



Statement No.

000572

MINISTER FOR THE ENVIRONMENT AND HERITAGE

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**OCEAN OUTLET FOR TREATED WASTEWATER, BUNBURY WASTEWATER
TREATMENT PLANT**

Proposal: The construction and operation of an ocean outlet and associated infrastructure, for the Bunbury wastewater treatment plant. The outlet extends approximately 1.7 kilometres from the shoreline adjacent to the plant, for the disposal of treated wastewater, as documented in schedule 1 of this statement.

Proponent: Water Corporation

Proponent Address: P O Box 100, Leederville WA 6902

Assessment Number: 1302

Report of the Environmental Protection Authority: Bulletin 1021

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

Procedural conditions

1 Implementation

1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

Published on

14 SEP 2001

- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment and Heritage under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment and Heritage has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment and Heritage within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment and Heritage will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment and Heritage for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.

4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Audit

5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.

5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.

5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment and Heritage.

Environmental Conditions

6 Marine Management

6-1 The proponent shall manage the discharge of effluent from the ocean outlet to achieve simultaneously:

- 1 the ecosystem health objective (Environmental Quality Objective 1, as defined in the Environmental Protection Authority document *Perth's Coastal Waters, Environmental Values and Objectives* in the zones delineated in figure 2 of schedule 1;
- 2 the fishing and aquaculture objective (Environmental Quality Objective 2) in the zones delineated in figure 2 of schedule 1; and
- 3 the recreational and aesthetic objectives (Environmental Quality Objectives 3 and 4, respectively) in the zones delineated in figure 2 of schedule 1.

Note: The above Environmental Quality Objective zones are subject to review in both extent and the guideline values and standard criteria applying to them, and may be varied from time to time on advice of the Environmental Protection Authority.

6-2 In meeting condition 6-1, the proponent shall address the following which are not included in commitment no. 19 (Operations Environmental Management Program):

- the identification of ecosystem health indicators appropriate to the discharge site; and
- site specific guideline values and standard criteria for the indicators, if generic criteria are not appropriate,

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

7 Decommissioning Plans

- 7-1 Prior to construction, the proponent shall prepare a Preliminary Decommissioning Plan which provides the framework to ensure that the site is left in a suitable condition, with no liability to the State, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

The Preliminary Decommissioning Plan shall address:

- 1 rationale for the siting and design of plant and infrastructure and conceptual plans for its / their removal or, if appropriate, retention;
- 2 conceptual rehabilitation plans for all disturbed areas and a process to agree on the end land use(s); and
- 3 management of noxious materials to avoid the creation of contaminated areas.

- 7-2 At least six months prior to the anticipated date of decommissioning, or at a time agreed with the Department of Environmental Protection, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in a suitable condition, with no liability to the State, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

The Final Decommissioning Plan shall address:

- 1 removal or, if appropriate, retention of plant and infrastructure;
- 2 rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
- 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.

- 7-3 The proponent shall implement the Final Decommissioning Plan required by condition 7-2 until such time as the Minister for the Environment and Heritage determines that decommissioning is complete.

- 7-4 The proponent shall make the Final Decommissioning Plan required by condition 7-2 publicly available, to the requirements of the Environmental Protection Authority.

8 Work Practices

- 8-1 Prior to commencement of construction, the proponent shall prepare a written prescription for contractor work practices covering pipeline installation and support vessel operation, to ensure that work practices are carried out in accordance with best practice in environmental management, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

8-2 The proponent shall ensure that all pipeline works and support vessel operations comply with the prescription referred to in condition 8-1.

9 Performance Review

9-1 Each six years following the commencement of construction, the proponent shall submit a Performance Review Report to the Department of Environmental Protection:

- to document the outcomes, beneficial or otherwise;
- to review the success of goals, objectives and targets;
- to evaluate the environmental performance over the six years; and
- to evaluate the investigation and implementation of additional options for the reuse of treated wastewater;

relevant to the following:

- 1 environmental objectives reported on in Environmental Protection Authority Bulletin 1021;
- 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
- 3 environmental performance targets;
- 4 environmental management programs and plans; and/or
- 5 environmental performance indicators;

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

Note: The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment and Heritage following consideration of the Performance Review Report.

