(3) of the EMPCA, the person to whom this notice is issued is required to comply with the conditions contained in **Schedule 3** of this notice.

INFORMATION

Attention is drawn to **Schedule 2**, 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 $50,000 or in the case of a body corporate $100,000.

NOTICE TAKES EFFECT

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

APPEAL RIGHTS

You may appeal to the Resource Management and Planning Appeal Tribunal against this environment protection notice, or against any requirement contained in the notice, within 14 days of that date, by writing to:

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

Signed: .....
Director of Environmental Management

Date: .....

Schedule 1

Definitions of Terms

In this notice -

'90% limit' means the value at which the relevant parameter is exceeded by no more than 10 percent of all samples over a twelve month period;

'AMT' or 'Accepted Modern Technology' means technology which has consistently demonstrated achievement of the desired effluent pollutant levels in economically viable situations, takes account of engineering and scientific developments in economically viable operations and pursues opportunities for waste minimisation;

'activity' means any environmentally relevant activity (as defined in section 3 of the EMPCA) to which this document relates, and includes more than one such activity;

'BPEM' or 'Best Practice Environmental Management' has the meaning described in section 4 of EMPCA;

'biosolids' means organic solid product produced by wastewater processing. Until such solids are suitable for beneficial use they are defined as wastewater solids or sewage sludge. The solids content of biosolids should be equal to or greater than 0.5%(w/v). Solid biosolids are defined as >17% solids;

'cells/mL' means the number of cells per 1mL of the specified species of organism;

'cfu' means colony forming units, a standard measure of the concentration of microbiological organism;

'composite' means, with the exception of sludge monitoring, a sample collected as a flow proportional composite sample collected over the period of 24 hours.

'composite grab' means a composite sample comprised of four grab samples, with each grab sample taken from each 25 dry tonnes to form a composite sample representing 100 dry tonnes.

'controlled waste' has the meaning described in section 1(3) of EMPCA;

'dS/m' means the unit of conductivity measurement deciSiemens per metre;

'the Director' is the Director of Environmental Management appointed under section 18 of the EMPCA (The Director is located within the Department of Primary Industries, Water and Environment);

'EMP' or 'Environmental Management Plan' refers to the *Sisters Beach Sewerage Scheme - Development Proposal and Environmental Management Plan – Waratah Wynyard Council - Draft Document 24/7/2003.* The Director may at any time

approve a revised Environmental Management Plan which overrides the previous EMP to the extent of any inconsistency.

'EMPCA' means the Environmental Management and Pollution Control Act 1994;

'environmental harm', 'material environmental harm' and 'serious environmental harm' each has the meaning described in section 5 of the EMPCA;

'grab' means a single sample collected in a manner that ensures that it is a representative sample;

'incident' has the meaning described in Section 32 of the Environmental Management and Pollution Control Act 1994;

'the land' means the land on which the activity to which these requirements relate may be carried out, situated off Honeysuckle Avenue at Sisters Beach, with a central grid reference of AMG E 379 180; N 5469 230, in the State of Tasmania;

'median' means the value at which the relevant parameter is exceeded by no more than 50 percent of all samples over a twelve month period;

the 'mixing zone' for this activity is defined as the area of radius 15 metres around Discharge point 1 in Bass Strait as shown in Attachment 4;

'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 and agents of that person, and includes a body corporate;

'sample site test' means a method for collecting samples that is reproducible, accurate and precise, and that is appropriate for both the media being sampled and the parameters being tested;

'SPWQM' means State Policy on Water Quality Management 1997; and

'Tasmanian Biosolids Reuse Guidelines' means the latest guidelines published by the Director about the management of biosolids.

'TBD' means to be defined through preparation of relevant management plans as required and subsequently approved by the Director.

Schedule 2

Information

POLICY OBJECTIVES

Wastewater Treatment Plants (WWTP) in Tasmania must comply with the requirements for best practice environmental management (BPEM) 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:

- pollutant discharges must not prejudice water quality objectives (WQO) defined for the receiving waters; and
- pollutant discharges must be reduced to the maximum extent by Best Practice Environmental Management (BPEM) in accordance with the hierarchy of waste management.

The policy framework and guidelines relevant to implementation of policy are as follows:

- *Emission Limit Guidelines for Sewage Treatment Plants That Discharge Pollutants In To Fresh And Marine Waters, June 2001;*
- *Accepted Modern technology Policy Framework for Wastewater Treatment Systems and New Permit Requirements, August 2001;*
- *Tasmanian Biosolids Reuse Guidelines; Aug 1999;* and
- *Environmental Guidelines for the Use of Recycled Water in Tasmania, April 2000.*

POLICY IMPLEMENTATION

The requirements contained in Schedule 4 (Environmental Conditions) of this document reflect the SPWQM objectives as follows:

- emission limits based on up to date performance data and BPEM/AMT criteria;
- adequate monitoring to maintain full compliance with emission limits and ensure WQOs are not prejudiced;
- pro-active implementation of the BPEM waste management hierarchy with a focus on effluent re-use feasibility where appropriate; and
- self auditing/reporting requirements in line with industry best practice, including:
  a) incident notification;

b) event reporting at the Director's request;

c) annual reporting; and

d) environmental management plan review.

