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ENVIRONMENTAL PROTECTION AUTHORITY

annual report 2002



Environmental Protection Authority



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ENVIRONMENTAL
PROTECTION
AUTHORITY

ANNUAL REPORT

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TRANSMITTAL TO THE MINISTER

Hon Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT

In accordance with s21 of the *Environmental Protection Act 1986*, I submit the EPA's Annual Report for the year ended 30 June 2003.

It is with pleasure that, on behalf of the EPA, I advise that for the reporting period to 30 June 2003, the EPA has conducted its functions such that it has met its objectives outlined in s15 of the *Environmental Protection Act 1986*. This has been achieved with the assistance of the services and facilities of the Department of Environment.



Dr Walter Cox

CHAIRMAN

7 October 2003

CHAIRMAN'S OVERVIEW



EPA Chairman Dr Walter Cox

The Environmental Protection Authority (EPA) was established by Parliament to provide independent advice, and with the broad objective of protecting the State's environment. This role is undertaken by providing overarching environmental advice to the Minister for the Environment through the preparation of environmental protection policies and the assessment of development proposals and management plans, as well as providing public statements about matters of environmental importance. One of the avenues for public statements is this Annual Report.

The report is structured in a manner which introduces the members of the EPA, and then provides a discussion of the major environmental issues on the EPA agenda, followed by information on the environmental assessment of proposals and planning schemes, strategic assessments and policy development. Towards the end of the report there are details of the EPA's role in the operation of the Waste Management (WA) facilities together with information on legislation issues, consultation, site visits undertaken by the EPA and the work of the Advisory Council to the EPA.

Assessments undertaken by the EPA included a number of proposals for the Burrup Peninsula including an ammonia/urea plant, methanol plant and a methanex methanol complex. There were also a number of mining/petroleum/gas proposals including Hope Downs Iron Ore mine rail and port project, the Koolyanobbing iron ore expansion, mineral sand mines at Tutunup and Ludlow, Ravensthorpe nickel project and the Gorgon gas project on Barrow Island.

The proposed Coral Coast Resort at Mauds Landing in particular generated significant public interest.

There were also a number of proposals to clear native vegetation in both urban and rural areas. Clearing in rural areas is difficult to justify, given the historic loss of biodiversity and the extensive loss of productive land to salinity. The process for considering clearing proposals, however, is complex and the EPA looks forward to further clarity and process improvement following Parliament's consideration of amendments to the *Environmental Protection Act 1986*.

Urban communities are also highly appreciative of remnants of native vegetation and proposals to clear generate considerable interest. Bush Forever has identified a number of sites with high conservation values. Where these sites are held by private landowners there is an expectation of a negotiated outcome which balances conservation and the owners' land use aspirations. In order to retain its independence the EPA is not bound by these negotiations. It does, however, assess the outcome of the negotiations that are incorporated into subdivision plans or amendments to Town Planning Schemes and the Metropolitan Regional Scheme.

A major part of the work of the EPA is the provision of advice to the Minister on the assessment of development proposals. These proposals may be from either the private or public sector, including government departments. The EPA values very highly its discussions with proponents in relation to their proposals, the preparation of the environmental review documents and the establishment of environmental commitments. In addition, the EPA encourages proponents to actively pursue a strategy of effective public consultation.

The proposed Gorgon gas project on Barrow Island provided an opportunity to pioneer sustainability assessment with the company Chevron Texaco submitting an economic, social and environmental impact report. The Department of Industry and Resources was responsible for an independent economic and social assessment, the Conservation Commission provided advice on the conservation aspects of the proposal, which seeks location on an "A" Class Nature Reserve vested in the Conservation Commission, and the EPA undertook an environmental assessment. Following a period of public comment on the reports Government will consider whether there is "in principle" support for a Barrow Island location for the proposal. If there is "in principle" agreement, the detailed proposal will be subject to full assessment under Part IV of the *Environmental Protection Act 1986*.

The experience gained from this sustainability assessment will undoubtedly lead to refinement in the process for future assessments.

I take this opportunity to thank proponents of proposals, members of the community and advisers to the EPA from both the public and private sectors. I thank also the staff of the EPA Service Unit for the part each officer has played in assisting the EPA in doing the work of protecting the environment. I'm delighted by the quality of advice received by

EPA members. It is very important that all those involved have confidence that the process will deliver outcomes that give full attention to environmental protection.

A number of EPA members, including the former Chairman Dr Bernard Bowen, former Deputy Chairman Dr Libby Matiske, Associate Professor Frank Murray and Mr Ian LeProvost, retired in 2002/03 and I thank them for their contribution to protecting the Western Australian environment.

Bernard Bowen served for 9 years with 6 years as Chairman, and his outstanding leadership was appreciated by EPA members and undoubtedly has resulted in a beneficial impact on environmental outcomes.

The Minister for the Environment, Dr Judy Edwards MLA continues to take a deep interest in issues addressed by the EPA, and her interest and support is appreciated.

A handwritten signature in black ink, appearing to read "W. J. Cox". The signature is written in a cursive style with a long, sweeping underline.

Dr W. J. Cox
CHAIRMAN

MEMBERS

The EPA has five members: a full-time Chairman, a part-time Deputy Chairman and three part-time members. However, members work far in excess of their part-time appointments. A record of members' attendance at EPA meetings is provided in Appendix 9.

Dr Walter Cox

EPA Chairman. Commenced as a member in January 2003 and as Chairman from 31 March 2003, for a term ending 30 March 2006.

Prior to taking up his position as EPA Chairman, Dr Cox was Executive Dean of the Faculty of Business and Public Management and Pro Vice-Chancellor at Edith Cowan University.

Dr Cox has a Bachelor of Science (Agriculture) degree from the University of Western Australia and a PHD in Soil Science from the University of California, Davis.

He has previously held a number of chief executive officer positions in Government including Executive Director, Department of Conservation and Land Management, East Perth Redevelopment Authority, Subiaco Redevelopment Authority and Managing Director of the Water Authority of Western Australia.

Dr Cox is the Chairman of the Independent Audit Group that audits water use in the Murray-Darling Basin and reports to the Murray-Darling Basin Ministerial Council.

He has served on a number of Boards and Committees including WA and State Planning Commission, Water Services Association of Australia (Chairman), Workpower and is presently the President of the Institute of Public Administration of Australia (WA Branch) and the Chairman of Leadership Western Australia.

Dr Roy Green, Deputy Chairman

Deputy Chairman of the EPA from 13 May 2003 to 6 May 2005, previously a member from May 1998 to May 2000 and Deputy Chairman from 1 January 2000 to 6 May 2000.

Dr Green has a Bachelor of Science degree from the University of Liverpool and a PHD from the University of Toronto.

Dr Green has a wealth of national and international experience. He is currently:

- ## President, Murray-Darling Basin Commission;
- ## Member, Natural Heritage Trust Advisory Committee;
- ## Visitor, Cooperative Research Centre for Greenhouse Auditing;
- ## Board Member, Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management; and,

€# Member, Technical Advisory Committee, Australian Nuclear Science and Technology Organisation.

Dr Green's experience on boards, committees and advisory bodies includes a Federal Cabinet appointment to chair three (Agriculture, Fisheries, and Forestry) of the nine working groups which reported to Government on Ecologically Sustainable Development (1990-1991).

From December 1994 to February 1996 Dr Green was Chief Executive/Acting Chief Executive, Commonwealth Scientific and Industrial Research Organisation, after heading the CSIRO Institute of Natural Resources and Environment from 1988 till 1994.

From April 1996 to November 1997 he was an expert consultant with the Intergovernmental Oceanographic Commission, based in Paris, a body responsible for the coordination of international research, services, data systems and education and training in coastal and marine areas

Dr Green has also served as:

- €# Chair of the Pulp and Paper Research Advisory Board (1989-1994);
- €# Chairman of the Board of Australian Marine Science and Technology Ltd (1991-95);
- €# Chair of the Heads of Marine Agencies (1988-95);
- €# Member of the State of the Environment Advisory Council (1994-96);
- €# Member of the Australian Marine Industries and Sciences Council (1994-96);
- €# Member of the Australian Space Council (1993-96); and,
- €# Member of the Board of the Centre for Innovation and International Competitiveness, University of Sydney (1992-95).



*Current members of the Environmental Protection Authority (from back left)
Ms Joan Payne, Mr Denis Glennon, Dr Andrea Hinwood
(from front left) Dr Roy Green (Deputy Chairman) and Dr Wally Cox (Chairman)*

Mr Denis Glennon

Member from 1 January 1998 until 30 March 2006

Mr Glennon is Managing Director of Environmental Solutions International Ltd, a company specialising in environmental management, contaminated site assessment and remediation, and hazardous waste, sludge and wastewater treatment.

Mr Glennon has a wide knowledge of environmental and pollution management systems and engineering, ecologically sustainable development and environmental management policy formulation, especially in regard to industrial waste disposal.

Mr Glennon is a Director and immediate past Chairman of the Environment Management Industry Association of Australia (EMIAA), which comprises more than 200 private sector companies, research centres, tertiary institutions and Federal and State government departments.

Ms Joan Payne

Member from 31 March 2003 until 30 March 2006

Ms Payne, currently the President of the Waterbird Conservation Group, has developed expertise in a broad range of environmental issues through interaction with conservation and community groups as well as Government Departments (State and Federal) since 1976.

Ms Payne was an Executive Member of the Conservation Council of WA from 1988 to 2001 including holding the position of Vice President for a number of years.

Her membership, both past and present, of Government committees and working parties, includes:

- ## The Western Australian Water Resources Council;
- ## Water Planning and Policy Standing Committee;
- ## Darling Range Regional Park Community Consultative Committee;
- ## National Wetlands Advisory Committee;
- ## Department of Environmental Protection's System 6 Implementation Group;
- ## Water and River Commission Stakeholders Council;
- ## Water and River Commission State Water Reform Council;
- ## System 6 Update Technical Advisory Group;
- ## Department of Conservation and Land Management's Wetlands Coordinating Committee;
- ## National Consultative Committee on Kangaroos; and,
- ## National Shorebird Conservation Taskforce.

Dr Andrea Hinwood

Member from 7 May 2003 until 6 May 2008.

Dr Hinwood is a senior lecturer in Environmental Management at Edith Cowan University and has a Masters in Applied Science from RMIT, Victoria and a PhD in environmental epidemiology from Monash University, Victoria.

Dr Hinwood has worked in the environmental protection area for over twenty years and has a wide experience in investigation, monitoring and management. She has managed the areas of contaminated sites, chemicals management and emergency response for the Victorian EPA prior to managing air quality with the Department of Environmental Protection in Western Australia. Dr Hinwood's research interests are in the areas of exposure assessment, hazardous air pollutants, health and environmental impacts of chemicals in the environment.

Dr Hinwood has a breadth of national and international experience, participating in a range of Ministerial and NEPC working groups. She chaired one of the UNEP Technical Options Committees on substances that deplete the ozone layer and was a member of the Technology and Economic Assessment Panel under the Montreal Protocol for a period of five years. More recently she has been an active member of the International Society for Environmental Epidemiology.

Departing EPA Members

Ending their terms with the EPA this year were **Dr Bernard Bowen**, Member and Deputy Chairman from 14 January 1994 and Chairman from 12 August 1997 until 30 March 2003;

Dr Elizabeth Mattiske, Member from 6 May 1998 until 5 May 2000 and Deputy Chairman from 6 May 2000 until 6 May 2003;

Mr Ian Le Provost, Member from 1 January 2000 until 31 December 2002; and,

Associate Professor Frank Murray, Member from 6 May 2000 until 6 May 2003.



Staff of the Office of the Chairman and the EPA Service Unit

MAJOR ENVIRONMENTAL ISSUES

The Environmental Protection Authority (EPA) has overarching responsibility for the provision of advice to Government on environmental matters, and the public expectation is that the EPA will assume a broad custodial, or guardianship role in relation to the protection of air, water, soil, flora, fauna and the maintenance of biodiversity.

In fulfilling this role, the EPA has available an array of mechanisms, including provision of advice of either a general or particular nature under s16 of the *Environmental Protection Act 1986* (EP Act), and preparing assessment reports and Environmental Protection Policies (EPPs), as well as Guidance Statements and Position Statements. In addition, the EPA retains a close link with the Government Departments which have a responsibility for the management of natural resources. Further information on the role of the EPA is provided in Appendix 1.

Some elements of the EPA's custodial responsibilities are discussed below.

Sustainability

One of the challenges facing the entire community is to ensure that the quality of life we currently enjoy will be available to future Western Australians. This requires that we all change some aspects of our lifestyle to ensure that we live more sustainably.

The work of the EPA is largely about the biophysical environment: protecting plants and animals and the habitats that sustain them, with social aspects also considered. The EPA works from a model that recognises that economic activity occurs within society's broader needs, with that activity constrained by the capacity of functioning natural ecosystems. Accordingly, any consideration of sustainability requires integrating ecological thinking into all social and economic planning and actions.

To assist in the discussion about sustainability and to link into the development of the Government's State Sustainability Strategy (SSS) the EPA released a preliminary EPA Position Statement on sustainability in October 2002. This Position Statement discusses the concept of sustainability and draws attention to a range of global and State issues such as sustainable natural resource management, energy consumption, communities, transport and the production and use of minerals. It also discusses sustainability in triple bottom line reporting, and acknowledges the requirements for education and planning for the future.

In undertaking this task, the EPA will work closely with the community and other key stakeholders in an attempt to translate the principles of sustainability into operational systems to improve the health of the environment. The completion of the Government's State Sustainability Strategy later this year will provide direction to this process.

Natural Resource Management

The EPA is well placed to provide leadership in the achievement of environmental objectives in natural resource management (NRM) because; it is the independent advisor to Government on environmental matters, is a statutory authority and has been assigned by Government the roles of NRM audit and State of the Environment (SOE) reporting.

In Western Australia, NRM involves the ecologically sustainable management of the land, water, air and biodiversity resources of the State for the benefit of existing and future generations, and for the maintenance of the life support capability of the biosphere. This includes State marine waters.

The EPA provides a decision-making framework on NRM that leads to environmental outcomes and from which government and the community can carry out their responsibilities. Consistent with both National and State approaches, this framework applies the environmental management system (EMS) model to NRM. EMSs provide a common thread through activities such as programs, policies, strategies and projects. The common threads are (see figure 1):

- ## identifying environmental assets and their corresponding environmental values and beneficial uses;
- ## identifying and defining threats to those environmental values;
- ## prioritising assets and threats;
- ## formulating policy, objectives, targets and benchmarks to address threats and to protect environmental values;
- ## implementing programs and projects in accordance with policy;
- ## monitoring change in resource condition as a result of management activities;
- ## evaluating the effectiveness of policies and management activities; and
- ## making recommendations to improve resource condition and environmental management performance.

The EPA has a major role in facilitating this process, in consultation with the Government's NRM agencies, by establishing, in an inclusive way, overarching environmental values, objectives and targets, which agencies should take into account when giving attention to their environmental responsibilities. The EPA also has a role at the evaluation level in reviewing environmental performance against objectives and targets so as to evaluate the performance of NRM.

The EPA and NRM agencies work closely together to ensure that the process for each review of environmental performance (against objectives and targets) is well understood by all parties prior to the commencement of a review. This includes the provision of information, the part to be played by expert groups and feedback to the agencies on the findings by the EPA.

It is important that the EPA retains an independent position in these undertakings and in providing advice to the Minister for the Environment and the public generally. This is to ensure that the Western Australian community has confidence in an impartial system of

review and evaluation and is consistent with the EPA's role as defined in the *Environmental Protection Act 1986*.

