



MEMORANDUM of UNDERSTANDING (MoU)

between

**Environmental Protection Authority
Marine Parks and Reserves Authority
Water Corporation**

**Department of Conservation and Land Management
and**

Department of Environmental Protection

**FOR THE MANAGEMENT OF TREATED
WASTEWATER DISCHARGES TO THE
MARMION MARINE PARK**

March 2003

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INTRODUCTION

In 1978, the Water Authority of Western Australia (now Water Corporation) began discharging treated wastewater into the ocean from an outlet extending 1.6 km offshore from Ocean Reef off Perth's northern coastline. The area of coastal waters between Trigg Island and Burns Rocks, which includes the waters off Ocean Reef, was gazetted as Marmion Marine Park and vested in the National Parks and Nature Conservation Authority (NPNCA) in 1989. A second outlet, discharging treated wastewater 1.8 km offshore at Ocean Reef was commissioned in 1992. Discharge limits of the outlets are regulated under the *Environmental Protection Act 1986* (EP Act) to protect designated beneficial uses of these waters.

When the amendments to the marine reserve provisions of the *Conservation and Land Management Act 1984* (CALM Act) came into effect in August 1997, the vesting of the Marmion Marine Park (MMP) was transferred from the NPNCA to the Marine Parks and Reserves Authority (MPRA), which was established under the revised CALM Act. The MPRA's functions are described in s26B of the CALM Act. The MPRA has a key role in setting the ecological and social objectives of marine conservation reserves and the Department of Conservation and Land Management (DCLM) is responsible for ensuring these objectives are maintained. In relation to the treated wastewater outlets, the EP Act continues to provide the primary legislative mechanism to regulate these discharges and their associated impacts on the MMP. The MPRA and DCLM rely on the close co-operation of the Water Corporation, the EPA and the Department of Environmental Protection to achieve these outcomes.

In 2000, the Environmental Protection Authority (EPA) published *Perth's Coastal Waters: environmental values and objectives* (EPA 2000) which set out an environmental management framework aimed at protecting the coastal waters of Western Australia from the effects of pollution, including the area in the vicinity of the Water Corporation's Ocean Reef outlets. During development of the environmental management framework, the EPA undertook an extensive public involvement and consultation process to ensure that the management of the Perth's coastal waters is in accord with community aspirations.

The Water Corporation has a strong interest in the reliable management of the MMP. The ten-year term (1992-2002) of the MMP Management Plan (DCLM 1992) has come to an end, but it will remain in force until a new plan is approved. The EPA has developed draft *Environmental Protection (State Marine Waters) Policy 1998* to provide for a consistent regulatory framework for the protection of the State's marine waters. The EPA is awaiting legislative amendments to progress this Policy. In view of this, it is now considered timely to develop a Memorandum of Understanding (MoU) between these five parties to formalise interim arrangements to manage treated wastewater discharges into MMP.

SECTION 1

This Section establishes the Memorandum of Understanding and its Purpose, and sets out the Principles by which it will operate.

PURPOSE

This document is a Memorandum of Understanding (MoU) between the Marine Parks and Reserves Authority (MPRA), the Environmental Protection Authority (EPA), the Water Corporation (the Corporation), the Department of Environmental Protection (DEP) and the Department of Conservation and Land Management (DCLM) regarding the management of treated wastewater discharges to the Marmion Marine Park (MMP).

The intent of this MoU is to bring clarity to the monitoring, management and public reporting of the environmental effects of discharging treated wastewater into the MMP.

PRINCIPLES OF THE MoU

The signatories of this MoU agree to implement a risk-based Environmental Quality Management Framework based on the National Water Quality Management Strategy (ANZECC & ARMCANZ, 2000) to manage the discharge of treated wastewater from the Beenyup wastewater treatment plant (WWTP) via the Ocean Reef outlets to the MMP. The objective is to ensure that the ecological and social values of the MMP are not compromised by the treated wastewater discharges. In operational terms, this means that impacts of the treated wastewater discharges are consistent with the management targets and objectives as expressed in the management plan.

