

Environmental Protection Authority

Environmental Protection Authority

ANNUAL REPORT 2006 - 2007



Cover

(From top left)

EPA State of the Environment report cover, released 2 July 2007 (see page 7)

EPA Site Visit to the Maret Islands November 2006 (see page 49 and appendix 10, page 62)

Grain export from CBH Cockburn Sound (from SOE report, see page 7)

EPA Site visit Straits Salt Yannarie Solar proposal Exmouth Gulf April 2007 (see page 31)



Environmental Protection Authority

ENVIRONMENTAL
PROTECTION
AUTHORITY

ANNUAL REPORT

2006 • 2007

TRANSMITTAL TO THE MINISTER

Hon David Templeman MLA
MINISTER FOR THE ENVIRONMENT; CLIMATE CHANGE; PEEL

In accordance with s21 of the *Environmental Protection Act 1986*, I submit the EPA's Annual Report for the year ended 30 June 2007.

It is with pleasure that, on behalf of the EPA, I advise that for the reporting period to 30 June 2007, 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 and Conservation.

A handwritten signature in black ink, appearing to read 'Barry Carbon', written in a cursive style.

Barry Carbon
CHAIRMAN

25 September 2007

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CHAIRMAN'S OVERVIEW

Prepared by Dr. Andrea Hinwood (Chairman 11 May to 30 June 2007) Deputy Chairman and Barry Carbon, Chairman (1 August to 4 November 2007).

First of all a comprehensive acknowledgement for the significant contribution made to the Environmental Protection Authority by Dr Wally Cox, our outgoing Chairman. His knowledge and preparedness to talk and listen are the foundations of his lasting and ongoing contribution to the well being of Western Australia's environment.



*EPA Chairman
Barry Carbon*

The EPA has overarching responsibility for the provision of advice to Government on environmental matters. 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. EPA achieves this through its work in assessment and advice on new projects, policy development and special reports on environmental issues of concern.

During 2006/2007 the EPA dealt with numerous development projects of significant complexity and controversy. The EPA reported on environmental impacts relating to the South West Yarragadee water abstraction project; the Mt Gibson Iron Ore and Infrastructure project and the Mesa A/Warramboe Iron Ore Project. In each case the environmental values in the proposed project areas were significant, with questions about new species and ecosystems, with potential impacts for either critical assets, or ecosystems, leading to some difficult decision making.

We acknowledge the significant contribution of staff in the consulting, industry and government sectors for assisting the EPA in dealing with these complex projects on time to provide good advice to government. Rigorous assessment processes were completed despite the competition for resources in the environment sector as a result of Western Australia's economic boom. We enthusiastically acknowledge the staff of the EPA Service Unit who continue to work in this very human resource constrained setting to deliver quality outputs in support of EPA.

The Environmental Impact Assessment system is still under major pressure. It is difficult for all sectors involved due to the shortage of experience, expertise and resources. We are all struggling to maintain the quality of documents, including those from proponents and consultants.

The EPA also completed advice to government on some significant environmental issues. These included reports to the Minister for the Environment on Fire Management in the Kimberly and other Rangeland Regions of Western Australia; advice on the Mt Manning Range Nature Reserve; the Gnanagara Mound Compliance Audit; and the State of the Environment Report. These reports outlined the challenges for environmental assets associated with Western Australia's growth and from Climate Change.

We will be looking at ways to cope with the large number of development proposals in areas of environmental significance without compromising environmental protection. Strategic environmental management and strategic assessment of multiple proposals seem appropriate where we are also looking at appropriate ways to deal in the triple bottom line benefits of the current boom.

We saw the need for a future focus on waterways and biodiversity in our State of the Environment Report. And a lesson from the Esperance lead affair was the reinforcement of the need to keep a focus on priority issues appropriate to each project.

The economic and growth boom in Western Australia provides a challenge to all of us to contribute to sustaining benefits for Western Australia, and this applies in the environment as elsewhere. Likewise the pressure that comes with the boom is an incentive for us at EPA to develop new knowledge and insight into how we undertake our assessment and advising roles, as opposed to just trying harder.



Barry Carbon
CHAIRMAN.

Chairman from 1986 to 1993 and 1 August to 4 November 2007.

Mr Carbon has a Master in Agricultural Science, a Degree in Biochemistry and was previously the longest serving chair of the Western Australian EPA.

He is the Principal for Barry Carbon and Associates. In the past year Mr Carbon has led a review of bushfire research in Australia and New Zealand for the Commonwealth government and led the Woodside input into the resolution of gas production versus National Heritage Listing dilemma on the Burrup Peninsula. (His contract with Woodside ended 9 July 2007). He is also Chair of WA Waste Management Board and Chair of State Marine Policy Stakeholder Group.

Mr Carbon's experience includes: Chief Executive of the Ministry for the Environment, New Zealand; Director General-Queensland Department of Environment and Heritage; Director General-Queensland Environment Protection Agency, including Parks and Wildlife; Executive Director, EPA, Commonwealth of Australia; The Supervising Scientist, Alligator Rivers Region; Chairman and Commonwealth Representative, National Environment Protection Council Committee and served on the Environment Protection Authority of Western Australia as Chairman from 1985 – 86 and as Chairman and Chief Executive from 1986-93.

Prior to his time as WA EPA Chairman Mr Carbon was manager responsible for environmental activities with Alcoa, and before that Research Programme Leader with CSIRO.

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 Andrea Hinwood

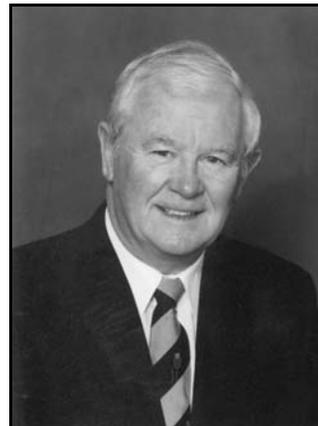
Member from 7 May 2003 to 10 May 2005. Deputy Chairman 11 May 2005 until 6 May 2008. Undertook Chairman's duties from 11 May to 30 June 2007.

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 National Environmental Protection Council (NEPC) working groups. She chaired one of the United Nations Environment Program (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.



Mr Denis Glennon

Member from 1 January 1998 until 30 June 2010

Mr. Glennon retired from the private sector following a lengthy career at senior levels in the environmental management business in Australia. He has specialist knowledge in industrial waste practices, and waste treatment technology development and implementation. He served as Chairman of Environment Business Australia for three years (then called Environment

Management Industry Association of Australia).

He has a comprehensive knowledge of environmental management and pollution prevention systems, environmental engineering, sustainable industry development, and environmental management policy formulation.

He is the recipient of an Order of Australia (AO) for his “service to environmental protection through the management, control and treatment of industrial and hazardous wastes, and to the community”.



Ms Joan Payne

Member from 31 March 2003 until 30 June 2008

Ms Payne, former 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 Chris Whitaker

Member 11 May 2007 to 10 May 2010

After his initial degree at Cambridge University, Chris Whitaker obtained his PhD in desert geomorphology at the Australian National University.

Following several years as a lecturer, in 1980 Professor Whitaker joined the South Australian public service, where he managed the Environmental Assessment Branch of the Department of Environment and Planning and headed

the environmental assessment of the Roxby Downs project.



He joined the Environmental Protection Authority in Western Australia in 1983 and was later appointed Director General of Transport for Western Australia in September 1996. Responsibilities included preparing Westrail Freight for privatisation.

From February 2000 until July 2003 he was the Chief Executive and Managing Director of the Melbourne Port Corporation. He then moved to become Pro Vice-Chancellor (Business) of RMIT University in August 2003, and from August 2004 to April 2005 he was Vice-Chancellor and President of the University. He was also a Trustee of the Sustainable Melbourne Fund.

He relocated to Western Australia in July 2007.

Dr Whitaker is a National Fellow of the Institute of Public Administration; and a Fellow of the Chartered Institute of Transport and Logistics. Prior to entering the South Australian public service he was also a professional freelance musician.

Retiring members

Dr Walter Cox

EPA Chairman, retired 11 May 2007.

Commenced as a member in January 2003 and as Chairman from 31 March 2003.

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 (WA) 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 State Planning Commission, Water Services Association of Australia (Chairman), Workpower and is presently the Chairman of Leadership Western Australia, Chairman of the Chemistry Centre of Western Australia Advisory Board and Chairman Agricultural Research Western Australia. He is also a Commissioner on the National Water Commission.

Professor Steven Halls

Member from 11 May 2005 until 10 May 2007

Professor Steven Halls is an Engineer/Biologist by training with BSc (Hons) and PhD degrees from the Universities of Manchester and London respectively and has been an Environmental Scientist and Researcher for the past 25 years. His fields of professional expertise include environmental policy analysis and review; technology, risk and impact assessment; industrial ecology, eco-innovation and eco-efficiency; and the design and implementation of environmental management and associated education programs.

Professor Halls is Director of Murdoch Environment at Murdoch University where he is responsible for the development and implementation of integrated environmental projects. He is also Professor in the School of Environmental Science and International Research Co-ordinator for the Environmental Biotechnology CRC. Until recently he was the Director of United Nations Environment Programme International Environmental Technology Centre (IETC) based in Japan. Previously Professor Halls was Project Team Leader for the European Commission Environment Directorate concerning the accession of Central and East European Countries into the European Union (EU). He has held appointments at several UK Universities and was Research Scientist/Assistant Professor at the University of Texas in the USA.

He is a member of the European Commission Steering Group on Waste Management Policy and Strategy for Europe. Currently he is an external

advisor and reviewer to the EC RTD Directorate on the development of an European Environmental Technology Action Plan and the European Union 6th Framework Programme on Research, Technology and Development respectively.

MAJOR ENVIRONMENTAL ISSUES

The EPA has overarching responsibility for the provision of advice to Government on environmental matters, and the public expectation is that the EPA will assume 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), State Environmental Protection Policies (SEPs) as well as Guidance Statements and Position Statements. In addition, the EPA retains a close link with Government departments which have the responsibility for the management of natural resources. Further information on the role of the EPA is provided in Appendix 1.

The EPA released its draft 2006 State of the Environment Report on 1 June 2006 (see page seven), a report card on Western Australia's environment. It also assesses the progress towards sound management, use and protection of natural resources.

Two issues stand out for Western Australia: the impacts of climate change compounded by the unprecedented rate of growth and development. Average rainfall is already 15% lower since 1975 and there is already evidence of impacts.

There is a direct link between greenhouse gas in the atmosphere and measured changes. While reduction in greenhouse gas production continues to be a global priority, a priority in Western Australia is to develop strategies to adapt to climate change.

The Water Quality Improvement Plan (WQIP) for the Peel-Harvey Estuary (see page 16), is nearing finalisation. The Dawesville Channel has been an overwhelming success at saving the previously doomed Peel Inlet, but there still is nutrient pollution from land use in the river catchments of the region.

The EPA will finalise the Water Quality Improvement Plan in 2007 to provide for enhanced governance arrangements and preventative and remedial action.

Specific issues of interest during 2006-2007 follow.

Application of s.4A principles

Amendments to Section 4A of the Environmental Protection Act 1986 contain five principles which, in summary, cover:

- the precautionary principle;
- the principle of intergenerational equity;
- the principle of the conservation of biological diversity and ecological integrity;

- principles relating to improved valuation, pricing and incentive mechanisms; and
- the principle of waste minimisation

The EPA, in giving effect to its duties and functions under the Act, must have regard to these.

The Authority does this in two main ways. Firstly, through ensuring that its environmental impact assessment process addresses the requirement to have regard to the principles. Secondly, it gives expression to these through its policy statements: in particular Position and Guidance Statements.

State of the Environment Reporting



Deputy Chairman Dr Andrea Hinwood at the State of Environment Report Media Conference.

In 2006/07 the EPA produced the *State of the Environment Report: Western Australia 2007*. (Available at, <http://www.soe.wa.gov.au>). It is a report card on Western Australia's environment. It also assesses the progress towards sound management, use and protection of natural resources.

The EPA is particularly grateful to over 300 individuals involved in the development of the report, many of whom donated considerable time and expertise to the program. In all some 60 organisations from a diverse range of stakeholder groups were involved.

Following the release of the Draft State of the Environment Report in June 2006, EPA Service Unit staff involved in the report's development undertook a series of public forums around the State to encourage public feedback. Public meetings were held throughout the Perth metropolitan area, and the regional towns of Mandurah, Kalgoorlie, Esperance, Albany, Bunbury, Narrogin, Northam, Geraldton, Carnarvon, Karratha, Broome and Kununurra.

The EPA is grateful for the 80 submissions it received, many of which were detailed and thorough. The EPA reviewed the submissions and made a number of changes to the report, a notable addition was the Overview section which contained a summary version of the report and other 'big picture' indicators.

Considerable assistance was provided by the Department of Environment and Conservation.

Water Issues

Perth Seawater Desalination Plant, Kwinana

The EPA has yet to undertake the section 46 review of Ministerial Conditions applying to this project initiated by the Minister for the Environment in 2005. The Minister requested that the EPA review include:

- revision of the Conditions in Statement 655 to be consistent with the requirements of the *State Environmental (Cockburn Sound) Policy 2005*;
- reinforcement of the importance of the Water Quality Management Plan (WQMP) in the conditions; and
- recommendations for a set of Dissolved Oxygen trigger levels for management intervention to ensure that relevant 'standards' are not exceeded.

The EPA has indicated to the Water Corporation that it wants to have at least six months of information related to the performance of the desalination plant and behaviour of the discharge into Cockburn Sound included within the proponent's section 46 review document. This would include data covering the critical autumn period, where previous advice has indicated the greatest concern about the potential impact of the discharge on Cockburn Sound.

As a result, the Water Corporation is expected to submit its section 46 review document to the EPA later in 2007.

During 2006, the EPA established an Independent Panel to provide advice on dissolved oxygen trigger levels that should be used in relation to management of the discharge into Cockburn Sound from the desalination plant. This advice will be published as part of the section 46 review process, but has been used in the meantime by the Water Corporation and the Department of Environment and Conservation as part of the consideration of the operating licence conditions for the desalination plant set under Part V of the *Environmental Protection Act 1986*.

FIGURE 1: Western Australia’s environment report card

The following report card presents the Environmental Protection Authority’s (EPA) synopsis for WA’s environment in 2007. The EPA has considered a number of indicators relating to the condition of the natural resources or assets, the pressures or threats present, and the adequacy of current responses. ‘Status’ refers to the current overall condition of the natural resources or assets, while ‘trend’ refers to the likely change in natural resources or asset condition over the past decade.

Theme	Status & trend	Comment
Fundamental Pressures		Increasing pressures on the environment from WA’s economic boom, consumption of natural resources, and climate change require new approaches to environmental management.
Atmosphere		Atmospheric pollution issues across WA are generally below guideline limits and appear to be under control. Some issues appear to be worsening.
Land		Many land problems in the South West are getting worse. There are fewer problems in other parts of WA.
Inland Waters		Many waterways and wetlands in WA are degrading, especially in the South West. Better management and protection of inland waters is required.
Biodiversity		There is insufficient knowledge about biodiversity in WA. Most biodiversity issues are serious and appear to be getting worse.
Marine		A few marine areas in WA have recognised problems. Improved knowledge of the marine environment is required.
Human Settlements		Some WA settlements are growing at an unsustainable pace with increasing demand for land, water and energy and increasing waste generation.
Heritage		Many heritage places in WA are being lost or degraded. Better management, protection and recognition of heritage values are required.