LEGAL OBLIGATIONS

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder, and in accordance with the principles of Best Practice Environmental Management. The requirements of this Environment Protection Notice must not be construed as an exemption from any of those requirements or principles.

STORAGE AND HANDLING OF DANGEROUS GOODS

The storage, handling and transport of dangerous goods must comply, as a minimum standard, with the requirements contained in the relevant State Acts and Regulations, and any subsequent amendments, including:

i) *Dangerous Goods Act 1998;*
ii) *Dangerous Goods Regulations 1998;*
iii) *Workplace Health and Safety Act 1995; and*
iv) *Workplace Health and Safety Regulations 1998*

NOTIFICATION OF INCIDENTS UNDER S.32 OF EMPCA

1) A person responsible for an activity that is not a level 2 activity or a level 3 activity must notify the relevant council, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as the result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.

2) A person responsible for an activity that is a level 2 activity or a level 3 activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.

3) A person responsible for an environmentally relevant activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause serious or material environmental harm.

The Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).

4) Any notification referred to in subsection (1), (2) or (3) must include details of the incident, its nature, the circumstances in which it occurred and any action that has been taken to deal with it.

This notification can be faxed to the Director on 6233 3800, or delivered by hand.

5) Any notification given by a person in compliance with this section is not admissible in evidence against the person in proceedings for an offence or for the imposition of a penalty (other than proceedings in respect of the making of a false or misleading statement).

6) For the purposes of subsections (1), (2) and (3) –

a) a person is not required to notify the council or the Director of such an incident if the person has reasonable grounds for believing that the incident has already come to the notice of the council or Director or any officer engaged in the administration or enforcement of this Act; but

b) a person is required to notify the council or the Director of such an incident despite the fact that to do so might incriminate the person or make the person liable to a penalty.

7) Any notification given by a person in compliance with this section is not admissible in evidence against the person in proceedings for an offence or for the imposition of a penalty (other than proceedings in respect of the making of a false or misleading statement).

Schedule 3

Environmental Conditions

GENERAL

1) The land must be developed and used, and the activity on the land must be carried out and monitored, in accordance with the environmental management measures set down in the Environmental Management Plan (EMP), and in accordance with best practice environmental management, unless otherwise specified in these conditions or contrary to the EMPCA.

2) A copy of these conditions and any associated documents referred to in these conditions must always be held in a location that is known and accessible to the person responsible for the activity. The person responsible for the activity must take all reasonable steps to 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.

3) 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.

4) Except with the granting of a new permit from the relevant planning authority (where the authority determines that a permit is required) or, if no such permit is required, the prior written approval of the Director, none of the following may be changed in the course of the operation of the Activity, if the changes will, or are likely to, cause or increase the emission of a pollutant, or otherwise result in environmental harm:

   a) the components or treatment process of the Activity;

   b) the nature or quantity of materials dealt with or used or produced in the operation of the Activity;

   c) the construction, installation, alteration or removal of any structure or equipment used in the course of the operation of the Activity.

5) If the person who is or was responsible for the activity will cease or ceases to be responsible for the activity, then, as soon as reasonably practicable, but no later than 30 days after that cessation, that person must:

   a) notify the Director in writing of that fact;

   b) provide the Director with full particulars in writing of any person succeeding him or her as the person responsible; and

c) notify any such person of the requirements of any relevant permit, environment protection notice or other environmental management obligations.

CONSTRUCTION

Construction Supervision

6) Construction of all facilities of the outfall and wastewater treatment plant system must be supervised at all times by personnel holding relevant technical qualifications or levels of competency consistent with any relevant standard defined by the Australian National Training Authority, unless otherwise approved by the Director.

Stormwater management during construction

7) During construction activities stormwater runoff must be collected and treated as necessary to ensure that stormwater discharged from the site does not cause serious environmental harm, material environmental harm or environmental nuisance.

Noise Control

8) Unless otherwise approved in writing by the Director, construction shall take place only between the hours of:

   0730 to 1730 hours, Monday to Friday; and

   0800 to 1600 hours Saturday.

   Construction activities are not to be carried out on Sunday or Public Holidays that are observed Statewide.

Dust Control

9) Construction activities must be managed by such measures as are necessary to prevent dust emissions causing serious environmental harm, material environmental harm or environmental nuisance. Such measures may include but are not limited to:

   a) using a dust suppression method such as watering dust generating surfaces; and

   b) ceasing construction activities in very windy weather when the wind direction causes dust to be blown in a manner that is likely to cause environmental nuisance at nearby residences or other sensitive uses.

Construction Disturbance

10) The area cleared of vegetation must be limited to the minimum necessary to carry out construction works.

11) Sufficient topsoil must be retained on site to enable the vegetation of disturbed areas.

12) As far as is practical and consistent with the use of the site for a wastewater treatment plant, disturbed areas must be revegetated with species native to the area.