PRIMARY LEGISLATION

This MoU does not intend to create legally binding relations, nor does it intend to be inconsistent with, or limit the powers of, the legislation (and any subsidiary acts, by-laws or regulations) that the parties operate under. The primary legislation that the parties to this MoU operate under is listed below:

Conservation and Land Management Act 1984

Wildlife Conservation Act 1950

Environmental Protection Act 1986

Water Corporation Act 1995

Water Agencies (Powers) Act 1984

Metropolitan Water Supply, Sewerage and Drainage Act 1909

SECTION 2

This section outlines the structure of the Environmental Quality Management Framework that underpins the MoU, the terms of the MoU and the process for its Implementation and Endorsement.

THE ENVIRONMENTAL QUALITY MANAGEMENT FRAMEWORK

The Environmental Quality Management Framework (EQMF) that underpins this MoU is based on *Perth's Coastal Waters, Environmental Values and Objectives, the position of the EPA - a working document* (EPA, 2000).

1. Environmental values (EVs) are identified, environmental quality objectives (EQOs) (management goals) are established and spatially defined. EVs are similar to *ecological and social values* and EQOs similar to *management objectives* of the MMP Management Plan.
2. Environmental quality criteria (EQC) are used to guide and assess the results of monitoring programs. EQCs are split into environmental quality guidelines and standards, forming quantitative investigative and management triggers, respectively. EQCs are similar to *targets* of the MMP Management Plan.
 - Environmental quality guidelines (EQGs) signify low risk of an environmental problem if met, and trigger further investigations if an exceedance occurs.
 - Environmental quality standards (EQSs) use multiple lines of evidence, and if exceeded signify that the environmental quality objective is not met and that a management response is required.
3. Management of the outlet is based on assessment of the results of an environmental monitoring program against the relevant EQC. Appropriate management responses are initiated to attain (or maintain) the environmental quality objectives.

PROCESS FOR IMPLEMENTATION

In a timely and cooperative manner the parties agree to:

1. Spatially define the EVs and EQOs as determined by the EPA (see Appendix 1 from EPA 2000) through extensive community consultation for the waters in the vicinity of the Ocean Reef outlets to be consistent with the management objectives for the Marine Park (DCLM 1992).
2. Set EQC as benchmarks for monitoring, specifically to identify when and where the objectives are being met or not met. Establish the parameters (environmental quality indicators) to be measured, the frequency of measurement and sites to be measured.
3. Define what constitutes measurable and unacceptable changes (environmental quality standards) that can be attributed to the discharge of treated wastewater from the outlet alone, and that would require a management response to restore environmental quality within a specified timeframe.

4. Establish standard protocols for the collection, analysis and reporting of monitoring data to ensure high credibility.
5. Establish an easy to understand method of reporting the condition of the marine environment (backed by strong science and data reports) to stakeholders and the community, for example, a simple report card.

PROCESS FOR ENDORSEMENT

The MoU will be supported by a *Schedule* containing maps showing EVs, spatially defined EQOs, tables of numerical and narrative EQC, narrative decision schemes to guide the risk-based approach for implementing the EQGs and EQSs, and Standard Operating Procedures (SOPs) for monitoring the marine environment.

Once all parties have approved this MoU, the next step will involve the development of, and agreement to, the *Schedule*. The DEP will reflect the intent of this MoU in the Beenyup WWTP operating licence and revise the ocean monitoring component of the licence to be consistent with the *Schedule* to this MoU.

A Working Group will be established comprising representatives of DCLM (Marine Conservation Branch), Water Corporation (Environment and Wastewater Treatment Branches), and DEP (EPA Services Unit and Environmental Regulation Division) to develop the *Schedule* required to give effect to this MoU.

Once the Working Group has developed the draft *Schedule*, it will be provided to signatories for endorsement. The EVs, EQOs, EQC, decision schemes and SOPs contained in the *Schedule* will become part of the MOU only after there has been formal endorsement of the *Schedule* by all signatories.

TERMS OF THE MoU

The terms of the MoU are as follows:

1. The Corporation shall maintain an environmental monitoring program, to the satisfaction of the relevant authorities (i.e. DCLM as the managing agency and the MPRA as the vesting authority for the receiving water body, and EPA for ministerial conditions set under S.45 of the EP Act), to measure environmental quality against agreed objectives.
2. The Corporation shall report to the MPRA, DCLM and EPA on its management performance annually by 30 September, consistent with both its general obligations under the Environmental Quality Management Framework, and with specific times frames set through the MPRA's annual auditing framework for the State's network of marine conservation reserves.
3. The Corporation shall operate an agreed community communication and complaints procedure.
4. The schedules can be changed during the currency of the MoU, through the Working Group and as agreed by all parties to this MoU.

