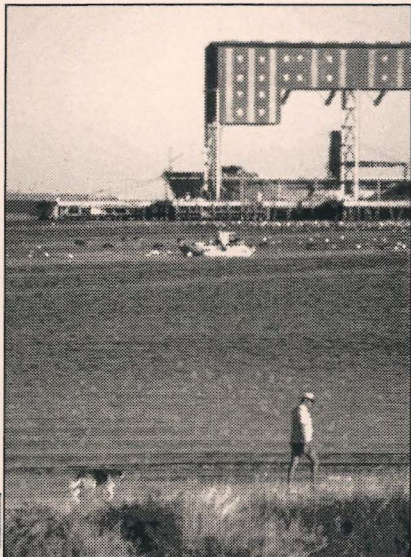


Progress Report
**Cockburn Sound
Environmental Protection
Policy (EPP)**



Environmental Protection Authority
Perth, Western Australia

June 2001

This progress report has been produced to inform the community about current progress by the EPA in developing an Environmental Protection Policy (EPP) for Cockburn Sound. This is one of the important measures being developed to protect the environment of Cockburn Sound. The recently formed Cockburn Sound Management Council is preparing an Environmental Management Plan, and a progress report on this is being released concurrently with this report.

You will have an opportunity to make comments on the proposed management framework when the Draft EPP and Draft EMP are released later this year.

1 Background

Cockburn Sound, situated within Perth's coastal waters, is a well sheltered and accessible marine embayment highly valued by the community for its ecological, economic and recreational attributes.

The Environmental Protection Authority (EPA) is conscious of the need to protect the intrinsic values of biological diversity and the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of these waters. It recognises the importance of Cockburn Sound for commercial purposes, including activities such as fisheries, aquaculture and tourism, which require a high level of marine water quality; and the need for other uses of the Sound such as industrial water supply, shipping, harbours and marinas. Cockburn Sound also receives waste inputs from point and diffuse sources from foreshore industry and catchment land uses.

The *Southern Metropolitan Coastal Waters Study* (DEP, 1996) highlighted the important linkages between a wide range of land-based human activities, occurring both in urban, industrial and rural catchments, and the environmental quality of the coastal waters.

The EPA's objective is to establish an environmental management framework to maintain ecosystem integrity and biodiversity of the marine environment of Cockburn Sound. This is consistent with the National Water Quality Management Strategy, and with the National Strategy for Ecologically Sustainable Development

In November 2000 the EPA released a Public Explanatory Document titled: *Managing Perth's Coastal Waters: Towards An Environmental Protection Policy (EPP) for Cockburn Sound* (EPA, 2000b). The document informed the community about measures being developed to protect the environment of Cockburn Sound, namely:

1. **Development by the EPA of an EPP for Cockburn Sound**, to establish a management framework to declare and protect the environmental values of Cockburn Sound. These values and objectives were derived from extensive community consultation. The environmental values and objectives that apply to the waters of Cockburn Sound were identified in the EPA document titled: *Perth's Coastal Waters: Environmental Values and Objectives* (EPA, 2000a) and are shown in Tables 1 and 2 of this report.
2. **The formation of the Cockburn Sound Management Council** to facilitate and coordinate on-going environmental management in Cockburn Sound and its catchment, and to prepare and implement an Environmental Management Plan (EMP). The EPP would provide the authority for developing and implementing the EMP.

2 Intent of the EPP

The Cockburn Sound EPP broadly aims to:

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

3 Progress on the structure of the EPP

As shown in Figure 1 the proposed EPP will comprise:

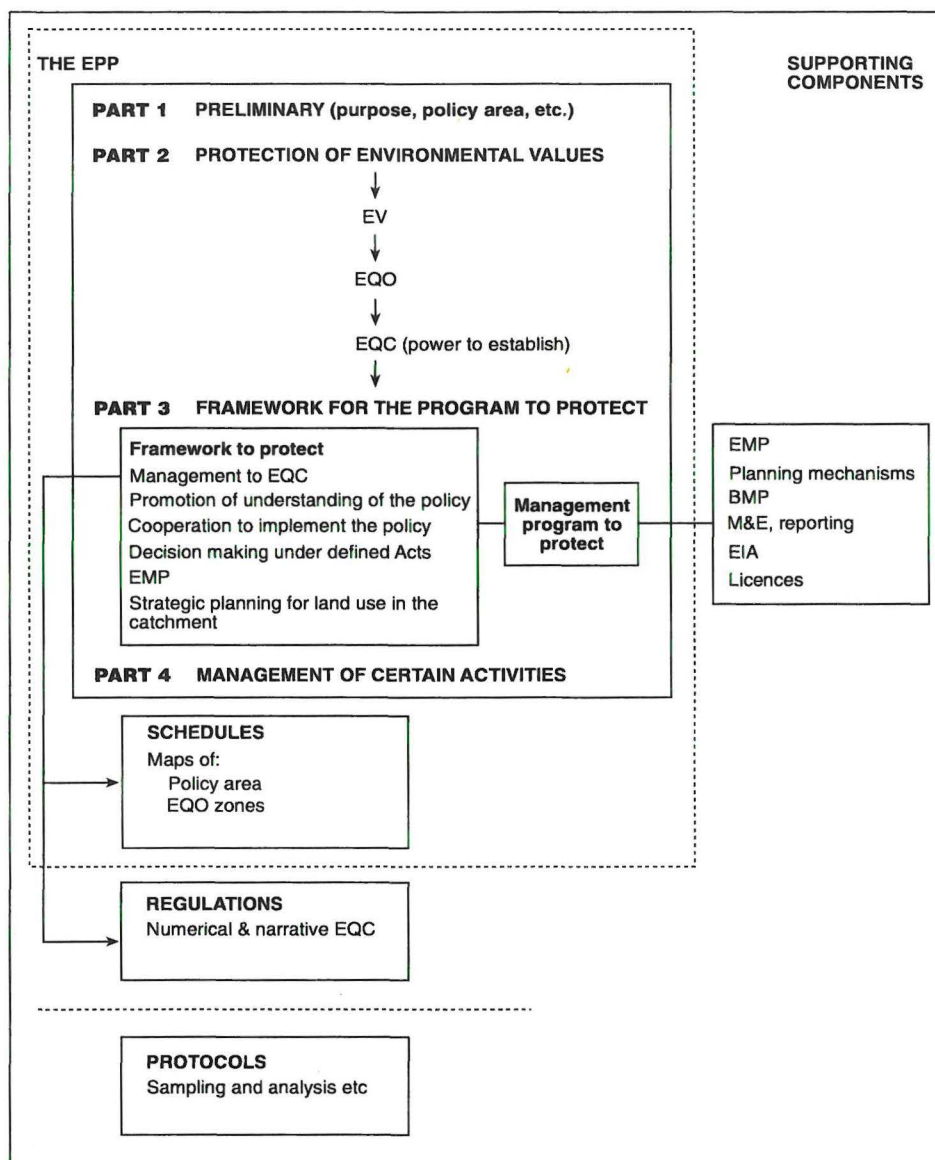


Figure 1. The overall structure of the EPP.

(1) **(Part 1) Preliminary**

This states the purpose of the policy, identifies the policy area and protected area to which the policy applies, and defines the terms used. The EPP policy area is consistent with the management area of the Cockburn Sound Management Council and includes land and marine waters (refer to Map 1 of the EMP Progress Report). The EPP protected area is defined as the marine waters of Cockburn Sound. It is within these waters that the declared environmental values must be protected.

(2) **(Part 2) Environmental values, environmental quality objectives and environmental quality criteria for the protected area**

This part declares: the actual values to be protected; the environmental quality objectives to achieve those values; the criteria or benchmarks against which to measure whether the objectives are being met; and the areas to which they apply. The areas to which the objectives apply have not been completed. The declared environmental values (ecological and social) and their objectives are outlined in Table 1 and 2. Progress on development of the environmental quality criteria is outlined in Section 4.