Legend:

Current status		Trend direction	
	Good		Likely improvement
	Average		Steady
	Of concern		Likely deterioration

South West Yarragadee Water Supply Development



Ironstone Gully in the Yarragadee Proposal Area. (May 2006. Mark Brundrett, Terrestrial Ecosystems Section, EPA Service Unit)

The EPA released its report (Bulletin 1245 <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>) in December 2006 on the proposal by the Water Corporation to develop a wellfield on the Blackwood Plateau near Jarrahwood and to supply the groundwater from the South West Yarragadee aquifers into the Integrated Water Supply Scheme (IWSS). The proposed well-field would comprise five well sites with two wells at each site drawing water from the Yarragadee Formation Unit 1 and Unit 3 aquifers, approximately 400m and 700m respectively from the surface, providing a maximum of 45 GL/yr.

The main issues considered in the EPA report were:

- risk of impacts on groundwater dependent ecosystems from groundwater abstraction;
- management of the total groundwater use; and
- the potential significance of climate change

The EPA recommended that the proposal could be implemented there remained residual risks to environmental values if the proposal proceeded. The EPA:

- acknowledged that the Water Corporation has undertaken extensive work to assess the likely environmental impacts of its proposed South West Yarragadee aquifer wellfield;
- recognised that the Water Corporation has committed to monitor actual changes in aquifer pressures and groundwater table levels against the predicted drawdowns once the wellfield has commenced, and to apply an adaptive management approach;
- considered there remained considerable residual risks to environmental values if the proposal proceeded; and
- recommended that if it were to proceed implementation of the proposal should be subject to stringent environmental conditions relating to the further acquisition of baseline environmental information, and the development and implementation of rigorous management plans for areas containing significant environmental values.

The proposal was withdrawn before Ministerial conditions were set and the Government subsequently announced in May 2007 that it would shelve the South West Yarragadee Water Supply development and instead proceed with gaining approvals for and developing a new desalination plant near Binningup, north of Bunbury.

Gnangara Mound Compliance Monitoring

Under a delegation from the Minister for the Environment, the EPA has once again reviewed the compliance of the Water and Rivers Commission/Department of Environment in relation to water management on the Gnangara Mound.

The Department of Water (the successor to the Department of Environment) provided an annual compliance report for 2004-05 on the Gnangara and Jandakot mounds, stating that there continued to be a high level of non-compliance with water levels set under the Ministerial Conditions. The Department advised that this was largely attributable to the extended period of poor rainfall.

The level of non-compliance with criteria set in the Ministerial Conditions over the past nine years is indicated in Table 1. The effect of the reduction in the number of criteria sites following the stage 1 section 46 review in 2005 is reflected in the reduction of sites listed.

The EPA provided public advice to the Minister for the Environment in March 2007. In that advice (EPA Bulletin 1252 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>) the EPA stated that it remains extremely concerned about the decline in groundwater dependent environmental values on the Gnangara Mound. These values are not only the increasing number of wetlands with little or no water present during part of the year, but also the condition of the vegetation relying on the water table.

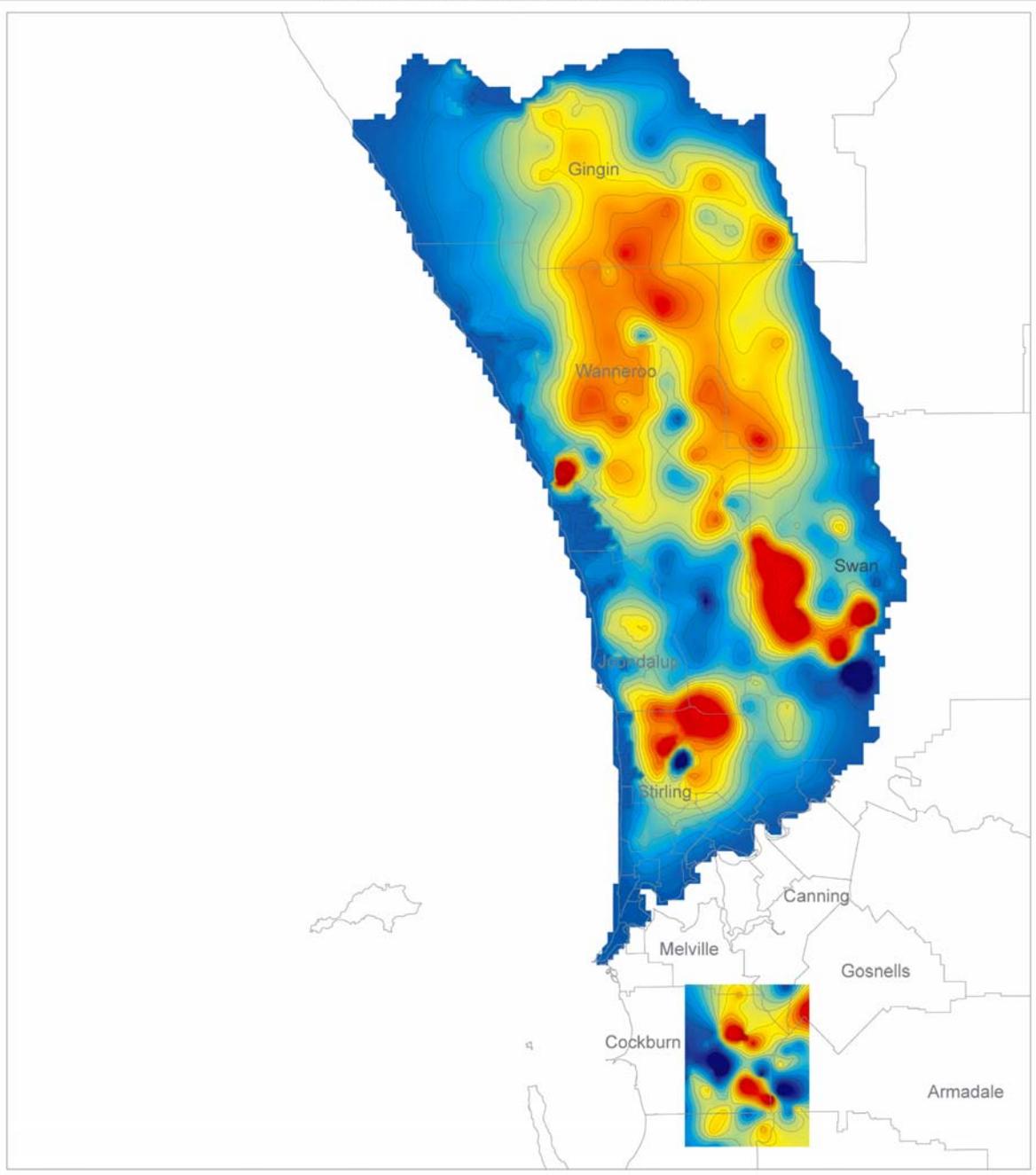
The level of breaches of criteria is not improving. The Department stated again in its 2005 compliance report that this is primarily the result of declining rainfall. The EPA was concerned that ongoing inaction in relation to private allocations continues to leave the Department of Environment (now Department of Water) open to the claim that it is doing little despite acknowledging that it is breaching legal requirements that are in place as part of its responsibility of managing the water resource. The EPA indicated that inaction means that the environmental values are progressively being reduced and, in some instances, lost.

As raised in previous compliance reports, the EPA reiterated its view that the whole issue of the current capacity of the Gnangara groundwater mound to cater for sustainable abstraction whilst protecting nominated environmental and social values must be reviewed as a priority.

There is delay in progressing the section 46 review of Ministerial Conditions that commenced in 2001. The more complex second stage of review was to have been completed by the end of 2006. The EPA understands that this has now been delayed until 2008. Declining groundwater levels and deferral of action will restrict the opportunities to protect environmental values.

Bulletin 1252 was the last audit report by the EPA in relation to compliance with environmental conditions applying on the Gnangara Mound. The Department of Environment and Conservation now has the responsibility for reviewing compliance under section 48 of the *Environmental Protection Act 1986*.

Environmental Protection Authority
Groundwater Level Differences, Gngangara (00-03) Jandakot (88-04)
 State of the Environment Western Australia



Legend

Gngangara

Groundwater level change (m) 2000-2003

High : 1.102216

Low : -2.660570

Jandakot

Groundwater level change (m) 1988-2004

High : 0.527465

Low : -2.339606



Projection: Map Grid of Australia Zone 50
 Datum: Geocentric Datum of Australia, 1994

Data Source
 Gngangara Groundwater Level Change - Dept of Environment (2000-2003)
 Jandakot Groundwater Level Change - Dept of Environment (1988-2004)

Analysis
 Environmental Protection Authority (2005)

Presentation
 Environmental Protection Authority (2005)

This map is produced for the State of the Environment report. Both map and report are produced by the Environmental Protection Authority, an independent advisory body on the environment.

This map depicts the difference in groundwater levels for Gngangara and Jandakot between the periods of 2000-2003 and 1988-2004 respectively. Bore levels recorded by the Department of Environment were modelled and the differences are reflected in a GRID dataset.

This map is constructed in PDF format and able to be printed up to A1 size.

Disclaimer: This map is intended as a generalised interpretation of environmental issues. The information contained on this map is to be considered indicative only and in no event shall the Environmental Protection Authority be liable for any incident or consequential damages resulting from use of the material.

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Groundwater Level Differences, Gngangara and Jandakot Mounds (From EPA State of Environment Report 2007 available at <http://www.soe.wa.gov.au>)

Table 1 - Criteria Sites under Ministerial Conditions on the Gngara Mound showing non-compliance

	MM16	MM16					MM16	MM16
					WM6			
						Yonderup	Yonderup	Yonderup
							PM7	#
					L McNess	L McNess	L McNess	L McNess
					Egerton			
MM55B					MM55B	MM55B	MM55B	MM55B
	Melaleuca	Melaleuca	Melaleuca			Melaleuca		
				WM1	WM1	WM1	WM1	WM1
MM59B			MM59B	MM59B	MM59B	MM59B	MM59B	MM59B
MM53	MM53				MM53	MM53	MM53	MM53
		Jandabup			Jandabup	Jandabup	Jandabup	Jandabup
Lexia 94	Lexia 94		Lexia 94		Lexia 94	Lexia 94	Lexia 94	Lexia 94
	Nowerup	Nowerup	Nowerup		Nowerup	Nowerup	Nowerup	
		PM6	PM6	PM6	PM6	PM6	PM6	#
	Coogee Sp	Coogee Sp	Coogee Sp	Coogee Sp	Coogee Sp	Coogee Sp	Coogee Sp	#
Lexia 186	Lexia 186	Lexia 186	Lexia 186	Lexia 186	Lexia 186	Lexia 186	Lexia 186	Lexia 186
JB5	JB5	JB5	JB5	JB5	JB5	JB5	JB5	#
Joondalup	Joondalup	Joondalup	Joondalup	Joondalup	Joondalup	Joondalup	Joondalup	Joondalup
Mariginiup	Mariginiup	Mariginiup	Mariginiup	Mariginiup	Mariginiup	Mariginiup	Mariginiup	Mariginiup
1997/98	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06

These are no longer criteria sites under Statement 687 issued in 2005.

Mount Manning Section 16 Advice

EPA Bulletin 1256 “*Advice on areas of the highest conservation value in the proposed extensions to Mount Manning nature reserve*” (EPA May 2007 available at

<http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

was prepared in response to a request from the (then) Minister for the Environment, the Hon Judy Edwards MLA, under Section 16(e) of the *Environmental Protection Act*.

The Minister sought EPA advice in relation to:

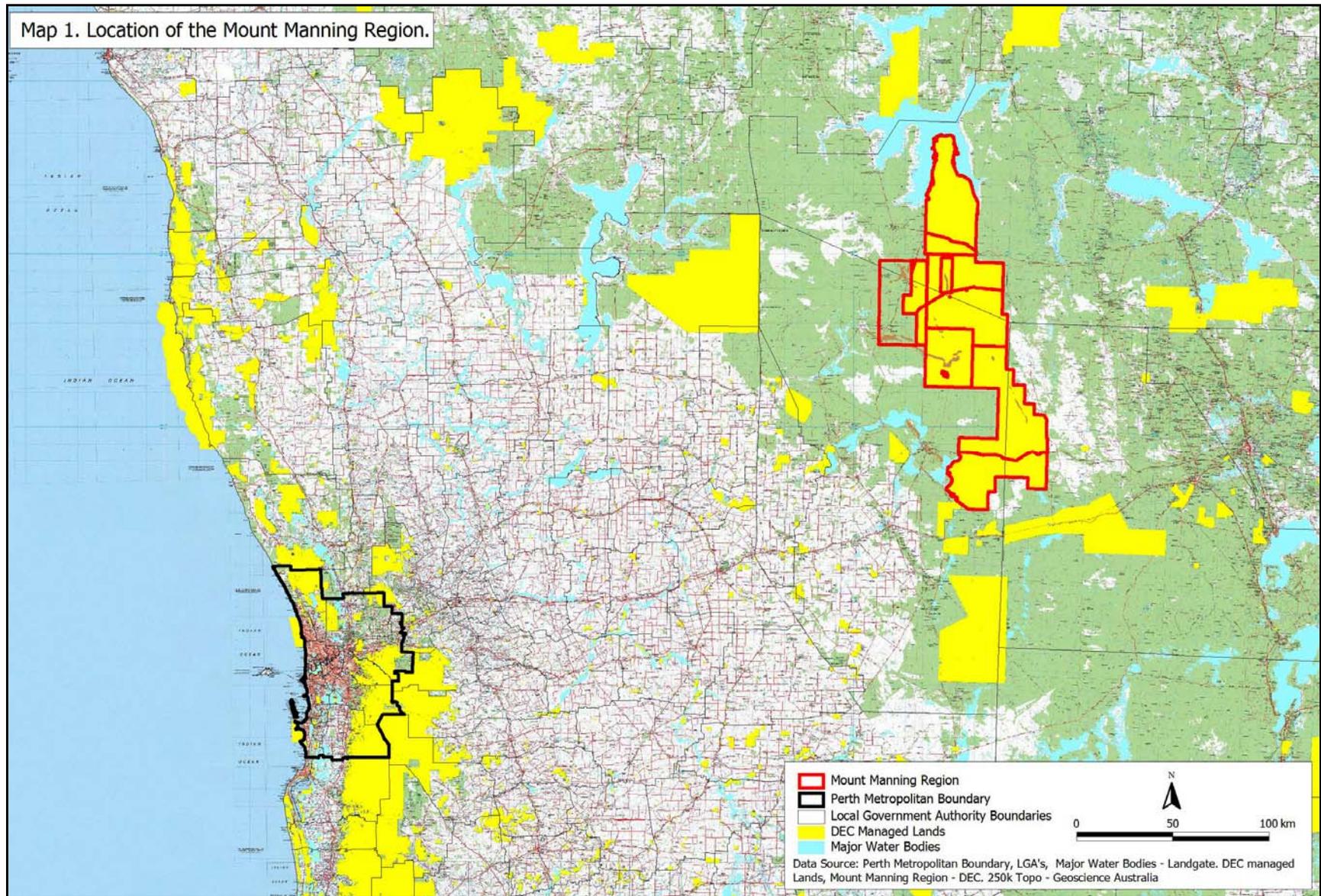
- the location of the highest conservation values in the proposed extensions to the Mt Manning Nature Reserve;
- surrounding areas which require protection from extractive industries (*interpreted to include mining*) as well as those areas in the proposed extensions to the Mt Manning Nature Reserve for which there is a potential for environmental offsets; and requested
- this advice should also give consideration to details of Ministerial Statement 627 with

respect to Portman Iron Ore Ltd Koolyanobbing Expansion.