Note

- 1 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.

DR JUDY EDWARDS MLA
MINISTER FOR THE ENVIRONMENT AND HERITAGE

14 SEP 2001

Schedule 1

The Proposal (Assessment no. 1302)

The Bunbury wastewater treatment plant is situated on Reserve 37116, Lot 5262, Minninup Road, Bunbury.

The proposal is to:

- line existing Lagoons 1 and 2 to provide sufficient storage so that bacterial levels in wastewater of less than 10,000 colony-forming units per 100 millilitres (on average) in the wastewater discharged via the pipeline can be achieved;
- construct a 900 millimetre diameter pipeline leading from the lagoons to the outlet pipeline. This pipeline will pass through the dunes between the lagoons and the dune blow-out area;
- construct the outlet pipeline which will be 610 millimetre outside diameter and 530 millimetre inside diameter. The pipeline will be buried at a depth of at least two metres under the beach and surfzone and will sit on the seabed leading to the diffuser of 120 metres in length starting approximately 1.6 kilometres offshore. The diffuser will contain 30 ports and will end 1.7 kilometres offshore from mean high water;
- discharge wastewater through the ocean outlet to a maximum of 16 million litres per day (on annual average) and a maximum of 60 tonnes of total nitrogen per annum.

The proposal does not include:

- the replacement of the trickling filter plant with a second module of the intermittently decanted extended aeration (IDEA) plant; and
- any reuse options, including the proposed summer irrigation of Hay Park.

The Key Proposal Characteristics are contained in Table 1 (attached).

Table 1 - Key Proposal Characteristics (1302)

ELEMENT	PARAMETER	DESCRIPTION	
Proposal	Location	Reserve 37116, Lot 5262, Minninup Road, Bunbury WA 6230	
Treated wastewater	Treated wastewater quantity and quality to pipeline	PARAMETER	
		MEAN CONCENTRATION OR VALUE	
		Volume: 2001 2040 estimated	Average 6.6 ML/d Average 16 ML/d
		Suspended solids (SS)	<20 mg/L
		Biological oxygen demand (BOD ₅)	<20 mg/L
		Total Nitrogen (TN)	15 mg/L
		Total Phosphorus (TP)	10 mg/L
Tertiary treatment lagoons	Description	Two lined lagoons designed to reduce bacterial levels in wastewater and also to reduce suspended solids concentrations. Existing Lagoons 1 and 2 will be modified to provide this treatment.	
		Area	10,000 m ² and 9,600 m ² respectively
		Volume	16,000 m ³ and 14,000 m ³ respectively
		Retention time	1.9 days @ 16ML/d
		Discharge of TN to ocean	Maximum 60 tonnes per annum
Connecting pipeline	Description	Wastewater from the lagoons will enter a 900 mm diameter pipeline which leads to the outlet pipeline. This pipeline will pass through the dunes between Lagoon 1 and the dune blow-out area.	
		Length	Approximately 180 m
		Diameter	Approximately 900 mm
Outlet pipeline	Description	Buried under the foredune, beach and surfzone and then sitting on the seabed leading to the diffuser.	
		Length	Onshore: ~100 m; Offshore including diffuser: 1.7 km
		Diameter	610 mm outside diameter and 530 mm inside diameter.
Outlet diffuser	Length	120 m	
		Diameter	610 mm outside diameter and 530 mm inside diameter
		Number of ports	30 ports
		Port diameter	80 mm
Marine habitat loss	Initial dilution	At peak flow (24 ML/d): 1:90 to 1:150	
		Due to construction of pipeline	Approximately 0.1 ha of marine habitat

Abbreviations:

mg/L	milligrams per litre
cfu/100 mL	colony forming units per 100 millilitres
ML/d	million litres per day
m ²	square metres
m ³	cubic metres
m	metres
mm	millimetres
km	kilometres
<	less than
~	approximately
ha	hectare

Figures

Figure 1 - Location of wastewater treatment plant.