The EPA will also be working in close association with WA's newly formed NRM Council. The Council's functions are:

- # adopt a community leadership role for NRM in WA;
- # provide high level policy and strategic advice on NRM to the Chair of the Cabinet Standing Committee on Environmental Policy; and,
- # engage and inform stakeholders about managing the State's natural resources, and consult and involve the community who have an interest in NRM when developing policy or addressing an issue.

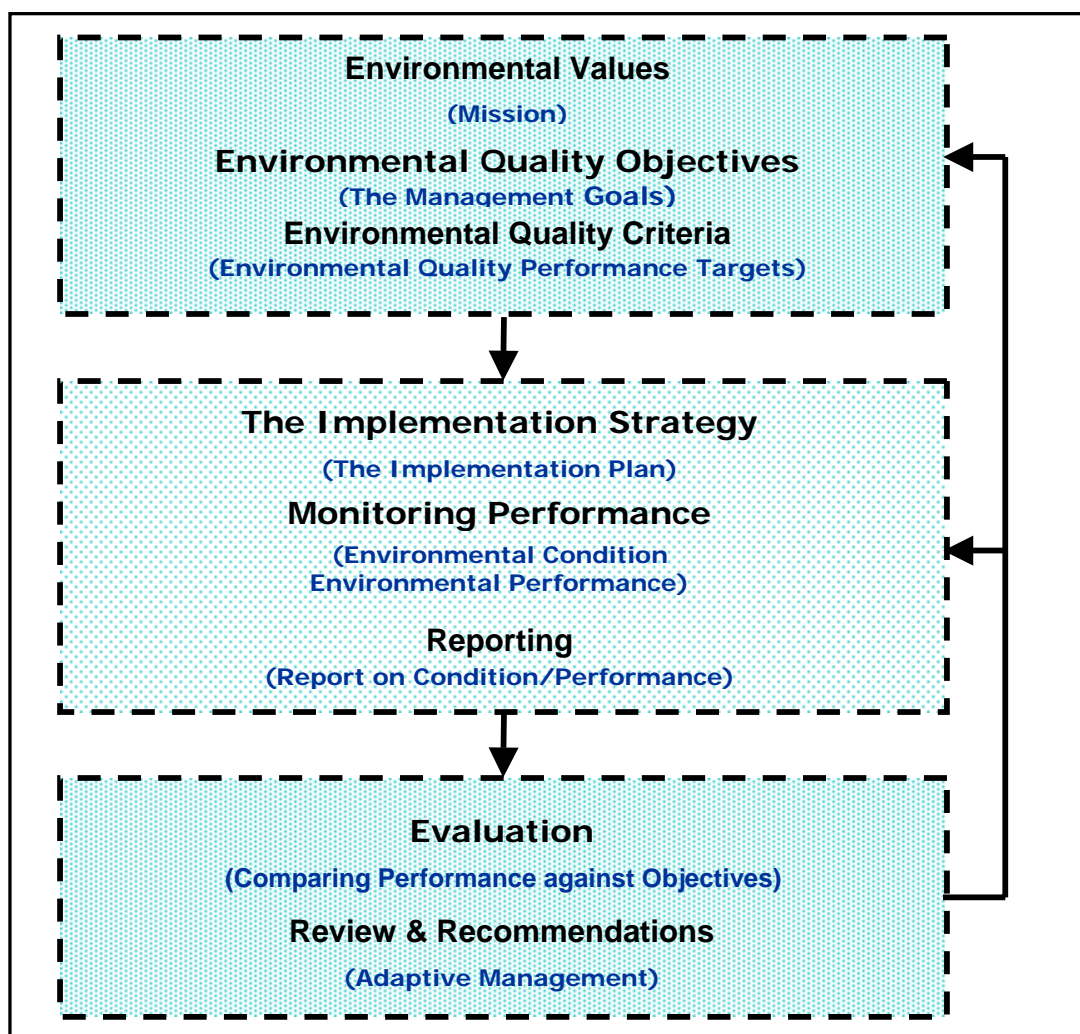


Figure 1: Overarching environmental management system, noting that the wording and framework may be amended for specific circumstances and projects

The EPA developed its role in NRM during 2002 and 2003, and to assist in this process the EPA employed consultants. The focus of the work was on rangelands and salinity, and additional information was gathered through cooperation with NRM agencies. The EPA also received an extensive report on Peel-Harvey, prepared by a specialist advisory committee, and has since released an EPA report on Peel-Harvey (January 2003). Finally, the EPA has responsibility for preparing the State of the Environment Report, which emphasises the responsibility of the EPA in all phases of assessing environmental performance, including NRM.

State of the Environment Reporting

In September 2001, the Minister for the Environment requested the EPA to develop a proposal to undertake the State of the Environment (SOE) reporting programme. The EPA advised the Minister that it would do so, but that dedicated resources would be required to support the programme.

The Minister accepted the EPA's proposal and on 9 July 2002, requested the EPA to coordinate the next SOE reporting cycle. This request acknowledged that additional resources would be sought, but in the interim, the EPA could undertake preparatory action to initiate the reporting process within existing resource constraints.

The focus of this preparatory work was on reviewing the previous SOE reporting cycle, developing a State monitoring and evaluation framework and preparing material for public consultation on the reporting process. This work has been completed and reported to the Minister.

The EPA is now preparing a 2003-2004 SOE work program that builds on the State monitoring and evaluation framework and other SOE planning activities. This work will closely related to the EPA's work in environmental performance evaluation of NRM

Broad-scale Clearing of Native Vegetation for Agriculture

Since the last annual report the EPA has released three assessments reports on proposals for broad-scale clearing of native vegetation for agricultural purposes as follows:

July 2002	Clearing of native vegetation on Melbourne Location 3927, 10 km east of Jurien
December 2002	Clearing of approximately 570 hectares of native vegetation for pine and sandalwood establishment, Lot 7778 Wannamal South Road, Wannamal
February 2003	Clearing of approximately 300 hectares of native vegetation for livestock grazing, Lot 92 Coolinup Road, Shire of Esperance

In the reports the EPA recommended against granting approval for broad-scale clearing of native vegetation within the agricultural region, consistent with the Authority's Position Statement Number 2 entitled, *Environmental Protection of Native Vegetation: Clearing of Native Vegetation With Particular Reference to the Agricultural area*.

While the average area potentially impacted by clearing proposals referred to the EPA has reduced in recent years, the number of proposals referred by the Commissioner for Soil and Land Conservation has been maintained or has slightly increased during late 2002 and early 2003. A significant proportion of the proposals recently referred to the EPA has been subject to environmental impact assessment under Part IV of the EP Act, as this is currently the only formal mechanism for consideration of the full scope of environmental impacts of these proposals (and, where applicable, for securing their effective management) available to Government under existing legislation.

For proposals that are inconsistent with the EPA's Position Statement No 2 on Environmental Protection of Native Vegetation, the EPA will continue to determine that the proposal should be assessed at the level of Proposal Unlikely to be Environmentally Acceptable (see Appendix 4). This level of assessment was introduced into the Environmental Impact Assessment Administrative Procedures in 1999.

The EPA expects that the number of proposals for broad-scale clearing of native vegetation referred to the EPA will be significantly reduced following the passage of the proposed amendments to the EP Act currently before Parliament. These amendments will provide for the introduction of a permit system providing consideration for, and control over, the implementation of the majority of proposals involving clearing of native vegetation.

Forest Management

The Conservation Commission has been developing its proposed Forest Management Plan since the draft Forest Management Plan was released by the Commission in August 2002. The EPA has received a full set of submissions on the draft Plan, but the Plan has yet to be submitted to the EPA for assessment. This is expected to occur in July and the EPA will then provide its advice to the Minister during the third quarter of 2003.

Perth's Water Resources

Another year of low rainfall and runoff in the hills catchments kept Perth's water resources at critical levels. This was reflected in increasing stress being experienced by water dependent parts of our environment, such as wetlands and some vegetation.

The Water Corporation examined the options of additional groundwater abstraction from current Water Corporation bores, new bores into the deep Yarragadee aquifer beneath Perth, and a proposed reverse osmosis desalination plant in Kwinana.

The EPA assessed the new desalination plant of 30 gigalitres capacity through an Environmental Protection Statement. Key environmental issues related to discharge of brine into Cockburn Sound and the greenhouse gas emissions from the power provision for this energy-intensive project. The EPA found that these and other environmental issues could be acceptably managed by the Water Corporation.

With ongoing low rainfall, the Water Corporation has also been investigating additional water sources. The EPA will provide Section 16 advice to the Minister for the Environment in the last quarter of 2003 on a plan to allocate 45 gigalitres from the deep Yarragadee aquifer between Nannup and Margaret River in the South West.

The combination of low groundwater recharge, public and private groundwater abstraction and interception by pine plantations continues to place significant and increasing pressure on the environmental values of the Gnangara Mound. The continual lowering of groundwater levels threatens a number of wetlands on the Mound and accelerates the long term trend towards the predominance of xerophytic vegetation . The EPA continues to be concerned about both of these aspects.

Peel-Harvey

In 1989 the EPA's assessment of the Peel-Harvey Management Strategy was concluded with the setting of Environmental Conditions by the Minister for the Environment. The Management Strategy was aimed at implementing the construction of the Dawesville Channel to improve the flushing of the Peel-Harvey estuarine system and the development of a suite of catchment management instruments designed to reduce the inflow of phosphorous (the limiting factor in algal blooms) into the estuaries from the coastal catchments.

In January 2003, the EPA published its report to the Minister on the efficacy of the conditions (EPA Bulletin 1087). The report concluded that the environmental changes predicted by EPA in its 1988 assessment were valid.

However, despite some excellent work on catchment management achieved by the local community with support from government, the Catchment Management Plan required in the Environmental Conditions is yet to be developed.

The EPA also recommended that, where government was a proponent under the EP Act, adequate resources needed to be provided for conditions and commitments to be met.

The EPA acknowledges the assistance of the Peel-Harvey Expert Review Committee, established by the Authority to assist in its review task. (The Committee's report to the EPA is contained in an Appendix to EPA Bulletin 1087.)

The Authority has proposed a three-point plan to meet the environmental objectives for Peel-Harvey.

Firstly, the EPA and the Commonwealth Government have a contractual agreement to prepare a jointly funded Water Quality Improvement Plan for the Peel-Harvey system. This is expected to be completed by December 2004 and will incorporate extensive community input, especially through the Peel-Harvey Catchment Council.

The Water Quality Improvement Plan is expected to be an important component of the wider Catchment Management Plan for which the Catchment Council will assume a major responsibility. Underpinning the Water Quality Improvement Plan are seven supporting projects, also Commonwealth-State funded, to be implemented by a number of agencies. The EPA itself is responsible for one of them: development of a decision support system for modeling phosphorous exports from different land uses.

The results of these seven projects, which come under the Commonwealth Coastal Catchment Initiative programme, will help finalise the Water Quality Improvement Plan. The total funding committed is more than \$1.5m and this is a significant boost to progressing the catchment management plan work.

Secondly, the EPA will re-open its review of the *Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992* and to advise Government on any appropriate changes that should be made to this EPP. The Authority completed its statutory seven year review of the EPP in 1999 and recommended to the Minister that the Policy remain extant until the EPA has reviewed the Environmental Conditions of the Peel-Harvey Management Strategy.

Thirdly, the EPA understands that responsible government agencies acting on behalf of proponent Ministers may prepare changes to the Environmental Conditions, set in 1989, to bring them up to date.

National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Guideline No. 4) and Australian Guidelines for Water Quality Monitoring and Reporting (Guideline No. 7)

The National Water Quality Management Strategy (NWQMS) is the product of two Ministerial Councils: the Australian and New Zealand Environment and Conservation Council (ANZECC) and the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ). The Strategy consists of 20 guidelines, most of which are now completed.

NWQMS Guidelines Nos. 4 and 7 are the most significant with respect to aquatic ecological protection.

Prior to signing off both Guidelines in 2000, the Minister for the Environment requested the EPA to advise on how these Guidelines should be implemented in Western Australia. The EPA prepared an Implementation Framework and consulted with all key stakeholders and peak bodies during the process.

The State Government stakeholders invited to be involved were:

- ⌘ Department of Agriculture;
- ⌘ Department of Conservation and Land Management;
- ⌘ Department of Environmental Protection;
- ⌘ Department of Fisheries;
- ⌘ Department of Health;
- ⌘ Department of Local Government and Regional Development (Regional Development Council);
- ⌘ Department of Mineral and Petroleum Resources;
- ⌘ Department for Planning and Infrastructure;
- ⌘ Office of Water Regulation;
- ⌘ Water Corporation;
- ⌘ Water and Rivers Commission;
- ⌘ Western Power; and,
- ⌘ WA Aboriginal Native Title Working Group.

The non-Government stakeholder invited to be involved were:

- ⌘ Aboriginal & Torres Strait Islander Commission;
- ⌘ Aquaculture Council of WA;
- ⌘ Association of Mineral Exploration Companies;
- ⌘ Australian Petroleum Production & Exploration Association Ltd;
- ⌘ Australian Water Association;
- ⌘ Busselton Water;
- ⌘ Chamber of Commerce & Industry of WA;
- ⌘ Chamber of Minerals & Energy of WA;
- ⌘ Conservation Council of WA;
- ⌘ Environmental Consultants' Association;
- ⌘ Housing Industry Association;
- ⌘ Kwinana Industries Council;
- ⌘ Pastoralists and Graziers Association of WA;
- ⌘ Regional Development Council;
- ⌘ Western Australian Fishing Council;
- ⌘ Western Australian Municipal Association;
- ⌘ Western Australian Farmers Federation;
- ⌘ Unions WA; and,
- ⌘ Urban Development Institute, WA Division.

Following stakeholder consultation, the EPA reported back to the Minister for the Environment in EPA Bulletin 1078 (The Implementation Framework). At the Minister's request, the EPA was further involved in a public review of the Framework between December 2002 and February 2003. The EPA subsequently provided advice to the Minister for the Environment in June 2003.

The EPA Service Unit is now preparing the Framework as a draft Government publication for Cabinet comment and endorsement for publication.

This Framework applies to the protection of ambient waters in Western Australia. The scope of the Framework relates primarily to environmental protection and some social matters. The Framework is not a legal or coercive Framework. Implementation however, would assist environmental policy formulation under Part III of the EP Act, and the setting of ministerial and licensing conditions on activities assessed under Parts IV and V of the EP Act.

The Framework requires that:

- ## All significant water resources in Western Australia be defined spatially, on a priority basis;
- ## Through a thorough consultative process involving the community, **environmental values** for water quality be developed for each significant water resource. An environmental value is a particular value or use of the environment important for a healthy ecosystem or for public benefit;
- ## For each environmental value, a set of broad **environmental quality objectives** be developed. An environmental quality objective should reflect the desired state of water quality;
- ## For each broad environmental quality objective, **environmental quality criteria** - sometimes known as benchmarks - be set. They can be environmental quality guidelines or standards. In appropriate circumstances, targets can be used as an alternative.

The cumulative outcome of systematically setting environmental values, objectives, guidelines and standards or targets for each of the State's significant water bodies, and having appropriate monitoring, auditing and reporting procedures, should be sustainable water resources that meet the needs of the State, communities and the environment.

If Cabinet accepts the Framework, the EPA anticipates that the Framework would form part of the draft State Water Quality Management Strategy.

University Linkage Projects

The EPA is mindful of the assistance provided by University staff within the environmental disciplines when matters of concern to the EPA are being discussed and a wider area of expertise is needed.