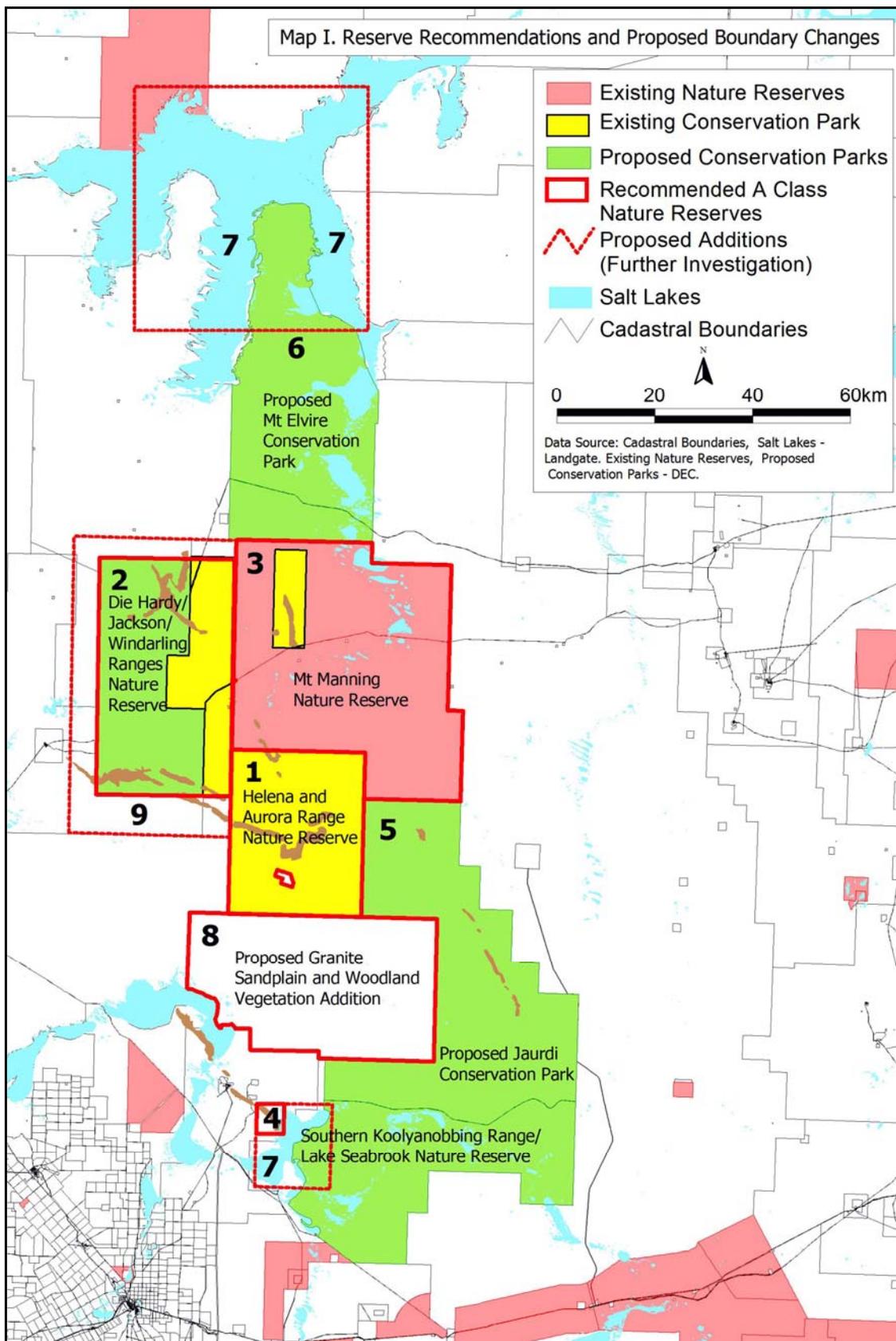
This request followed earlier government approval for the expansion of iron ore mining by Portman Iron Ore Ltd from Koolyanobbing to the Windarling and Jackson Ranges.

The advice primarily concerns the area of the Mt Manning Nature Reserve and its proposed extensions, also known as the Northern Yilgarn Conservation Reserves. The Mount Manning area has been recommended as a conservation reserve since 1962. New knowledge from recent surveys in the Mount Manning Region has increased the biodiversity conservation values of the region, in particular the number of rare species and ecological communities confined (endemic) to ranges composed of banded ironstone formation rocks in the region.

EPA Bulletin 1256 concludes that this region is worthy of recognition as a biodiversity hotspot, due to high flora and fauna diversity and endemism, and the number of Declared Rare and Priority Flora, Declared, Threatened and Priority Listed Fauna, undescribed or newly described taxa and unique vegetation communities restricted to banded ironstone formation ranges.



Location of the Yigarn/Mount Manning /Midwest region (from EPA Bulletin 1256 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)



Mt Manning Reserve recommendations and proposed boundary changes (from EPA Bulletin 1256, May 2007)

Iron Ore Development in the Midwest Yilgarn region

The banded ironstone formation ranges are a focus for iron ore mining throughout the Mid West and Yilgarn.

There are grounds for identifying many of the banded ironstone ranges as areas of conservation value, particularly for endemic plant species, and ecological communities.

At present, none of approximately 50 banded ironstone ranges scattered across the Mid-West or Yilgarn regions are conserved in reserves that are secure from mining, though most if not all are subject to mineral tenements. The apparent lack of security for conservation in this region provides a difficult context for project assessment.

The State Government is undertaking a strategic review of the social, economic and environmental values of the banded ironstone formation ranges, across the Midwest and Northern Yilgarn. The objective of this review is to provide government with the information to enable strategic planning to provide certainty. The EPA supports the intent of this review.

Mt Gibson Iron Ore Mine and Infrastructure Project

Mount Gibson Mining Limited proposes to mine and process iron ore from Extension Hill and Extension Hill North, part of a ridge of banded ironstone formations, within the Mt Gibson ranges in the Mid-West region of Western Australia. The proposal also includes the construction of a pipeline to transport the magnetite slurry to Geraldton Port, and

infrastructure at the Port to strip the ore from the slurry for export. The operation will yield approximately 13 million tonnes of hematite over 8 years and 230 million tonnes of magnetite over 20 years.



View from Extension Hill to Mt Singleton, Mt Gibson Ranges. EPA site visit 16 May 2006

The EPA assessed the proposal at the level of Public Environmental Review. The key issues identified in the EPA report were impacts on flora (particularly the threatened species *Darwinia masonii* and *Lepidosperma* sp. Mt Gibson), restricted vegetation communities and fauna and mine closure and rehabilitation.

The EPA considered that the banded ironstone formations in the Mt Gibson ranges have outstanding conservation values because they support unique biological species and floristically different vegetation communities that evolved as a result of the isolation of the ranges over geological timescales. The EPA recommended that the proposal should only proceed if the remaining ridges of banded ironstone formations in the Mt Gibson area that contain sub-populations or suitable habitat for *Darwinia masonii* and *Lepidosperma* sp.

Mt Gibson and habitat for the remaining restricted vegetation communities are secured.

At the time of writing, the Minister for the Environment was considering appeals on the EPA's report and recommendations (Bulletin 1242 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

Mungada Ridge Hematite Project, Karara Magnetite Project

The EPA is currently assessing two proposals by Gindalbie Metals to mine and process iron ore from a ridge of Banded Ironstone Formations in the Mid-West region of Western Australia. The first proposal is the Mungada Ridge Hematite Project and the second the Karara Magnetite Project. Both proposals are being assessed at the level of Public Environmental Review.

The hematite would be railed to Geraldton Port, and the magnetite would be transported to the Port as slurry, via a pipeline. There is opportunity for infrastructure sharing between the two projects.

Koolanooka, Blue Hills

Midwest Corporation Limited proposes to mine iron ore from two sites, Koolanooka, which is 160 km south east of Geraldton and 21 km east of Morawa, and Blue Hills, which is 60 km east of Koolanooka. Both sites are Banded Ironstone Formations. The ore would be processed and blended at the Koolanooka site to achieve direct shipping grade ore. In addition a 55 km haul road would be upgraded between the Koolanooka and Blue Hills sites.

This proposal is under assessment at the level of PER. At the time of writing the proponents PER document has yet to be completed.

Review of Fire Management in the Kimberley and Other Rangeland Regions of Western Australia



Fire front, Mitchell Plateau, November 2005 during Fire Review Committee field trip.

The EPA found in its review of fire management in the Kimberley and other Rangelands areas that fire is occurring with alarming frequency in most of the Rangeland regions of Western Australia and particularly in the northern Kimberley regions. Late dry season fires, frequently deliberately lit, are burning many areas almost every year. Fires, usually caused by lightning, sweep over large areas of the Inland Arid Region, creating fire scars which persist for many years threatening the long-term survival of plants and animals difficult.

At the request of the Minister for the Environment, the EPA examined the impacts of fire management in the Rangeland regions on biodiversity and

provided its advice in Bulletin 1243 released in December 2006 (available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>). The EPA found the frequency, extent and intensity of fires to be of considerable concern. While the complexities of the interactions between fire and ecosystems are not completely understood; there is no doubt that the implications of frequent, large and intense late dry season fires are serious. The Kimberley studies undertaken to date indicate that native plants and animals are being adversely affected, with some communities (eg rainforest) and species (eg grain feeding birds) facing local and possibly regional extinction. There is sufficient evidence that altered fire regimes are resulting in habitat simplification and degradation and, together with increased predators and herbivores, are implicated in the decline and extinction of medium size mammals in the semi-arid and arid zones.

There is enough evidence to justify urgent action being taken to prevent further loss of the biodiversity values of the Rangeland regions. The EPA found there is research, mostly undertaken in the Northern Territory, into the links between biodiversity and fire which indicates a precautionary, adaptive approach should be applied to fire management.

The EPA recommended measures to Government to achieve an improved biodiversity focused fire management regime for the Rangelands. These included:

- a regional Fire Management Committee, with local representatives to be established for each of the Rangeland regions

identified in this review. The regional committees should:

- coordinate fire management planning advice, with a key focus on biodiversity, to land managers and responsible agencies throughout the Rangeland region;
- develop a bushfire biodiversity management strategy for the Region that accommodates the interests of all the stakeholders;
- assist landowners in the preparation of fire management plans, in which biodiversity and conservation are a key element;
- provide advice on the availability and provision of fire fighting resources in the region; and facilitate deployment of those resources on a needs basis, particularly when a rapid response is necessary;
- disseminate the best current knowledge about appropriate fire management practices, with a focus on biodiversity conservation, to fire managers and all relevant stakeholders;
- provide advice on monitoring requirements; and
- advise on the development of appropriate communication and education strategies to ensure the community is fully informed about the use of fire in conservation management;
- fire management in Western Australia be urgently provided with resources to include fire management in Unallocated Crown Land; and

- appropriate ecological monitoring programmes and research be developed for WA rangeland regions, the results of which should be used to adapt an appropriate fire management regime for any region if necessary.

During the EPA's investigations into fire, the promotion of gamba grass for pastoral purposes was raised as an important fire risk matter. The EPA has subsequently written to the Agricultural Protection Board, asking that gamba grass be declared a noxious weed.

Marine Issues



Dredge plume. Parker Point, Dampier, June 2004.

Over the past year the EPA has undertaken assessments of two significant dredging proposals in the Pilbara region at Dampier and Cape Lambert. A number of other dredging proposals were also on the EPA's assessment program during 2006/07. In addition, Section 16 advice issued by the EPA for the Fremantle Ports Outer Harbour Proposal (Bulletin 1230, September 2006 available at [http://www.epa.wa.gov.au/template.asp?](http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins)

[ID=16&area=EIA&Cat=EPA+Bulletins](http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins)) and the Mangles Bay Marina Proposal (Bulletin 1237, October 2006) highlighted the significant environmental challenges presented by the dredging aspects of these proposals.

Officers of the EPA Service Unit are engaged in collaborative scientific research centred on seagrass communities in the Jurien Bay Marine Park. The research is supported by the Strategic Research Fund for the Marine Environment. It has been designed to provide the scientific underpinning for seagrass health criteria which are important elements of environmental monitoring and management programs and also to improve impact prediction and management. The results are published in the Strategic Research Fund for the Marine Environment Final Report which was released in December 2006.

Another strategic marine environmental protection project that commenced during the 2006/07 year was the initiation of an EPA Guidance Statement for the assessment and management of environmental impacts associated with marine dredging in WA. Work is progressing on a draft document, which is expected to be published for stakeholder comment later in 2007.

Perth Air Quality Management Plan

The Perth Air Quality Management Plan was released in December 2000 and was developed to ensure that clean air is achieved and maintained throughout the Perth metropolitan region over the next 30 years.

An Implementation Strategy for the Perth Air Quality Management Plan was developed by the Air Quality Coordinating Committee in 2002 to provide a framework for ensuring that the actions within the AQMP are carried out in an effective manner. It also identified priority actions starting with those that have the largest impact on air quality in the short term.

It is a requirement that the Implementation Strategy be reviewed after five years to ensure that the overall objective is being met. The EPA was requested to undertake the review and in June 2007 the review formally commenced. It is expected to be finalised by November 2007.

Water Quality Improvement Plan for the Peel Inlet-Harvey Estuarine System

A draft Water Quality Improvement Plan for the Peel Inlet-Harvey Estuarine System is being prepared by the EPA in partnership with the Australian Government's Department of Environment and Water Resources and, State agencies including the Departments of; Environment and Conservation, Water, Agriculture and Food, the Peel Development Commission; and with the support of the Peel Harvey Catchment Council, Western Australian Planning Commission and Department for Planning and Infrastructure.

The draft Plan takes the findings of seven supporting projects and recommends a combination of management measures to reduce phosphorus discharges to rivers and estuarine waters. It also recommends a

framework to enhance water quality through land-use planning processes for the Peel-Harvey catchment.

In particular, the Plan will focus on management measures to lessen the incidence of excessive algal blooms and will build on current catchment management activities and research.

During 2006-2007 major progress was made on finalising the draft Plan in readiness for public review. Significant input was received from stakeholders on the working draft. The draft Water Quality Improvement Plan is expected to be released in the third quarter 2007 for an 8 week public comment period.

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. It also provided advice on a number of proposals in their formative stages.

A total of 507 development proposals and planning schemes were referred to the EPA for consideration, slightly more than last year. Of these, the EPA determined that 38 proposals required formal assessment, reporting and providing recommendations to the Minister for the Environment. This was a 40 per cent reduction over last year. A further 305 did not require assessment but specific advice was provided to proponents and approval agencies, especially in relation to planning schemes. This reflects the substantial

increase in planning or land development referrals during the year.

During the year, 33 formal assessments or provision of formal advice 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 2006-07 is shown in Table 2. A list of all

addressed and indicating 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.