Figure 2 - Levels of protection - Environmental quality objective zones (Schematic diagram).

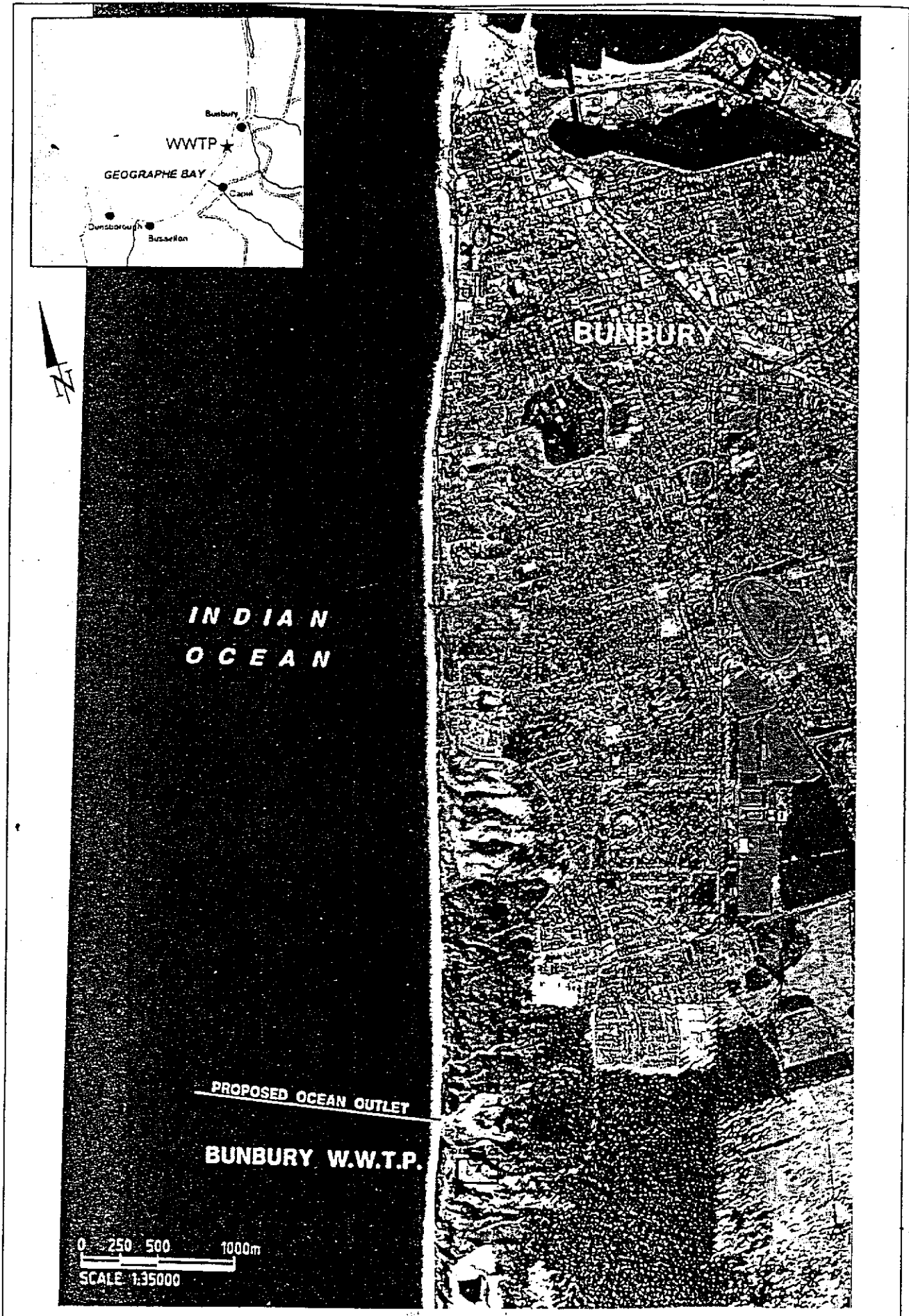


Figure 1. Location of wastewater treatment plant .