5. Representatives of the parties to this agreement (the Working Group) shall hold, at a minimum, annual meetings to discuss issues associated with the MoU.
6. This MoU will remain current until such time that it is revised and endorsed by all parties. The parties to this MoU shall jointly review the MoU within five years of the date of signing.
7. This MoU is an interim step towards the development of an Environmental Protection Policy (EPP) for the broader coastal marine waters of the State (i.e. *Environmental Protection (State Marine Waters) Policy*).

REFERENCES

ANZECC & ARMCANZ (2000). *Australian and New Zealand guidelines for fresh and marine water quality*. National Water Quality Management Strategy Paper No 4, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra, ACT.

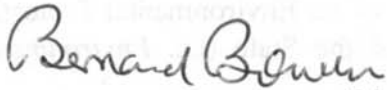
DCLM (1992). *Marmion Marine Park Management Plan 1992-2002*. Management Plan No. 23 prepared by the Department of Conservation and Land Management for the National Parks and Nature Conservation Authority, Perth, Western Australia. January 1992.

EPA (2000). *Perth's coastal waters: Environmental values and objectives – the position of the EPA, a working document*. February 2000. Report 17. Department of Environmental Protection, Perth, WA.

EPA (1998). *Draft Environmental Protection (State Marine Waters) Policy 1998*. Draft policy for public comment. Environmental Protection Authority, Perth, WA, June 1998.

MEMORANDUM OF UNDERSTANDING AGREEMENT

The undersigned agree to this MoU:



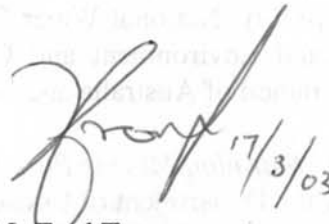
Dr Bernard Bowen 12³/₀₃
Chairman
Environmental Protection Authority



Dr Barry Wilson
Chairman
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Dr Jim Gill
Managing Director
Water Corporation



Mr Fred Tromp
Acting Chief Executive Officer
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Mr Keiran McNamara 9/4/03
Acting Executive Director
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Appendix 1

Appendix 1: Extracts from *Perth's Coastal Waters: Environmental Values and Objectives* (EPA 2000).

Summary

The Environmental Protection Authority (EPA) has developed an environmental management framework aimed at protecting the coastal waters of Western Australia from the effects of pollution. This framework is being applied to Perth's coastal waters in consultation with the community and stakeholders. A three month public involvement and consultation program has been undertaken to help the EPA identify the Environmental Values of these waters, develop a set of Environmental Quality Objectives (ie. management goals) to protect the Environmental Values, and provide an indication of where the objectives should apply within Perth's coastal waters.

Four Environmental Values were identified as relevant to Perth's coastal waters. Six Environmental Quality Objectives (EQOs) or management goals were developed to protect those Environmental Values. The Environmental Values and their associated EQOs are:

- **Ecosystem Health:**

- EQO 1 Maintenance of ecosystem integrity (naturally diverse and healthy ecosystems)

- **Fishing and Aquaculture:**

- EQO 2 Maintenance of aquatic life for human consumption (seafood safe to eat)

- **Recreation and Aesthetics:**

- EQO 3 Maintenance of primary contact recreation values (waters safe for swimming)

- EQO 4 Maintenance of secondary contact recreation values (waters safe for boating)

- EQO 5 Maintenance of aesthetic values (pleasant, attractive environment)

- **Industrial Water Supply:**

- EQO 6 Maintenance of industrial water supply values (water suitable for industry use)

Maps are presented in the body of this report to provide a general indication of the relative size and locations of the areas where the EQOs will apply, or not apply, in Perth's coastal waters.