Surveys should be well scoped, timely, competent and comprehensive. They provide key data that informs siting,

Table 2: Environmental Protection Authority's Completed Assessments in 2006-07

Level of Assessment	Assessments
Environmental Review and Management Program (ERMP)	1
Public Environmental Review (PER)	9
Planning Scheme Environmental Review (ER)	1
Scheme Incapable of Being Made Environmentally Acceptable	1
Environmental Protection Statement (EPS)	3
Assessment on Referral Information (ARI)	7
Formal under Part IV	1
Proposal Unlikely to be Environmentally Acceptable (PUEA)	1
Section 46 Change to Conditions	4
Section 16 Strategic Advice	5

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 identifying the environmental issues that need to be

design and approval considerations. The EPA has prepared a number of guidance statements (Appendix 7) that outline survey requirements to assist proponents and consultants in meeting the requirements for information included in or supporting their environmental documents. While it is not mandatory to follow these Guidances, the EPA points to the advantages of following procedures and approaches that have been developed with expert advice to ensure that adequate information is available to inform the assessment process.

Environmental review documents prepared by the proponent need to:

- describe the potential impacts on the environment of the proposal;
- show that ‘best practicable’ steps will be taken to avoid and 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.

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 Ministerial Conditions of approval for the project.

The EPA accepts that it is not always 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.

Mitigation measures are usually outlined in the environmental review document and described in more detail in environmental management plans (EMPs). An important issue is when is

the most appropriate time for EMPs to be prepared. The EPA believes that proponents should only be deferring details of matters that are relatively routine and certainly not significant in relation to whether a proposal should be approved. As a consequence, the EPA will ensure that the assessment scoping identifies those issues that should be addressed in some detail, including management measures, in the environmental review document. Some proponents prepare draft EMPs and include them in their environmental review document, with the intention of informing all stakeholders and the EPA of their management objectives, approach and options. The draft EMP is then finalised after project approval has been given. This approach is encouraged by the EPA.

The EPA is continuing to encourage proponents to establish peer review panels of specialists to provide guidance in the environmental studies and review environmental documents before submission to the EPA and release for public comment.

The EPA strongly encourages meaningful consultation by proponents with relevant public and government agency stakeholders during the preparation of their environmental review documents, as part of best practice EIA. This consultation should continue through project implementation and operation, and decommissioning where this is relevant. Establishing an on-going relationship with stakeholders, including aboriginal people, is important. It is the EPA’s experience that when proponents clearly embrace the EIA process and their responsibility to define and manage the impacts of a proposal (considering the proposal in a

broader bioregional, ecosystem, and social surroundings context) the EIA process is more timely, less burdensome with a higher quality project in terms of environmental outcomes achieved.

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, 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 for the Environment. 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.

Table 3 indicates the mean time and range of times taken to complete assessments for major projects in 2006-07 compared with the previous four years. The data shows that timelines for the assessment of projects completed in 2006-07 were significantly reduced. While proponents continued to take a proportionately longer time to progress through the assessment process, they were also more focused on reducing the total time taken following the setting of Level of Assessment. The timeframe for the EPA's reporting from the end of the public review process was generally less than last year. The data continues to highlight that for major project assessments, proponents need to allow time to undertake the necessary studies and prepare the environmental review documents, for the public review period and response to issues arising from the public review and the EPA's assessment with the publication of its report and recommendations to the Minister for the Environment. However, where proponents provide adequate information and undertake sound community engagement, time can be reduced.

Since 1999, the EPA has provided two streamlined assessment processes for proposals where the impacts were expected to be reasonable and manageable. These are referred to as 'Assessment on Referral Information' (ARI) and 'Environmental Protection Statement' (EPS). During the year, ten 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

Table 3: Timelines for major projects (in weeks)

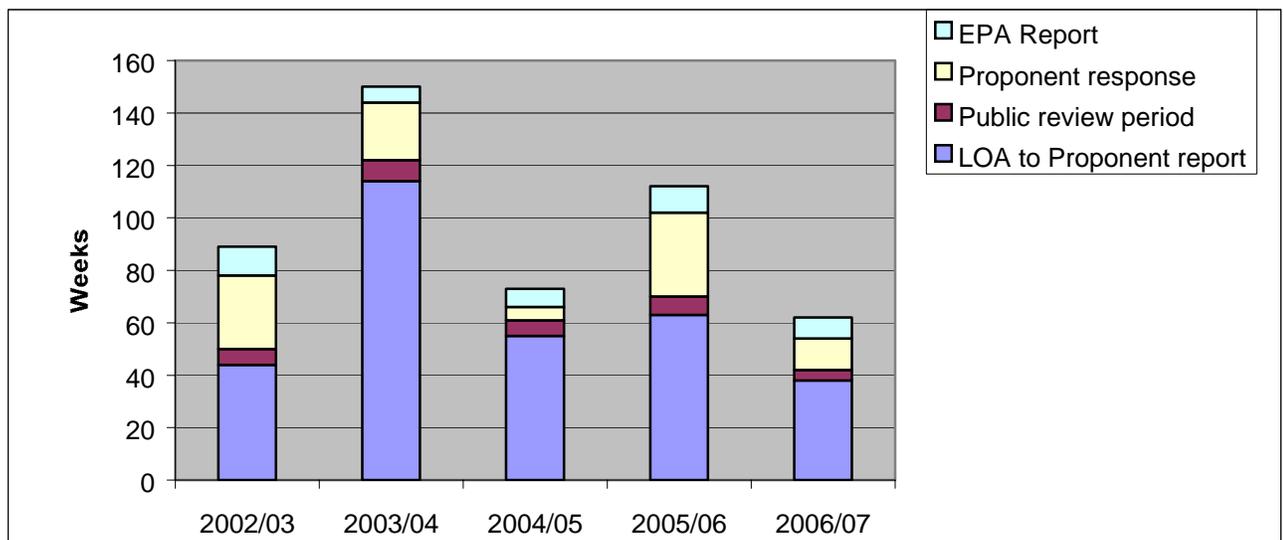
Assessment Phase		2002/03	2003/04	2004/05	2005/06	2006/07
From Level of Assessment set to proponent report release+	Mean	44	114	55	63	38
	Low*	4	29	9	12	11
	High*	187	240	223	209	80
Public Review Period	Mean	6	8	6	7	4
	Low*	4	4	4	4	4
	High*	11	10	8	16	10
End of Public Review period to proponent response to EPA+	Mean	28	22	35	32	12
	Low*	3	6	5	2	4
	High*	82	45	149	266	37
Proponent response to EPA report release	Mean	11	6	7	10	8
	Low*	3	2	3	4	2
	High*	39	11	23	27	16
Total, from level of assessment set to EPA Report	Mean	90	149	103	114	62
	Low*	22	54	25	22	24
	High*	271	295	273	335	129

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

+ This part of the process is largely under proponent control.

This is represented graphically in the following figure, which shows the average periods taken for each stage of the assessment process over the period 2002/03 to 2006/07.

Figure 2: Average time taken for the assessment of proposals over the past five years.



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 10 weeks of receiving the proponent's final environmental document. Table 3 indicates that the EPA normally completed its report well within that time.

The EPA continues to implement relevant recommendations from the 2002 Independent Review Committee's Review of the Project Development Approvals System (the Keating Review). This review made a number of recommendations which directly or indirectly affect the EPA's assessment process for State Development portfolio projects. Two major thrusts have been the desire to improve timeliness of approvals and also to reduce duplication of requirements. The EPA has strongly supported initiatives to address both of these issues through the development of administrative time limits on the key steps in the formal assessment process. The EPA continues to reinforce the matter of timeliness through the assessment process. However, this is becoming increasingly difficult with the reducing capacity to replace experienced staff available to provide the process support to the EPA.

Strategic Environmental Assessment

Since its introduction through the *Environmental Protection Amendment Act 2003*, four strategic proposals have commenced. These are:

- development of East Rockingham Industrial Park (IP 14 area), Rockingham;

- Smiths Beach Development (Sussex Location 413), Yallingup; and
- Southern Sources Integration Assets between Serpentine in the south, Armadale in the north, Baldivis in the west to Byford in the east.

The fourth strategic proposal, covering the Brookdale Redevelopment Project area west of Armadale, was overtaken by the assessment of the town planning scheme. That assessment was completed in April 2007, and will result in the strategic proposal being withdrawn.

Unfortunately the first two strategic proposals have taken considerable time to progress, having been referred in 2004 and 2005 respectively. Only the Smiths Beach strategic proposal has progressed to public review stage.

Strategic assessment provides substantial advantages to proponents with proposals that fit this model, but there appears to be some reluctance to use this approach. While a strategic assessment may require some increased level investment in early investigations, it also provides improved certainty where implementation is complex and over an extended period.



EPA Service Unit, Environmental Impact Assessment Division, Work Planning Meeting. Dwellingup March 2007

MAJOR PROJECTS

The EPA acknowledges proponents that deliver quality documents supported by sound science, thorough analysis and comprehensive management responses to environmental issues.

The EPA's continued ability to routinely deliver on the benchmarks set for it by the Keating process was acknowledged in a number of forums this year by Mr Brendan Hammond, Development Approvals Coordinator of the Office of Development Co-ordination.

Additional resources were again supplied to the EPA by Government this year in the face of the boom in development that continues in Western Australia. The EPA has relied on this extra support to enable it to cope with the boom conditions of the last few years and looks forward to a similar level of additional support from Government in the coming year.

The environmental impact assessment (EIA) process adds value to a project by ensuring it properly protects the environment in a way that is transparent, robust and defensible. This 'social licence to operate' allows proposals to proceed with confidence once the EIA process is complete.

The EPA has continued to deal with a large number of projects this year. The sustained tempo of new land use planning and infrastructure projects has continued on the back of the resources boom. Sustained demand for land, housing, basic raw materials and other services has kept the EPA's workload at a high level.

Each year a number of assessments demonstrate innovative approaches to solving environmental problems or

provide significant insight into issues of environmental policy. The EPA continues to capture these lessons through its Position Statement and Guidance Statement series of publications.

A number of assessments, both completed and in progress that illustrate these points are outlined below.

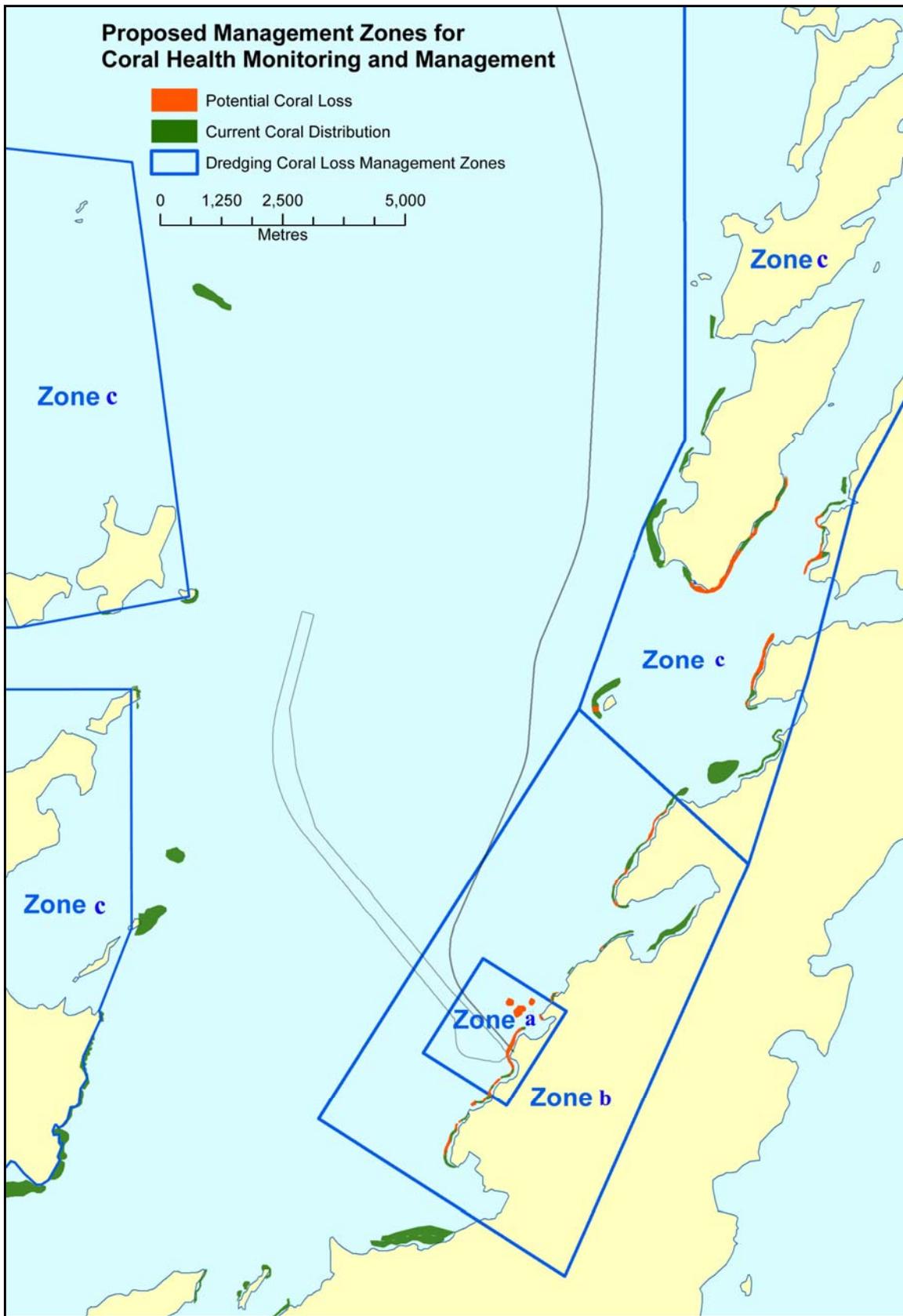
Pluto Liquefied Natural Gas (LNG) Development

Following the discovery of the Pluto gas field in April 2005, Woodside Energy Ltd has proposed to develop the gas field and construct an LNG processing plant on the Burrup Peninsula. Woodside are aiming to begin producing gas in late 2010.

The Pluto gas field is located offshore on the North West Shelf, approximately 190 kilometres north-west of Dampier. The gas is proposed to be transported by a sub-sea trunkline to the west coast of the Burrup Peninsula where the gas processing plant would be located on industrial land to the south of the existing North West Shelf Venture gas plant. Dredging would also be needed to allow shipping access to the export facility and gas trunkline installation.

LNG and condensate storage tanks are required for the Pluto LNG Development, and the construction of these tanks represents a critical time path. Woodside sought a separate approval to allow limited site preparation activities to occur ahead of approvals for the overall Pluto LNG Development.

The EPA undertook two formal assessments, the first for the 'Development of Industrial Land on the Burrup Peninsula for Future Gas



Coral distribution and Management Units (from EPA Bulletin 1259)

Development' and the second for the overall 'Pluto LNG Development'. Both were assessed at the level of PER.

Development of Industrial land for future gas Development

The EPA's objective was to ensure that conservation objectives are met in the context of the wider Burrup Peninsula and environmental impacts caused by the proposal are minimised and managed as far as practicable.

The EPA considered that the disturbance footprint had been selected and optimised to avoid the most environmentally sensitive sections of the site and that impact had been minimised to the extent practicable.

The EPA reported on this proposal in September 2006 and the Minister for the Environment issued approval for limited site preparation in November 2006.

Pluto LNG Development

While the assessment of the factors of Vegetation, Fauna and Indigenous Heritage were similar to the previous assessment, the potential effects from dredging and dredge spoil disposal, meant that the factor of Marine impacts required considerable assessment scrutiny.

Marine impacts - the EPA noted that adjacent to the export facility, the coral loss predicted was up to 37%. Existing industrial development around this area had already caused an exceedance of the threshold (10% loss) established in the EPA Guidance Statement relating to benthic primary producers habitat. The EPA thus advised that additional losses would only be acceptable if WEL is able to devise and implement appropriate measures to fully offset the loss of coral.