13) Machinery used for earth works on the land or during construction of the sewerage scheme must be cleaned before entering the Sisters Beach area. Any gravel, soil or clay imported onto the site must be sourced from a quarry or pit tested and known to be free of *Phytophthora cinnamomi.*

OPERATIONS

Operations Manual

14) Prior to commissioning:

a) an operations manual that sets out essential operating procedures to ensure optimum environmental management of the treatment plant must be produced;

b) operators must be adequately trained such they are competent to operate the plant such that it meets the requirements of this Environment Protection Notice and does not breach EMPCA; and

c) a copy of the operations manual must be provided to the Director.

Contact

15) Within 14 days of the date on which this Environment Protection Notice takes effect, the Director must be provided with telephone and/or pager contact details of a person who can respond to any incident relating to the Activity, 24 hours a day, 7 days a week.

16) The Director must be notified within 24 hours if:

a) the person who can respond to an incident relating to the Activity ceases to be the person who can respond to an incident relating to the Activity

b) there are changes to the telephone and/or pager contact details of the person who can respond to an incident relating to the Activity.

Plant and Equipment

17) All plant and equipment used in the Activity:

a) must be maintained in accord with the manufacturer's specifications;.

b) must be operated in a proper and efficient manner in accord with the manufacturer's specifications; and

c) must be operated by personnel holding technical qualifications or levels of competency consistent with any relevant standard defined by the Australian National Training Authority or unless otherwise approved by the Director.

Volume

18) The design capacity for the wastewater treatment plant must not exceed an average dry-weather flow of 585 kilolitres or more per day of wastewater.

19) The activity is permitted to treat a maximum of 2,340 kilolitres per 24 hour day (peak wet weather flow).

Flow Monitoring Equipment

20) Flow monitoring equipment must be installed at the inlet to the treatment plant.

21) Equipment that is required to monitor flow must measure to +/-5% of true value.

22) Flow monitoring equipment must be calibrated in accordance with the manufacturer's specifications or at least once every 12 months.

23) Calibration details must be recorded and kept for a minimum of 2 years.

Hazardous Materials

24) Unless otherwise approved in writing by the Director, each environmentally hazardous material held on the land, including chemicals, fuels and oils, must, as far as practical and to the satisfaction of the Director, be located within bunded areas or spill trays which are designated to contain at least 110% of the volume of the largest container.

25) Spill kits appropriate for the types and volumes of materials handled on the land, and which may include relocatable (temporary) bunds, must be kept in appropriate locations to assist with the containment of spilt environmentally hazardous materials

Generator

26) Any generator installed on site must be located in a covered area such that water from precipitation and stormwater run-off does not infiltrate into the generator or remain within the bund within which the generator is located.

Stormwater Management

27) Perimeter cut-off drains must be constructed at strategic locations on the land to prevent surface run-off from entering the area used or disturbed in carrying out the activity. All practicable measures must be implemented to retain sediment transported along these drains on the land, such measures may include provision of appropriately sized and maintained sediment settling ponds.

28) Drains must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 24 hour, 1 in 20 year rainfall event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

29) Polluted stormwater that will be discharged from the land must be collected and treated to the extent necessary to prevent serious or material environmental harm, or environmental nuisance.

30) Other stormwater that is released to the downstream environment must be visibly free of oil, grease and unnatural discolouration and must not be more turbid than the receiving waters.

31) All practicable measures must be implemented to ensure that solids entrained in stormwater are retained on the land, such measures may include provision of appropriately sized and maintained sediment settling ponds.

SOLID WASTE

Controlled Waste

32) Controlled waste generated by the Activity may only be disposed of:

a) at a site and in a manner approved by the Director, or

b) in accordance with a management plan approved by the Director.

33) The person responsible for the activity must not release controlled wastes for transport from the land for fee or reward unless he or she is satisfied that the transporter holds a current Waste Transport Business Environment Protection Notice (WTB-EPN) in force under EMPCA.

34) A daily record of the quantities and nature of all controlled wastes released for transport from the land must be maintained. The record shall be kept for a minimum period of 2 years and made available to any authorised officer on request.

Sewage Sludge/Solids Management

35) Biosolids produced by the activity for re-use must be:

a) Graded and classified according to the system specified in the *Tasmanian Biosolids Reuse Guidelines1999.*

b) Sampled and analysed according to the procedures specified in the *Tasmanian Biosolids Reuse Guidelines1999.*

36) A Sewage Sludge And Biosolids Management Plan for the removal of sewage sludge from the activity and storage, handling, reuse and/or disposal of the sludge, in a format approved by the Director must be provided to the Director prior to the desludging and within 12 months of the issuing of this Environment Protection Notice.

37) The Sewage Sludge And Biosolids Management Plan must be fully implemented no longer than 12 months after the date of this Notice being issued.

DISCHARGE

Discharge Location

38) Wastewater from the wastewater treatment plant must only be discharged from the authorised discharge points, as specified below:

Authorised Discharge Points	Purpose	Location
Discharge Point 1	Discharge to Bass Strait	500 metre coastal outfall with diffuser located at E 379 142 N 5469 887. Refer to plan in Attachment 4.