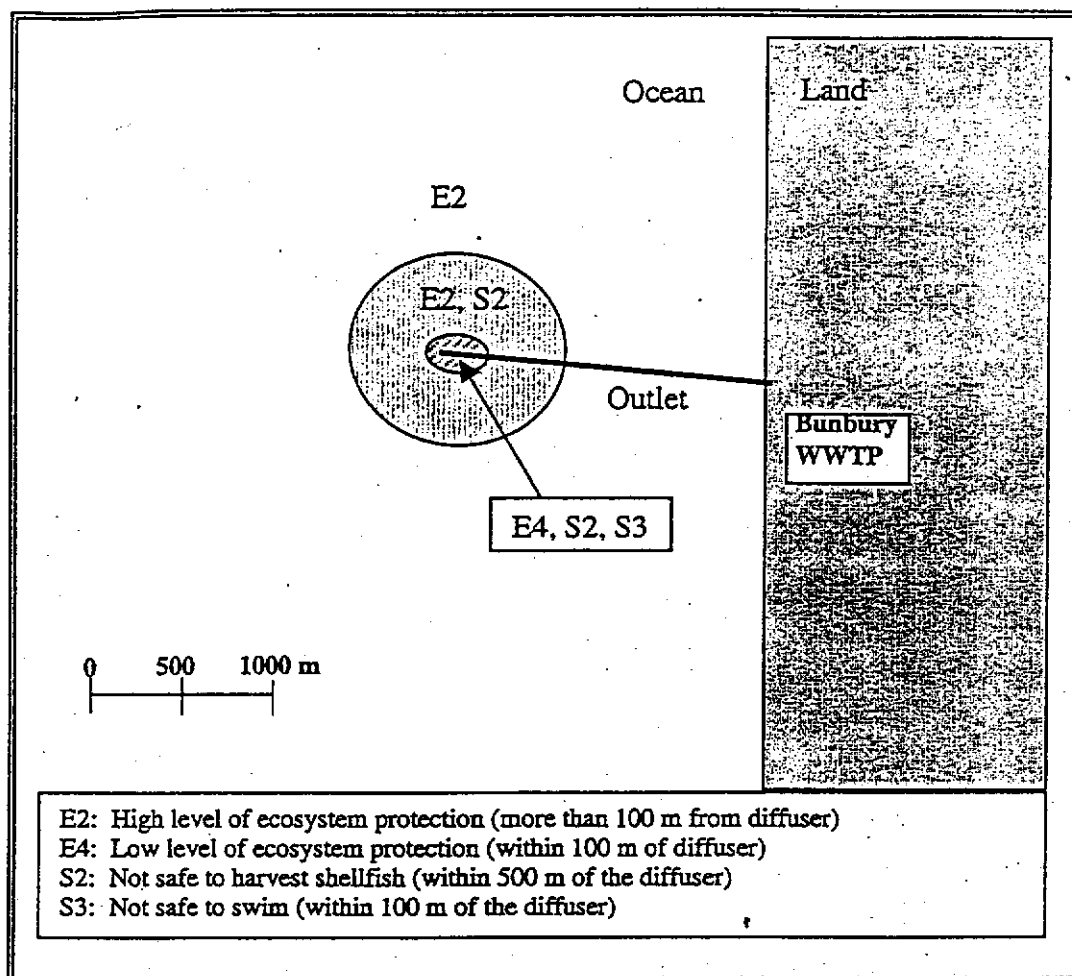


FIGURE 2 BUNBURY OCEAN OUTLET

Schematic diagram showing levels of protection based on the EPA working document "Perth's Coastal Waters, Environmental Values and Objectives", Environmental Protection Authority, February 2000.

