

**Managing Perth's Coastal Waters:
Towards a Cockburn Sound Environmental
Protection Policy (EPP)**

A public explanatory document

**Environmental Protection Authority
Perth, Western Australia
November 2000**

This public explanatory document has been produced to inform the community about measures being developed to protect the environment of Cockburn Sound. Importantly, the Cockburn Sound Management Council has been formed and the EPA is producing an Environmental Protection Policy for Cockburn Sound. You will have an opportunity to make comments on the proposed management framework during a public comment period in 2001.

1 Background

Perth is a coastal city and its population is expected to increase by more than 50 per cent over the next 30 years. With the increasing number of people, it is inevitable that the pressures on our coastal waters will also increase.

The Environmental Protection Authority (EPA) recognises that the environmental quality of our coastal waters in the future will be strongly influenced by the decisions we take now. In response, the EPA developed a Perth Coastal Waters Management and Consultative Process to provide a mechanism for managing environmental quality.

Cockburn Sound, situated within Perth Coastal Waters, is the most intensively used marine embayment in Western Australia. The Sound is highly valued by the community for its ecological and recreational attributes. It is also used for commercial purposes, including activities such as fisheries, aquaculture and tourism, which require a high level of marine water quality. Cockburn Sound provides a safe anchorage and significant maritime facilities near the State's major industrial complex. There is general recognition of the need for other uses such as discharge of industrial and domestic treated effluent, shipping, mining, harbours and marinas, even though they can lower environmental quality or preclude certain social uses in localised areas.

Cockburn Sound also receives waste inputs from point and diffuse sources. The development of industry on the coastal strip and the intensification of land uses in the surrounding catchments during the past fifty years have resulted in a large quantity of waste inputs to the Sound. By the late 1970s water quality had been significantly degraded, resulting in major habitat loss and contamination of biota, sediments and water in the Sound. Substantial progress has been made in reducing direct discharges into Cockburn Sound, but further improvements in water quality will be limited by the contribution of contaminants through groundwater flow.

There are now some signs that some aspects of water quality are improving, and it is therefore vital that effective environmental planning and management of Cockburn Sound and its catchments occur in the future to continue this positive trend. This is particularly important given the range of infrastructure and development proposals on or adjoining Cockburn Sound.

To date a number of significant steps have been taken:

- the EPA established the Perth Coastal Waters Management and Consultative Process and consulted broadly with the community for guidance on future decision making, and identified the environmental values and objectives that apply to these waters (*Perth's Coastal Waters: Environmental Values and Objectives*, EPA 2000);

- Cabinet established a management body for Cockburn Sound and put in place the Cockburn Sound Management Council (Management Council);
- Cabinet instructed the Management Council to prepare a draft Environmental Management Plan with full stakeholder involvement; and
- the EPA agreed to develop an Environmental Protection Policy (EPP) for Cockburn Sound, and this EPP provides the authority for implementing the Environmental Management Plan.

This document highlights how these activities will come together to deliver an environmental management regime focussed on Cockburn Sound but with broader implications for Perth coastal waters. Figure 1 shows the boundaries of Perth coastal waters and of Cockburn Sound Management Council jurisdiction.

2 A consultation and management process for Cockburn Sound

The Perth Coastal Waters Management and Consultative Process (Consultation Process) is outlined in Figure 2. Following the Cabinet decision to establish a Management Council and develop an Environmental Protection Policy (EPP) for Cockburn Sound, the process has been modified as shown in Figure 3. The change is minor. As in the original Consultation Process, the EPA will release draft and final reports for public comment, in order to establish environmental quality criteria. However, the EPP becomes the vehicle for inviting discussion of these criteria. These criteria will be developed with input from technical workshops and incorporated into the EPP process. The EPP process itself has a statutory requirement for public consultation. These steps preserve the integrity of the original process established by the Consultation Process.

The relationship to the preparation of the Environmental Management Plan is also shown in Figure 3. The Environmental Management Plan provides the means by which the objectives and criteria identified in the Environmental Protection Policy are intended to be achieved.

Importantly, this combined approach has not reduced the level of public and stakeholder input. The EPA wants to ensure that the key issues are fully debated through a public consultation process.

The EPA and DEP will also use the outputs of the Consultation Process to develop an environmental management framework for Perth coastal waters outside of Cockburn Sound.