Water Quality at the Mixing Zone

39) Discharges within the mixing zone as defined in the effluent plume dilution study must not cause

a) odours which would adversely affect the use of the surrounding waters;

b) any objectionable discolouration or visible oil, grease, foam, scum or litter;

c) a barrier to the migration of fish or other aquatic organisms;

d) mortality of fish or other aquatic organisms;

e) long-term adverse effects to biota through the discharge of chemicals which bioaccumulate;

f) significant irreversible harm within the mixing zone, including objectionable bottom deposits;

g) the growth of undesirable aquatic life or dominance of nuisance species; or

h) fish or other aquatic organisms to be unacceptable for human consumption as determined by Tasmanian health standards, and/or any standard in force from time to time, applying to the sale for human consumption of such fish or other aquatic organisms in Tasmania, interstate or overseas.

Effluent Quality Limits

40) Treated wastewater discharged from the activity from Discharge Point 1 must not exceed the quality limits or ranges specified below:

Parameter	Unit	Median	90% limit	Max limit
pH	-			6.5 – 8.5
Biochemical Oxygen Demand	Mg/L	10	15	20
Suspended Solids	Mg/L	10	20	30
Ammonia Nitrogen	Mg/L	1	2	5
Total Nitrogen	Mg/L	5	10	15
Total Phosphorus	Mg/L	1	3	5
Oil and Grease	Mg/L	1	2	5
Thermotolerant Coliforms	Cfu/100ml	200	500	750

Mass Load Limits

41) Mass loadings discharged by the activity must be calculated in accordance with the formula and definitions shown in Attachment 1 or in accordance with an alternative method approved by the Director.

42) The mass loadings of treated wastewater discharged by the activity must not exceed the following limits:

Parameter	Weighted load limit (kg)	Period
Total Nitrogen	1,708	yearly
Total Phosphorus	470	yearly

Limits for Odour Emission

43) Odorous gases must be managed, including collection and treatment as appropriate, so that they do not cause environmental nuisance beyond the boundary of the land.

44) Emissions of odours must be managed such that, when modelled using a methodology approved by the Director, odours do not exceed 2 odour units at the boundary of the land or at any alternative point specified by the Director.

Limits for Noise Emission

45) Noise emissions must conform to the following quality limits:

a) Noise emissions from the activity when measured at any domestic premises in other ownership and expressed as the adjusted time average A-weighted sound pressure level must not exceed:

i) 50 dB(A) between the hours of 0700 and 1800,

ii) 45 dB(A) between the hours of 1800 and 2200, and

iii) 40 dB(A) between the hours of 2200 and 0700.

b) Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, for the appropriate time of day, this requirement 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).

c) Noise level measurements must be taken in the presence of ambient noise normally existent in the area.

d) The time interval over which noise levels are to be averaged must be between 10 and 20 minutes.

e) Measured noise levels are to be adjusted for tonality and impulsiveness in accordance with the *Tasmanian Noise Management Procedure Manual.*

f) All methods of measurement must be in accordance with the *Tasmanian Noise Management Procedure Manual* as issued by the Director.

MONITORING

Location of Monitoring Points

46) Monitoring data must be collected at the locations listed below.

Site.	Purpose	Description	Location
1	Influent volume and quality	Monitors quantity and quality parameters of wastewater entering the WWTP at the inlet point	Wastewater treatment plant inlet
2	Effluent quality	Monitors quality parameters of	Wastewater

Site.	Purpose	Description	Location
		WWTP effluent at the discharge point	treatment plant outlet
3	Sludge quality	Monitors sludge quality from composite sludge samples	
TBD	Ambient water quality and biological	Monitors water quality and bio-diversity at or beyond the edge of the mixing zone.	As per Ambient Water Quality and Biological Monitoring Program approved by the Director

47) Any changes to the location of monitoring points must be approved in writing by the Director prior to being implemented.

48) With the exception of open water sampling, all monitoring points must be clearly marked by a sign that indicates the location, purpose and name of the monitoring point

Effluent Monitoring

49) Wastewater samples collected at the effluent monitoring sites 1 and 2 must be analysed for the following parameters using the sampling frequency and methods specified:

Parameter	Units	Site	Sampling Method	Frequency
Flow	kL	1 & 2	sample site test	monthly
PH	-	1 & 2	sample site test	monthly
Temperature	°C	1 & 2	sample site test	monthly
Conductivity	dS/m	1 & 2	sample site test	monthly
Dissolved Oxygen	mg/L	1 & 2	sample site test	monthly
Biochemical Oxygen Demand	mg/L	2	composite or grab	monthly
Suspended Solids	mg/L	2	composite or grab	monthly
Ammonia-Nitrogen	mg/L	2	composite or grab	monthly
Nitrate-Nitrogen	mg/L	2	composite or grab	monthly
Nitrite-Nitrogen	mg/L	2	composite or grab	monthly
Organic-N	mg/l	2	composite or grab	monthly
Total Nitrogen	mg/L	2	composite or grab	monthly
Total Phosphorus	mg/L	2	composite or grab	monthly