In recognition of the desire to foster excellence in environmental assessment standards, to obtain additional intellectual input and to raise University awareness of current environmental issues, the EPA decided to set aside a small amount of money to assist post graduate students in areas of work of particular interest to the EPA. The assistance provides funding for travel and accommodation, field work and other encouragements such as prizes for outstanding performance by students in a relevant environmental area.

The program commenced in October 2000. The outcomes of three of the University projects funded in previous years were reported to the EPA this financial year:

- ## reviewing the effectiveness of Ministerial Conditions in improving environmental practice in Western Australia;
- ## assessing the health of the Yornaning catchment; and,
- ## fauna biodiversity (first year report of three year program received).

The existing grant for the PhD project received \$5000 for the second year of the project on fauna biodiversity. The first year of the three year program has been completed and reported on. A commitment to fund the third year of the project has been made by the EPA to the extent of \$5000.

There has been one new grant awarded and funded this financial year totaling \$1 800. This grant was to a PhD project on the impact of human activity on the use of Cockburn Sound by Bottlenose Dolphins.

Students are required to report to the EPA on the results of their research work, with special emphasis on the aspects which they believe are most relevant to the EPA decision-making process.

It is unlikely that the EPA will be able in a position to sponsor additional university projects in the next financial year due to budgetary constraints.

ENVIRONMENTAL ASSESSMENT OF PROPOSALS

The EPA assessed a diverse range of development proposals covering resource development, industrial processing, infrastructure and land use developments, as well as planning schemes and amendments.

A total of 431 development proposals and planning schemes were referred to the EPA for consideration. Of these, the EPA determined that 44 proposals required formal assessment, reporting and recommendations to the Minister for the Environment. A further 166 required informal review with specific advice to the proponents.

During the year, 46 formal assessments were completed. The Level of Assessment for each proposal or planning scheme depends on the significance of the environmental impacts. The number of assessments completed in each Level of Assessment categories in 2002-03 is shown in Table 1.

Table 1: Environmental Protection Authority's Assessments in 2002-03

Level of Assessment	Assessments
Environmental Review and Management Program (ERMP)	1
Public Environmental Review (PER)	17
Planning Scheme Environmental Review (ER)	1
Environmental Protection Statement (EPS)	3
Assessment on Referral Information (ARI)	6
Formal under Part IV	3
Proposal Unlikely to be Environmentally Acceptable (PUEA)	3
Section 46 Change to Conditions	6
Section 16 Strategic Assessment	6

A list of all assessments completed is set out in Appendices 2 to 5. Some of the more significant assessments are discussed below, preceded by a brief discussion of some overarching issues in relation to the environmental assessment process.

Demonstrating Environmental Acceptability

The environmental impact assessment (EIA) process is predicated upon a proponent being responsible for demonstrating that a proposal is environmentally acceptable. During the process the EPA works with the proponent to assist in defining what is considered acceptable for the project. An important part of the process is the proponent undertaking the necessary environmental studies and surveys and preparing the environmental review document.

Environmental review documents need to:

- ≠# describe the potential impacts on the environment of the proposal;
- ≠# show that 'best practicable' steps will be taken to minimise impacts;
- ≠# commit to appropriate actions and measures to manage impacts and to mitigate for unavoidable environmental losses resulting from the proposal; and
- ≠# justify the proposition that the impacts of the proposal, both individually and collectively, should be judged by the EPA to be environmentally acceptable.

Contemporary environmental protection principles require that, as a society, we no longer simply meet minimum environmental standards, but that we adopt best practicable steps to avoid and minimise impacts. This applies particularly to the emission of pollutants. Consistent with these principles, proponents need to demonstrate that best practicable environmental measures will be adopted as part of the proposal.

The EPA appreciates that there are no formal specifications for what constitutes best practicable measures in all situations where emissions or other environmental impacts will occur. However, as part of the EIA process, the EPA expects proponents to

investigate this, to the extent possible, in justifying that the proposal represents best practicable measures.

The EPA recognises that, in some circumstances, proponents will not have advanced sufficiently with the design of the project and selection of technology to demonstrate best practicable measures during the EIA process. In these circumstances, the EPA expects that proponents will commit to demonstrating ‘best practicable’ measures, both during the design phase of the project and before an application for Works Approval is submitted. This commitment would then become part of the conditions of approval for the project.

For many environmental factors, particularly those related to impacts on the biological and physical environment, defining environmental acceptability is not straightforward. There are no simple answers to ‘how much biodiversity can we lose?’ or ‘what is the sustainable capacity of this system?’. The difficulty is compounded by limitations in our ability to predict with confidence ecological responses or consequences associated with particular impacts, or combination of impacts, in both a local and regional context.

The EPA recognises that it is often not possible for proposals to avoid all impacts on biological and physical systems. However, where impacts are unavoidable, the EPA does expect proponents to develop appropriate mitigation measures as part of their proposal. This applies particularly to the loss of vegetation and wetlands. Proponents should develop mitigation strategies which seek to increase protection of, or restore, environmental values elsewhere for those lost as part of the project. The EPA believes that as part of good corporate environmental responsibility, proponents should seek to ensure that a proposal results in a ‘net environmental benefit’, as far as is reasonable.

To assist proponents in the EIA process, the EPA prepares Position Statements and Guidance Statements to provide information about the EPA’s thinking in relation to aspects of the assessment process, including environmental acceptability, to guide proponents on the standards and information requirements for assessment.

In parallel with this, where proposals involve major environmental issues and acceptability criteria are uncertain, and where there is a need to have the highest degree of confidence in the prediction of impacts and their consequences, the EPA is increasingly encouraging proponents to establish peer review panels of specialists to provide guidance in the environmental studies and review environmental documents before being submission to the EPA and release for public comment. In addition to being experts in a particular environmental field, peer review panel members often have specific knowledge relating to the broader geographic location of a proposal is to be located, enabling regional cumulative impacts to be considered more thoroughly.

The EPA also encourages meaningful consultation by proponents with relevant public and government agency stakeholders during the preparation of their environmental review reports, as part of best practice EIA.

It is the EPA's experience that where proponents clearly embrace the EIA process and responsibility to define and manage the impacts of a proposal to consider the proposal in a broader bioregional, ecosystem, and social surroundings context, and to justify the acceptability of the proposal, the EIA process is less burdensome and, a higher quality project in terms of environmental outcomes, is produced

The Importance of Context

An important starting point for the EPA in carrying out EIA is the consideration of the type of proposal and the environmental context of the proposed location.

Context may include aspects such as:

- ## current land uses on the site and in the general region;
- ## land tenure;
- ## the environmental values of the site and adjacent areas;
- ## community expectations about the appropriate use of special areas, including national parks and nature reserves, and how these expectations may impact upon other proposed activities;
- ## biodiversity on-site and in a regional context;
- ## the environmental 'balance sheet' in regard to potential environmental gains and environmental losses from the proposal, on both local and State scales;
- ## cumulative impacts; and,
- ## the balance between an individual's perception of their right to develop and the collective interests of the community in relation to wise use of environmental resources and intergenerational equity.

There are many aspects taken into account by the EPA in forming its overall judgement of environmental acceptability, including consideration of the overall environmental costs and benefits, and who bears those costs (community, proponent or a reasonable balance).

An ideal development could be regarded as one which demonstrates good environmental outcomes and is seen by the community as a socially justifiable development, in terms of overall environmental costs and benefits. Such a project would achieve a sensible balance between environmental costs and benefits and would not put an unreasonable burden on the community to bear the environmental costs, either in this generation or in subsequent ones.

Timelines for Environmental Impact Assessment of Proposals

The EPA recognises that proponents are usually keen to obtain environmental approval for the projects as early as possible to assist with establishing 'bankability' for the projects. However, proponents need to appreciate that the EIA process is an important one in demonstrating the environmental acceptability of projects, and that adequate time

must be allowed for the necessary surveys and studies to be undertaken, for public input and government agency review, and for the EPA to evaluate the impacts and to provide its report and recommendations to the Minister.

Time must also be allowed for the Minister for the Environment to consider any appeals against the EPA's report, and to consult with other Ministers and decision-making authorities regarding Ministerial Conditions of approval. While the EPA is continually seeking to improve timelines for assessments, adequate time must be allowed to undertake responsible EIA.

The EPA's experience is that, generally, where proponents allow adequate time in the project feasibility and planning stage to undertake thorough EIA studies, consult with the community and evaluate ways to minimise and mitigate the environmental impacts of the project, progress through the EIA process is expedited and the overall development schedule is met.

Where a proponent seeks to compress the period for undertaking environmental assessment and consultation, difficulties often arise during the review by government agencies and the EPA's evaluation, such that the EPA's reporting to the Minister for the Environment is delayed.

Table 2: EPA Timelines for major projects (in weeks)

Assessment Phase		2000/01	2001/02	2002/03
From Level of Assessment set to proponent report release	Mean	42	35	23
	Low*	21	21	4
	High*	72	68	53
Public Review Period	Mean	5	7	7
	Low*	4	4	2
	High*	10	11	12
From end of public review period to EPA report	Mean	28	27	31
	Low*	18	9	6
	High*	52	55	94
From end of appeal period to approval statement	Mean	12	22	16
	Low*	6	6	7
	High*	42	76	36
Total, from level of assessment set to issue of statement.	Mean	88	93	77
	Low*	64	46	27
	High*	134	175	149

* Represent extremes across separate projects. Total is not cumulative.

Table 2 above indicates the mean time and range of times taken to complete assessments for major projects in 2002/03 compared to previous years. The data shows that timelines have generally improved over the last few years. The data highlights however, that for major project assessments, proponents need to allow 1 to 1½ years to undertake the

necessary studies and prepare the environmental report, for the public review and response to issues, the EPA assessment, and determination of any appeals and issue of approval.

To assist in improving timelines, in September 1999 the EPA introduced a number of new levels of assessment to streamline the assessment process for proposals where the impacts were expected to be reasonable and manageable. These are now referred to as 'Assessment on Referral Information' (ARI) and 'Environmental Protection Statement' (EPS) in the revised Administrative Procedures for EIA referred to above.

During the year, nine projects were assessed under these streamlined processes (see Appendix 3).

Where a project is subject to one of these levels of assessment, the EPA expects the proponent to have consulted with the community and government agencies while undertaking environmental studies and preparing the environmental document, and to have addressed issues raised, so that once the EPA has received the environmental document there is no need for a formal public review period. Under these circumstances the EPA aims to provide its report and recommendations to the Minister for the Environment within 4 weeks of receiving the proponent's final environmental document.

For projects which are suitable for assessment through these streamlined processes, the EPA's experience has been that this has significantly reduced timelines over what would be required for the full EIA process.

To assist in better communication and reporting of timelines for EIA, during the year the EPA began placing project-specific timelines on its website, so that proponents and the community can identify the current stage of a project in the assessment process. This also provides advanced notice of timing for the next step in the assessment.

Also, the EPA now includes in its assessment reports the timeline taken for each phase of an assessment and the total time taken.

MAJOR PROJECTS

Of the proposals assessed during 2002/2003, the EPA was particularly pleased with the quality of environmental assessment, the consideration of ways to mitigate for environmental impacts, and the proponents' willingness to consider alternative approaches to achieving a positive environmental outcome in relation to the following proposals:

- ## Hope Downs Management Services Pty Ltd's Iron Ore Project, Rail and Port Facility, Pilbara;
- ## HIsmelt (Operations) Pty Ltd's Commercial HIsmelt Plant, Kwinana; and,
- ## Cable Sands (WA) Pty Ltd's Ludlow Titanium Minerals Mine, South of Bunbury.

A number of the more significant assessments completed during the year are discussed below.

Austeel Pty Ltd Iron Ore Mine, Downstream Processing and Port, Cape Preston

The proposal by Austeel Pty Ltd involves the mining of iron ore from a site south of Cape Preston, to feed a process plant producing up to 13.8 million tonnes a year (mtpa) of pellet iron and 4.7 mtpa of direct reduced/hot briquetted iron. The products would be exported via a new port to be built at Cape Preston (some 60km west of Dampier) and Preston Island, a kilometre north of this Cape. A 25km infrastructure corridor would transport the product to the port. At the Cape a power station and a desalination plant would be required, while a causeway is proposed to connect Preston Island with the mainland. At the minesite a village would be built to accommodate the majority of the employees which are expected to peak at 5000 during construction and reach 970 for the operational stage.

The site is relatively undisturbed to date, being part of a pastoral lease, and is close to the mouth of the Fortescue River. It has a variety of rocky, riparian and coastal habitats, reflected in the large number of species of flora and fauna recorded in surveys.

Because of a high water table, the pit would require dewatering from early in its development, resulting in an extensive surrounding cone (149km²) of groundwater depletion. Vegetation within this zone would be affected and significantly, the water table drop could impact upon a species of stygofauna (an oniscoid isopod) which to date has only been found in bores within the orebody. The EPA recommended that the proponent should undertake investigations of the subterranean fauna, prior to dewatering, to demonstrate that the proposal would not pose a significant risk of the extinction of any species.

Dredging of a shipping channel and the construction of the causeway in the Cape Preston/Preston Island vicinity would result in the loss of coral colonies, algae and sponges. Many of the corals and sponges are large old colonies and the coral community may provide a valuable source of recruits for other reefs around Preston Island and Cape Preston. Also, changes in sedimentation loads and drainage patterns resulting from the causeway and port construction could have a significant effect on riverine and near-coastal ecosystems. A further consideration was the briny outflow from the desalination plant and the hot coolant water from the power station.

The mangroves in the Cape Preston area are designated in the EPA's *Guidance Statement for the protection of tropical arid zone mangroves along the Pilbara coastline* (Guidance Statement No. 1) as internationally, regionally and locally significant. The western beach at Cape Preston is thought to be a turtle nesting ground and the impact on the turtles of a change to coastal hydrodynamics is not known. The sandy beach and the mud flat habitats have the greatest biological significance, due to their utilisation by birds, turtles, mangroves and bats (in the mangroves).

The EPA's objectives could best be met by the construction of an open causeway. It was recommended that a condition be applied requiring the causeway to be of open construction unless the proponent can demonstrate by detailed hydrodynamic modelling that the impacts of a solid causeway would be acceptable.

A marine management plan was also recommended for preparation prior to the start of ground disturbing activities at Cape Preston. This was to include detailed surveys to predict changes in coastal water movements, water quality residence times, sedimentology, changes to habitat associated with the construction of a causeway and the shipping channel and a means to avoid damage to significant coral colonies.

Power would be provided by a 640MW open cycle plant. The total estimated carbon dioxide emissions (CO₂) for the project are approximately 5.6 million tonnes per year (tpa). This represents about 1.4% of Australia's 1990 baseline for greenhouse gases. The EPA recommended the installation of a combined cycle power station so as to increase efficiency and reduce the output of CO₂ by reducing the gas requirements for the power station by approximately 655 400tpa (11.8% of total project).

Hope Downs Management Services Pty Ltd - Iron Ore Project: Rail and Port Facility

In September 2002, the EPA reported on a proposal by Hope Downs Management Services Pty Ltd (HDMS) to construct a rail line and port facility to support the development of an iron-ore mine, based on the Hope 1 Deposit, located approximately 75km north-west of Newman. The proposal was assessed as a Public Environmental Review (PER) with an eight week public review period.

The Hope Downs Iron Ore Mine was previously assessed by the EPA in August 2001 and environmental approval was published on 1 February 2002. A number of rail corridor options for the railway connection were put forward in the Hope Downs Iron Ore Mine assessment. However, since this aspect of the proposal was subject to continuing negotiations with the owners of the existing railways, no specific alignment for the rail connection was provided in the proposal.