The Environmental Management Plan will be developed by the Management Council within the context of the EPP for Cockburn Sound. The effective power of the Council is derived from the delegated authority conferred upon it by the EPA to develop and implement the Environmental Management Plan. It is intended that the outline and structure of the draft Environmental Management Plan will be released with the draft EPP for public comment.

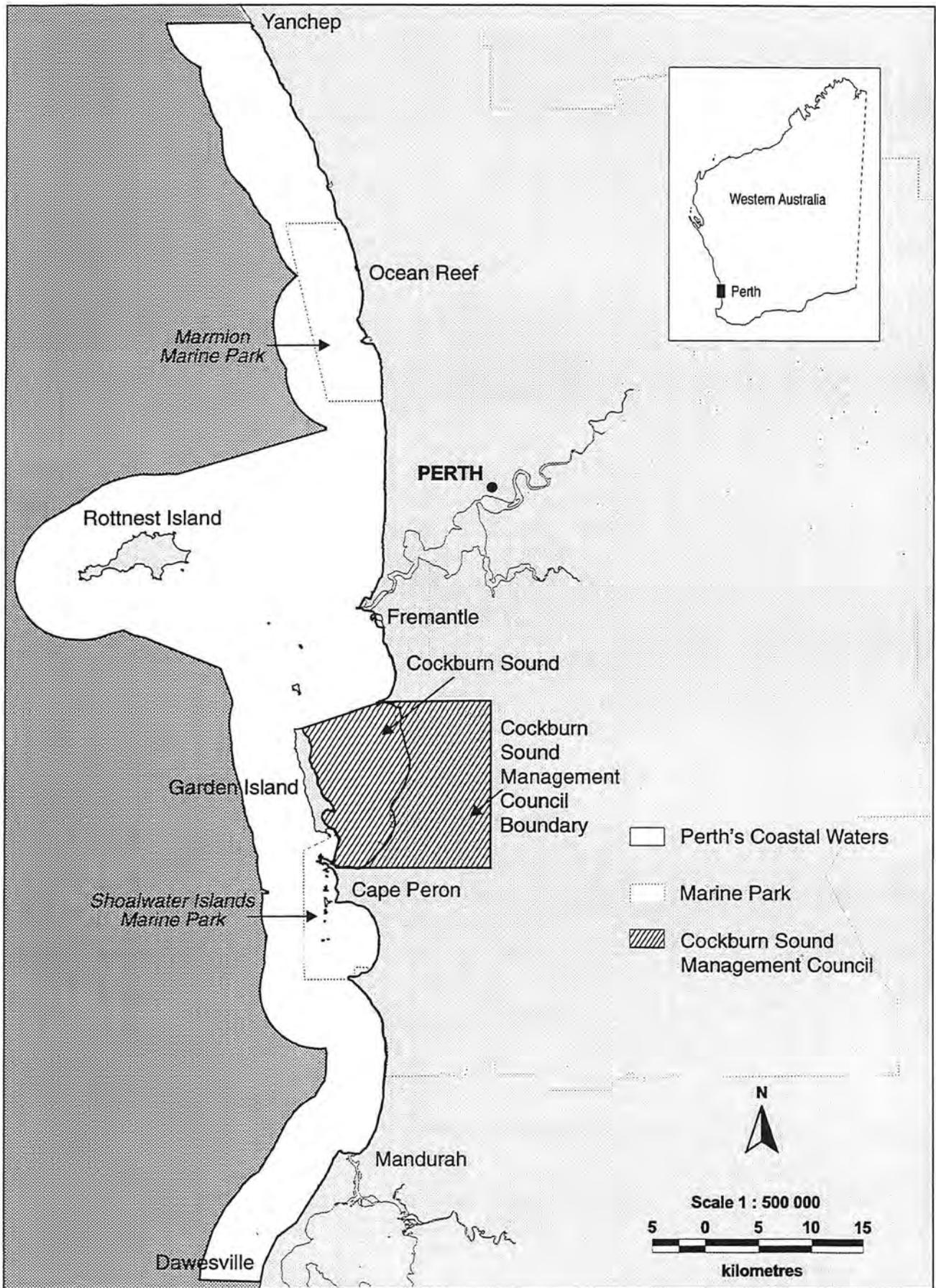


Figure 1. Perth coastal waters and Cockburn Sound Management Council boundaries

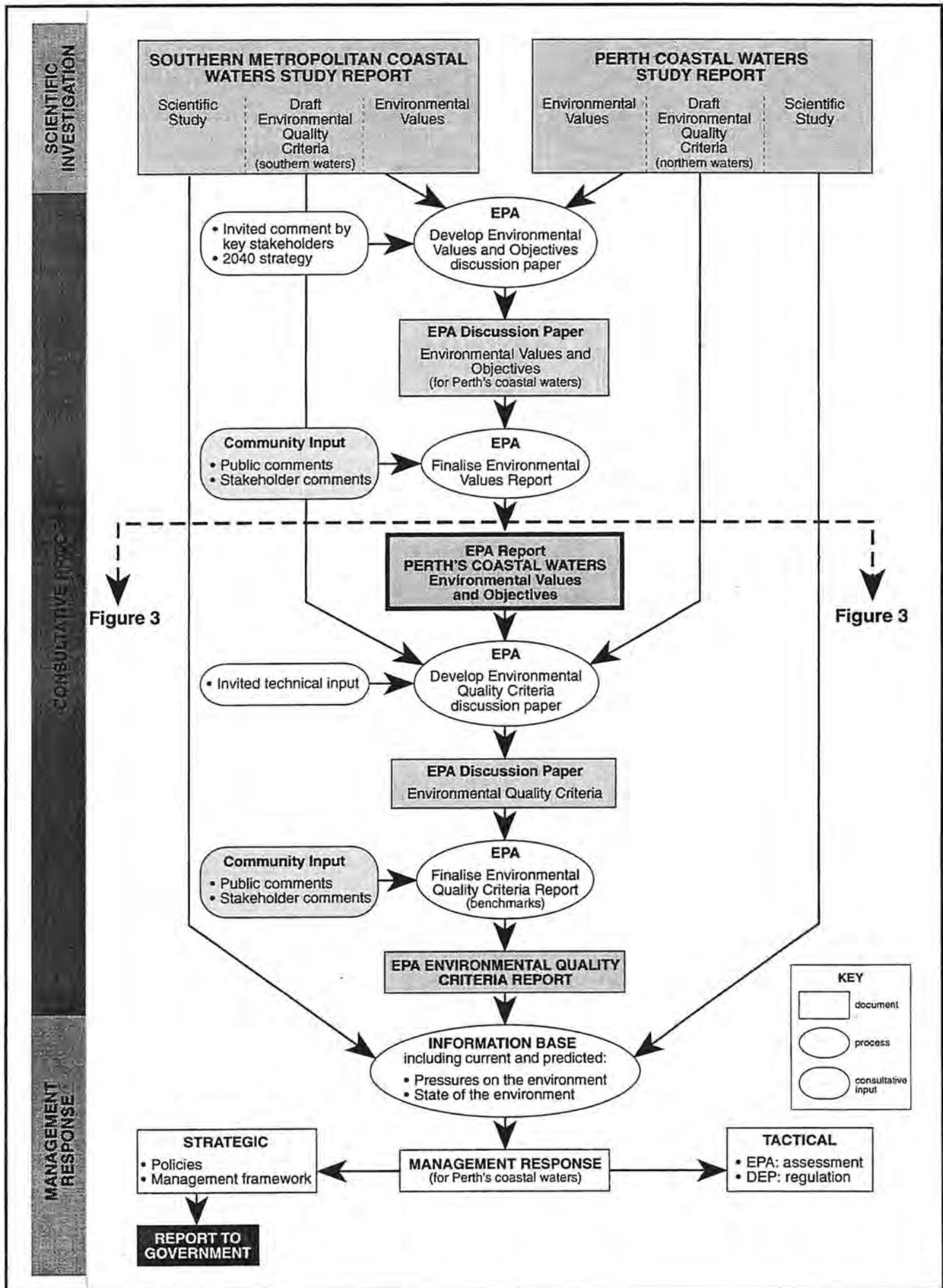


Figure 2. Original process for Perth Coastal Waters Management and Consultation

Perth Coastal Waters Management and Consultative Process for Cockburn Sound