Parameter	Units	Site	Sampling Method	Frequency
Oil and Grease	mg/L	2	composite or grab	monthly
Thermotolerant Coliforms	cfu/100ml	2	grab	monthly
Faecal Streptococci	cfu/100ml	2	grab	monthly
E.coli	cfu/100ml	2	grab	monthly
Phenols	mg/L	2	grab	Annual
Thiocyanate	mg/L	2	grab	Annual
Cyanide	mg/L	2	grab	Annual
Antimony	mg/L	2	composite or grab	Annual
Arsenic	mg/L	2	composite or grab	Annual
Barium	mg/L	2	composite or grab	Annual
Boron	mg/L	2	composite or grab	Annual
Cadmium	mg/L	2	composite or grab	Annual
Chromium (total)	mg/L	2	composite or grab	Annual
Cobalt	mg/L	2	composite or grab	Annual
Copper	mg/L	2	composite or grab	Annual
Iron	mg/L	2	composite or grab	Annual
Lead	mg/L	2	composite or grab	Annual
Manganese	mg/L	2	composite or grab	Annual
Mercury	mg/L	2	composite or grab	Annual
Nickel	mg/L	2	composite or grab	Annual
Selenium	mg/L	2	composite or grab	Annual
Silver	mg/L	2	composite or grab	Annual
Tin	mg/L	2	composite or grab	Annual
Zinc	mg/L	2	composite or grab	Annual

Sludge Monitoring

50) Samples collected as required by the Sewage Sludge And Biosolids Management Plan must be analysed for the following parameters using the sampling frequency specified. A composite sample must consist of at least 4 sub-samples.

Parameter	Units	Site	Sampling Method	Frequency
Moisture	%	3	composite	Annual
Temperature	°C	3	sample site test	Annual
Conductivity	dS/m	3	sample site test	Annual

Parameter	Units	Site	Sampling Method	Frequency
Organic matter	%	3	composite grab	Annual
Ammonia-Nitrogen	mg/kg	3	composite grab	Annual
Nitrate-Nitrogen	mg/kg	3	composite grab	Annual
Nitrite-Nitrogen	mg/kg	3	composite grab	Annual
Total Nitrogen	mg/kg	3	composite grab	Annual
Total Phosphorus	mg/kg	3	composite grab	Annual
Total Potassium	mg/kg	3	composite grab	Annual
Total Arsenic	mg/kg	3	composite grab	Annual
Total Cadmium	mg/kg	3	composite grab	Annual
Total Chromium	mg/kg	3	composite grab	Annual
Total Copper	mg/kg	3	composite grab	Annual
Total Lead	mg/kg	3	composite grab	Annual
Total Mercury	mg/kg	3	composite grab	Annual
Total Nickel	mg/kg	3	composite grab	Annual
Total Selenium	mg/kg	3	composite grab	Annual
Total Zinc	mg/kg	3	composite grab	Annual
DDT	mg/kg	3	composite grab	Annual
DDE	mg/kg	3	composite grab	Annual
DDD	mg/kg	3	composite grab	Annual
Aldrin	mg/kg	3	composite grab	Annual
Dieldrin	mg/kg	3	composite grab	Annual
Chlordane	mg/kg	3	composite grab	Annual
Heptachlor	mg/kg	3	composite grab	Annual
Lindane	mg/kg	3	composite grab	Annual
HCB	mg/kg	3	composite grab	Once only
BHC	mg/kg	3	composite grab	Once only
PCB	mg/kg	3	composite grab	Once only

Ambient Water Quality and Biological Monitoring of receiving environment

51) The design of an ambient water quality and biological monitoring program to assess the impact of the wastewater treatment plant effluent on the receiving environment must be submitted for approval by the Director within 6 months of this Environment Protection Notice being served.

52) The design of the ambient water quality and biological monitoring program must provide for monitoring to be completed:

a) within 6 months of the Director approving the program design; and

b) as part of each 5 yearly EMP review thereafter.

53) Additional ambient water quality and biological monitoring must be completed:

a) if abnormal changes to the ambient water quality or biota in receiving environment are identified;

b) if there are increases to the pollutant load discharged by the activity; or

c) if requested by the Director.

Variation to Monitoring Programs

54) Changes to the parameters, sampling method and frequency of any monitoring program specified in this document must be approved in writing by the Director prior to being implemented.

Testing Methods

55) All samples not delineated as sample site test for the purposes of sampling method must be:

a) analysed at a laboratory with N.A.T.A. accreditation for the selected analyses or a laboratory approved in writing by the Director; and

b) collected and analysed in accordance with the relevant Australian Standards unless otherwise specified in writing by the Director.

56) All sample information and monitoring results must be submitted to the Director within 1 month of laboratory results becoming available.

57) All raw data must be provided in an electronic format approved by the Director.

58) All records of sampling and analysis required under this Environment Protection Notice must be retained for at least 2 years after the date of sampling and made available to the Director upon written request.