Dredge activities also have the potential to cause impacts in the proposed Dampier Archipelago Marine Park. This Marine Park is expected to be gazetted shortly and the draft Management Plan for the park requires that development approvals be consistent with the management targets for the park. Coral loss was predicted which would exceed the management target of 'no change due to human activities' for the recreation zone around Conzinc Island. The EPA considered that significant impacts within the Marine Park were unacceptable.

The EPA also noted that wastewater discharges to Mermaid Sound should be avoided and expects all options for reuse to be exhausted before a discharge is contemplated. The EPA considers that discharge to deepwater could be acceptable if managed to best practice standards.

The EPA has also provided 'other advice' recommending the Dampier Port Authority take a leadership role in managing the cumulative impacts of dredging proposals within the Port limits. This would allow for a consistent approach by all future proponents.

Greenhouse gas – the EPA notes that the 12 million tonnes of LNG produced per annum would provide a benefit over the use of fuels such as coal and oil, in terms of full lifecycle greenhouse gas emissions. As such, the EPA acknowledges the important role LNG fulfils as a transition fuel.

The Pluto LNG Development itself would produce up to 4.1 million tonnes of greenhouse gas per annum. The main sources being the gas turbines used for power generation, gas compression and liquefaction, along with the carbon

dioxide released from the underground gas reservoir. The EPA is aware that the Pluto LNG plant may be used to process gas from other gas fields in the future and that these fields may contain differing amounts of carbon dioxide.

For the Pluto project, the EPA recommended that Woodside should offset the reservoir carbon dioxide released.

The EPA reported on this proposal just after 30 June 2007 in Bulletin 1259 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>.

Mesa A / Warramboos Iron Ore Project



North-Eastern escarpment of Mesa A (December 2005)

In March 2007, the EPA released its report and recommendations (Bulletin 1251 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>) on the proposal by Robe River Mining Company Pty Ltd to mine the Mesa A / Warramboos iron ore deposit (located 43 kilometres west of Pannawonica), providing a replacement for its current Mesa J mine operation.

The proposal included the development of new mine pits at Mesa A and Warramboos, a primary sizer processing plant, associated mine infrastructure and the construction of a rail line to link into the existing Mesa J mining operations. The ore would be transported via rail to Cape Lambert Port, for secondary and tertiary crushing and screening.

The proposal was assessed as a Public Environmental Review with an 8 week public review period. In addition, a supplementary report on further troglobitic fauna sampling was released for a separate 4 week public comment.

Of particular interest to the EPA was the discovery of the occurrence of troglobitic fauna (terrestrial fauna that inhabit air chambers in underground caves) at Mesa A, and associated mesa formations in the Robe Valley. These being the first areas on the Pilbara mainland, outside the Cape Range area, from which significant identified troglobitic fauna had been collected. Troglobitic fauna species recorded at Mesa A had not been recorded elsewhere, and survey work had shown that species appeared to be endemic to (i.e. unique to) each isolated mesa formation.

The EPA in its assessment acknowledged that the proponent had undertaken extensive research and sampling and had significantly contributed to the knowledge of troglobitic fauna, both at Mesa A, and in the wider Robe Valley region.

The EPA held the view that the proposal had the potential to impact on at least five species of troglobitic fauna, and considered this to be a high and unacceptable risk. The EPA also considered the proposed Mining Exclusion Zone (only 50 m wide in

places) to be inadequate to conserve landscape and heritage values associated with Mesa A, and expressed concern over the long term structural stability of the landform post-mining.

The EPA concluded that the proposal, based on the information supplied, was not environmentally acceptable.

Yannarie Solar



Straits Salt EPA Site Visit 13 to 14 March 2007. Helen Dagnall EPA Executive Assistant

“Yannarie Solar” is a proposal by Straits Salt Pty Ltd. to develop a solar salt farm on the east coast of Exmouth Gulf. The proposal, referred in April 2004, was for the production of 3 million tonnes per annum (Mtpa) of salt, expanding to 10Mtpa through staged development. The full 10Mtpa operation would have extended along 70km, and covered over 30,000ha of the eastern shore of Exmouth Gulf.

The proposal was published in an Environmental Review and Management Program (ERMP) document on 4 December 2006 and was open for public submissions for a fourteen week period. More than 2600 submissions were received from government and non-government organisations, private

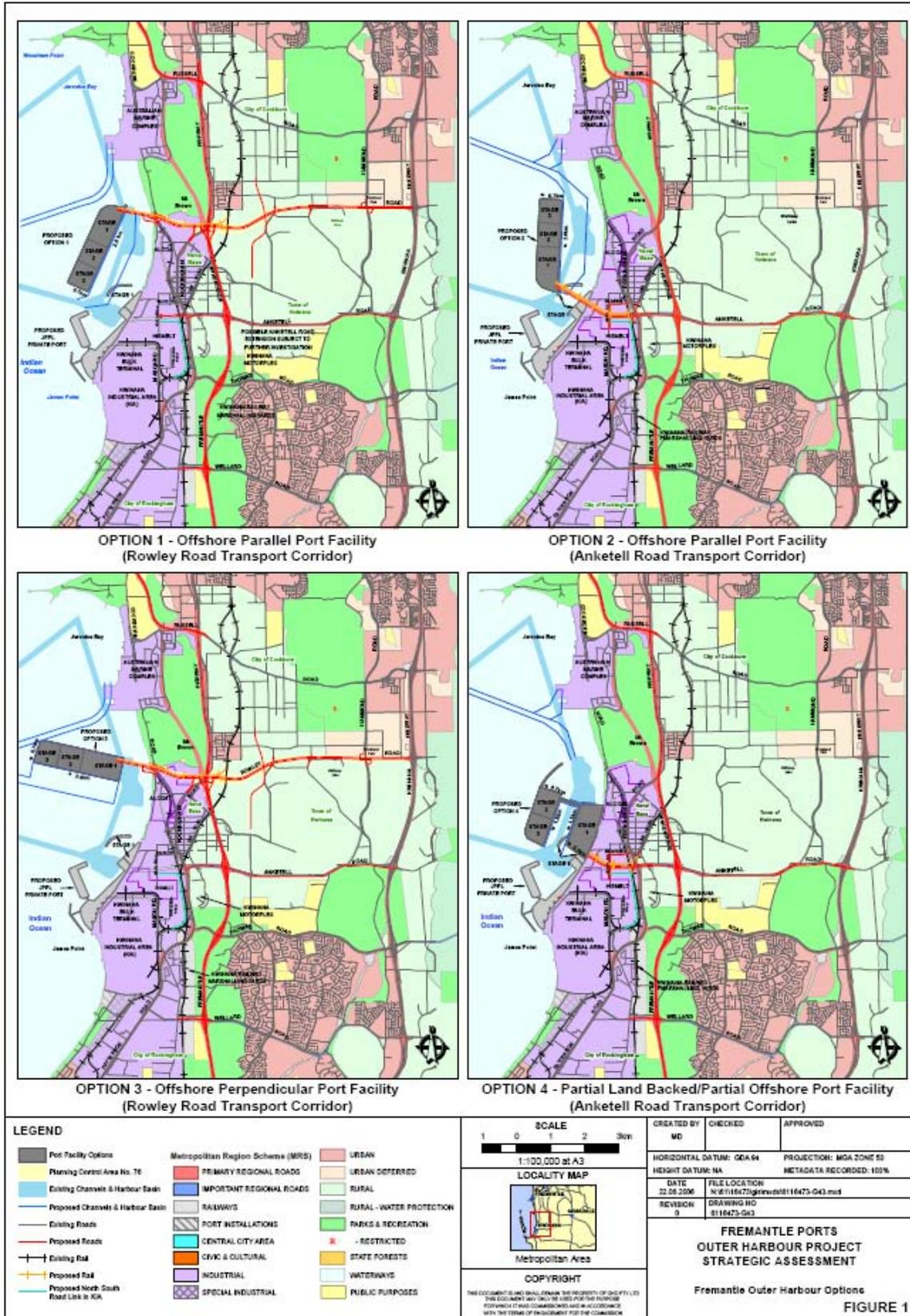
individuals and from signatories to proforma submissions.

Straits Salt Pty Ltd. advised the EPA in April 2007 that they are downsizing their proposal to a 4 Mtpa operation with a consequent reduction in the extent of the footprint. The details of the revised proposal will be incorporated in the response to submissions document. The proponent is currently preparing their response to submissions and is carrying out additional studies to address information gaps.

Fremantle Ports Outer Harbour Project

The EPA provided its section 16 advice on the proposal by Fremantle Ports and the Department for Planning and Infrastructure (FP/DPI) to develop a new port facility and related transport infrastructure for container trade and general cargo in Cockburn Sound in September 2006 (Bulletin 1230 available <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

The project is intended to provide a substantial container and general cargo port facility which would accommodate growth of shipping trade beyond 2017, when Fremantle Ports claim the existing Inner Harbour facilities will reach capacity. The preferred site is located at Naval Base/ Kwinana, north of James Point. Four development concepts have been considered by the proponents. Three options are for an offshore facility while the fourth is a combined land backed and offshore design. The offshore designs would be approximately 2.6 km long and 0.7 km wide, and linked to new rail and road infrastructure by a bridge.



Fremantle Port Development and Infrastructure Options (from FP/DPI 2006a, EPA Bulletin 1230)

Fremantle Ports and the Department for Planning and Infrastructure are proceeding through a two stage strategic assessment and statutory approval process. Bulletin 1230 provided the EPA's strategic advice under the first stage of the approval process.

The EPA advised that development of an island port in Cockburn Sound like that proposed by the Fremantle Ports and Department for Planning and Infrastructure would be a substantial undertaking. It is clear that all port options would have significant adverse impacts that go well beyond the local scale, primarily because of the substantial size of the port.

In providing its advice, the EPA expressed concern that there remains limited information available on some critical environmental issues. These include effects on marine impacts in general, fish fauna and habitat in particular, and the definition of potential offsets. There is also increasing complexity in relation to the potential cumulative impacts of the number and nature of developments in the portion of Cockburn Sound between Challenger Beach and James Point, which have yet to be addressed in detail. Both of these points are particularly relevant at a time when the proponents are seeking government support to proceed to obtaining statutory environmental and planning approvals for a specific port and transport infrastructure proposal.

The EPA is of the view that the effects of infrastructure development on the terrestrial environment are more easily definable and quantifiable than those related to Cockburn Sound.

The information currently available in relation to impacts in Cockburn Sound does not allow judgement to be made

about the likely environmental acceptability of any of the port options. Considerable investigation and the provision of detailed and appropriate information will need to occur to change this view. The key issues and detailed further work which will need to be addressed and undertaken as part of the next stage have been identified in this report and relate to the following areas:

- cumulative impact assessment;
- the Cockburn Sound State Environmental Policy;
- impacts of dredging and reclamation;
- impacts on benthic primary producer habitats;
- marine fauna;
- environmental offsets; and
- impacts on the ecological values of Bush Forever sites.

On the basis of the information currently available it appears all options would have significant adverse impacts. Detailed assessment will be required to determine the full extent of impacts and to evaluate the effectiveness and acceptability of any management, mitigation and offset measures.

The EPA is concerned that cumulative pressures along the eastern margin of Cockburn Sound will increase the threat to the improvements in the condition of Cockburn Sound which have been achieved through strong action by Government, industry and the community in recent decades.

Alkimos Wastewater Treatment Plant - Site A and Site B

On 13 November 2006 the EPA released Bulletin No's 1238 and 1239 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins> on the proposal by the Water Corporation to construct the Alkimos

Wastewater Treatment Plant. Two separate assessments were completed relating to the factors associated with Site A and Site B.

The EPA had previously assessed the implications on Vegetation, Fauna and Geoheritage for siting the Alkimos Wastewater Treatment Plant at Site A and Site B (Bulletin 1207). Hence, the reports focused on the assessment of impacts of the construction of the ocean outlet pipe (both on land and in the marine environment), the offshore disposal of water into the marine environment and odour from the Alkimos Wastewater Treatment Plant.



Alkimos: landforms and vegetation in the vicinity of the proposed wastewater treatment plant site. (July 2005. Mark Brundrett, Terrestrial Ecosystems Section, EPA Service Unit)

The EPA recommended a management plan be required for the construction of the ocean outlet pipe.

The disposal of water in the marine environment involved clearly identifying the extent of habitat loss due to the construction of the pipe outlet and the water quality of the treated wastewater. The EPA recommended conditions be set to ensure that marine impacts were minimised.

The odour issues associated with the Alkimos Wastewater Treatment Plant

varied by site. Site B was of greater concern than Site A as Site B was further from the ocean and subject to odour ponding. Under certain calm meteorological conditions odour ‘ponds’ in the dunal valleys around the plant. This odour then is blown away in a ‘cloud’ when the wind picks up, potentially impacting people downwind. The EPA recommended that the proponent implement best practise design and operation and that any unacceptable impacts would be contained within the buffer.

The EPA recommended that the proposal could be managed to meet the EPA’s objectives provided the proposal incorporated the conditions recommended by the EPA.

Cape Peron Tourist Precinct Project

In October 2006, the EPA released advice to the Minister for the Environment under section 16 of the *Environmental Protection Act 1986* in relation to the strategic environmental implications of the Cape Peron Tourist Precinct Project in Rockingham (Bulletin 1237 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

The project was for a predominately land-based, tourist marina to be designed to accommodate more than 500 boats and incorporate local boating clubs, commercial areas and boat pens for public use (both short and long-term). The surrounding land development is described as ‘mixed-use’ with tourism facilities, accommodation, commercial areas, public open space and residential areas.



Three project options discussed in the Strategic Environmental Review (From EPA Bulletin 1237)

The Minister requested that the EPA advise on the key environmental issues associated with the Project at a strategic level. A Strategic Environmental Review document, describing the environmental issues associated with three development options at a strategic level, was released for a 4 week public review period, and resulted in significant community interest with over 400 submissions received.

The EPA provided advice on investigations to be undertaken to inform the environmental impact assessment for a final development proposal if a decision is made to proceed with development.