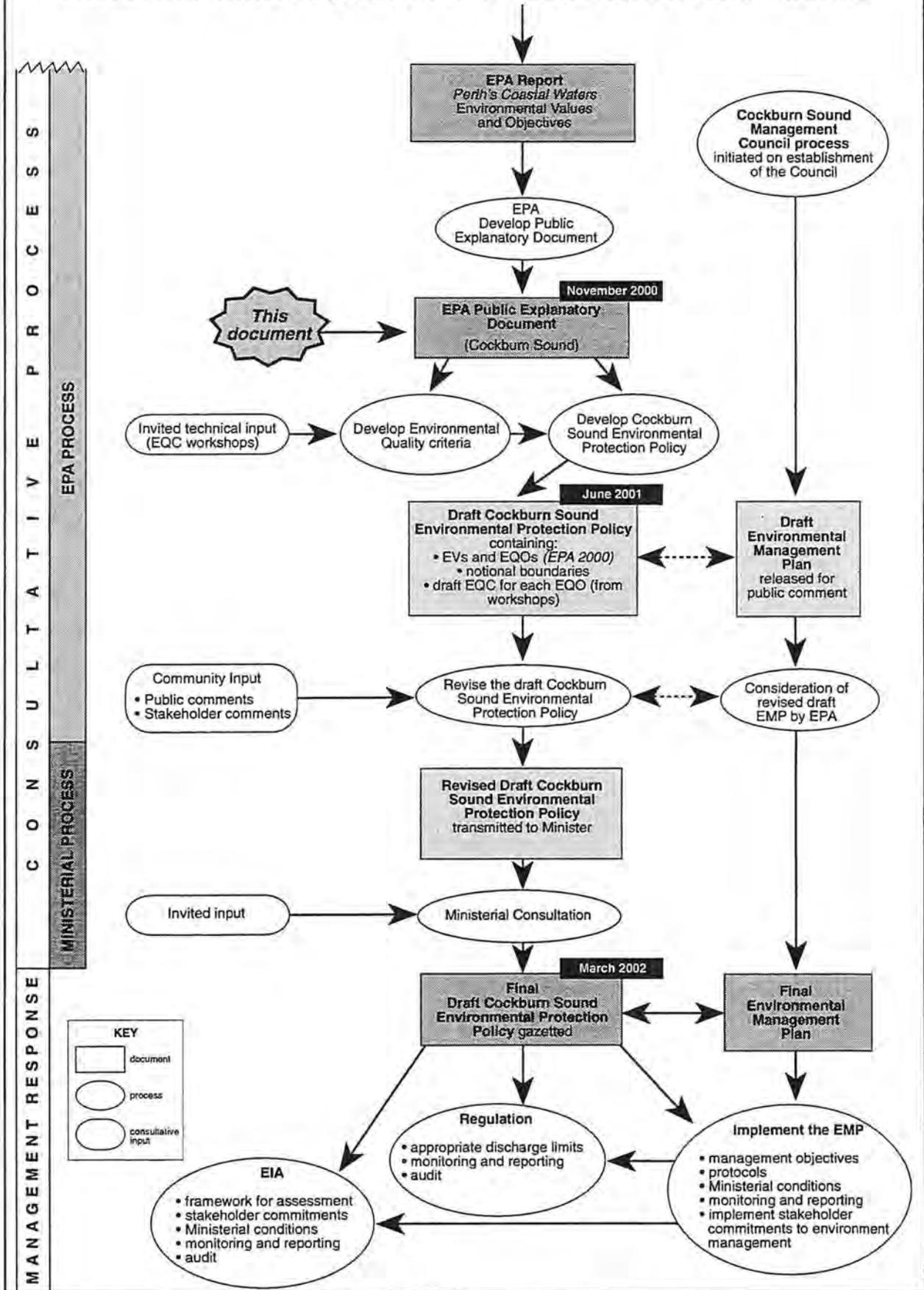


Figure 3. Revised process for Cockburn Sound EPP and Environmental Management Plan

3 Why have an EPP for Cockburn Sound

An EPP provides a framework for environmental protection or pollution control, has the force of law, and can provide the legal basis for the Management Council to coordinate and implement the Environmental Management Plan.

An EPP can relate to any activity in relation to environmental protection or pollution control. The Policy can specify activities which, if undertaken without authorisation, can create an offence bearing penalties.

4 Aims of the Cockburn Sound EPP

The Cockburn Sound EPP will broadly aim to:

- establish environmental values (EV), environmental quality objectives (EQO) and environmental quality criteria (EQC) for waters and habitat in Cockburn Sound;
- identify a program to protect the environmental values;
- integrate environmental planning and management for the land and marine environment;
- establish an Environmental Management Plan to coordinate management against agreed objectives;
- provide a mechanism for the Management Council to coordinate environmental management efforts; and
- provide for regular reporting on progress against objectives.

5 The EPP process to be followed

For Cockburn Sound the EPP development process forms part of the existing Consultative Process. The outputs of environmental values, environmental quality objectives and environmental quality criteria established in the Consultation Process will be incorporated into the EPP.