In September 2001, following unsuccessful negotiations with existing railway owners, HDMS referred a proposal to the EPA to build its own railway (running roughly parallel to BHP Billiton Iron Ore's existing railway) and port facilities at Port Hedland.

In assessing the relevant environmental factors of biodiversity, surface water hydrology, dust, noise and acid sulphate soils, the EPA concluded that:

- ## a high standard of biological data collection had been carried out;
- ## none of the habitat types present in the project area appear to be unique to the study corridor or regionally significant;
- ## the range of management measures to be implemented as part of the design, construction and operation of the proposed rail line would effectively minimise or

- avoid any impacts on significant fauna habitats (including sand dune associations, cracking clay communities, mulga woodlands and rockpile associations) and fauna communities;
- ## the impact on mangroves had been reduced to a minimum practicable level;
 - ## the integrity and function of the existing hydrological system would be maintained;
 - ## dust arising from the proposal could be managed in accordance with the proponent's commitments and through the incorporation of best practicable management in the design, construction and operation of the ore handling facility; and,
 - ## acid sulphate soils were unlikely to present a problem in the Port Hedland marine environment, based on initial investigations undertaken by the proponent.

In relation to noise, the EPA considered that the proponent had demonstrated that it could achieve noise levels in Port Hedland that were well below existing noise levels and that although special noise conditions had been developed to allow HDMS to exceed the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) it was considered that these conditions were consistent with the achievement of reasonable cumulative noise levels in the longer term.

With regard to noise emissions for the Port Hedland area, the EPA noted that this proposal highlighted the fact that cumulative industrial noise levels within the Port Hedland townsite currently exceed the prescribed limits set by the Noise Regulations, for residential locations.

As a consequence, the EPA recommended that Government, in conjunction with industry, should develop a strategy to resolve the cumulative noise issue in Port Hedland, with the aim of achieving real noise reductions in Port Hedland over time.

In its assessment of the Hope Downs mine the EPA noted that it would be preferable for HDMS to share existing railway infrastructure, rather than to duplicate an existing railway line. This advice was re-iterated for this assessment and the EPA further recommended that Government should give consideration to the rationalisation of future rail, road and other corridors in the Pilbara and mechanisms to ensure that the environmental impacts of future cumulative access proposals are acceptable.

Environmental approval of the project was published on 25 November 2002.

Cable Sands (WA) Pty Ltd - Ludlow Titanium Minerals Mine

In May 2003 the EPA reported on a proposal to mine a section of State Forest No. 2, near Ludlow. The proposal was referred to the EPA by the proponent, Cable Sands (WA) Pty Ltd, in 2001. The EPA determined that the level of assessment should be set as Environmental Review and Management Program with a 10-week public review period, which occurred during 2002.

There has been a long history to the competing interests of conservation and mining in the Ludlow Tuart Forest, of which State Forest No. 2 is a part. One outcome of this has been the creation of the Tuart Forest National Park. The area proposed to be mined is not part of the National Park, but the long term plan for this area is for it to be incorporated into the National Park once its conservation values have been restored. The vegetation of this area is a tall Tuart forest that has been significantly modified by past activities including tree felling, grazing, and planting of pine trees.

Due to the history of this area, there was a high level of community interest in this assessment. In recognition of this, Cable Sands established the Ludlow Working Party early in the development of its plans. This party consisted of a number of community groups and government agencies with interests in the Ludlow Tuart Forest. The work of this party resulted in early identification of the environmental issues and allowed for well informed debate on the remaining issues of concern, thus assisting the EPA in its assessment. The efforts of the community in participating in the working party were appreciated by the EPA.

The mining proposal put forward by Cable Sands (WA) Pty Ltd was to:

- ## mine minerals sands from 147ha of State Forest No. 2 over 4 years;
- ## rehabilitate the entire mining lease (216ha) back to Tuart forest; and,
- ## provide a package of environmental offsets, including additional areas of land for conservation, some additional rehabilitation, and funds for Tuart conservation measures.

The potential for long-term impacts on the conservation value of the area was the most important consideration for the EPA in assessing this proposal. In particular, the issues of whether the likely rehabilitation outcome was consistent with the long-term conservation plans for the area, and how this outcome might affect the conservation of Tuart in the Ludlow area were closely examined. In its report and recommendations the EPA discussed these issues under the factors of Tuart Conservation, Rehabilitation and Fauna.

It was the EPA's conclusion that the proposal (including the environmental offsets) was environmentally acceptable, in that it would result in a neutral to positive outcome for Tuart conservation in the long-term. The EPA also set out the priorities that it believed should be applied in distributing the funds provided for Tuart conservation. The main priority being to secure additional land for Tuart conservation in the Ludlow area. The EPA's report is currently subject to a number of appeals.

Coral Coast Marina Development Pty Ltd – Coral Coast Resort

The proposal for a marina-style resort and residential subdivision at Mauds Landing is a long-standing and contentious proposal. An earlier Coral Coast Resort proposal was assessed by the EPA in 1995, and subsequently refused by the Government of the day. The proponent, Coral Coast Marina Development Pty Ltd, was requested by the Government of the day to develop a new proposal at Mauds Landing for consideration.

The EPA released its advice and recommendations to the Minister for the Environment on this new Coral Coast Resort on 28 October 2002. The EPA's overarching advice was that the proposal as it stands should not be approved for implementation, even with the conditions recommended by the EPA relating to the built environment of the resort and its infrastructure. Making the proposal environmentally acceptable would require significant involvement and investment by Government into the management of the Ningaloo Marine Park.

In forming this conclusion, the EPA considered the proposal from two interrelated environmental perspectives. These were the built environment of the resort and its infrastructure (the proposal's footprint) and the management of human-use pressures on the Ningaloo Marine Park and adjacent coastal lands.

In considering whether the proposal's footprint could be constructed in such a way that direct environmental impacts could be managed, the EPA examined a broad range of environmental factors associated with the footprint. These included marine and terrestrial flora and fauna, coastal processes, marine water and sediment quality and wilderness qualities. The EPA advised the Minister that, in its judgement, such matters could be managed to an acceptable standard, provided a set of strict recommended environmental conditions were imposed and complied with.

However, as indicated, the proposal's footprint could not be considered in isolation.

Indeed, the EPA considered that the proposal itself was an indicator of a wider, developing environmental problem associated with the impacts of increasing human pressure on the environmental values of Ningaloo Reef and its adjacent coastal lands.

In its report, the EPA gave attention to human-use impacts and their management in the context of the local and regional marine and terrestrial environments.

A fundamental conclusion of the EPA on this issue was that it was beyond the authority of the proponent to carry out the management likely to be necessary to protect the values of the Ningaloo Marine Park and surrounding coastal areas.

Although the EPA considered a proposal by the proponent to assist in the management of the Ningaloo Marine Park, it was of concern that, without a whole-of-Government commitment to the management of people associated with the proposal, it is unlikely that the proponent's initiative would deliver the management necessary to protect the environmental values of this important area on an ongoing basis.

Hismelt (Operations) Pty Limited – Commercial Hismelt Plant Kwinana

Hismelt (Operations) Pty. Limited proposed to construct and operate a commercial scale Hismelt Process Plant at Kwinana in Western Australia. The plant will be located at the

site currently occupied by the existing HIs melt Research and Development Facility (HRDF) within the northern portion of the Kwinana Industrial Area (KIA), 40km south of Perth.

The Stage 1 plant will initially produce around 820 000 tpa of pig iron. If the Stage 1 plant is found to be technically and commercially viable, the proponent proposed to install an additional iron-making plant (the Stage 2 plant) to double production to around 1.64 million tpa of pig iron.

The HIs melt process is a direct smelting technology for the production of liquid iron (hot metal) using iron ore fines or any other appropriate ferrous feed material. The smelting will be undertaken in a molten iron bath using coal as the reductant and energy source. Pig iron produced in the plant will be shipped for use in steel mills either within Australia or overseas. The unloading and loading of raw materials and product will be undertaken at the Fremantle Port Authority's Kwinana Bulk Terminal Berth No. 2.

The Public Environmental Review document for the proposal was made available for public review in April and May 2001, and the EPA released its report and recommendations in September 2002.

The relevant environmental factors that were identified for the proposal were:

1. Atmospheric emissions;
2. Greenhouse gas emissions;
3. Waste management;
4. Surface water and groundwater;
5. Noise and vibration;
6. Marine environment; and,
7. Water supply.

The EPA determined that the proposal could be managed in an environmentally acceptable manner, subject to the satisfactory implementation of the proponent's commitments and the conditions recommended by the EPA.

Air quality modelling that was undertaken predicted that sulphur dioxide, nitrogen oxides (NO_x) and particulate emission levels would be below the relevant Kwinana Environmental Protection Policy and National Environmental Protection Measure Standards.

The proponent has committed to use measures to minimise emissions of sulphur dioxide and particulates which are considered to be best available technology by the European Commission.

The plant will utilise burners that are designed to keep NO_x emissions as low as reasonably practicable where process gas will be combusted, and low NO_x burners where natural gas will be combusted.

In order to address community concerns about potential health impacts from emissions of dioxins, furans, poly aromatic hydrocarbons, volatile organic compounds, and heavy metals from the proposed plant, the EPA recommended a condition which requires the proponent to cease plant operations if emissions of these compounds are measured above licence limits until investigations and modifications are undertaken.

Submissions received by the EPA also highlighted community concerns about the wider issue of potential health impacts arising from the cumulative air emissions from all industries in Kwinana.

The EPA's assessment report indicated that a taskforce reporting to a Ministerial Council would be preparing a strategy for a comprehensive review of potential health issues. The strategy is expected to include a program for increased monitoring to provide greater information on levels of pollutants. The EPA saw this as an important issue and encouraged Government to ensure the relevant agencies have resources to undertake this work.

In relation to the management of fugitive dust emissions from various HIs melt plant stockpiles, the EPA recommended a condition requiring the proponent to investigate various options, including enclosure, to be adopted if emissions exceed established criteria.

The proposed plant will emit significant amounts of greenhouse gases (up to 3Mtpa with the Stage 1 and Stage 2 plants operating concurrently), but will achieve lower greenhouse gas emissions per tonne of hot metal produced compared to existing blast furnace technology.

The proposal will comply with noise regulations but will add to cumulative noise levels in the broader KIA. The EPA considered that cumulative noise emissions from the KIA need to be progressively reduced over time, to ensure an improved level of amenity for the surrounding residential areas.

The EPA's assessment identified the potential for the capacity of the proposed plant's process wastewater storage facility to be exceeded during extreme rainfall events given that it was only to be designed to accommodate the surface run-off from a 1 in 10 year rainfall event of 72 hours duration. The EPA determined that if a more extreme rainfall event occurs, process wastewater would need to be disposed of into the marine environment via the Cape Peron Outlet Pipeline. To minimise potential impacts on the marine environment, the EPA recommended the imposition of a condition which requires the construction of an additional process wastewater storage facility within the plant boundary with sufficient capacity to accommodate the influx of additional water from extreme rainfall events of greater magnitude than a 1 in 10 year rainfall event of 72 hours duration.

The EPA's assessment also identified the potential for the proposed HIs melt plant to consume significant quantities of scheme water if recycled water from the proposed

Kwinana Wastewater Recycling Plant (KWRP) is not utilised. The EPA recommended a condition requiring the proposed plant to source water from the KWRP when completed.

Portman Iron Ore Ltd - Koolyanobbing Iron Ore Expansion

Portman Iron Ore Ltd proposed to expand their existing iron ore mine at Koolyanobbing by commencing two new satellite mines at Windarling Range and Mt Jackson. The proposal required clearing 93 hectares of native bush at Mt Jackson and 490 hectares at Windarling, with additional clearing for a transport corridor.

The majority of the land associated with the proposal has been recommended by the Department of Conservation and Land Management (DCLM) for inclusion in the Mt Manning Nature Reserve since 1994. Surveys carried out for the Public Environmental Review (PER) extended the available floristic knowledge of the area, further emphasising the biodiversity values. It became apparent that the Declared Rare Flora (DRF) species *Tetratheca paynterae* and certain vegetation communities are geographically restricted and grow only at Windarling. The most valuable part of the iron ore resource coincides with the main habitat of these plants.

The proponent agreed to reduce the area of the mine pit at Windarling so that the direct impact on the 2 852 *Tetratheca paynterae* plants would be reduced from 89% loss to 60%. However, the EPA recommended to the Minister for Environment that the project should not be implemented unless further research was carried out to ensure the long-term survival of *Tetratheca paynterae* and the vegetation communities.



EPA site visit 4 October 2002. Proposed Koolyanobbing iron ore mine expansion. From left: Ian Le Provost (former EPA Member), Bernard Bowen (former EPA Chairman), Phillip Playford (EPA advisor), Denis Glennon (EPA Member), Richard Mehan (Portman Mining) and Professor Frank Murray (former EPA Member).

The proponent appealed against the EPA's recommendation and, during the appeal proceedings, the proponent agreed to further reduce the mining footprint. The Minister then issued a Statement that the proposal may be implemented with up to 30% direct loss of *Tetratheca paynterae* and an option to increase this to 50% at such time as the Minister was satisfied that the mining activities would not affect the long-term viability of the remaining 50% of the plant's population.

The proponent also agreed to establish an arrangement with DCLM to provide environmental offsets which could include provision of land for reservation, provision of resources for management of conservation reserves in the area and provision of resources for management of fauna, DRF and Threatened Ecological Communities (TEC).

University of Western Australia - Superlot Subdivision, Underwood Avenue, Shenton Park

The EPA has formally assessed a proposal by the University of Western Australia and the Water Corporation to subdivide Lots 4 and 105 Underwood Avenue, Shenton Park into three superlots for clearing and development. The proposal included a 12 hectare area to be set aside for conservation purposes. It is a different proposal to the one assessed by the EPA in November 2001.

The site contains regionally significant bushland recognized in the draft *Perth's Bushplan* and identified for protection through an urban negotiated planning solution in *Bush Forever*. The site is currently impacted by odour from the Subiaco Wastewater Treatment Plant.

Following detailed consideration of the proposal, the EPA has recommended that it is unlikely that the EPA's objectives would be compromised provided there is satisfactory implementation by the proponent of the recommended stringent conditions.

The EPA considers that the area proposed for conservation by the proponent does not provide for adequate protection of the core (highest conservation) values of the Bushplan Site in terms of the condition of the vegetation protected. This, and the shape of the Conservation Area means that more intensive management will be required to improve and maintain its conservation values in the long term.

Conditions have been recommended to set aside an additional area of bushland to be managed as part of the Conservation Area until the condition of vegetation within the proposed Conservation Area has been improved. Additional conditions are recommended to ensure a precautionary approach through staging of development, and to address rehabilitation, management and security of the Conservation Area in perpetuity.

With regard to odour, the EPA considers that there is reasonable certainty that at least the proposed Lot 1 will become suitable for residential development after planned improvements to the Subiaco Wastewater Treatment Plant have been implemented. Conditions have been recommended to ensure that clearing or development does not

occur until it is demonstrated that an acceptable amenity for residential use will be experienced at the site.

Burrup Projects

During 2002/2003 assessments of several proposals located on the Burrup Peninsula were completed and Ministerial approval to implement the proposals was granted. These were:

Ammonia-Urea Plant - Dampier Nitrogen (formerly Plenty River)
Methanol Plant – Liquigaz (formerly GTL and Australian Methanol Company)
Methanol Complex – Methanex

In addition, the following support project was not assessed by the EPA:

Burrup East-West and North-South Services Corridors

One new project has commenced on the Burrup Peninsula with Burrup Fertilizers starting earthworks on their site in the King Bay-Hearson Cove industrial area in May 2003.