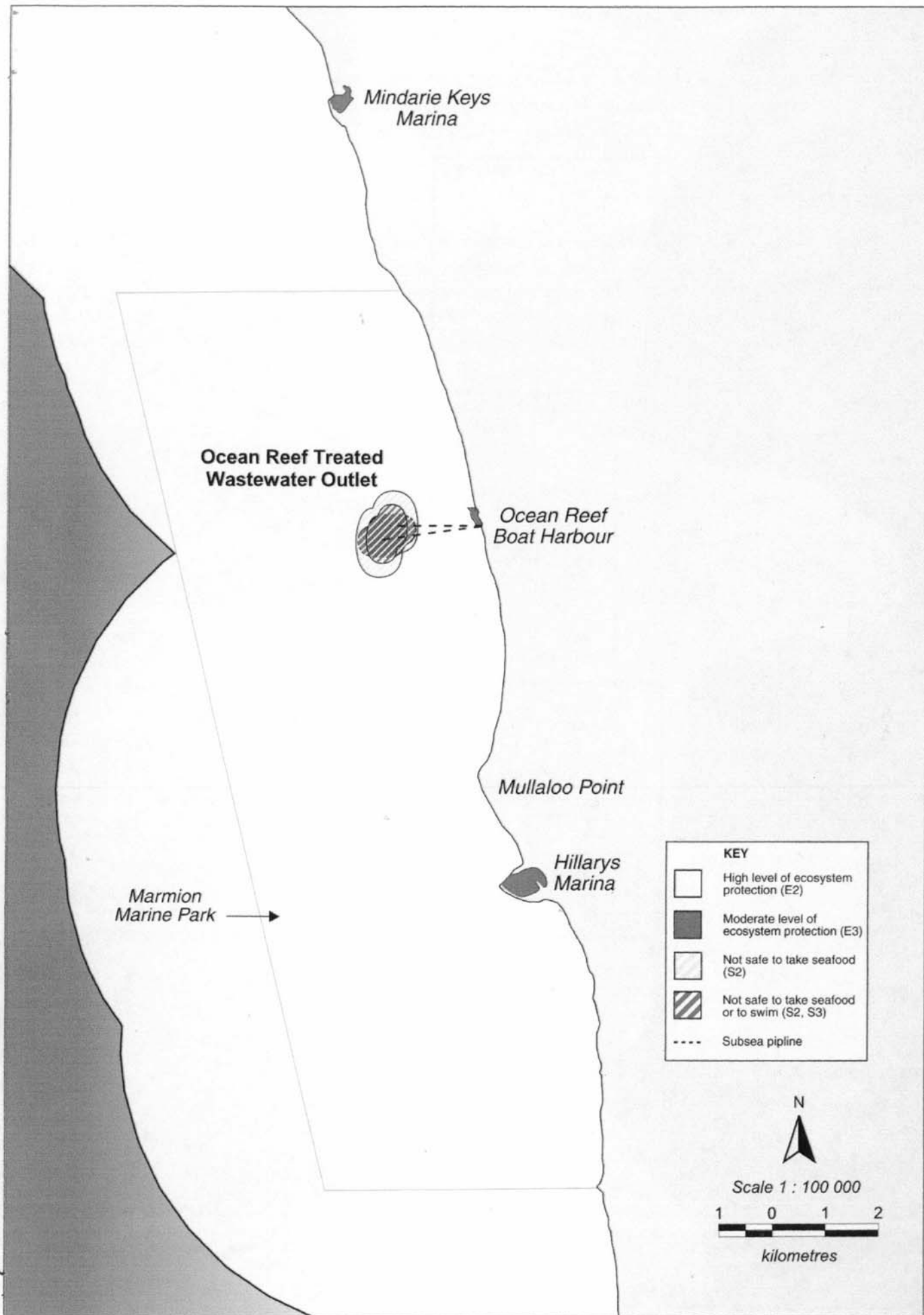
The first EQO (EQO 1: Maintenance of ecosystem integrity), will apply throughout Perth's coastal waters. In order to meet this objective and maintain a healthy and diverse ecosystem overall, the vast majority of Perth's coastal waters (over 99%) will have a high level of protection, with less than 1% designated a medium or low level of protection. The areas with reduced protection are largely confined to harbours and marinas, and adjacent to some industrial and domestic wastewater outfalls.

The EQOs 2, 3 and 4, which support social uses such as fishing, swimming and boating, will be designated for the vast majority of Perth's coastal waters. However, some of these EQOs will not apply in small areas near domestic treated-wastewater discharge points.

EQOs 5 and 6 which relate to maintaining the attractiveness of the environment, and industrial water supply will apply throughout Perth's coastal waters.

Maps are presented in the appendices of this report to provide a better indication of where the EQOs apply, and do not apply, in Perth's coastal waters.

The next phase of the management and consultative process for Perth's coastal waters will address the more technical issues of developing Environmental Quality Criteria and defining the precise boundaries of the areas where the different EQOs apply.



Map 2.