An EPP is prepared under Part III of the Environmental Protection Act 1986 and includes stages to develop, implement, report on and review the policy.

The EPP development process is initiated by the EPA. The EPA consults widely and prepares a draft EPP, which is gazetted and released for public comment. The EPA considers these comments and submits a revised draft to the Minister for the Environment for approval. The Minister consults with public authorities before making a decision. An approved EPP is gazetted and then tabled in Parliament.

6 What will be in the Cockburn Sound EPP

The Cockburn Sound EPP will establish the:

- boundaries of the area and the portion of the environment to which the policy applies; and
- basis on which the environment in this area is to be protected, or pollution is to be prevented, controlled or abated.

In addition, the Cockburn Sound EPP will also:

- specify the environmental values and environmental quality objectives to be achieved and maintained under the policy, and the areas to which they apply;
- set out the criteria to be used for assessing environmental quality in the policy area;
- specify any activity which may degrade the environment, including the discharge of waste;
- create offences and penalty provisions; and
- establish a program for the protection of the environmental values within the policy area and may specify, among other things, measures designed to:
 - (i) minimise the possibility of pollution; and
 - (ii) protect designated environmental values.

The EPP may contain a mechanism for incorporating minor change, such as improved scientific understanding or future development that may change environmental quality objective boundaries, without the need for a new EPP being developed. (However, this will be consistent with s.37 of the Environmental Protection Act.)

Since EPPs are law once gazetted, they tend to have a consistent structure. An outline of a structure for the proposed Cockburn Sound EPP is provided in Appendix 1.

7 Roles of values, objectives and criteria in Cockburn Sound

The EPA's objective is to establish a management framework to maintain ecosystem integrity and biodiversity of the marine ecosystems in Cockburn Sound, whilst recognising the current and projected future uses. This is consistent with the National Water Quality Management Strategy, and with the Strategy for Ecologically Sustainable Development. As an important first step the EPA consulted the community and stakeholders to develop an agreed set of environmental values and environmental quality objectives for Perth's coastal waters and for Cockburn Sound.

Two types of environmental value have been identified: ecological and social. Table 1 describes the environmental quality objective for the ecological value - ecosystem health. Table 2 lists the three social values - fishing and aquaculture, recreation and aesthetics, and industrial water supply - and their associated environmental quality objectives. The recently released document *Perth's Coastal Waters: Environmental Values and Objectives* (EPA 2000) provides a more detailed description and an example of how the values and objectives could be applied as the basis for an environmental management framework.

For each environmental quality objective, a set of environmental quality criteria are to be established to provide the environmental quality benchmarks. These are used to assess whether the environmental quality objectives are being met and the environmental values protected. Environmental quality criteria provide clear and scientifically justifiable limits to the level of ecological change considered acceptable, and hence set the bounds within which we must operate to ensure that current and future activities are ecologically sustainable.

The DEP will conduct technical workshops to facilitate the development of the environmental quality criteria. The criteria will be an important component of the draft Cockburn Sound EPP and draft Environmental Management Plan when they are released in 2001.

Table 1 Ecological value: description of environmental quality objective

Ecological value	Description of environmental quality objective
Ecosystem health	<i>Maintenance of ecosystem integrity</i> The level of protection to be maintained for ecosystem integrity measured in terms of structure (e.g. biodiversity, biomass and abundance of biota) and function (e.g. food chains and nutrient cycles)

Table 2 Social values: description of environmental quality objectives

Social value	Description of environmental quality objective
Fishing and aquaculture	<i>Maintenance of aquatic life for human consumption</i> Seafood to be safe for human consumption when collected or grown
Recreation and aesthetics	<i>Maintenance of primary contact recreation values</i> Primary contact recreation (e.g. swimming) to be safe
	<i>Maintenance of secondary contact recreation values</i> Secondary contact recreation (e.g. boating) to be safe
	<i>Maintenance of aesthetic values</i> The aesthetic values to be protected
Industrial water supply	<i>Maintenance of industrial water supply values</i> Water to be of suitable quality for industrial water supply purposes

The final step in the management framework is the implementation of monitoring strategies to collect the data for measuring performance against the criteria. Monitoring may involve sampling of both the contaminant source and the ambient environment. Ambient monitoring will rely primarily on the more integrative measures of exposure such as sediment and biota quality, phytoplankton, water clarity and seagrass health.