Table 1 Ecological value: description of environmental quality objective

| Ecological value | Environmental Quality Objective and narrative description |
|------------------|--|
| 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 | Environmental Quality Objective and narrative description |
|---------------------------|--|
| 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 |

(3) (Part 3) Program to protect environmental values and achieve environmental quality objectives

This section establishes a framework to protect the declared environmental values of Cockburn Sound, and a management program to implement that framework. Components of the framework and management program are outlined in Figure 1 (Part 3). The Environmental Management Plan is a key component and will provide a mechanism to integrate environmental planning and management for the land and marine environment, and facilitate multiple use management of Cockburn Sound.

The EPP will require State and local governments to take decisions and actions that are consistent with the environmental quality objectives and measures specified within the EPP. Government functions such as environmental impact assessment and waste discharge licensing must be made consistent with the objectives of the EPP.

Inclusion of a strategic planning mechanism to assist land use management by local authorities would be an important component of the program to protect.

(4) (Part 4) Management of certain activities

Significant quantities of waste and nutrients discharge into Cockburn Sound from the sandy soils of the catchment, in groundwater and surface water flows. Certain activities may be specified here but management will be achieved through implementation of best management practices outlined in the Environmental Management Plan. Cooperative management will be further facilitated by the Cockburn Sound Management Council, which will coordinate actions by responsible authorities as they manage multiple uses within the land and marine environment of Cockburn Sound.

Monitoring and evaluation, and annual reporting to the EPA, stakeholders and the community are the final important steps in the management framework.

(5) Schedules and regulations

Schedules form part of the EPP and carry the same status and enforceability as the EPP. The policy area and environmental quality zones will be placed in Schedules to the EPP, and therefore are only likely to be changed when the policy is reviewed (as it must according to statutory requirements).

However, the environmental quality criteria will undergo continual refinement as scientific understanding improves, and are better placed in Regulations.

Regulations provide a mechanism for change without the need for a formal review of the whole EPP. Figure 1 indicates the relationship of Schedules and Regulations to the EPP.

4 Progress on development of the EQC and on EQO boundaries

Development of EQC

The environmental quality criteria are being developed using approaches and guidelines from the revised Australian and New Zealand Water Quality Guidelines for Fresh and Marine Waters, which should be available to the public in July 2001. However, for three broad ecosystem health indicators (toxic contaminants in sediment, nutrient related indicators and biological indicators) the criteria need to be refined to fit local conditions using local data. The EPA therefore held three technical workshops in February 2001 involving local, national and international technical experts and key stakeholders. These workshops provided guidance on the key environmental quality parameters to be measured and the methodologies and approaches for deriving environmental quality criteria. Key outcomes from the workshops were recorded and distributed to all participants.

Draft environmental quality criteria are now being developed for the protection and maintenance of ecosystem health, recreational and aesthetic use, aquaculture and harvesting of seafood and include water, sediment and biological measures. The assistance of local technical experts has been sought through the establishment of informal working groups. Draft criteria have been derived for aesthetic value and harvesting of seafood. National and international technical experts are currently reviewing preliminary criteria for toxic contaminants in water and sediment. Review of the preliminary criteria for recreational uses has almost been completed by the Health Department of WA. Drafting of the preliminary criteria for ecosystem health for nutrient-related issues and physical water quality, and for aquaculture is almost complete.

A companion document to the EPP will also be produced which will outline how monitoring data should be collected, analysed and interpreted against the environmental quality criteria. This protocol document is shown in Figure 1.

EQO Boundaries

The EPA in its report *Perth Coastal Waters – Environmental Values and Objectives* (EPA, 2000a), presented notional boundaries of zones where various environmental quality objectives would apply. It has endorsed a process to refine those zones. The process will use recent and proposed scientific modelling of Cockburn Sound, and will assist the EPA in understanding the implications for the community, environment and industry of applying various boundaries.

The Department of Environmental Protection is assisting the EPA in this process, and is obtaining advice from a range of technical experts with national and international experience.

Consultation on EQC and EQO boundaries

Once this technical phase has been completed, the draft criteria and boundaries will be reviewed by the Cockburn Sound Management Council and other bodies, and then released for public comment as part of the Draft EPP.