The EPA noted in the last annual report that there was a lack of knowledge in many environmental areas for the Burrup. The EPA is pleased to note that further environmental investigations have since commenced in the areas of air emissions, impacts of acid gases on rock art and the marine environment.

Air Quality

The Aboriginal Rock Art and archaeological sites on the Burrup, some of which have been estimated to date back 6 000 years, predating the pyramids of Egypt, are a significant component of Australia's heritage. During the past year a Committee was established by the Government to examine the effects of air emissions on Rock Art. Additional studies on air quality impacts have been undertaken by the Office of Major Projects on behalf of the Committee.

Currently Woodside is undertaking re-modelling of their air quality impacts and cumulative modelling of impacts of those industries already approved for development on the Burrup Peninsula. This re-modelling work is being done in response to the discovery that Woodside had underestimated their emission of oxides of nitrogen and as part of Woodside's expansion program.

Management of Non-Industrial Land and Recreation

Recently agreement was reached on Native Title between the State Government and the three claimant groups. This agreement transferred the Conservation, Recreation and Heritage areas on the Burrup as freehold land to a Body Corporate consisting of the three claimant groups. The land is to be managed jointly by the claimant groups and the Department of Conservation and Land Management. Currently the drafting of a

management plan is in the initial consultation phase. An Advisory Committee has been formed to provide advice on the plan.

Management of the conservation area may allow the development of an alternative recreational beach to Hearson Cove, which will be impacted by the industrial development in the King Bay-Hearson Cove area.

Marine

The Water Corporation, as proponent for the multi-user ocean discharge pipeline, has continued with further investigations of the marine environment. The Water Corporation plans to carry out four surveys on water quality. To date three surveys have been completed and two reports produced.

The EPA Services Unit, in conjunction with the CSIRO, has conducted a background water quality survey for key contaminants found in seawater in the Dampier Archipelago. The CSIRO can detect the lowest concentrations of contaminants in Australia.

The Burrup User Group has been set up by the Water Corporation to co-ordinate industry water use on the Burrup.

Flora and Fauna

During the past year Dampier Nitrogen undertook a study of the samphire and associated vegetation assemblages in the King Bay-Hearson Cove tidal area. This area was not included in previous vegetation surveys undertaken for the Office of Major Projects and adds to the knowledge of the flora and diverse vegetation associations found on the Burrup.

In addition to the impact of acid gases on Rock Art, there is still the need for more information on the impact of acid gases and of increased nutrients from atmospheric emissions of oxides of nitrogen, ammonia and urea on flora and fauna and ecological systems.

Future development

Due to the high environmental cost of development on the Burrup and the limited capacity of the Burrup to sustain more industrial development, the EPA encourages the Government to progress the development of the Maitland Estate or alternative industrial area.

The assessment of proposals on the Burrup has highlighted the need for a coordinated, whole-of-government approach to the provision of land and infrastructure to support industrial developments. An example is the development of the Dampier Port and the land under control of the Port. More wharves are required for product export from industries establishing on the Burrup and the land area at the Port is limited. Coordinated

development of infrastructure could ensure optimal use of land and resources, instead of each development submitting individual proposals.

Assessment of Proposals

The assessment of the Ammonia-Urea Plant (Dampier Nitrogen, formerly Plenty River Corporation Ltd) began in 1998 and a Consultative Environmental Review was released for public comment in October 1998. The proponent's responses to public submissions were not finalised and the proposal was inactive for a number of years. In 2001 the proponent reactivated the proposal with a number of changes. A Supplement to the 1998 CER was required to complete the assessment process. The Supplement was published in May 2002 by the proponent for targeted public review by stakeholders and interested parties.

The proposal was to construct and operate an ammonia-urea plant of nominal capacity of 2 300 tonnes per day (tpd) of ammonia and 3500 tpd of urea, including a storage site for urea at Dampier Port, export of ammonia and urea from the Port and associated infrastructure and utilities. The plant site is located in the King Bay-Hearson Cove industrial area.

The Methanol Plant (Liquigaz, formerly GTL and Australian Methanol Company) was referred to the EPA in November 2001 and was originally advertised as having the potential to be assessed as an Environmental Protection Statement. However at the proponent's request this was upgraded to a Public Environmental Review in July 2002. The public review of the PER commenced in September 2002.

The proposal was to construct and operate a methanol plant of 1.05 million tpa nominal capacity, at Withnell East industrial area on the Burrup Peninsula. The proposal included the installation of a gas supply pipeline, product pipeline, seawater supply pipeline and wastewater discharge pipeline to be situated in infrastructure corridors. The Department of Mineral and Petroleum Resources was the proponent for the infrastructure corridors.

The Methanol Complex (Methanex) was set a level of assessment of Public Environmental Review on 26 November 2001. The PER was made available for public review in April 2002.

Methanex Australia Pty Ltd proposed to establish a methanol complex in the King Bay-Hearson Cove industrial area, consisting of two nominal 6 000tpd methanol plants, two air separation units, methanol storage (220 000t), a desalination plant, transport of raw materials and products to and from the plant site and ship loading operations at Dampier Port.

In all the proposals, the EPA considered the factors of Flora and Vegetation communities, Fauna, Atmospheric emissions, Greenhouse gas emissions, Wastewater, Noise, Risk, Aboriginal Heritage, and Amenity and concluded that the proposals could be implemented and managed to meet the EPA's environmental objectives, subject to certain conditions and the implementation of proponent commitments.

The Minister issued Statements allowing the implementation of the proposals subject to certain conditions, on 6 December 2002 for the Ammonia-Urea Plant, 20 December 2002 for the Methanol Plant and 4 February 2003 for the Methanol complex. Subsequent to this, Methanex has advised that the Methanex complex proposal will be revised to allow it to be built in smaller stages without any additional environmental impacts.

ENVIRONMENTAL ASSESSMENT OF PLANNING SCHEMES

A key issue for the EPA in assessing planning schemes under s48A of the EP Act is to ensure a rational linkage between the level and detail of environmental assessment and the relevant 'stage' of planning approval being considered. The planning approval process is a hierarchical one, normally involving a series of stages through regional scheme, town planning scheme, structure plan, subdivision and to development approval. When assessing a scheme or amendment at the regional scheme stage, the EPA would normally focus on 'higher level' environmental issues such as protection of regionally significant environmental features.

The level of detail required for environmental assessment normally increases as the planning detail increases in town planning scheme and structure planning. At this stage, more detailed environmental information is required, for example, in terms of boundaries for protection of wetlands and other significant environmental features, cumulative impacts and drainage management.

The EPA is keen to ensure that this hierarchy of planning and environmental assessment is rational and that a consistent approach is adopted. Close collaboration with planning agencies is an essential element so as to ensure an efficient and effective process.

Greater Bunbury Region Scheme

The Western Australian Planning Commission (WAPC) initiated the preparation of the Greater Bunbury Region Scheme (GBRS) in 1996 to provide a regional framework for planning and development within the City of Bunbury and the Shires of Harvey, Dardanup and Capel. It includes regional reservations and broad land use zones.

Because of the potential environmental impacts associated with many of the new zoning proposals included within the GBRS, a formal environmental assessment of the Scheme is being undertaken by the EPA under s48A of the EP Act.

Following a period of public review, the public submission period for the GBRS and its associated Environmental Review closed early in 2002. A substantial number of submissions were received. In March 2003 the WAPC submitted its response to the environmental issues raised in the submissions.

A key issue which has been raised in the assessment to date relates to the protection of regionally significant bushland and other natural areas within the Bunbury Region. This is an important issue for the EPA, particularly given the emerging focus on the values of remaining bushland on the Swan Coastal Plain and the need for its protection. In response to this issue, the EPA has prepared a *Strategy to identify regionally significant natural areas in the GBRS portion of the Swan Coastal Plain*. The Strategy will also be used to broadly identify and describe the principle attributes of regionally significant sequences of ecological communities within or between the major landform elements of the GBRS.

It is anticipated at this stage that the EPA's assessment of the Region Scheme will be finalised in the later half of 2003.



EPA site visit 6-7 February 2003: Greater Bunbury Region Scheme
From left: Darren Walsh (EPA SU), Bernard Bowen (former EPA Chairman), John Dell (EPA SU), Dr Libby Mattiske (former EPA Deputy Chairman), Bronwen Keighery (EPA SU), Gary Williams (EPA SU), Dr Wally Cox (EPA Chairman) and Kim Taylor (EPA SU).

STRATEGIC ASSESSMENTS

Strategic environmental assessment is an expanding area of the EPA's work. These assessments provide for key environmental issues to be considered at a strategic level and at an early stage in planning for development so that necessary environmental protection and management requirements can be built into detailed planning and design for subsequent developments.

Importantly, strategic assessment allows cumulative impacts of planned development to be considered, rather than impacts from individual development being considered in isolation, which is often the case with project by project assessment. Strategic assessment also allows consideration of more options for alternative locations for developments to avoid particularly sensitive environmental areas.

In 2002-2003 the EPA completed a range of strategic assessments as described below.

- €# the provision of strategic advice to **Griffin Energy Pty Limited** in relation to their proposal to construct and operate an 800MW advanced super critical coal-fired power generation facility in the Collie region of Western Australia. Key considerations included atmospheric emissions, minimising greenhouse gas emissions, the consideration of alternative water supply options, and the establishment of an adequate buffer zone between the proposed power generating facility and residential development.

- €# the provision of strategic advice to **Western Power Corporation** in regard to whether there were any environmental constraints which may apply to the proposed Pinjar Power Station Expansion, Kwinana / East Rockingham Power Station, Kemerton Power Station, New Bunbury Power Station, and the Collie Power Station Expansion. The EPA concluded that the proposed power generation facilities located at each of the above sites could be managed such that it is unlikely that the EPA's objectives would be compromised. The EPA also indicated that future specific proposals for power generation facilities at the above sites will need to be referred to EPA for assessment under Section 38 of the *Environmental Protection Act, 1986*.

The EPA also participated in a whole-of-government sustainability assessment, integrating, environmental, social and economic assessments for major proposed gas production facility at Barrow Island.

Gorgon Gas Development

The EPA was asked by the Minister for the Environment to provide advice to Government on issues surrounding in-principle access to Barrow Island for a gas processing proposal by the Gorgon Venture partners. The proposal is to tap natural gas from the field in Commonwealth waters 70km to the northwest of the island and pipe it to Barrow Island for processing and export, most likely as liquefied natural gas (LNG) by ship to overseas markets, and by pipe to the mainland for domestic use. The proposal includes disposal of some of the carbon dioxide generated by the project by injecting it into a sub-surface saline aquifer beneath Barrow Island.

Barrow Island is a unique and very important Class 'A' Nature Reserve for the conservation of flora and fauna, including a number of mammals which are now extinct on the mainland. The island has also been the site of a producing oilfield since the 1960s.

The State Government indicated to the Gorgon Venture that it would consider in-principle access to Barrow Island only after carefully analysing the environmental, social, economic and strategic issues, and stipulated that there must be net conservation benefits to the State.

In February 2003 the Gorgon Venture released for a six week period a strategic level document for public review and comment entitled *Environmental, Social and Economic review of the Gorgon Gas Development on Barrow Island*. The submissions period closed on 24 March 2003.

On 1 July 2003 the EPA provided its strategic environmental advice to Government under the provisions of Section 16e of the Environmental Protection Act. This bulletin was one part of a combined package which included recommendations from the Department of Industry and Resources on the social and economic aspects of the proposal, and those of the Conservation Commission (in which the class A nature reserve is vested) on the biodiversity conservation values of Barrow Island. The advice from all three agencies was mutually independent.

The EPA recommended against the use of Barrow Island because of the risks posed to the island's very important conservation values. Amongst the most important concerns were:

- ## the loss of 300ha of class A reserve habitat to clearing for the plant site;
- ## the risk of importation of pests, weeds and diseases caused by a predicted "virtually certain" failure in quarantine protocols expected over the +30 year life of the project;
- ## the unresolved questions over the proponent's ability to permanently sequester carbon dioxide gas safely and economically by sub-surface injection at the chosen site;
- ## the unknown effects of the gas processing plant's atmospheric emissions on the island's flora and fauna; and
- ## the effects of dredging and shipping on Barrow Island's surrounding marine environment.

The EPA recommended that alternative locations should be assessed in greater detail and suggested a preferred hierarchy, starting with 'brownfields' mainland sites (Burrup area), then 'greenfields' mainland options (such as Cape Preston) followed by Thevenard Island and Trimouille Island (Montebello Group), all of which would be environmentally preferable to Barrow Island. The Authority also indicated that injection of CO₂ on Barrow Island, but with location of the process plant elsewhere, may be acceptable.

Recognising that Government may wish the project to go ahead to secure the significant strategic and economic benefits that could accrue, the EPA recommended that several non-negotiable conditions be integral to any approval. These included:

- ## the requirement that the nature reserve would have primacy of tenure over mining and industrial uses;
- ## that the Department of Conservation and Land Management should be adequately resourced to manage the reserve;

- ## that the size of the cleared area be limited to 300ha;
- ## the need for a public process and input of expert advice to determine the level of acceptable risk to the island's conservation values;
- ## the requirement for quarantine management by the Gorgon Venture to go beyond what is currently considered to be world's best practice;
- ## the need for an assurance that carbon dioxide would be injected into the sub-surface as proposed, or, if this method was found to be impractical, that an acceptable alternative method of sequestration would be implemented; and
- ## finally the EPA reflected the Government's requirement that the project would need to add significant net conservation benefits to the State's inventory.

Following the release of the combined package of advice on the 1 July 2003 came a six week period for public submissions. At the time of writing of this annual report submissions from the community, industry and government agencies are being evaluated prior to a decision by Cabinet on the question of in-principle access to Barrow Island for the proposed gas plant.

Should in-principle approval be forthcoming, a site-specific proposal would be required to undergo comprehensive formal environmental impact assessment under the Western Australian EP Act and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.



EPA site visit: 19-20 September 2002 Barrow Island

POLICY DEVELOPMENT

The EPA's emphasis on policy development over recent years has been generally well supported by stakeholders who have appreciated having a context for EPA decision making and guidance into EPA thinking. The Authority has used a number of tools in this regard: Environmental Protection Policies (EPPs), Position Statements, Guidance

Statements, advice published under s16(e) of the EP Act, other advice contained in its reports and recommendations on proposals subject to formal assessment, and policy statements in its annual reports. In a number of cases, the involvement of the EPA has helped catalyse action on issues which have been well recognised but perhaps somewhat paralysed due to conflicting interests or complexity.

For example, the dryland salinity debate was helped by the EPA's policy statements in the 1996-96 Annual Report. Its review of performance on compliance with the Forest Management Plans in 1998 helped the public debate on ecologically sustainable forest management (EPA Bulletin 912) and its Position Statement on environmental protection of native vegetation in 2000 brought the land clearing issue into sharp focus.

While the Authority intends to continue down the path of emphasising policy development as a priority in its work plan, it is mindful of some stakeholder criticism that a number of policy documents remain unfinished. Accordingly, it will be a priority in 2003-04 to bring as many of them to fruition as possible.

Environmental Protection Policies

EPPs remain the highest order of policy instruments under the EP Act, having the force of law following Parliamentary disallowance procedures. Progress on the EPPs is described below and summarised in Tables 3 and 4.