Sample Information Required

59) The following information must be recorded in relation to all sampling:

a) the date on which the sample was taken;

b) the time at which the sample was taken;

c) the monitoring point at which the sample was taken;

d) the measured or estimated daily flow of effluent at the time of sampling; and

e) the results of all monitoring.

Complaints Monitoring

60) A record must be kept of any complaint received by the person responsible for the Activity alleging that pollution has occurred as a consequence of the Activity. The record must include the following details:

a) the date and time of the complaint;

b) the name and address of complainant if known;

c) the nature of the complaint;

d) the approximate wind speed and direction and air temperature at the time of the complaint;

e) the likely source of the alleged pollution; and

f) the action taken in relation to the complaint, including any follow-up contact with the complainant.

61) The record of a complaint must be kept for at least 2 years after the complaint is made.

REPORTING

Annual Report

62) An annual report must be submitted to the Director on the anniversary of this document being served.

63) The annual report must contain the following:

a) a summary of sewage treatment plant performance and discharge compliance;

b) environmental, effluent quality monitoring data and mass loadings for all parameters required by this Environment Protection Notice;

c) a summary of influent flows and loadings from all wastewater sources;

d) particulars of all wastewater sources including the names of major trade waste sources discharging into the sewage system;

e) particulars relating to controlled waste including:

i) the quantities and methods of disposal or reuse of all controlled waste including biosolids;

ii) the gradings of biosolids for re-use; and

f) a summary of complaints during the report period including:

i) the total number of complaints received by the person responsible for the activity;

iii) a breakdown of the total number of complaints into categories of 'odours', 'water pollution', 'aesthetic' and any other category indicated by the complaints;

iv) the action taken by the person responsible for the activity; and

v) a brief description of any significant unresolved issues arising from the complaints.

64) The annual report must present graphs and tables in a format approved by the Director.

Environmental Management Plans

65) An Environmental Management Plan (EMP) review, in a format approved by the Director, must be submitted by 30 October 2007, and every 5 years thereafter.

66) In each EMP review the person responsible for the Activity must prepare a report for submission to the Director which compares the environmental performance of the activity as predicted in the EMP with the actual performance of the premises during the review period, and propose means to address circumstances where actual performance is below that predicted in the EMP.

REHABILITATION

67) The Director must be notified of permanent cessation of operations at least 30 days prior to the planned date of cessation.

68) Following permanent cessation of operations, rehabilitation of the land must be carried out in accordance with a decommissioning and rehabilitation plan approved by the Director. The plan must be prepared in accordance with guidelines to be provided by the Director, and by such date as the Director may specify in writing.

Schedule 4

Further Grounds

Condition in Schedule 3 (unless otherwise indicated)	**Grounds**
1-5	General conditions relating to the activity.
6-13	Requirements to ensure BPEM during the construction of the WWTP.
14	Requirement stipulating documentation of operational procedures in accord with BPEM as defined in EMPCA.
15-16	A person must be able to be contacted at all times in case of environmental emergency.
17	Requirement stipulating plant and equipment operating competencies in accord with BPEM as defined in EMPCA.
18-19	Requirements specifying maximum daily flow.
20-23	Requirements ensuring accurate flow measurement to enable adequate determination of impact on receiving waters as defined in s45 of SPWQM.
24-25	Requirements regarding the storage of hazardous materials under the requirements of EMPCA.
26	Requirements pertaining to use of a generator on-site. These reflect BPEM as defined in EMPCA.
27-31	Requirements pertaining to stormwater. These reflect BPEM as defined in EMPCA.
32	Requirement pertaining to controlled waste. This reflects the terminology and requirements of EMPCA and SPWQM.
33-34	Requirements regarding the transport of controlled waste under the requirements of EMPCA.
35	Requirement to ensure the grading and management of biosolids according to the *Tasmanian Biosolids Reuse Guidelines*; Aug 1999.
36-37	Requirements requiring sludge management plan in accord with BPEM as defined in EMPCA.
38	A requirement specifying the location of authorised discharge points to enable accurate monitoring of receiving waters as defined in s45 of SPWQM
39	Requirement ensuring effluent disposal within the mixing zone does not contravene Section 20 of the SPWQM.