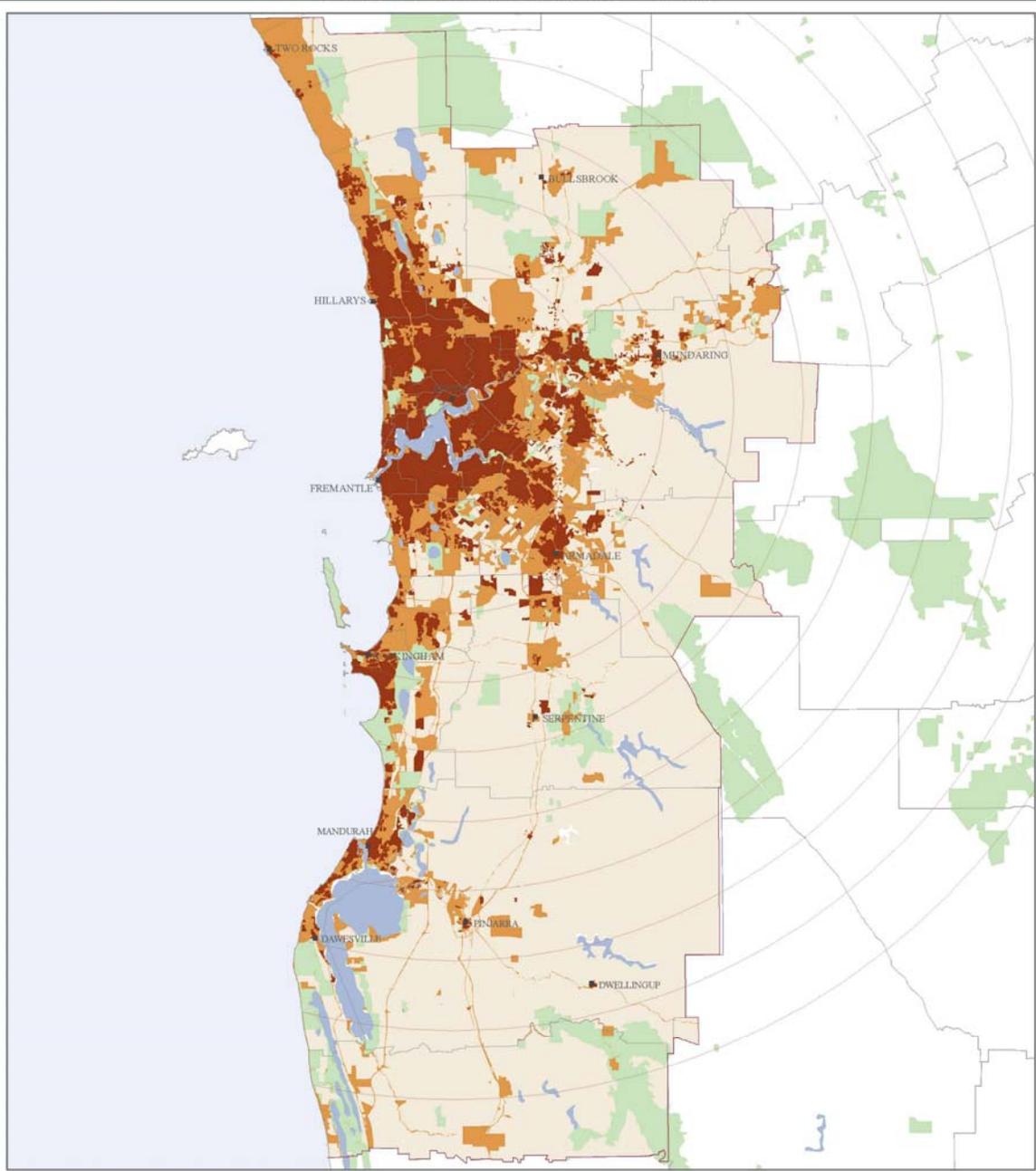
ENVIRONMENTAL ASSESSMENT OF PLANNING SCHEMES

All planning schemes are referred to the EPA. Subdivision and development may be referred where significant environmental issues have not been resolved through earlier stages of the planning approvals. The intent of introducing amendments to the *Environmental Protection Act (1986)* in 1996 requiring all planning schemes to be referred to the EPA was to ensure that planning and environmental matters were addressed at an early stage of the zoning process. A key issue for the EPA in assessing planning schemes under s48A of the *Environmental Protection Act (1986)* 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 region 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 for local planning schemes, structure planning and subdivision. For each of these stages, more detailed environmental information is required, for example, in terms of ensuring that boundaries of significant environmental features are secured and confidence being provided that issues such as drainage and acid sulphate soils can be managed. The EPA supports the provision of environmental information appropriate to the stage of planning. Close collaboration with planning agencies is an essential element in ensuring that this occurs and the process for considering development remains effective, efficient and timely.

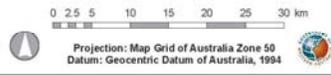
In the past year there has been a focus on securing land available for development. The EPA saw a significant increase in the number of schemes referred to it, particularly local planning schemes. The EPA considered 388 schemes across the State. Of these, the EPA decided that 4 warranted assessment requiring an Environmental Review with 1 deemed incapable of being made environmentally acceptable. The EPA decided not to assess the remaining 383 schemes. However, it did provide advice on 256 of these with the aim of improving the environmental outcome of the development. For the balance (127) the EPA provided no advice as the environmental issues had been satisfactorily addressed or the schemes represented amendments of minor environmental consequence.

Environmental Protection Authority
Urban Extent versus Designated Urban Development Areas (2004)
 State of the Environment Western Australia



Legend

- Urban Extent (2004)
- Designated Urban Development Areas
- Rural
- Extent of MRS and PRS Zoning
- Regional Parks and Protected Areas
- Major Water Bodies
- 10km intervals from city centre
- Local Government Areas



Data Source
 Metropolitan Region Scheme - Dept of Planning and Infrastructure (2004)
 Peel Region Scheme - Dept of Planning and Infrastructure (2004)
 Urban Extent - Dept of Planning and Infrastructure (2005)
 Regional Parks and Protected Areas (CAPAD) - Dept of Environment and Heritage (2004)
 Register National Estate (Natural Areas) - Dept of Environment and Heritage (2004)
 Local Government Areas - Dept of Land Information (2005)
 Major Water Bodies - Dept of Environment (2005)

Analysis
 Urban Extent - Dept of Planning and Infrastructure (2005)
 Generalisation of region schemes - Environmental Protection Authority (2006)

Presentation
 Environmental Protection Authority (2006)

This map is produced for the State of the Environment report. Both map and report are produced by the Environmental Protection Authority, an independent advisory body on the environment.

This map depicts the extent of urbanisation for the Perth Metropolitan and Peel regions in comparison to generalised zoning of urban and rural areas, and protected natural areas identified in CAPAD and Register of National Estate.

This map is constructed in PDF format and able to be printed up to A1 size.

Disclaimer: This map is intended as a generalised interpretation of environmental issues. The information contained on this map is to be considered indicative only and in no event shall the Environmental Protection Authority be liable for any incident or consequential damages resulting from use of the material.

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Urban Areas. Actual versus Zoned Perth Metropolitan Area. (From EPA State of Environment Report available at <http://www.soe.wa.gov.au>)

Land development continues to focus on the Perth and Peel Region with much of the unconstrained areas already developed. There are areas within the Perth and Peel that are environmentally constrained and may be found to be environmentally unacceptable for development including land which should be set aside for its conservation and recreation values.

The absence of important baseline environmental information to inform planning and development decision making is increasingly a problem across the State. The challenge for the development industry is to ensure that the EPA receives sufficient information at the appropriate level of planning to demonstrate that the significant environmental values are known and the proposed development protects these values and is environmentally acceptable. This includes ensuring that areas with significant environmental values, which are not suitable for development, are set aside to meet conservation objectives.

The consequence of an absence of informed strategic decision making through planning schemes is the potential for referral of subdivision and development applications. During this final stage of the process for considering development there is limited opportunity for timely resolution of issues.

Wungong Urban Water Redevelopment Scheme 2006

The EPA provided advice and recommendations to the Minister for the Environment in April 2007 on the Wungong Urban Water Redevelopment Scheme 2006 (Bulletin 1253 available at <http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>) The Scheme was initiated by the

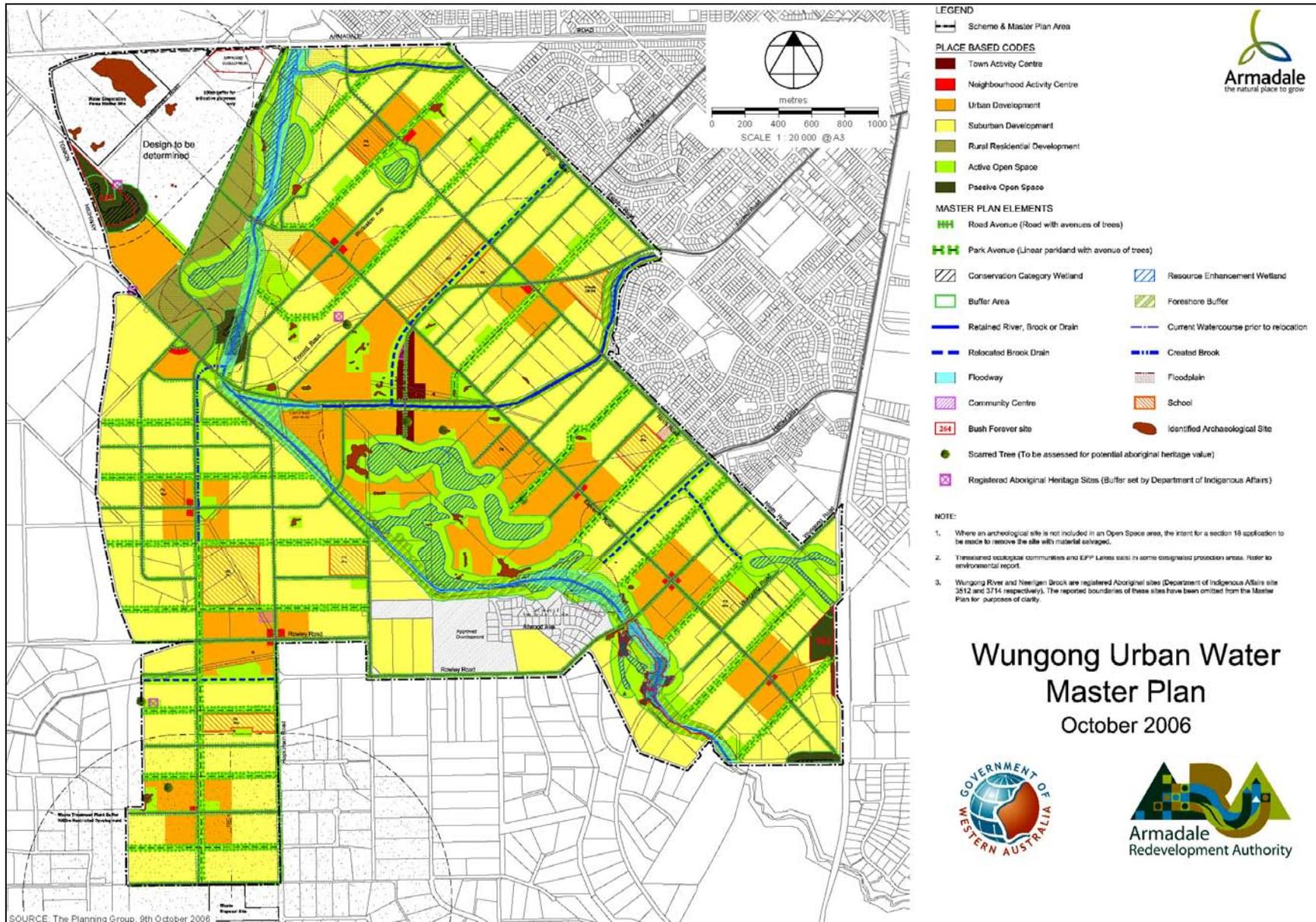
Armadale Redevelopment Authority to ensure the orderly and proper planning and development of parts of Brookdale and Wungong in accordance with the Wungong Urban Water Master Plan.

The Scheme area comprises approximately 1500 ha of rural land. The site is mostly cleared and low lying, and is traversed by the Wungong River and Neerigen Brooks.

The objectives of the referred Scheme included the creation of an urban development in accordance with the principles of sustainability. The Scheme documentation showed the retention of Conservation and Resource Enhancement wetlands, Bush Forever sites, indicative foreshore reserves along the main waterways, and a network of Park and Road Avenues. The Armadale Redevelopment Authority committed to preparing or requiring a range of environmental management plans and strategies to manage environmental impacts.

The EPA concluded that it was unlikely the EPA's objectives would be compromised provided that the Scheme incorporated the conditions recommended by the EPA.

A number of conditions were recommended to strengthen the management of water and to require remedial action and the potential application of offsets should the prevailing water quality criteria not be met. Management of nutrients was identified as a particular issue for the site as it is partly in the priority Southern River catchment of the Swan-Canning River System and partly in the Peel-Harvey catchment. The EPA considered it critical that storm-water and water use were managed during planning and development so that the environmental



Wungong Urban Water Master Plan(from EPA Bulletin 1253)

values of the river and estuarine systems, groundwater, wetlands and groundwater dependent ecosystems are protected and enhanced.

Taking into account the high level of clearing in the Scheme area and the eastern side of the Swan Coastal Plain generally, and the consequent significance of the remaining vegetation, habitat and ecological linkage in the region, the EPA recommended conditions to strengthen the protection and management of these factors. Recommendations included a landscape management strategy at structure planning stage, a foreshore management plan, wetland management plans, fauna management plans and construction management plans for development near environmentally significant areas.

Taking into account that the Scheme area is generally low lying, is mostly a 'moderate' risk area for acid sulphate soil, and a controlled groundwater level is to be investigated, the EPA recommended conditions to manage the risk of disturbing acid sulfate soil.

The EPA supported the thrust of the many initiatives of the Armadale Redevelopment Authority to pursue environmentally sustainable development in the Scheme area.

SECTION 45C APPROVALS

The section 45C amendment to the *Environmental Protection Act, 1986* was enacted in 2003. The amendment enables the Minister for the Environment, or his delegate, the Chairman/Deputy Chairman of the EPA, to approve a change to a proposal after assessment.

The EPA has published Draft Guidelines, to clarify the approvals process, for a proponent considering making a submission for a change to a proposal. These are on the EPA website (*Policies/Other Documents*).

For the 2006-2007 period, the EPA Chairman/Deputy Chairman has approved 29 changes (Appendix 8). The changes are recorded in an attachment to the amended Statements, which are publicly available either from the Office of the Appeals Convenor or the DEC library in the Atrium building L4, The Atrium, 168 St Georges Terrace, Perth; phone 6467 5226.

POLICY DEVELOPMENT

Strong economic growth which continued in Western Australia during the reporting year has meant that there was continued pressure on environmental approvals processes to deliver outcomes in a timely way. As a consequence, policy development has slowed to some extent while resources were applied to maintain services in project approvals.

Notwithstanding this, the EPA has made significant progress in three main policy areas:

- *State of the Environment Report.* The EPA delivered to Government the 2007 State of the Environment Report 2007 (see page 7 above);
- *Peel-Harvey Water Quality Improvement Plan.* The Draft Water Quality Improvement Plan due for release for public comment in the third quarter of 2007 (see page 21); and
- *Environmental offsets.* Following the January 2006 release of its Position Statement on

environmental offsets, the EPA released for public comment a Draft Guidance Statement for guiding those in the environmental impact assessment process on offsets. As well the EPA provided specific advice to the Minister on a way forward for a whole-of-government approach to this topic. The then Chairman Dr Cox and Director, Strategic Policy, Rob Sippe, both gave presentations at a national workshop on the subject organised by Australian Centre for Minerals Extension and Research (ACMER) in March 2007.

Environmental Protection Policies

Progress on Environmental Protection Policies is summarised in Tables 4, 5, 6 and 7.

State Environmental Policies



Bernadette Streppel promoting the EPA's GIS boundaries and analysis at the West Australia Land Information conference.

(Available at <http://www.epa.wa.gov.au/template.asp?ID=35&area=Policies&Cat=State+Environmental+Policies>)

A State Environmental Policy is a non-statutory Government policy position on a particular aspect of the environment. It is enabled under Part II section 17(3) of the EP Act whereby the EPA can “consider and make proposals as to the policy to be followed in the State with regard to environmental matters”.

The process for developing a State Environmental Policy is largely based on the statutory requirements for developing an EPP under Part III of the Act. A State Environmental Policy is developed in its first stages by the EPA. Following a public consultation process, a State Environmental Policy can be approved by the Minister for the Environment and adopted by Cabinet on a whole-of-Government basis.