Table 3: Gazetted Environmental Protection Policies and their status as at 30 June 2003.

Name	Approval date	Review date	Comment
Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992	11.12.92	11.12.99	EPA has reconsidered the EPP and a discussion paper towards a new draft EPP is in preparation.
Environmental Protection (Swan Coastal Plain Lakes) Policy 1992	18.12.92	18.12.99	Legal drafting of a revised draft Swan Coastal Plain Wetlands EPP has commenced.
Environmental Protection (Gnangara Mound Crown Land) Policy 1992	24.12.92	24.12.99	Review suspended awaiting section 46 assessment.
Environmental Protection (Swan and Canning Rivers) Policy 1998	10.07.98	10.07.05	Planning for the review has commenced.
Environmental Protection (South West Agriculture Zone Wetlands) Policy 1998	28.10.98	28.10.05	Review to commence in 2004.
Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999	21.12.99	21.12.06	Gazetted and being implemented

Name	Approval date	Review date	Comment
Environmental Protection (Ozone Protection) Policy 2000	17.10.00	17.10.07	Gazetted and being implemented
Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002	18.02.03	18.02.10	Gazetted and being implemented. Guidance document currently being developed.
Environmental Protection (Goldfields Residential Areas) (Sulfur Dioxide) Policy 2003	18.03.03	18.03.10	Gazetted and being implemented. Explanatory and Implementation Document currently being developed.

Policies Being Implemented

All EPP's and associated maps may be viewed on the EPA website at www.epa.wa.gov.au or at the EPA's Library Resource Centre, 141 St Georges Terrace, Perth.

Environmental Protection (Swan and Canning Rivers) Policy 1998

The purpose of the EPP is to ensure that the values of the Swan and Canning Rivers are restored, maintained and protected by managing the activities that affect them. *Riverplan*, the implementation strategy for this EPP, has been endorsed by the Swan River Trust Board, the EPA and the Minister for the Environment and will be released for public comment in July 2003.

Riverplan is a strategic document that recognises that State Government agencies, local governments, community and industry groups and individuals have important roles in managing the Swan and Canning Rivers. It identifies management responsibilities and activities, gaps in management which need filling and draws together those responsible into an environmental management framework designed to ensure that the values of the Swan and Canning Rivers are protected.

Public comments, monitoring and evaluation data relating to *Riverplan* will be used as part of the seven year statutory review of the current Swan and Canning EPP (due in July 2005).

Environmental Protection (Western Swamp Tortoise) Policy 2003

In 1994 the EPA first published a draft EPP to protect the habitat of the Western Swamp Tortoise, with a second draft published in 1998. The Western Swamp Tortoise is the most endangered tortoise or turtle species on Earth. It is listed under the Western Australian *Wildlife Conservation Act 1950*, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the United Nations Convention on International Trade of Endangered Species (CITES) as a critically endangered species.

This EPP was gazetted on 18 February 2003 and is now law. The EPP declares beneficial uses that are to be protected. The EPP aims to ensure management activities within the policy area do not adversely impact on the habitat or these beneficial uses. The EPP outlines a programme of protection for landowners, local government and State government to implement. A 'Guidance Statement for the Protection of the Western Swamp Tortoise Habitat' is currently being prepared by the EPA to facilitate EIA and complement the objectives of the EPP.

Environmental Protection (Goldfields Residential Areas) (Sulfur Dioxide) Policy 2003

On 18 March 2003 the EPP and associated Regulations for the Goldfields Residential Areas were gazetted, thereby replacing the 1992 EPP and Regulations. A minor amendment to correct the map coordinates of the EPP was gazetted on 10 June 2003.

The 2003 EPP sets ambient air limits and standards for sulfur dioxide concentrations in Goldfields residential areas that are consistent with the agreed *National Environment Protection (Ambient Air Quality) Measure* (NEPM). More specifically, the objectives of the EPP are to control and progressively reduce the sulfur dioxide concentration in the ambient air of a protected area during each year until 2008 and to ensure that by 2005, the sulfur dioxide concentration in the ambient air of a protected area does not exceed 0.25 ppm. There has been a progressive tightening in the measure of acceptability. This has continued in the 2003 EPP providing a progressive reduction in the number of calendar days the sulfur dioxide concentration of 0.2 ppm could be exceeded from 3 in 2003 to 1 in 2008 and each succeeding year.

These concentrations will be managed and controlled through licences issued to sulfur dioxide emitting industries. Industries must monitor these concentrations and must not exceed them. The 2003 Regulations specify conditions that must be placed within a licence. Full compliance with the NEPM will be achieved in 2008.

Environmental Protection (Swan Coastal Plain Lakes) Policy 1992

In 1999 a statutory review of the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* was required under Part III of the EP Act. As part of this statutory process a *Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 1999* was released for public comment. Following consideration of comments, a *Revised Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 1999* was then prepared by the EPA and transmitted to the Minister for the Environment for consideration.

The aim of the revised draft EPP is to declare and protect the environmental values of important wetlands on the Swan Coastal Plain by controlling activities that can degrade or destroy those environmental values (in summary, no filling, draining, mining, discharges or clearing without authorization under the EP Act. It is proposed that important wetlands to be protected under the Policy will be identified on a Register of Protected Wetlands.

The revised draft EPP has commenced legal drafting to update and improve the existing protection mechanisms of the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*. The Minister for the Environment is currently considering the revised draft *Environmental Protection (Swan Coastal Plain Wetlands) Policy 1999* and will soon be consulting with key stakeholders on the EPP. Any comments received during this period will be considered prior to a final decision on the Policy which is expected around late 2003, early 2004.

Environmental Protection (Peel Inlet-Harvey Estuary) 1992

In 1999 the EPA reviewed the *Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992* and transmitted a revised draft EPP to the Minister for consideration. The Minister requested that the EPA reconsider the revised draft Policy along with its review of the Progress and Compliance Report (PCR) on the Ministerial Conditions set on the assessment of the Peel Inlet-Harvey Estuary Management Plan.

In January 2003 the EPA provided advice to the Minister on the PCR, including recommendations on how it would progress the EPP. A draft discussion paper proposing changes to the EPP, in light of recommendations within the PCR, is likely to be released for public comment later in 2003. The EPA will be consulting with key stakeholders and interest groups regarding the changes before reporting back to the Minister on the EPP.

Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998

The EPP protects wetlands registered under the Policy from further degradation by such damaging human activities as filling, excavating, discharging of effluent, draining and damaging or clearing fringing native vegetation. It also promotes the rehabilitation of wetlands in the South West Agricultural Zone of the State.

Wetlands may be nominated for registration under the Policy if they are on Crown land or on private land where landowner consent has been given. Currently there are only two wetlands on the Register of Protected Wetlands. These are Lake Monjingup in the Shire of Esperance and Koojedda Swamp in the Shire of Northam.

The EPA is to commence its review of this EPP in 2004. In the meantime, nomination forms to register a wetland under this EPP may be requested through the Department of Environmental Protection.

Policies in development

Table 4: Environmental Protection Policies in development.

Name	Status
Draft Environmental Protection (Ambient Air NEPM Implementation) Policy	Legal drafting of draft policy commenced
Draft Environmental Protection (Cockburn Sound) Policy	Legal drafting of revised draft policy commenced
Draft Environmental Protection (State Coastal Zone) Policy	Not yet formally initiated. Discussion Paper in preparation.

Cockburn Sound

In November 2002 the EPA transmitted the *Revised Draft Environmental Protection (Cockburn Sound) Policy 2002* and its Report to the Minister for the Environment. The draft Policy establishes a management framework to declare and protect the environmental values of Cockburn Sound and maintain the trend towards a healthier environment. At the same time the Cockburn Sound Management Council (CSMC) released the *Interim Environmental Management Plan* following its review of public submissions.

The Policy and Plan are being developed in response to increasing pressures on Cockburn Sound, which is the most intensively used marine embayment in Western Australia. The Sound is highly valued by the community for recreation. It is used for commercial purposes, such as fisheries, aquaculture and tourism which need a high level of marine water quality. Cockburn Sound provides a safe anchorage and significant maritime facilities near the State's major industrial complex. It is also home to a strategic naval base.

Throughout the development of this Policy and its associated management framework, the CSMC and EPA have consulted extensively with the wider community, key stakeholders and scientific experts and have hosted community meetings to encourage discussion and publicly report on progress.

The environmental values that have been declared for Cockburn Sound were also derived through extensive community consultation. They include ecosystem health (an ecological value), and the social values of fishing, aquaculture, water-based recreation, aesthetics and industrial water supply.

A set of environmental quality criteria, or 'benchmarks', used for assessing whether environmental quality in the Policy area is sufficient to protect and maintain the environmental values are contained in the *Revised Environmental Quality Criteria Reference Document*. The criteria indicate whether the management objectives (environmental quality objectives) are being met or where management action is required.

The documents released by the EPA also include *The Big Picture-Managing the Cockburn Sound Environment*.

A Manual of Standard Operating Procedures for Environmental Monitoring Against the Cockburn Sound Environmental Quality Criteria is being prepared to support the management framework. The manual specifies how samples should be collected and the results assessed against the criteria.

Under section 30 of the EP Act, the Minister is required to consult public authorities and persons likely to be affected by the Policy. This consultation will commence in the second half of 2003 when the legal version of the draft Policy and regulations have been completed. The Minister will then prepare and approve the new EPP, subject to disallowance in both Houses of Parliament.

The final version of the Environmental Management Plan (EMP) will be released after the EPP is completed. In the meantime, the CSMC continues its broader role of coordinating environmental planning and management of Cockburn Sound and its catchment. The recommendations contained within its Interim EMP will ensure that there is ongoing co-operative environmental management between government, industry and the community to achieve the environmental goals.

Ambient Air NEPM Implementation

The intent of the Ambient Air Quality National Environment Protection Measure (NEPM) Implementation EPP is to provide nationally consistent standards to deliver acceptable air quality for the protection of the overwhelming majority of Australians. The EPP will bring into state-wide effect the existing standards and goal of the NEPM. The NEPM currently establishes standards for six pollutants commonly found in ambient air and sets a goal of compliance with its standards by July 2008.

Legal drafting of a draft EPP has commenced following endorsement by the EPA and the Minister for the Environment. Its release for public comment is expected early 2004 along with the development of a strategy outlining how the EPP will be implemented.

State Coastal Zone

The EPA is currently considering options for a Coastal Zone EPP following the Government commitment to:

introduce an Environmental Protection Policy (EPP) for the coastal zone to establish environmental objectives, measure environmental quality, set minimum standards for pollution control and establish a program by which objectives are to be achieved and maintained. (ALP 2001)

An EPP for the coastal zone could identify the environmental values (EVs) to be protected, the environmental quality objectives (EQOs) to be achieved and environmental quality criteria (EQC) against which the performance of the Policy would be measured.

The EPP could also identify a decision making framework within which a program for protection could be implemented consistent with sustainability principles. It could link environmental protection aspects of sustainability with the social and economic dimensions addressed through town planning processes.

The development process for an EPP is public and transparent. Accordingly, all stakeholders and the public will be invited to become involved in the process. Before commencing to draft a Coastal Zone EPP, the EPA will be seeking to gauge stakeholder and public views on how best the EPA can facilitate a coordinated approach to environmental protection and management of the coastal zone. It will soon be releasing a discussion paper which will identify issues that the EPA is currently exploring as part of its preparation towards developing a coastal zone EPP.

Position Statements

Position Statements are an important high order mechanism for the EPA to publish its policy position on a broad range of issues. They are aimed at describing what the EPA thinks and how it feels about environmental issues, threatening processes or special parts of the environment. In this regard Position Statements differ from Guidance Statements which are aimed specifically at the EIA process.

Position Statements are released as Preliminary for public comment regarding errors and omissions, the revised and published as Final.

The current status of Position Statements is provided in Appendix 6.

Guidance Statements

The EPA prepares Guidance Statements to help proponents and the public to understand how it expects issues to be dealt with during the assessment process. They aim to increase the level of certainty for proponents and provide high quality information to the EPA.

The approach to an issue, as set out in an EPA Guidance Statement, can usually be regarded as the minimum requirement. Proponents are likely to find that the assessment of their proposals will be more straightforward and take less time if they demonstrate that the proposal will either meet, or better, the minimum requirements.

Proponents are free to argue their case for a different but acceptable approach, but would be expected to put a well-researched and clear justification to the EPA when arguing for a deviation from the usual minimum level of performance. Some proponents put proposals aiming for better than the minimum.

The two-step approach to the development of Guidance Statements (Draft and Final) facilitates lively and helpful input from stakeholders and the public on the content of the Guidance Statements.

Twenty-six guidance statements are now available as either Draft or Final. The following Guidance Statements were released in 2002-2003:

- €# Terrestrial flora and vegetation surveys for Environmental Impact Assessment in Western Australia – Draft;
- €# Sampling of subterranean fauna in groundwater and caves – Draft;
- €# Implementing best practice in proposals submitted to the Environmental Impact Assessment process – Draft;
- €# Terrestrial fauna surveys for Environmental Impact Assessment in Western Australia – Draft;
- €# Level of Assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region – Final;
- €# Minimising greenhouse gas emissions – Final; and
- €# Assessment of development proposals in Shark Bay World Heritage Property - Final.

A list of guidance statements and their stage of development can be found at Appendix 7.

MONITORING OF WASTE MANAGEMENT (WA) FACILITIES

Waste Management (WA) (WMWA) currently operates the Intractable Waste Disposal Facility (IWDF) at Mt Walton East and the Liquid Waste Treatment Facility (LWTF) at Brookdale.

The EPA has responsibility for monitoring these facilities, with each facility operated under a Ministerial Direction issued under s110 of the EP Act.

The EPA contracts an independent auditor to assist the EPA monitor the operations of WMWA.

Intractable Waste Disposal Facility, Mt Walton East

Waste Management WA (WMWA) carried out a disposal operation for chemical and low level radioactive waste at the IWDF in early 2002. The EPA reviewed and approved the annual Performance and Compliance Report which incorporated the Close-Out Report for the 2002 disposal operation in December, 2002.

Cabinet has approved the transfer of responsibility for the management of this facility from WMWA to the Department of Housing and Works. When this transfer is effected, the Department of Environment will assume responsibility for environmental auditing of the future operations at this facility.

Liquid Waste Treatment Facility, Brookdale

The EPA assessed a proposal by WMWA to change plant processes, and to allow the acceptance of a wider range of 'liquid wastes' and 'hazardous liquid wastes' at the LWTF, Brookdale. The EPA's report and recommendations are contained in Bulletin No 1039 released in January 2002.

The Minister for the Environment and Heritage issued Ministerial Statement 588 on 18 March 2002, which set out the Ministerial Conditions applying to this proposal. The key Ministerial Condition required that the facility cease to accept hazardous waste by 30 June 2002. The facility is able to continue to accept liquid waste for which it has existing environmental approvals.

A number of spot audits have been undertaken by the EPA since July 2002 which have shown that WMWA is operating this facility in compliance with its Ministerial Conditions.

The EPA has approved the Decommissioning Plan relating to hazardous liquid wastes as required by Ministerial Statement 588 and will review the subsequent implementation of this Plan.

The EPA will continue to monitor the facility and review Progress and Compliance Reports required by Ministerial Conditions.

The Minister for the Environment has announced that this facility will close at the end of December 2003. The EPA is responsible for assessing the final Decommissioning and Rehabilitation Plan to ensure that the site is suitable for its intended future land use. The EPA will involve the Brookdale Community Reference Group in its review of the final Decommissioning and Rehabilitation Plan.