Condition in Schedule 3 (unless otherwise indicated)	**Grounds**
40	Requirement specifies discharge quality requirements at the discharge point as defined in s20.4 of SPWQM.
41-42	Requirements pertaining to mass loadings to assist integrated catchment management and State of the Environment reporting as defined in s 6.1 and s 46.2 respectively in SPWQM.
43-44	Requirements specifying the limits and management of odour emissions as required by EMPCA.
45	Requirement specifying the limits and management of noise emissions as required by EMPCA.
46-47	Requirements specifying the details of all monitoring points to adequately determine impact on receiving water quality as defined in s45 of SPWQM.
48	Requirement requiring signposting and identification of monitoring points to ensure appropriate monitoring in accordance with s45 of SPWQM.
49	Effluent monitoring and sampling required to adequately determine impact on receiving water quality as defined in s45 of SPWQM.
50	Requirement specifying sludge monitoring and sampling to adequately determine potential impacts of sludge conducted in accordance with BPEM and EMPCA.
51-53	Requirements requiring design of biological monitoring plans to adequately determine impacts on receiving environment as defined in s45 of SPWQM.
54	Allows for variation of monitoring programs subject to approval by the Director
55-56	Requirements specifying sample testing and sample information requirements to reflect the wording and terminology of EMPCA and SPWQM.
57	Electronic reporting requirement to enable the Director to effectively assess activity compliance with Environment Protection Notice requirements, EMPCA and BPEM/AMT.
58	Requirement specifying maintenance of records to reflect the wording and terminology of EMPCA.
59	Requirement specifying sample information required. These reflect the wording and terminology of EMPCA and BPEM.
60-61	Requirements specifying requirements for complaint monitoring in order to facilitate the assessment of any alleged incidents of nuisances and environmental harm under EMPCA and BPEM.

Condition in Schedule 3 (unless otherwise indicated)	**Grounds**
62	Annual reporting requirements to enable the Director to effectively assess activity compliance with EPN requirements, EMPCA and BPEM/AMT.
63-64	Requirements specifying requirements for annual reporting to reflect BPEM.
65-66	Requirements specifying requirements for regular review of environmental management plans to reflect BPEM.
67-68	Conditions specifying notification and procedures for site decommissioning to facilitate BPEM and ensure compliance with EMPCA.

ATTACHMENT 1

CALCULATION OF MASS LOADS

The calculation to determine mass load from monitoring data is as follows:

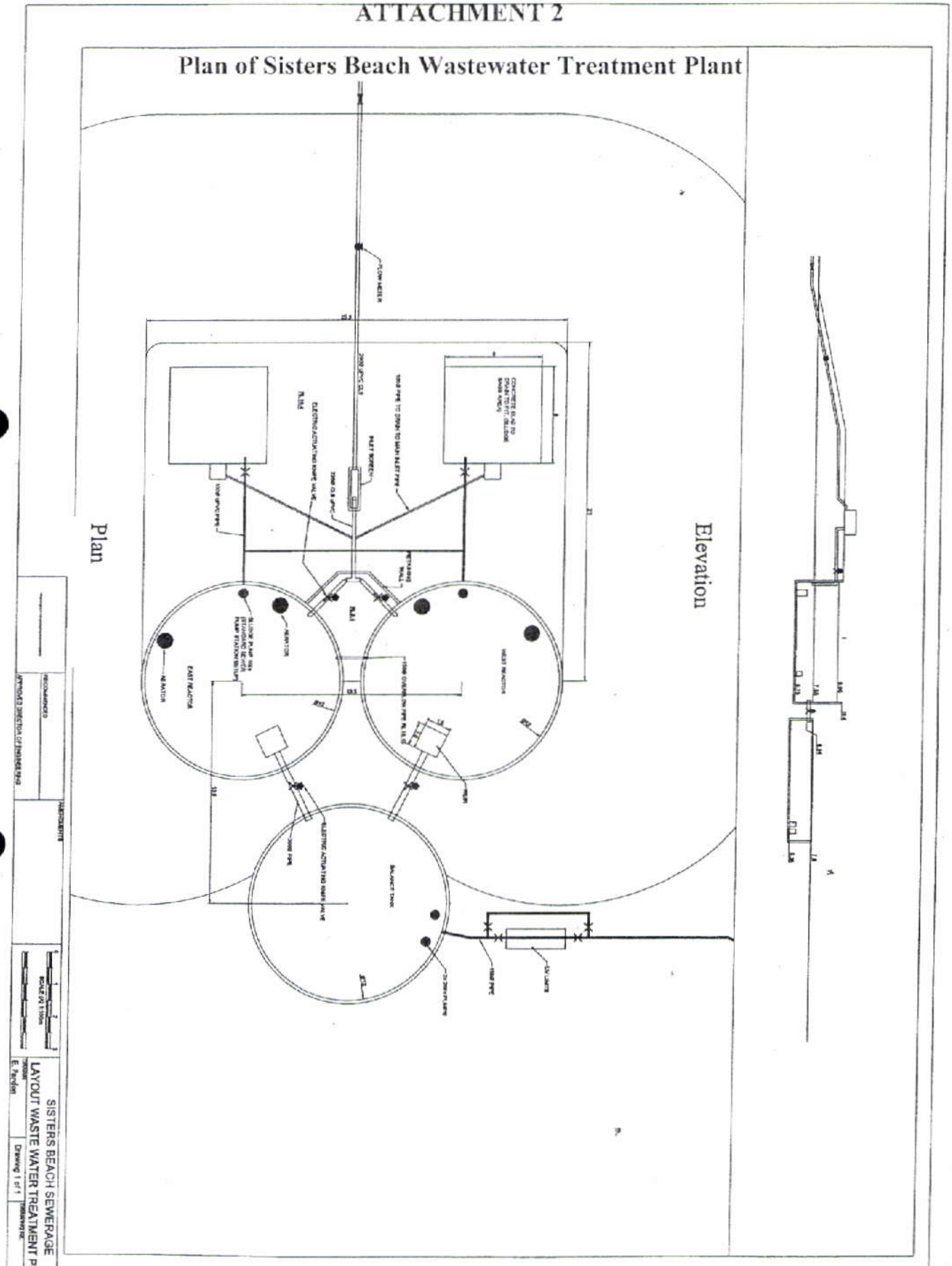
Mass Load (kg) = Volume x Concentration; where:

'Volume' is the total volume of treated wastewater discharged from the authorised discharge points in ML, not including treated wastewater directed to reuse as approved by the Director; and

'Concentration' is the concentration of the parameter in the treated wastewater in mg/L, established using the data from the sample collected on the closest date on which a sample was required to be collected. Where the day is equidistant from two such sampling dates, the mean of the two resultant samples must be used.

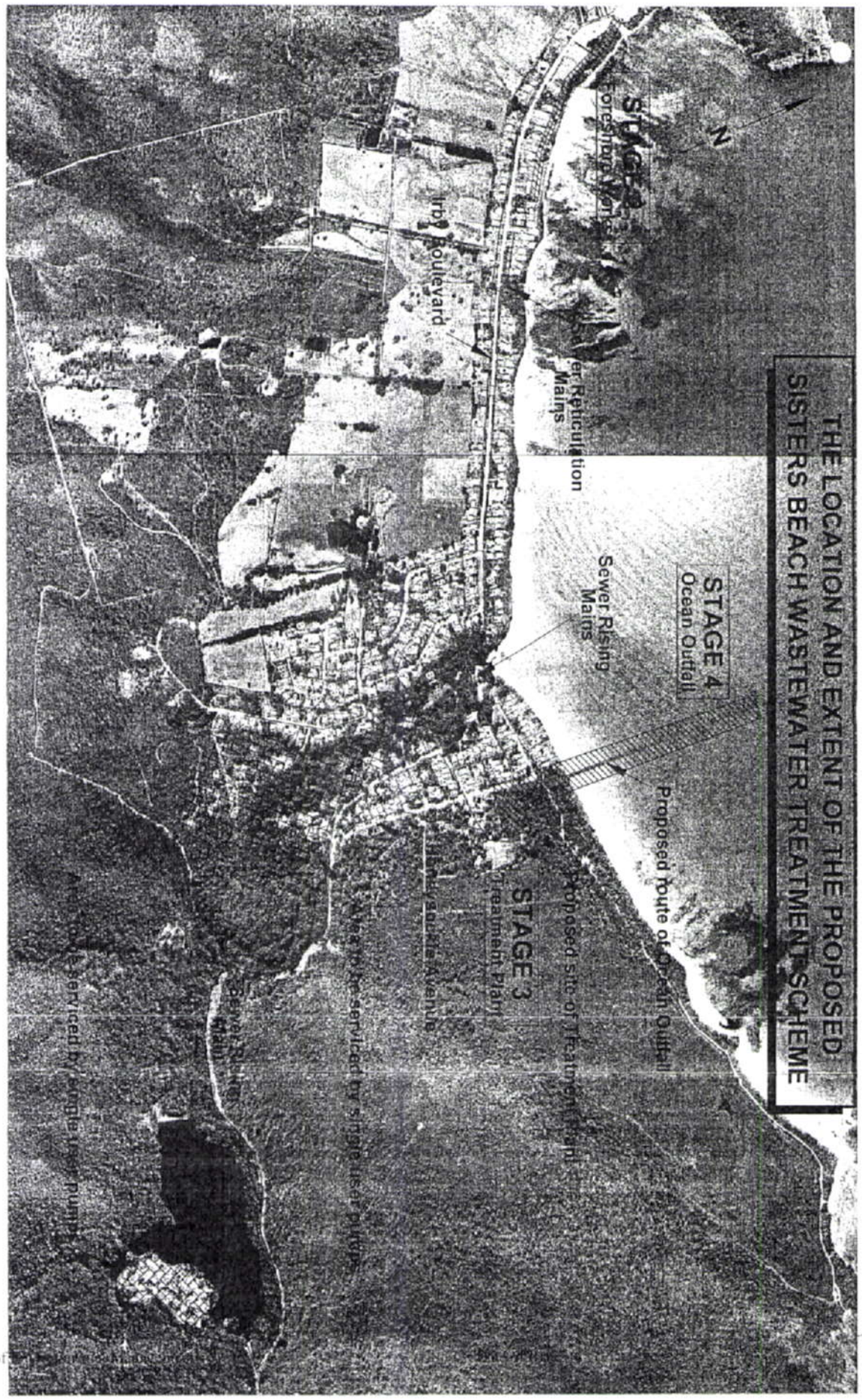
ATTACHMENT 2

Plan of Sisters Beach Wastewater Treatment Plant



ATTACHMENT 3

Location and extent of Sisters Beach wastewater treatment scheme



ATTACHMENT 4

Location of Outfall Discharge Point and Mixing Zone