Schedule 2

**Proponent's Consolidated Environmental Management
Commitments**

August 2001

**OCEAN OUTLET FOR TREATED WASTEWATER,
BUNBURY WASTEWATER TREATMENT PLANT**

(Assessment No. 1302)

WATER CORPORATION

Ocean Outlet for Treated Wastewater, Bunbury Wastewater Treatment Plant (Assessment no. 1302)

Proponent's consolidated environmental management commitments (August 2001)

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
1	Wastewater management	<ul style="list-style-type: none"> • Continue to investigate options for viable wastewater reuse at Bunbury. • Provide a triennial report to community and DEP detailing options investigated during previous three years and plans for next three years • Review requirement after each triennial report 	To maximise viable reuse of wastewater in the Bunbury region and minimise disposal of treated wastewater to the ocean.	<ul style="list-style-type: none"> • On-going • Every 3 years • Every 3 years 	City of Bunbury, Shire of Capel and community interest groups
2	Construction Environmental Management Program (EMP)	<p>Prepare EMP for construction phase of the project which includes management plans for:</p> <ul style="list-style-type: none"> • Dune rehabilitation and revegetation; • Beach rehabilitation; • Marine construction; • Underwater blasting (if required); • Protection of terrestrial vegetation; • Public safety; • Aboriginal heritage; and • Construction traffic. 	<p>To provide a framework for environmental management of the construction phase of the project, to:</p> <ul style="list-style-type: none"> • Identify potential environmental impacts and management strategies to avoid or reduce impacts; • Monitor so that any adverse impacts can be revealed in a timely manner; and • Provide contingency plans to deal with any adverse impacts. 	Prior to construction.	CALM, City of Bunbury, Shire of Capel (Local Authorities), and Maritime Division.
3	Construction EMP: Dune management plan	<p>Prepare Dune Management Plan which addresses:</p> <ul style="list-style-type: none"> • Minimisation of construction impacts on dune erosion; and • Stabilisation and revegetation of the foredune area and areas impacted by construction. 	<p>Maintain or improve the integrity, function and environmental values of the dune system.</p> <p>Ensure the amenity of the area adjacent to the project is not unduly affected by the proposal.</p>	Prior to construction.	Local Authorities and Maritime Division.
4	Construction EMP: Dune management plan	Implement Dune Management Plan.	Maintain or improve the integrity, function and environmental values of the dune system.	Complete within 12 months following completion of construction.	Local Authorities and Maritime Division.

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
5	Construction EMP: Beach rehabilitation plan	Prepare a Beach Rehabilitation Plan which addresses the rehabilitation of the beach after construction.	The integrity, function and environmental values of the foreshore area will be restored.	Prior to construction.	Local Authorities and Maritime Division.
6	Construction EMP: Beach rehabilitation plan	Implement Beach Rehabilitation Plan.	The integrity, function and environmental values of the foreshore area will be restored.	Within 1 month following completion of construction.	Local Authorities and Maritime Division.
7	Construction EMP: Terrestrial flora management plan (including Declared Rare and Priority Flora)	Prepare Terrestrial Flora Management Plan which addresses the issues: <ul style="list-style-type: none"> • That changes in local groundwater levels do not result in the loss of nearby Tuarts and other significant flora; • That construction results in minimal and reversible impact on dune vegetation; and • That weeds are not introduced or spread. 	Protect Declared Rare and Priority Flora, consistent with the provisions of the <i>Wildlife Conservation Act 1950</i> . Protect threatened ecological communities and critical habitats.	Prior to construction.	CALM
8	Construction EMP: Terrestrial flora management plan (including Declared Rare and Priority Flora)	Implement Terrestrial Flora Management Plan.	Protect Declared Rare and Priority Flora, consistent with the provisions of the <i>Wildlife Conservation Act 1950</i> . Protect threatened ecological communities and critical habitats.	Complete within 12 months of completion of construction.	CALM
9	Construction EMP: Marine construction management plan	Prepare a Marine Construction Management Plan which outlines procedures to minimise impacts of marine construction on: <ul style="list-style-type: none"> • Marine flora and fauna; and • Marine water quality. 	Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.	Prior to construction.	CALM
10	Construction EMP: Marine construction management plan	Implement Marine Construction Management Plan.	Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.	During construction.	CALM