LEGISLATIVE ISSUES

The EPA has a significant role to play in environmental regulation. The EP Act sets out that the Governor may, on the recommendation of the EPA, make regulations required or permitted by the Act to be prescribed or in relation to implementing a National Environmental Protection Measure.

Noise Regulations

Progress was made with the preparation of Drafting Instructions and Explanatory Notes for a series of amendments to the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) as identified in the 'Noise Regulations Review – Outcomes of the Working Group Programme' document.

Stakeholder consultation is anticipated to be undertaken in 2003-04.

Regulation 17 Applications

Noise Regulation 17 applications for approval to vary from the assigned noise levels were progressed for the following applicants:

Wespine pine log sawmill, Dardanup

A regulation 17 approval was Gazetted in November 2002, effectively bringing the permitted noise emission levels into line with those granted under Part IV Conditions in 1993 (before the Noise Regulations came into force);

Western Power Corporation, regional power stations

Western Power Corporation is the sole provider of energy in many regional locations in WA, having taken over this essential service from local Shires in the 1970's and 80's. Many of the facilities consist of diesel generators housed in metal sheds located centrally in towns. The community response to the resulting high noise levels is generally tempered by the essential nature of the service.

The existing power stations are to be replaced with noise-compliant facilities over the next few years, through an Independent Power Procurement process.

An EPA Bulletin was issued, recommending that a section 6 Ministerial exemption be granted in lieu of a Noise Regulation 17 approval. The exemption order is currently in preparation.

Wesfarmers Coal Ltd, Premier Coal Mine, Collie

The Premier Coal Mine is a large open-cut mine located 10km east of Collie, and adjacent to the Buckingham townsite. The EPA found that it was not practicable for the Mine to meet the prescribed standards for noise emissions set down in the Noise Regulations, especially under temperature inversion conditions.

A financial compensation package was negotiated with the existing Buckingham residents, and an EPA Bulletin was issued, recommending a Regulation 17 approval be granted. An approval notice is in preparation.

Western Power Corporation, transmission substations

Of the 113 Transmission Substations located throughout the Perth Metropolitan area, and some country centres, 38 have been found to exceed the prescribed standard for noise emissions. Western Power Corporation is proposing to implement a significant noise mitigation program over the next five years that will reduce all noise emissions to compliance or within 5dB of compliance. The EPA endorsed this strategy, and a Bulletin recommending a Noise Regulation 17 approval is currently in preparation.

Western Power Corporation, Pinjar power station

The Pinjar gas turbine power station causes a small noise exceedance over an area of bushland adjacent to the plant boundary. The EPA has endorsed a strategy involving the granting of a simple Noise Regulation 17 approval, and a Bulletin is in preparation. A small number of remaining major power stations are expected to be assessed shortly.

Alcoa Wagerup refinery

As a result of the complexity of the noise emissions from this facility, an independent review of noise emissions was commissioned. The reviewer's report was released in May 2003, and a public consultation process is currently under way, leading up to an EPA strategy briefing.

Gwalia Consolidated, Greenbushes tantalum mine

After an extended consultation and investigation period, Gwalia is soon expected to submit an updated report prior to an EPA strategy briefing.

Albany Port (truck transport) and Wesfi Manufacturing Pty Ltd, Dardanup

Work on these two assessments has recently recommenced.

Apart from the "active" assessments outlined above, there were two applications where withdrawal is being negotiated, and three that are expected to be dealt with via regulation amendments, leaving four "inactive" applications under assessment as at 30 June 2003.

CONSULTATION

The EPA undertakes an array of consultative processes relating to proposals being assessed. These include:

- ## public review of proponent documentation for proposals either being formally assessed or for which a Strategic Environmental Review is being undertaken;
- ## participation at public meetings held by proponents to give advice on the EIA process and to respond to questions;
- ## conduct EPA-initiated public meetings where there is a degree of public sensitivity, usually after the close of the formal public review period, to provide feedback on the key environmental issues raised and to receive any other environmental issues the community requests the EPA to consider in its assessment of the proposal. These meetings also provide an opportunity for the EPA to inform the community of the likely timing of the EPA's advice to the Minister for the Environment on a proposal and appeal rights available;
- ## participation at stakeholder meetings; and
- ## receiving briefings from stakeholder groups at meetings of the EPA Board on issues of importance.

SITE VISITS CARRIED OUT BY THE EPA

During the year, various EPA members (subject to availability) travelled within the State to examine proposals in the field and to meet with proponents on-site.

Proponents have welcomed the opportunity to meet with the EPA to discuss issues in the less formal setting of the project. Relevant staff from the EPA Service Unit accompanied the EPA. Whenever possible, EPA members took the opportunity to meet with key local stakeholders, including local government CEOs and Shire Presidents, interest and conservation groups, and Indigenous communities.



*EPA site visit 18 June 2003:
Southern Forest, in association with representatives of the Conservation Commission.*

Site visits have proved very valuable in a number of ways, including:

- ## giving EPA members a clearer understanding of the environmental setting of a proposal;
- ## providing an opportunity to meet proponents, exchange views, address environmental issues associated with their proposal, and network in an informal atmosphere;
- ## providing an opportunity for the mutual exchange of views and making it easier to communicate with proponents and others through subsequent telephone interaction and formal EPA board meetings;
- ## leading to better environmental advice being provided to the Minister;
- ## enhancing the identity of the EPA as an Authority that provides independent advice; and
- ## providing an identity to an otherwise 'invisible' Board.

A list of the EPA and other site visits is provided in Appendix 8.

ADVISORY COUNCIL TO THE EPA

The Advisory Council to the Environmental Protection Authority (ACTEPA) was established to provide advice to the EPA on a range of environmental issues.

ACTEPA meets bi-monthly and consists of a cross-section of members of the community. Appointees are individuals who can bring to the table a range of perspectives and expertise from industry, conservation and technical fields, rather than representing particular groups.

Current members:

Mr Andrew Baker (Chairman)

(the above appointment expires 30 June 2004)

Mr Norm Halse (Deputy Chairman)

Dr Sue Graham-Taylor

(the above appointments expire 1 September 2004)

Mrs Dot Hesse

Dr Rod Lukatelich

Mr Tony van Merwyk

Ms Verity Allan

Mr Graham Slessar

Mrs Marion Blackwell

Mr Frank Batini

(the above appointments expire 30 September 2003)

ACTEPA's role is to provide comment and advice to the EPA on any matters referred to it by the EPA. ACTEPA may also initiate discussion on environmental matters and provide advice to the EPA.

During the year ACTEPA was kept advised of a range of issues before the EPA, and members' input was sought. Issues covered include:

- €# Greenhouse gas
- €# Gorgon proposal
- €# Lots 4 and 105 Underwood Avenue, Shenton Park, University of Western Australia
- €# Brookdale Liquid Waste Treatment Facility
- €# State of the Environment Reporting
- €# Various Guidance Statements, Position Statements, and Environmental Protection Policies
- €# Koolyanobbing Iron Ore Mine Expansion
- €# Coral Coast Marina Development
- €# Coastal Task Force

The EPA records its appreciation for the time and effort taken by ACTEPA members during the year. The advice of all members of ACTEPA is greatly appreciated by the EPA.

APPENDICES

APPENDIX 1: The Role Of The Environmental Protection Authority

The EPA is a statutory advisory body and provides independent overarching policy advice to the Minister for the Environment. Its objectives, as stated in the EP Act, are to protect the environment and to prevent, control and abate pollution.

The EPA carries out a number of functions in pursuing its objectives including:

- ## environmental impact assessment;
- ## formulating environmental policies;
- ## co-ordinating activities necessary to protect, restore and improve the environment of the State;
- ## seeking information and providing advice; and
- ## carrying out studies, investigations and research into problems of environmental protection.

A major role of the EPA is to ensure that the environment is protected when development decisions are made. It does this by providing high level independent environmental advice to the Minister for the Environment and others so that environmental considerations are taken into account in the decision-making process.

Approval of proposals and the Ministerial Conditions to be imposed on developments are made by the Minister, who may take into account broader issues than those considered by the EPA.

Under the EP Act, environment is defined as “living things, their physical, biological and social surroundings and the interactions between all of these”. The Act further explains that “the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that these surroundings directly affect or are affected by his physical or biological surroundings.” The EPA interprets environment to include beneficial use and risk associated with the environment.

Under the EP Act the EPA has no enforcement role. This responsibility is undertaken by the Department of Environment, including overseeing Ministerial Conditions on developments.

General approach taken by the EPA

The EPA is regarded by the community as an advocate for the environment and believes that transparency of process is fundamental to the effective development of environmental policy and to the implementation of environmental protection. In evaluating issues, the EPA seeks input from stakeholders and the public through liaison, public meetings, submissions, as well as through site visits with proponents and members of the community.

The broad principles of ecologically sustainable development and biodiversity provide a valuable starting point for the EPA. However, recommendations are also made on the basis of protecting:

- ## ecological processes;
- ## biodiversity;
- ## declared rare flora and fauna;
- ## vegetation associations and habitat;
- ## water quality and quantity (marine, estuarine, fresh and brackish waters);
- ## air quality;
- ## soils and land;
- ## individuals and society from unacceptable risk; and
- ## beneficial uses of the environment.

These elements are considered by the EPA during the assessment of each development proposal. The EPA also considers the environmental management framework for each proposal to ensure that the whole proposal and all of its environmental impacts are managed. This includes environmental management plans, objectives and performance indicators. Proponents are encouraged to conduct an annual audit and a periodic review of their operations in keeping with the broad philosophy of ensuring continuous improvement in environmental management.

A series of non-statutory statements (Position and Guidance Statements) has been developed to set out the EPA's view on specific environmental matters, giving proponents and the community an understanding of the EPA's views. They are designed to increase certainty for proponents and the public. If the EPA's views are incorporated early in project development by proponents, assessments can be carried out more rapidly.

Role of the proponent

A common concern raised with the EPA each year is that the EIA process is biased because the proponent has the responsibility to prepare, or have prepared, the environmental review document. The basis of this concern is that the proponent, who has the greatest stake in having the project proceed, should not be given the opportunity to control the development of the major document on which the environmental impacts of the project are likely to be judged.

However, there are good reasons why the proponent should play a pivotal role in the preparation of the environmental review document, provided the appropriate checks and balances are in place. The preparation of this document is the prime way for proponents to ensure that environmental factors are given consideration in project decision-making. It is only through this mechanism that the proponent will appreciate the environmental impacts of the proposed project, and thus the need for good project design and a management program to ameliorate those impacts.

The EPA encourages and expects the proponent to give a high priority to environmental responsibility, including the preparation of the list of environmental commitments as part

of its management program. This can be achieved only if the proponent is fully involved in the consideration of the environmental impacts of the project through the preparation of the environmental review document which forces the proponent to consider environmental issues and factors in project formulation. It is also important for the proponent and their consultant to prepare the document as though looking at the project through the eyes of the EPA. It needs to be as accurate and as full as possible.

It should be remembered that the preparation of the environmental review document is only one element of the process of EIA. There are a number of steps in EIA in WA which are designed to ensure the objectivity and adequacy of the information which is available to the decision-making authority. These steps can be summarised as:

- ## the guidelines for the preparation of the environmental review document are set by the Environmental Impact Assessment Division within the EPA Service Unit (EPA SU);
- ## the guidelines are public and, at one level of assessment, the guidelines are available for public comment;
- ## the environmental review document can be released only after the Environmental Impact Assessment Division within the EPA SU is satisfied that the document is appropriate for release;
- ## the public has the opportunity to comment on the environmental review document after it has been approved for release;
- ## the proponent is required to respond to public comments on the environmental review document, and the response is also available to the public;
- ## the EPA provides the Minister for the Environment, who is the decision-making authority, with an assessment report on the project after receiving advice from the Environmental Impact Assessment Division within the EPA SU and many others; and,
- ## the public (and the proponent) have a further opportunity to provide advice or information to the Minister, in the form of an appeal, following the public release of the EPA report and recommendations.

EPA linkages with government agencies

The EPA seeks advice from agencies, including the Department of Environment, (DoE), Department for Planning and Infrastructure (DPI) and WA Planning Commission (WAPC), the Department of Conservation and Land Management (DCLM), the Conservation Commission of Western Australia (CCWA), the Marine Parks and Reserves Authority (MPRA), Department of Health (DoH), Department of Industry and Resources (DoIR), Department of Indigenous Affairs (DIA), Department of Fisheries (DoF) and Department of Agriculture (DAWA).

Department of Environment

As a result of the Machinery of Government Report review, the Department of Environmental Protection and the Water and Rivers Commission are being amalgamated to form the Department of Environment (DoE).

Administratively situated within the new Department is the EPA Service Unit, consisting of the Environmental Impact Assessment Division and the Policy and Coordination Division, under the direction of the EPA. A Service Agreement between the Authority, Department and the Minister has been established for the provision of departmental services to the EPA.

The EPA Service Unit carries out a variety of functions for the EPA, primarily EIA and preparation of draft EPA reports, research and co-ordination functions in relation to the environment, and the preparation of draft EPPs.

The new Department will continue to administer the regulation requirements of the EP Act (for example Licensing of Industry and undertaking pollution investigations) and act as a proponent (for example for water allocation plans) and as a provider of expert advice on matters pertaining to water resource protection and management as inputs to the EIA process.

In relation to the control of pollution, the EPA will continue to have a key role where it subjects proposals to EIA and through relevant EPPs.

Where DoE is the proponent of proposals that are subject to Environmental Conditions set by the Minister for the Environment, the EPA undertakes the statutory compliance audit role.

Department for Planning and Infrastructure and WA Planning Commission

All town planning schemes and amendments (both Local Authority and Region Schemes) are required to be referred to the EPA under Section 48A of EP Act. If the EPA formally assesses a scheme or amendment to a scheme, both the Planning and Infrastructure, and Environment Ministers have to agree on conditions before approval can be given.

DPI and WAPC also prepare strategic plans that the EPA can report on under Section 16(j) of the EP Act.

Department of Conservation and Land Management

In the case of DCLM, the EPA has two different working relationships. DCLM, as manager of forests and the conservation estate on behalf of the Conservation Commission, is required to implement Forest Management Plans which are assessed by the EPA. DCLM is also a key provider of expert advice on conservation and biodiversity issues generally, and particularly during the EIA process.

Conservation Commission of Western Australia

The Commission has responsibility for control and management planning of State Forest and the conservation estate. This includes adopting management plans for the estate and then auditing DCLM's implementation of the plans. Where the EPA assesses plans, such

as the Forest Management Plans, the EPA may then audit the Commission's compliance with Environmental Conditions set by the Minister for the Environment.

Marine Parks and Reserves Authority

The MPRA has responsibility for control and management planning of marine parks and reserves. The MPRA provides advice on marine issues for development proposals under consideration by the EPA.

The MPRA is supported by a Scientific Advisory Committee which the EPA also calls upon from time to time for professional and technical input.

Department of Health

The Department of Health has a significant role in providing advice to the EPA on possible health impacts of proposals. Industrial and other activities can pose a risk to human health if not managed in an environmentally acceptable manner.

When the EPA requests a Health Risk Assessment to identify cumulative effects of an activity on human health, for example the impact of air emissions from several industries within a region, the EPA seeks advice from the Department of Health on the Assessment particularly in relation to the validation of the modelling methods proposed.

The Department of Health also provides specialist advice in the remediation and management of asbestos in contaminated sites and where on-site containment of contaminated material is proposed.