A State Environmental Policy is a relatively new policy instrument. The concept of SEP's was developed in 2004 following amendments to the EP Act which provided wider reaching powers of environmental protection, such as environmental harm provisions and clearing controls.

A State Environmental Policy could have the scope to provide the following:

- Establish environmental values and environmental quality objectives for a particular environment;
- Identify a framework for implementation using existing statutory mechanisms under the Act (such as Environmental Impact Assessment, Licensing, Regulations and/or EPPs) and by guiding other agency mechanisms (such as Town Planning Scheme provisions and Statement of Planning Polices). New funding initiatives can also

- be used to facilitate the implementation of SEP's; and
- Define environmental performance criteria against which to audit environmental performance.

Policies Being Implemented

All Environmental Protection Policies and associated maps may be viewed on the EPA website at <http://www.epa.wa.gov.au/template.asp?ID=20&area=Policies&Cat=Environmental+Protection+Policies+%28EPP%29> or at the DEC's Library Resource Centre, Atrium Level 4, 168 St Georges Terrace, Perth.

Environmental Protection (Swan Coastal Plain Lakes) Policy

In 1999 a statutory review of the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* was undertaken.

The EPA worked towards expanding this Policy to include all wetland types rather than 'Lakes' to reflect the different values of different wetland types.

In August 2006, the government determined not to adopt this policy and the expansion in scope. The Minister subsequently asked the EPA if it would develop a guide to wetland protection and management to assist landowners to be aware of the existing provisions relating to wetlands.

The *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* remains in force.

State Environmental (Coastal Zone) Policy

During the year the EPA advised the Minister for the Environment not to continue the development of a State Environmental Policy for the coastal zone. It was considered that the election commitment that gave rise to the State Environmental Policy has been addressed by the planning portfolio (for example through *Coasts WA: Better Integration* and the *State Coastal Planning Policy*).

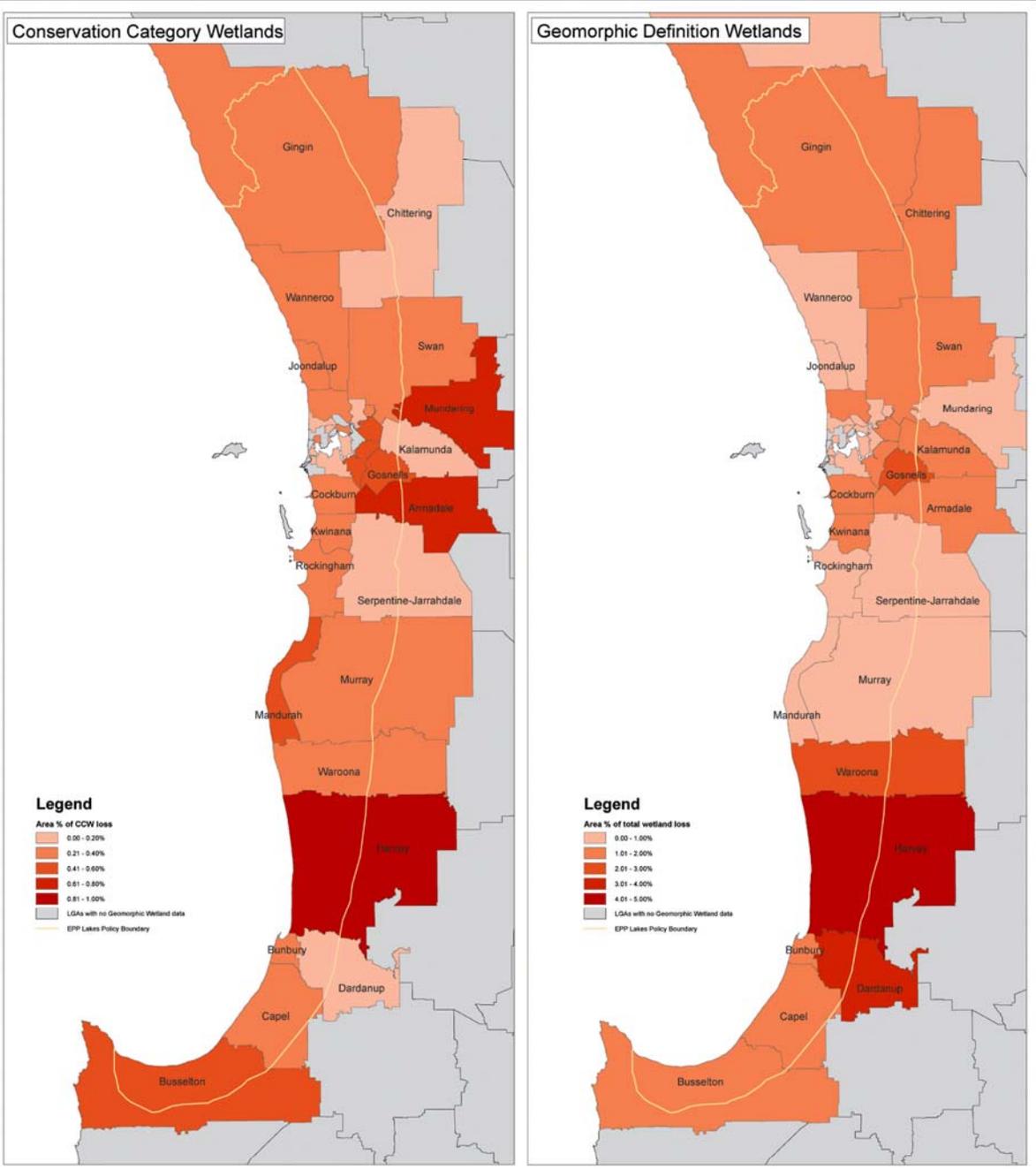
The EPA and the Minister agreed that a Position Statement be developed on the coastal zone, indicating the environmental objectives and processes that could be incorporated into all levels of the planning process. This will facilitate processes to provide an appropriate environmental bottom line for any section of the coast, and will be a more effective method to support the recent planning changes.

Position Statements

Position Statements (Available at <http://www.epa.wa.gov.au/template.asp?ID=8&area=Policies&Cat=Position+Statements>) remain an important, high level policy expression by the EPA on environmental issues. Two were completed in 2006/07.

Position Statement No. 8 sets out the EPA's position on the role it sees it has in natural resource management. The Authority considers it has a role in establishing the high level environmental values and environmental objectives/targets and a role in the environmental evaluation of the sector. It is the natural resource manager's role to manage, not EPA's.

Environmental Protection Authority
Percentage Loss or Decline of Wetlands by Local Government Authority
 State of the Environment Western Australia



<p style="text-align: center;">0 5 10 20 30 40 50 km</p> <p style="text-align: center;">Projection: Map Grid of Australia Zone 50 Datum: Geocentric Datum of Australia, 1994</p> <p>Data Source Geomorphic Wetlands - Dept of Environment (2005) Landmonitor - Dept of Land Information (2004) Local Government Authority Boundaries - Dept of Land Information (1998) EPP Lakes Policy Boundary - Environmental Protection Authority (1992)</p> <p>Analysis Environmental Protection Authority (2005)</p> <p>Presentation Environmental Protection Authority (2005)</p>	<p>This map is produced for the State of the Environment report. Both map and report are produced by the Environmental Protection Authority, an independent advisory body on the environment.</p> <p>This map depicts geomorphic wetland loss or decline as a percentage of Local Government Authority area between 1996-2004. The analysis was performed using Landmonitor vegetation loss within the spatial wetland definitions of Wetlands of the Swan Coastal Plain volume 2A and 2B: wetland mapping, classification and evaluation (1996).</p> <p>This map is constructed in PDF format and able to be printed up to A1 size.</p> <p><small>Disclaimer: This map is intended as a generalised interpretation of environmental issues. The information contained on this map is to be considered indicative only and in no event shall the Environmental Protection Authority be liable for any incident or consequential damages resulting from use of the material.</small></p> <p style="text-align: right;"><small>© Copyright Environmental Protection Authority, 2006. All Rights Reserved. All works and information displayed are subject to Copyright. For the reproduction or publication beyond that permitted by the Commonwealth Copyright Act 1968 written permission must be sought from the Authority.</small></p>
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Percentage of Wetlands Loss by Local Government Authority. (From EPA State of Environment Report 2007 available at <http://www.soe.wa.gov.au>)

Table 4: Environmental Protection Policies in force and their status as at June 2007

Name	Approval date	Review date	Comment
Environmental Protection (Peel Inlet- Harvey Estuary) Policy 1992	11.12.92	11.12.99	The review will recommence upon finalisation of the Water Quality Improvement Plan (WQIP). A draft WQIP is expected to be released third quarter 2007.
Environmental Protection (Swan Coastal Plain Lakes) Policy 1992	18.12.92	Under direction of the Minister, Section 36 (1) (a) and (aa) of the EP Act determines future reviews for this policy.	See page 31 above
Environmental Protection (Gnangara Mound Crown Land) Policy 1992	24.12.92	24.12.99	Review on hold awaiting section 46 assessment to review Ministerial conditions.
Environmental Protection (Swan and Canning Rivers) Policy 1998	10.07.98	10.07.05	In September 2006 the WA Parliament passed the <i>Swan and Canning Rivers Management Act 2006</i> . The EPP will be revoked on proclamation of this Act expected in late 2007.
Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998	28.10.98	28.10.05	In May 2007 the EPA initiated the review of the <i>Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998</i> .
Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999	21.12.99	21.12.06	The Minister directed the EPA to defer the commencement of the review of the Policy until finalisation of the State Industrial Buffer Statement of Planning Policy, State Environmental (Ambient Air) Policy and completion of re-determinations of the maximum permissible quantities for sulfur dioxide within the Kwinana Industrial Area. The direction is in effect until 30 June 2008.
Environmental Protection (Ozone Protection) Policy	17.10.00	17.10.07	Review on hold awaiting Commonwealth action.

Name	Approval date	Review date	Comment
2000			
Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002	18.02.03	18.02.10	Policy being implemented.
Environmental Protection (Goldfields Residential Areas) (Sulfur Dioxide) Policy 2003	18.03.03	18.03.10	Policy being implemented.

Table 5: *Environmental Protection Policies in development*

Name	Status
Draft Environmental Protection (State Groundwater) Policy	On hold.
Draft Environmental Protection (State Marine Waters) Policy	On hold.

Table 6: *State Environmental Policies in force and their status as at June 2007*

Name	Date	Status
State Environmental (Cockburn Sound) Policy 2005	20.01.05	Policy being implemented.

Table 7: *State Environmental Policies in development*

Name	Status
Draft State Environmental (Ambient Air Quality NEPM) Policy	The EPA is currently preparing a draft SEP and explanatory document.
Draft State Environmental (Coastal Zone) Policy	The EPA is to draft a Position Statement to address the coastal zone issues instead of a joint SEP with the WAPC.

Position Statement No. 9 on Environmental Offsets was also finalised after two rounds of formal consultation and following feedback from some public forums convened by the Environmental Consultations Association (WA) and the National Environmental Law Association (WA Division).

This Position Statement has aroused the most interest of any: primarily because it breaks new ground in articulating a policy position on the difficult questions regarding the application of offsets in environmental decision making.

Appendix 6 provides a list of Position Statements.

Guidance Statements

Guidance Statements provide the EPA's view on how frequently addressed environmental issues should be dealt with during environmental impact assessment of new proposals. Based on experience gained from similar proposals each statement is designed to increase certainty for proponents and provide transparency for the wider community.

Proponents and the community should consider the advice in Guidance Statements to be the best guide to the EPA's current thinking on a particular issue. The advice is not mandatory. Proponents may take a different approach to dealing with an issue if they wish, but for the EPA to find that alternative acceptable, the proponent should provide a well-reasoned argument, supported by appropriate technical data. The EPA will then consider the issue on its merits on a case

by case basis. Alternatively, if proponents demonstrate that a proposal will meet or better the requirements in the relevant Guidance Statement, then they are likely to find that the assessment of their proposal will be simpler and faster.

There are two steps in the Guidance Statement development process. Key stakeholders are generally consulted about issues in a new Statement via a workshop or similar process. A Draft Guidance Statement is then agreed by the EPA and released for public comment, usually for 12 weeks, but sometimes for longer when a period of practical application is desirable. The EPA takes all comments into account during the preparation of the Final Guidance Statement. Final Guidance Statements are subject to review every five years, or when significant new information becomes available.

Twenty-seven Guidance Statements are now available in either draft or final form. Two draft Guidance Statements were released during the year.

Draft Guidance Statement No. 8, Environmental Noise, was issued during the year, as was Guidance Statement No. 19, Environmental Offsets. Guidance Statement 33, Planning and Development, remains available as a Draft but is being substantially revised.

Guidance Statement No. 47, Odour, remains withdrawn while it undergoes revision. Interim odour guidance is still available on the EPA website. Buffer distances for odour are specified in EPA Guidance Statement No. 3, Separation Distances Between Industrial and Sensitive Land Uses, which is still current.

A full list of Guidance Statements and their stage of development is included in Appendix 7 (Also available at <http://www.epa.wa.gov.au/template.asp?ID=14&area=EIA&Cat=Guidance+Statements>).

MONITORING OF LIQUID WASTE TREATMENT FACILITY, BROOKDALE

Waste Management (WA), a corporate entity within the Department of Environment and Conservation is responsible for the operations of the Liquid Waste Treatment Facility at Brookdale.

The EPA has responsibility for monitoring compliance with the Ministerial Conditions contained in Ministerial Statement 588 issued as a Ministerial Direction under s110 of the EP Act.

The EPA contracts an independent auditor to assist the EPA monitor compliance with the Ministerial Conditions.

At the direction of the Minister for the Environment the facility ceased operations on 31 December 2003.

The EPA reviewed the Detailed Site Investigation Plan as Phase 1 of the decommissioning and rehabilitation of the Brookdale Liquid Waste Treatment Facility.

The Decommissioning and Rehabilitation Plan is being prepared by

Waste Management (WA) in three phases:

- a Detailed Site Investigation Plan which provides for sampling of soil and groundwater to determine the extent, if any, of contamination of the site;
- a Site Management Plan is then required to undertake any rehabilitation of contaminated areas that may result from the outcomes of the sampling undertaken through the implementation of the Detailed Site Investigation Plan; and
- if required, an ongoing Water Monitoring Plan may be required depending on the outcomes of the first two plans.

The Minister for the Environment approved the Detailed Site Investigation Plan as the first phase towards decommissioning and rehabilitation of the Brookdale Liquid Waste Treatment Facility site.

Waste Management (WA) has advised that the sampling of soil and groundwater to determine the extent, if any, of contamination of the site has been completed. Waste Management (WA) will refer its report on the outcomes of the sampling undertaken in accordance with the approved DSI to the EPA for its consideration in the second half of 2007.

REGULATION 17 APPLICATIONS

Applications for approval to vary from the assigned noise levels under regulation 17 of the *Environmental*

Protection (Noise) Regulations 1997 are determined by the Minister on the EPA's advice. Progress milestones were achieved in the following applications:

Verve Energy Corporation, Geraldton Gas Turbine Station

Following an EPA strategy briefing the EPA's advice recommending approval of the noise regulation 17 application was released in October 2006 (Bulletin 1235 available at

<http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

. The approval has since been granted by the Minister.

Centurion Transport, South Guildford

Following advice from Centurion Transport that their operations could be managed to bring their noise emissions into compliance, their noise regulation 17 application was withdrawn.