8 Proposed EPP timeframe

Inputs to the EPP for Cockburn Sound have begun (Figure 3 above outlined the EPP process and intended timeframe). Development of the environmental quality criteria through workshops is the next step. The EPA anticipates that the draft EPP containing environmental values, environmental quality objectives, environmental quality criteria and notional boundaries will be released at the end of June 2001 for public comment. A revised draft will be transmitted to the Minister for the Environment for consideration. The Minister will then consult with others to determine whether further changes are needed. The final Cockburn Sound EPP is scheduled for gazettal by March 2002.

As part of the Environmental Management Plan, a program of implementation, monitoring and reporting procedures will be finalised by December 2002. These procedures will develop from inter-agency consultation about best management and reporting practice.

An opportunity for public comment will be available when the draft EPP is released. Advertisements in the *West Australian* and community newspapers will announce its release and tell you where you can obtain a copy.

If you have any enquiries or would like to make comments on the matters raised in this document please write to:

Chairperson
Environmental Protection Authority
141 St Georges Terrace
PERTH WA 6000

Further reading

DEP (1996). Southern Metropolitan Coastal Waters Study (1991-1994). Final report. Department of Environmental Protection, Perth.

DEP (1996). Southern Metropolitan Coastal Waters Study (1991-1994). Summary report. Department of Environmental Protection, Perth.

EPA (1998). Draft Environmental Protection (State Marine Waters) Policy 1998. Environmental Protection Authority, Perth.

EPA (2000). Perth's Coastal Waters: Environmental Values and Objectives. The position of the EPA - a working document. Environmental Protection Authority, Perth.

These documents are available for reading in the Department of Environmental Protection Library, 141 St Georges Terrace, Perth.

Acronyms

CSMC	Cockburn Sound Management Council ('the Management Council')
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EPP	Environmental Protection Policy
EQC	Environmental quality criteria
EQO	Environmental quality objective
EV	Environmental value
PCWMCP	Perth Coastal Waters Management and Consultative Process ('the Consultation Process')

APPENDIX 1

STRUCTURE OF PROPOSED COCKBURN SOUND EPP

Background

Purpose

Purposes of this policy are:

- to declare and protect the environmental values of Cockburn Sound;
- to declare and abate pollutants and activities that diminish the environmental values of Cockburn Sound;
- to establish a program of protection of the environmental values; and
- to give effect to the environmental quality criteria (EQC) and Environmental Management Plan (EMP) for Cockburn Sound.

Policy area

See Schedule A (map showing boundary of Cockburn Sound Management Council).

Environmental values, environmental quality objectives and environmental quality criteria

- specify actual values and areas to which they apply.

Program to protect environmental values and achieve environmental quality objectives

Environmental Management Plan: a framework to protect the waters and habitat of Cockburn Sound

- an Environmental Management Plan (EMP) for:
 - + groundwater quality;
 - + surface water quality;
 - + marine environmental quality; and
 - + ecosystem health.
- state and local authority actions and decisions consistent with environmental quality objectives;
- industry sector business activities consistent with environmental quality objectives;
- co-operation of government agencies, local governments, industry and general public in implementation of the policy;
- implement specific actions;
- monitoring;
- inventories; and
- reporting of progress against objectives.

Authorisations

These would include but not be limited to:

- Minister for the Environment Part IV;
- Department of Environmental Protection licensing;
- regional and local government town planning schemes;
- Water and Rivers Commission groundwater licensing, stormwater, drainage;
- local government and Water Corporation drainage;
- Fremantle Port Authority; and
- Royal Australian Navy.

Regulations

- for the purposes of implementing particular standards and criteria for special areas, environmental quality criteria regulations may be made;
- an environmental quality criteria regulation may prescribe:
 - + the portion of the policy area to which the regulation applies;
 - + standards and criteria to be met within a special area;
 - + measures to prevent or control activities which pollute the waters and habitat of Cockburn Sound;
 - + standards, limits, practices and procedures to achieve the criteria;
 - + indicators, parameters, criteria and benchmarks for measuring or predicting water quality within the protected area; and
 - + means to evaluate the effectiveness of criteria regulation, such as monitoring protocols, sampling procedures, statistical treatments, simulation models and reporting procedures.

Review of Regulations

- mechanism to cover changing criteria and boundaries may be required.

Control of certain activities

- any specific control needs/prohibited activities would be specified if needed;
- exemptions authorised under the policy;
- offences and penalties; and
- exceeding prescribed limits.

Schedules

A. Policy area map