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
11	Construction EMP: Underwater blasting management plan	If blasting is used, prepare an Underwater Blasting Management Plan to minimise the effect of underwater blasting on marine fauna and eliminate possible effects on protected marine fauna. The plan will specifically address issues associated with the protection of marine mammals.	Protect Specially Protected (Threatened) Fauna, consistent with the provisions of the <i>Wildlife Conservation Act 1950</i> . Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.	Prior to construction.	CALM
12	Construction EMP: Underwater blasting management plan	Implement Underwater Blasting Management Plan if required.	Protect Specially Protected (Threatened) Fauna, consistent with the provisions of the <i>Wildlife Conservation Act 1950</i> . Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.	During construction.	CALM
13	Construction EMP: Public safety plan	Prepare Public Safety Plan which addresses the issues of: <ul style="list-style-type: none"> • Restriction of public access to the construction site; • Marine equipment complying with Department of Transport regulations; and • Public notification of any restrictions. 	Maintain public safety during construction.	Prior to construction.	Local Authorities
14	Construction EMP: Public safety plan	Implement Public Safety Plan.	Maintain public safety during construction.	During construction.	Local Authorities
15	Construction EMP: Aboriginal Heritage	Prepare an Aboriginal Heritage Plan which addresses the issues of: <ul style="list-style-type: none"> • Consultation with local Aboriginal groups; • Obtaining advice from the Department of Indigenous Affairs on work practices. 	Ensure no sites of Aboriginal heritage or culture are inadvertently destroyed	Prior to construction	Local Aboriginal groups and DIA
16	Construction EMP: Aboriginal Heritage	Implement Aboriginal Heritage Plan	Ensure no sites of Aboriginal heritage or culture are inadvertently destroyed	Prior to construction	Local Aboriginal groups and DIA

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
17	Construction EMP: Construction traffic plan	Prepare a Construction Traffic Plan to minimise impacts of construction traffic on local residents.	<p>Ensure that noise levels meet acceptable standards and that an adequate level of service, safety and public amenity is maintained.</p> <p>Ensure that the noise levels generated by the project meet acceptable standards.</p> <p>Ensure that noise and vibration levels meet statutory requirements and acceptable standards.</p>	Prior to construction.	Local Authorities
18	Construction EMP: Construction traffic plan	Implement Construction Traffic Plan.	<p>Ensure that noise levels meet acceptable standards and that an adequate level of service, safety and public amenity is maintained.</p> <p>Ensure that the noise levels generated by the project meet acceptable standards.</p> <p>Ensure that noise and vibration levels meet statutory requirements and acceptable standards.</p>	During construction.	Local Authorities
19	Operations Environmental Management Program	<p>Prepare EMP for the operations phase of the project which includes plans for:</p> <ul style="list-style-type: none"> • Marine biota, sediment and water quality; • Recreational water quality; and • Wastewater treatment management. 	<p>To provide a framework for environmental management of the operations phase of the project, to:</p> <ul style="list-style-type: none"> • Identify potential environmental impacts and management strategies to avoid or reduce impacts; • Monitor so that any adverse impacts can be revealed in a timely manner; and • Provide contingency plans to deal with any adverse impacts. 	Prior to commissioning.	CALM and Local Authorities and Maritime Division.

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
20	Operations EMP: Marine biota, sediment and water quality management plan	<p>Prepare a Marine Biota, Sediment and Water Quality Management Plan which addresses the following issues:</p> <ul style="list-style-type: none"> • Derive site specific trigger levels for waters in the vicinity of the outlet for indicators other than toxicants, where appropriate (ANZECC, 2000) ; • Design appropriate study to differentiate between natural and anthropogenic sources of nitrogen currently existing and due to future discharge from outfall • Design monitoring programs for the sediments in the vicinity of the outlet; • Design of water quality monitoring programs which have the ability to measure long-term changes in water quality, including changes in productivity, biodiversity and ecosystem processes. Include reference site for comparison; • Contingency planning to improve water quality or reduce loads of contaminants and nutrients discharged if monitoring shows that agreed criteria are not met; • Reporting procedures to DEP; • Monitoring of contaminant levels in treated wastewater at Bunbury WWTP; and • Quality assurance procedures for monitoring programmes. 	<p>Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.</p> <p>Maintain or improve marine water and sediment quality consistent with agreed EQOs and EQC. Achieve criteria at defined zones to 95% confidence.</p>	Prior to commissioning of the outlet.	CALM
21	Operations EMP: Marine biota, sediment and water quality management plan	Implement Marine Biota, Sediment and Water Quality Management Plan for five years after completion of construction, after which time it will be reviewed in consultation with DEP.	<p>Maintain the biodiversity of the seafloor within the relevant geographical area and to ensure that impacts upon locally significant marine flora and fauna communities are avoided.</p> <p>Maintain or improve marine water and sediment quality consistent with agreed EQOs and EQC.</p>	For five years after completion of construction, after which time the program will be reviewed.	CALM