5 Land use planning controls to protect Cockburn Sound

Groundwater and surface water discharge from catchment land uses is one of the major factors affecting the water quality of Cockburn Sound. To manage all the impacts on Cockburn Sound, regional and local land use planning controls are needed.

The EPP will not itself contain land use planning controls but will establish environmental values, environmental quality objectives and a program for protection of those values and objectives and an Environmental Management Plan.

Referral of planning schemes and scheme amendments to the EPA allows consideration of environmental factors at the broad zoning level. It should be noted that a considerable portion of the catchment of Cockburn Sound is currently within an Interim Planning Control Area (following from the Fremantle to Rockingham Industrial Area Regional Strategy). Therefore the Western Australian Planning Commission has planning controls and functions in this area. A Master Plan is required for the Interim Planning Control Area and this

will result in a Town Planning Scheme which will also be referred to the EPA under s.48A of the Environmental Protection Act.

There is need for another mechanism at the local level (for example a protocol, referral mechanism or planning policy) which deals with more detail such as: acceptable land uses in the catchment; or conditions on land use such as minimum lot sizes and level of export of contaminants. Such a mechanism could be a Statement of Planning Policy issued by the Western Australian Planning Commission, which would guide the development of local Town Planning Schemes.

6 Links between the EPP and EMP

The EPP provides the framework for environmental protection or pollution control, has the force of law, and can provide the legal basis for the Cockburn Sound Management Council to develop and implement the Environmental Management Plan.

The Environmental Management Plan (EMP) draws its authority from the EPP and is a key supporting component of it. The EMP will be released after the Minister has approved the EPP. The terms of reference of the Cockburn Sound Management Council require the EMP to be consistent with the EPP.

Figure 1 shows where the EMP fits in the management framework.

7 Initial consultation through the Cockburn Sound Management Council

In initiating the EPP, the EPA has undertaken preliminary consultation through the Cockburn Sound Management Council. The Council's wide and representative membership has provided invaluable feedback on key issues such as the structure of the EPP, the implementation framework, and land use planning controls. This consultation process will continue through the preparation and finalisation of the EPP.

8 Issues to be resolved

The EPA is still in the process of obtaining advice on outstanding issues:

- environmental quality criteria: technical revision of draft EQC;
- boundaries
 - possible adjustment to the southern boundary to include surface and groundwater flows;
 - environmental quality objective (EQO) zones for ecosystem health: to delineate the zones of protection;
- management of cumulative impacts; and
- management of terrestrial groundwater and surface water.

9 Proposed EPP timeframe

The EPA anticipates that the Draft EPP and Regulations containing the environmental values, environmental quality objectives, environmental quality criteria and boundaries will be released for public consultation in the last quarter of 2001. Following analysis and re-writing of the EPP in response to submissions, a revised draft will be transmitted to the Minister for the Environment and Heritage for consideration. The Minister will then consult with others to determine whether further changes are needed. The final Cockburn Sound EPP will then be gazetted.

The Cockburn Sound Management Council expects to release the Draft EMP in conjunction with the Draft EPP.

As part of the Environmental Management Plan (see accompanying EMP Progress Report), a program of implementation, monitoring and reporting procedures will be finalised. These procedures will develop from inter-agency consultation about best management and reporting practice.

Public comment

This progress report is for your information. 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.

References:

1. DEP, (1996). Southern Metropolitan Coastal Waters Study (1991-1994). Summary Report* and Final Report. Department of Environmental Protection, Perth.
2. EPA, (2000a). Perth's Coastal Waters: Environmental Values and Objectives – the position of the EPA, a working document. February 2000. Environmental Protection Authority, Perth.
3. EPA, (2000b). Managing Perth's Coastal Waters: Towards a Cockburn Sound Environmental Protection Policy (EPP). November 2000. Environmental Protection Authority, Perth.

These documents are available for reading in the Department of Environmental Protection Library, 141 St Georges Terrace, Perth and on the EPA web site <http://www.environ.wa.gov.au/>

(* Summary report only available on the web site).

Acronyms

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| CSMC | Cockburn Sound 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 |
| SPP | Statement of Planning Policy |

(Front cover photographs courtesy of the Cockburn Sound Management Council)