Department of Industry and Resources

The EPA has a Memorandum of Understanding (MOU) with the DoIR for the referral of onshore mining and exploration proposals to the EPA under Section 38 of the *Environmental Protection Act 1986*.

The MOU is not a delegation of the EPA's powers but provides an agreed, efficient and transparent administrative framework for referral of proposals to the EPA. The MOU has been operating since 1995. MOUs of this type are consistent with the recommendations of the Review of the Project Development Approvals System ("the Keating Review") and provide an effective means to ensure coordination between Government agencies and efficiency of the approvals process.

An administrative framework is in place with the DoIR for the referral of offshore petroleum exploration and development proposals. This administrative framework has been operating for over three years and is being formalized through a separate memorandum of understanding.

Department of Indigenous Affairs

When the EPA is undertaking an assessment of a proposal, Aboriginal heritage may be a relevant environmental factor. The EPA must consider the issue and must satisfy itself that it can, and will, be addressed, consistent with the scope and requirements of the EP Act. One way to assist the EPA to be satisfied is for the EPA to be provided with confirmation that environmental aspects of the issue will be fully addressed through other processes, such as under the *Aboriginal Heritage Act*.

The EPA will give consideration to Aboriginal heritage matters to the extent that they may be affected by the impacts of the proposal on the physical or biological surroundings. The EPA will need to determine if changes to the physical or biological environment will result in there being an impact on matters of heritage significance to Aboriginal people.

Under both of these circumstances, the EPA will consult with and seek specialist advice from the Department of Indigenous Affairs to avoid or reduce duplication.

Department of Fisheries

Department of Fisheries provides key advice on significant proposals that may have an impact on the marine environment.

The Department of Fisheries is responsible for the management of the State's fish resources, commercial, pearling and aquaculture industries, recreational fishers and the waters and habitats that surround the State's coastline.

The Department of Fisheries develops and implements appropriate and sustainable resource management strategies for the State's fisheries and fish habitats, including collaborative arrangements with the EPA in terms of aspects of natural resource management.

Department of Agriculture

As part of its role in the Interdepartmental Committee for consideration of proposals to clear native vegetation, the Office of the Commissioner for Soil and Land Conservation provides advice on the land degradation aspects of clearing which is taken into account in the EPA's overall environmental assessment of this type of proposal.

APPENDIX 2: Formal Assessments (other than Environmental Protection Statements)

Bulletin No.	Title	Release date
1053	Lancelin to Cervantes Coast Road, Shires of Dandaragan and Gingin	July 2002
1054	Clearing of 197ha of land, Melbourne Loc 3927, Cairn Road, Dandaragan	July 2002
1054	Clearing of 600ha of land for horticulture, Melbourne Loc 3927, 10km south east of Jurien Bay	July 2002
1056	Iron Ore Mine and Downstream Processing (Direct-Reduced and Hot-Briquetted Iron) and Port, Cape Preston	July 2002
1057	Redevelopment of the Midland Railway Workshops into a Police Operations Facility, south of Midland Township	August 2002
1060	Metropolitan Region Scheme Amendment No. 1010/33, Port Catherine	August 2002
1061	Donnybrook Plantation Based Woodchip Project, Preston AA Lot 262, south east of Donnybrook	August 2002
1065	Ammonia/Urea Plant, Burrup Peninsula	September 2002
1066	Hope Downs Iron Ore Project, Rail and Port, Pilbara	September 2002
1068	Commercial HIsmelt Process Plant, Kwinana	September 2002
1069	Change to Environmental Conditions – Cedric Street Wetland relocation to Telford Crescent, Stirling	September 2002
1071	Modification to Derby Tidal Power Proposal	October 2002
1073	Coral Coast Resort –Phase 1 Mauds Landing, between Carnarvon and Exmouth	October 2002
1075	Methanol Plant and Product Export, within the Withnell East Industrial Area and Dampier Port, Burrup Peninsula	November 2002
1076	Construction of Cargo Wharf and Associated Cargo Handling Facilities, to the north of James Point – Stage 1, Cockburn Sound	November 2002

Bulletin No.	Title	Release date
1077	Methanex Methanol Complex, Burrup Peninsula	November 2002
1079	Change to Environmental Conditions – Yakabindie Nickel Project, Leonora	November 2002
1082	Koolyanobbing Iron Ore Expansion, 50km north east of Southern Cross	December 2002
1083	Poultry Litter Fired Power Station, Brand Highway, near Muchea, 70km north of Perth	December 2002
1085	Mineral Sands Mine, Tutunup, 14km south of Capel	December 2002
1087	Public Review of Environmental Conditions – Peel Inlet and Harvey Estuary Management Strategy	January 2003
1091	Industrial Subdivision, Lot 502 North Lake, Sudlow and Phoenix Roads, Bibra Lake	March 2003
1093	Change to Environmental Conditions – Ravensthorpe Nickel Project, Bandalup Hill, Ravensthorpe	April 2003
1094	Change to Environmental Conditions – Ammonia-Urea Plant, Kwinana	March 2003
1098	Titanium Minerals Mine, Ludlow, 34km south of Bunbury	May 2003
1099	Superlot Subdivision, Lot 4 and Lot 105 Underwood Avenue, Shenton Park	May 2003
1100	Champion Lakes Recreation Park Development, Lake and Wright Roads, Armadale	June 2003

APPENDIX 3: Environmental Protection Statements (EPS) and Assessment on Referral Information (ARI)

Bulletin No.	Title	Release date
1055	Samson Brook Redevelopment Scheme, Shire of Waroona	July 2002
1058	Telfer Extension Project, Power Supply and Infrastructure Corridor, Port Hedland to Telfer Gold Mine, Great Sandy Desert.	August 2002
1059	Telfer Project, expansion of Telfer Gold Mine, Great Sandy Desert	August 2002
1064	Adjustment to alignment of Product Services Corridor, near Dampier Public Wharf, Dampier	August 2002
1070	Perth Metropolitan Desalination Proposal, Kwinana/East Rockingham	October 2002
1072	Mundaring Water Treatment Plant and Sawyers Valley Water Storage Tanks, Mundaring Weir	October 2002
1080	Perth Energy Kwinana Combined Cycle Power Plant, Kwinana	December 2002
1081	Pinjarra Cogeneration Project Site with Alcoa's Pinjarra Alumina Refinery, approximately 6km east of town of Pinjarra	December 2002
1086	Cockburn 2 Combined Cycle Gas Turbine, Leath Road, Naval Base.	January 2003

APPENDIX 4: Proposal Unlikely to be Environmentally Acceptable

Bulletin No.	Title	Release date
1084	Clearing of approximately 570ha of native vegetation for Pine and Sandalwood Plantation, Lot 7778 Wannamal South Road, Wannamal, 12km north east of Gingin	December 2002
1089	Clearing of approximately 300ha of native vegetation for pasturing and livestock grazing, portion of Neridup Loc 16, Lot 92, approximately 65km east of Esperance.	February 2003
1095	Construction of 92 Grouped Dwellings and a Local Shop/house, Pt Lot 1001, Foreshore Drive, Singleton	April 2003

APPENDIX 5: s16 Strategic Advice

Bulletin No	Project Title	Release date
1063	Bauxite Mining (2.6ha) and Road and Conveyer Stream Crossings (2.9ha) in CAR Informal Reserves, Huntly and Willowdale Bauxite Mines, Mining Lease 1SA, near Dwellingup	August 2002
1067	Strategic Planning for Future Power Generation, Pinjar, Kemerton, Kwinana, Bunbury and Collie	September 2002
1088	Environmental Values Associated with the Realignment of Roe Highway (Stage 8)	February 2003
1090	Griffin Energy South West Power Project, 4.5km north east of Collie	February 2003
1092	Mining in CAR Informal Reserve, Ewington-1 Open-cut Coal Mine, east of Collie	March 2003
1097	Three Haul Road Stream Crossings (totalling 2.4ha), through CAR Informal Reserves, Huntly Mine, Ming Lease 1SA, near Dwellingup	May 2003

APPENDIX 6: Position Statements

No.	Position Statement	Current Status
1	Environmental Protection of Cape Range Province	Published December 1999
2	Environmental Protection of Native Vegetation in Western Australia	Published December 2000
3	Terrestrial Biological Surveys as an element of Biodiversity Protection	Published March 2000
4	Environmental Protection of Wetlands	Preliminary published June 2001
5	Environmental Protection and Sustainability of the Rangelands in Western Australia	Preliminary published October 2002
6	Towards Sustainability	Preliminary published October 2002
7	Principles of Environmental Protection	Preliminary published October 2002

APPENDIX 7: Guidance Statements for the Assessment of Environmental Factors

Draft Guidance

No	Title	Release date
8	Environmental Noise	June 1998
22	Seagrass Habitat Protection.	May1998
26	Management of Surface Run-off from Industrial and Commercial Sites	March 1999
29	Benthic Primary Producer Habitat Protection for Western Australia's Marine Environment	August 2003
33	Guidelines for Environment and Planning	August 1997
41	Assessment of Aboriginal Heritage	April 2001
43	Guidance to assist proponents in understanding the EPA's requirements in relation to the environmental condition on Environmental Management Systems	March 2000
48	Groundwater Environmental Management Areas	February 1998
50	Achieving EPA Risk Criteria for development in proximity to existing and proposed High Pressure Gas Transmission Pipelines	May 2000
51	Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia	February 2003
54	Sampling of subterranean fauna in groundwater and caves	March 2003
55	Implementing best practice in proposals submitted to the environmental impact assessment process	March 2003
56	Terrestrial fauna surveys for environmental impact assessment in Western Australia	February 2003

Final Guidance

No	Title	Release date
1	Protection of Tropical Arid Zone Mangroves along the Pilbara Coastline	April 2001
2	Risk Assessment and Management: Offsite Individual Risk from Hazardous Industrial Plant	July 2000
4	Deep and Shallow Well Injection for Disposal of Industrial Waste	September 1998
10	Level of Assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region	January 2003
12	Minimising Greenhouse Gases	October 2002
13	Management of Air Emissions from Biomedical Waste Incinerators	March 2000
15	Emissions of Oxides of Nitrogen from Gas Turbines	May 2000
17	A Site Remediation Hierarchy for Contaminated Soil	July 2000
18	Prevention of Air Quality Impacts from Land Development Sites	March 2000
28	Protection of the Lake Clifton Catchment	May 1998
34	Linkage between EPA Assessment and Management Strategies, Policies, Scientific Criteria, Guidelines, Standards and Measures Adopted by National Councils	April 1998
40	Management of Mosquitoes by Land Developers	June 2000
47	Assessment of Odour Impacts	March 2002
49	Assessment of Development Proposals in Shark Bay World Heritage Property	November 2002

APPENDIX 8: EPA site visits

Date	Site
19 September – 20 September 2002	Proposed Gorgon Gas Project, Barrow Island.
4 October 2002	Koolyanobbing Iron Ore Expansion Project.
12 November 2002	South West Metropolitan Railway.
25 November 2002	Champion Lakes, Armadale.
6 February 2003	Ludlow Titanium Minerals Mine
6 February – 7 February 2003	Various sites associated with the Proposed Bunbury Region Scheme.
3 April – 4 April	Proposed Gorgon Gas Project, Barrow Island
2 May 2003	Various sites associated with the Proposed Bunbury Region Scheme.
12 June – 13 June 2003	Proposed Gorgon Gas Project, Barrow Island.
18 June 2003	Various sites within the southern forest related to the proposed Forest Management Plans.

Other site visits by individual EPA members, usually by the Chairman or Deputy Chairman.

Date	Site
8 August 2002	Proposed Warradarge Coal Mine, Jurien.
27 September 2002	Wungong Water Reservoir.
28 October – 30 October 2002	Mineral Sands National Workshop, Bunbury.
20 February – 21 February 2003	Koolyanobbing Iron Ore Expansion Project.

APPENDIX 9: Attendance at EPA Meetings

Attendance EPA Meetings – 4 July 2002 to 19 June 2003									
EPA Meeting Date	EPA Member								
	Bernard Bowen	Libby Mattiske	Ian LeProvost	Denis Glennon	Frank Murray	Walter Cox	Joan Payne	Andrea Hinwood	Roy Green
No. 791 – 4 July 2002	-	D	D	-	D				
No. 792 – 18 July 2002	D	D	D	D	D				
No. 793 – 1 August 2002	D	D	-	D	D				
No. 794 – 15 August 2002	D	D	D	D	D				
No. 795 – 29 August 2002	D	D	D	D	D				
No. 796 – 12 September 2002	D	D	D	D	D				
No. 797 – 26 September 2002	D	D	D	-	D				
No. 798 – 10 October 2002	-	D	D	D	D				
No. 799 – 24 October 2002 *	D	D	D	-	D				
No. 800 – 7 November 2002	-	D	D	D	-				
No. 801 – 21 November 2002	D	D	D	D	D				
No. 801a – 2 December 2002 **	-	D	-	D	D				
No. 802 – 5 December 2002	D	D	D Term as member ceased 31/12/02	D	D				
No. 803 – 16 January 2003	D	D		D	D	D Commenced as member 1/1/03			
No. 804 – 30 January 2003	D	D		D	D	-			
No. 805 – 13 February 2003	D	D		D	D	D			
No. 806 – 27 February 2003	D	D		D	D	-			

Attendance EPA Meetings – 4 July 2002 to 19 June 2003

EPA Meeting Date	EPA Member								
	Bernard Bowen	Libby Mattiske	Ian LeProvost	Denis Glennon	Frank Murray	Walter Cox	Joan Payne	Andrea Hinwood	Roy Green
No. 807 - 13 March 2003	D	D		D	D	D			
No. 808 – 27 March 2003	D Ceased as Chairman 30/3/03	D		D	D	D			
No. 809 - 10 April 2003		-		D	D	D Commenced as Chairman 31/3/03	D Commenced as member 31/3/03		
No. 810 – 24 April 2003		D Term as member ceased 6/5/03		D	D Term as member ceased 6/5/03	D	D		
No. 811 – 8 May 2003				D		D	D	D Commenced as member 7/5/03	
No. 812 - 22 May 2003				-		D	D	D	- Commenced as Deputy Chairman 13/5/03
No. 813 – 5 June 2003				-		D	D	D	D
No. 814 - 19 June 2003				D		D	D	D	D

* D Glennon was absent for this EPA meeting but participated in discussion and decision of agenda item 6.5 via telephone link.

** Out-of-session item on Pinjarra Cogeneration project.

APPENDIX 10: Financial Report

The administration costs of the EPA are as follows:

	2002-03 (\$'000)	2001-02 (\$'000)	2000-01 (\$'000)
<i>Recurrent</i>			
Salaries and allowances	452	390	384
<i>Other Expenses</i>			
Staff related expenses	41	41	31
Communications	10	4	4
Services and contracts	254	179	154
Consumable supplies	13	9	3
Repairs, Maintenance and Depreciation	2	7	8
<i>Total</i>	772	630	584

Electoral Act 1907 (s175 ZE Disclosure)

In accordance with Section 175 ZE of the *Electoral Act 1907*, the Environmental Protection Authority incurred the following expenditure in advertising, market research, polling, direct mail and media advertising:

- Total expenditure for 2002/2003 was \$3 778.34 (2001/02 – \$2 820.80).
- Expenditure of specified amounts of \$1 500 or greater in the following areas:

Advertising Agencies	Nil
Market research organisations	Nil
Polling organisations	Nil
Direct mail organisations	Nil
Media advertising organisations	Nil

Note:

Section 175 ZE of the *Electoral Act 1907* requires “specified amounts” of \$1 500 or greater expended on advertising in the above categories to be notified in the annual report.