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
22	Operations EMP: Recreational water quality management plan	Prepare a Recreational Water Quality Management Plan which addresses the following issues: <ul style="list-style-type: none"> • Design a bacterial monitoring program which will establish whether primary contact criteria are met within 100 m of the diffuser and whether shellfish harvesting criteria within 500 m of the diffuser; and • Contingency planning to improve water quality if monitoring shows that agreed criteria are not met. 	Not to compromise recreational uses of the area. Protect the recreational values of the area consistent with agreed EQOs and EQC.	Prior to commissioning of the outlet.	Department of Health and Local Authorities
23	Operations EMP: Recreational water quality management plan	Implement Recreational Water Quality Management Plan for five years after completion of construction, after which time it will be reviewed in consultation with DEP.	Not to compromise recreational uses of the area. Protect the recreational value of the area consistent with agreed EQOs and EQC.	For five years after completion of construction, after which time the program will be reviewed.	DEP, Department of Health and Local Authorities
24	Recreation (land based)	Maintain legitimate recreational uses of the beach and dune areas (no plan required).	Not to compromise recreational uses of the area.	Following commissioning of the outlet.	Relevant Local Authorities

	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
25	Operations EMP: Wastewater treatment management plan	<p>Prepare a Wastewater Treatment Management Plan for the plant which addresses the following environmental issues:</p> <ul style="list-style-type: none"> • Operate WWTP such that national guidelines for toxicant concentrations in marine waters are met; • Bring forward upgrade of wastewater treatment system if monitoring shows unacceptable environmental impacts; • Operate WWTP such that agreed EQOs and EQC are met to 95% confidence; • Discontinue the current practice of discharging treated wastewater to unlined lagoons, except where flows are required to reduce stress on nearby trees; • Ensure maximum annual average nitrogen load to the ocean from the outlet is less than 60 tpa; and • Contingency plans for non-standard operation of the WWTP 	<p>Reduce nitrogen loads to nearshore and reduce potential for erosion of beach during storm events.</p> <p>Ensure that the management of wastewater effluent during construction and operation is environmentally acceptable.</p>	Prior to commissioning of the outlet.	
26	Operations EMP: Wastewater treatment management plan	Implement Wastewater Treatment Management Plan for five years after completion of construction, after which time it will be reviewed in consultation with DEP.	<p>Reduce nitrogen loads to nearshore and reduce potential for erosion of beach during storm events.</p> <p>Ensure that the management of wastewater effluent during construction and operation is environmentally acceptable.</p>	For five years after completion of construction, after which time the program will be reviewed.	
27	Community consultation	Provide information during construction of outlet and monitoring of operations to community groups. Consider community objectives.	Inform and consult community on wastewater issues	Ongoing	City of Bunbury, Shire of Capel and interest groups

* ANZECC (2000) - Australia and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand: *Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000*

Abbreviations: DIA – Department of Indigenous Affairs, CALM – Dept of Conservation and Land Management, EQO – Environmental Quality Objective, EQC – Environmental Quality Criteria, DEP – Department of Environmental Protection, WWTP - wastewater treatment plant. tpa – tonnes per annum

Attachment 1 to Statement 572
Change to Proposal

Proposal: Ocean Outlet for Treated Wastewater, Bunbury Wastewater Treatment Plant

Proponent: Water Corporation

Change: Schedule 1, Key Characteristics Table

Components of original Proposal as implemented:

Element	Quantities/Description
Nitrogen mass per annum discharged	Discharge wastewater to a maximum of 16 million litres per day and a maximum of 60 tonnes of total nitrogen per annum

Components of changed Proposal:

Element	Quantities/Description
Nitrogen mass per annum discharged	Discharge wastewater to a maximum of 16 million litres per day and a maximum of 70 tonnes of total nitrogen per annum 2008/09

Dr Paul Vogel
Chairman
Environmental Protection Authority
under delegated authority

Approval date: 18.11.08

Attachment 2 to Ministerial Statement 572

Change to proposal under s45C of the *Environmental Protection Act 1986*
 This attachment replaces Table 1 in Schedule 1 and attachment 2 in Ministerial Statement 572

Proposal: Ocean Outlet for Treated Wastewater, Bunbury Wastewater Treatment Plant

Proponent: Water Corporation

The Proposal (Assessment No.1302)

The construction and operation of an ocean outlet and associated infrastructure, for the Bunbury Wastewater Treatment Plant.

Changes: Removal of the Total Phosphorous (TP) limit of 10 mg/l and the faecal coliform limit of <10,000 cfu/ 100ml

Key Characteristics Table:

<u>Element</u>	<u>Parameter</u>	<u>Description of proposal</u>	<u>Description of approved change to proposal</u>
Proposal	Location	Reserve 37116, Lot 5262, Minninup Road, Bunbury WA 6230	
Treated wastewater	Treated wastewater quantity and quality to pipeline	PARAMETER	MEAN CONCENTRATION OR VALUE
		Volume: 2001 2040 estimated	Average 6.6 ML/d Average 16 ML/d
		Suspended solids (SS)	<20 mg/L
		Biological oxygen demand (BOD)	<20 mg/L
		Total Nitrogen (TN)	15 mg/L
		Total Phosphorous (TP)	Removed as managed by Part V Licence under the Environmental Protection Act (EP Act)
		Faecal coliform bacteria counts	Removed as managed Part V Licence under the EP Act
		Discharge of TN to ocean	Maximum 60 tonnes per annum
Tertiary treatment lagoons	Description	Two lined lagoons designed to reduce bacterial levels in wastewater and also to reduce suspended solids concentrations. Existing Lagoons 1 and 2 will be modified to provide this treatment.	
	Area	10,000 m ² and 9,600 m ² respectively	
	Volume	16,000 m ³ and 14,000 m ³ respectively	
	Retention time	1.9 days @ 16 ML/d	

<u>Element</u>	<u>Parameter</u>	<u>Description of proposal</u>	<u>Description of approved change to proposal</u>
Connecting pipeline	Description	Wastewater from the lagoons will enter a 900 mm diameter pipeline which leads to the outlet pipeline. This pipeline will pass through the dunes between Lagoons 1 and the dune blow-out area.	
	Length	Approximately 180 m	
	Diameter	Approximately 900 mm	
Outlet pipeline	Description	Buried under the foredune, beach and surfzone and then sitting on the seabed leading to the diffuser.	
	Length	Onshore:~100 m; Offshore including diffuser: 1.7 km	
	Diameter	610 mm outside diameter and 530 mm inside diameter	
Outlet diffuser	Length	120 m	
	Diameter	610 mm outside diameter and 530 mm inside diameter	
	Number of ports	30 ports	
	Port diameter	80 mm	
	Initial dilution	At peak flow (24 ML/d): 1:90 to 1:150	
Marine habitat loss	Due to construction of pipeline	Approximately 0.1 ha of marine habitat	

Note: Text in **bold** in the Key Characteristics Table, indicates change/s to the proposal.

Abbreviations:

mg/L	milligrams per litre
cfu/100 mL	colony forming units per 100 millilitres
ML/d	million litres per day
m ²	square metres
m ³	cubic metres
m	metres
mm	millimetres
km	kilometres
<	less than
~	approximately
Ha	hectare

[Signed 22 April 2014]

Dr Paul Vogel
CHAIRMAN
Environmental Protection Authority
under delegated authority