Alcoa Wagerup refinery

Following the EPA's report recommending that a noise regulation 17 approval be granted (Bulletin 1215 available at

<http://www.epa.wa.gov.au/template.asp?ID=16&area=EIA&Cat=EPA+Bulletins>)

Alcoa provided further assessment of the likely costs of additional noise reduction works on the existing plant in June 2007. That report is under review.

Kalgoorlie Consolidated Gold Mines

An application was received from KCGM for noise emissions from the

Kalgoorlie Super Pit. The application was substantially progressed in conjunction with Part IV assessments of the related proposals for the Golden Pike Cutback and Northern Waste Dumps. An EPA strategy briefing is expected shortly.

Technical assessment work progressed on the following noise regulation 17 applications: Hamersley Iron (Pilbara Iron Ore port operations, Dampier); and Millennium Chemicals, Australind.

Awaiting information from the applicants relating to the technical assessment: Albany Port (truck transport); CBH Esperance (grain handling); and Laminex (particleboard plant, Dardanup).

Progressing to EPA briefing: Esperance Port Authority (extension of 2001 approval).

Progressing to approval: Sons of Gwalia Ltd (Greenbushes tantalum mine).

The noise regulation 17 application by Onslow Salt, for their Dampier operations has been terminated, as the approval is not required.

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



EPA examination of the proposed pipeline route for the Grange Southdown Magnetite Project (near Albany), November 2006

During the year, various EPA members 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, interest and conservation groups.

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 for the Environment;
- 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.

ENVIRONMENTAL PROTECTION AUTHORITY REFERENCE PANELS

The Environmental Protection Authority (EPA) has established a number of expert reference panels which meet on an 'as need' basis and provide advice to the EPA on matters of policy referred to them by the authority. The four expert Reference Panels established are

- Industry;

- Mining;
- Natural Resource Management; and
- Land Use Planning.

The Panels include expert and community representation.

During 2006/07 the Panels considered and provided advice to the EPA on:

- Environmental Offsets Position Statement; and
- Ambient air standards policy direction.

APPENDICES

APPENDIX 1: The Role and Function of the Environmental Protection Authority

What is the Environmental Protection Authority?

The Environmental Protection Authority (EPA) is a statutory authority and is the primary provider of independent environmental advice to Government. The EPA is not a regulatory body. The regulatory responsibilities within the *Environmental Protection Act (1986)* (EP Act) are undertaken by the Department of Environment and Conservation (DEC). The EPA consists of five members, including a full-time chairman.

When was the EPA established?

The EPA came into existence on 1 January 1972 and operates under the EP Act.

What is the 'environment' to the EPA?

The EP Act defines environment to mean *living things, their physical, biological and social surroundings, and interactions between all of these. ... For the purposes of the definition of "environment" ... the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings.*

What are the EPA's objectives?

The EPA's objectives are to protect the environment and to prevent, control and abate pollution.

How does the EPA achieve its objectives?

The EPA achieves these objectives through:

- Providing advice to the community, stakeholders, developers, regulators and those within Government who formulate environmental policy;
- Preparing Environmental Protection Policies (EPPs) which have the force of law and State Environmental Policies (SEP), Position Statements and Guidance Statements which are non – statutory. Details of the Policy program are provided on the EPA website (www.epa.wa.gov.au);
- Assessing development proposals (including schemes and scheme amendments) and activities that have the potential to impact on the environment, and advising the Minister for the Environment regarding their environmental acceptability and conditions which should apply if they are approved to proceed. Details are on the EPA website; and
- Auditing compliance with Ministerial Conditions for

proposals for which the Department of Environment and Conservation is the proponent.

Who does the EPA involve when formulating advice to the Minister?

The EPA receives information from many sources, including the public, developers, peak bodies, interest groups and government departments, particularly the Department of Environment and Conservation.

In addition, the EPA has established four Reference Panels for mining, industrial, natural resource management and land use planning. Each reference panel has technical experts and community representation. The EPA may refer matters relevant to a particular Reference Panel for advice.

How does the EPA give advice to Government?

The EPA makes recommendations to the Minister for the Environment. The advice is public, and is generally through published Bulletins. The Government, through the Minister, makes the final decisions.

How can the EPA's advice be implemented?

The three main instruments for implementing the EPA's advice to Government are:

- Government endorsed statutory EPPs or non – statutory SEPs, which have been developed by the EPA in consultation with all interested parties;

- Ministerial Conditions set by the Minister for the Environment; on development proposals assessed by the EPA; and
- Bodies, including Government, government agencies, local government, stakeholders and the community, implementing the EPA's policies and advice, as provided or modified.

Public's Right to be involved

A basic tenet of the EP Act is the community's rights to know, to be informed, to be heard and to object to activities that have the potential to impact on the environment.

Accordingly, the EPA provides opportunities for the public to be involved in the decision-making processes. Further information on how the public can become involved is available on the EPA website and in its advertisement in Public Notices section of the Monday edition of the *West Australian* newspaper.

Other functions of the EPA

The Minister can request the EPA to carry out other functions. For instance, the Minister has asked the EPA to carry out State of the Environment (SOE) reporting and Natural Resource Management (NRM) environmental performance auditing.

The EPA publishes Position Statements to provide the overarching principles and information which the EPA would use when giving advice to the Minister, the public, proponents, and decision-makers. The list of Position Statements is provided in Appendix 6.

In addition, the EPA publishes Guidance Statements that provide direction to proponents in developing their proposals for environmental impact assessment. The list of Guidance Statements is Provided in Appendix 7.

All Position and Guidance Statements are available on the EPA's website.

Principles that the EPA considers when carrying out its duties

The EPA has regard for a number of principles when giving environmental advice, including:

1. *The precautionary principle;*
2. *The principle of intergenerational equity;*
3. *The principle of the conservation of biological diversity and ecological integrity;*
4. *Principles relating to improved valuation, pricing and incentive mechanisms; and*
5. *The principle of waste minimisation.*

What are the environmental aspects that the EPA can consider when giving advice?

Generally, when providing advice, the EPA considers the following broad environmental factors:

- i) Integration;
 - Biodiversity; and
 - Sustainability.
- ii) Biophysical:
 - Flora and vegetation;
 - Fauna;
 - Wetlands (wetlands, rivers);
 - Water (surface or ground);

- Land form;
- Marine habitats; and
- Conservation Areas.

iii) Pollution Management:

- Air Quality;
- Water Quality (surface, marine or ground);
- Soil Quality;
- Noise;
- Radiation;
- Light; and
- Greenhouse Gases.

iv) Social Surrounds:

- Heritage;
- Visual Amenity; and
- Recreation.

v) Other:

- Decommissioning and rehabilitation.

Role of the proponent

A common concern raised with the EPA each year is that the Environmental Impact Assessment (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 a 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 requires 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 comprehensive 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 scoping document for the preparation of the environmental review document is approved by the EPA;
- the scoping document is publicly available and, at the ERMP level of assessment, the scoping document is available for public comment prior to finalisation;

- the environmental review document can be released only after the EPA 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, the EPA checks the adequacy of the response which 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 technical experts within its Service Unit (see below), other agencies and institutions; 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 and authorities

The EPA seeks advice from agencies, including the Department of Environment and Conservation (DEC) Department for Planning and Infrastructure (DPI), WA Planning Commission (WAPC), the Conservation Commission of Western Australia, the Marine Parks and Reserves Authority (MPRA), Department of Health, Department of Industry and Resources (DoIR), Department of Indigenous Affairs and Department of Fisheries.

Department of Environment and Conservation

Administratively situated within the Department is the EPA Service Unit, consisting of the Environmental Impact Assessment and Strategic Policy Divisions, under the direction of the EPA. An updated Service Agreement between the Authority, Department and the Minister is currently being established for the provision of departmental services to the EPA.

The EPA Service Unit carries out a variety of functions for the EPA, primarily environmental impact assessment and preparation of draft EPA Bulletins, research and co-ordination functions in relation to the environment, and the preparation of draft Environmental Protection Policies, Position Statements and Guidance Statements.

The Department continued to administer the regulation requirements of the EP Act (for example Licensing of Industry and undertaking pollution investigations) and as a provider of expert advice on matters pertaining to pollution control, management of contaminated land and management as inputs to the EIA process.

In relation to policies and requirements for best practice in control of pollution, the EPA will continue to have a key role where it subjects proposals to environmental impact assessment and through relevant Environmental Protection Policies.

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

DEC is also manager of forests and the conservation estate on behalf of the Conservation Commission of Western Australia, was required to implement Forest Management Plans which are assessed by the EPA. DEC continues to be 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 DEC'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 Ministerial Conditions set by the Minister for the Environment.

Marine Parks and Reserves Authority

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

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.

Department for Planning and Infrastructure and WA Planning Commission also prepare strategic plans that the EPA can report on under Section 16(j) of the EP Act.

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 (DOIR)

Two Memoranda of Understanding (MOUs) between the EPA and Department of Industry and Resources deal with onshore mining and exploration proposals and with onshore

petroleum proposals respectively. The MOUs, provide clear criteria for Department of Industry and Resources to refer proposals to the EPA under Part IV of the *Environmental Protection Act 1986*.

The MOUs are not a delegation of the EPA's powers but provide an agreed, efficient and transparent administrative framework for referral of proposals to the EPA. 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.

The MOUs were developed in consultation with industry and the conservation movement and have the support of both.

The onshore petroleum MOU complements the MOU between the EPA and Department of Industry and Resources on referral of offshore petroleum proposals.

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 Water

During 2005/06 the Department of Water was created from part of the existing Department of Environment. The remainder of the department was amalgamated with the Department of Conservation and Land Management to form the Department of Environment and Conservation. These changes came into effect on 1 July 2006.

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APPENDIX 2: Formal Assessments (Including ERMP, PER, s46 and s48, Excluding Environmental Protection Statements, Assessment on Referral Information and Proposal Unlikely to be Environmentally Acceptable which are listed in Appendix 3 and 4.)

Bulletin No.	Title	Level of Assessment	Release date
1224	Riverslea Subdivision (Sussex Locs 9002 and 9101) Margaret River, Greendene Pty Ltd	PER	10/7/06
1226	Dampier Port increase in throughput to 120 million tonnes per annum - extend the time limit of conditions 7-3, 7-4 and 7-5 in Ministerial Statement 702, Hamersley Iron Pty Ltd (s46)	s46	21/8/06
1227	City of Albany Town Planning Scheme 3 Amendment 247 Nullakai Peninsula	s48a	28/8/06
1228	Development of Industrial Land on the Burrup Peninsula for Future Gas Development, Woodside Energy Ltd	PER	4/9/06
1232	Industrial Subdivision of Lots 300-303 and 14 & 15 Beringarra Avenue, Malaga	PER	6/11/06
1234	Helena East Precinct Remediation and Redevelopment	PER	16/10/06
1238	Alkimos Wastewater Treatment Plant Site A (Assessment 1582)	PER	13/11/06
1239	Alkimos Wastewater Treatment Plant Site B (Assessment 1529)	PER	13/11/06
1241	Albany Foreshore Redevelopment, Princess Royal Harbour — Change to Environmental Conditions	s46	20/11/06
1242	Mt Gibson Iron Ore Mine and Infrastructure Project	PER	27/11/06
1244	Synthetic Rutile Plants 1 and 2, North Capel	s46	4/12/06
1245	South West Yarragadee Water Supply Development	ERMP	8/12/06
1247	Dust Management Program for Finucane Island and Nelson Point Operations, Change to Environmental Conditions	s46	29/1/07
1250	Long Island Tourism Development, Houtman-Abrolhos Islands	PER	19/3/07
1251	Mesa A / Warramboe Iron Ore Project	PER	26/3/07
1253	Wungong Urban Water Redevelopment Scheme 2006	s48	30/3/07
1257	Rural/Residential Subdivision, Lot 2 Ellenbrook Road, Bullsbrook	PER	14/5/07

APPENDIX 3: Environmental Protection Statements and Assessment on Referral Information

Bulletin No.	Title	Level	Release date
1225	Dredging Programme Dampier Port Upgrade, Hamersley Iron Pty Ltd (ARI)	ARI	7/8/06
1229	Materials Stockpiling and Handling Facilities – Cape Preston (ARI)	ARI	11/9/06
1231	Dampier to Bunbury Natural Gas Pipeline Stage 5 Expansion	ARI	3/10/06
1233	Cloverdale Mineral Sands	ARI	13/10/06
1246	Cape Lambert Port upgrade – increase in throughput to 85 Mtpa	EPS	8/1/07
1248	Kwinana Ethanol Bio-Refinery	EPS	12/2/07
1249	Extension of Rehoboth Christian School, 92 Kenwick Road, Kenwick	ARI	5/3/07
1254	Dredging Program Cape Lambert Port Upgrade	ARI	5/4/07
1255	Maxima 3D Marine Seismic Survey – Scott Reef	EPS	30/4/07
1258	Kemerton Power Station Enhancement Project	ARI	28/5/07

APPENDIX 4: Proposal Unlikely to be Environmentally Acceptable (PUEA)

Bulletin No	Project Title	Release Date
1236	Clearing of between 65 and 112 hectares of native vegetation for agriculture, Kent Location 1858, Shire of Gnowangerup. PUEA	16/10/06

APPENDIX 5: s16 Strategic Advice

Bulletin No	Project Title	Release date
1230	Fremantle Ports Outer Harbour Project	25/9/06
1237	Cape Peron Tourist Precinct Project	23/10/06
1240	Strategic advice on the proposed buffer for the Woodman Point Wastewater Treatment Plant	20/11/06
1243	Fire Management in the Kimberley and other Rangeland Regions of Western Australia	4/12/06
1256	Advice on areas of the highest conservation value in the proposed extensions to Mount Manning Nature Reserve	14/5/07

APPENDIX 6: Regulation 17 Variation

Bulletin No	Project Title	Release Date
1235	Geraldton Gas Turbine Station Noise Regulation 17 Variation.	28/9/06

APPENDIX 7: Section 45 reports (Compliance Monitoring)

Bulletin No.	Subject	EPA Report Date
1252	Environmental Management of Groundwater Abstraction from the Gngangara Mound July 2004 – June 2005 - Annual Compliance Report	2/4/07

APPENDIX 8: Position Statements

No.	Position Statement
1.	Environmental Protection of Cape Range Province
2.	Environmental Protection of Native Vegetation in Western Australia
3.	Terrestrial Biological Surveys as an element of Biodiversity Protections
4.	Environmental Protection of Wetlands
5.	Environmental Protection and Sustainability of the Rangelands in Western Australia
6.	Towards Sustainability
7.	Principles of Environmental Protection
8.	Environmental Protection in Natural Resource Management
9.	Environmental Offsets

APPENDIX 9: Guidance Statements for the Assessment of Environmental Factors

Final Guidance

No	Title
1	Protection of Tropical Arid Zone Mangroves along the Pilbara Coastline
2	Risk Assessment and Management: Offsite Individual Risk from Hazardous Industrial Plant
3	Separation Distances between Industrial and Sensitive Land Uses
4	Deep and Shallow Well Injection for Disposal of Industrial Waste
6	Rehabilitation of Terrestrial Ecosystems
7	Protection of Western Swamp Tortoise Habitat, Uppers Swan/Bullsbrook
10	Level of Assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region

No	Title
12	Minimising Greenhouse Gases
13	Management of Air Emissions from Biomedical Waste Incinerators
15	Emissions of Oxides of Nitrogen from Gas Turbines
17	A Site Remediation Hierarchy for Contaminated Soil
18	Prevention of Air Quality Impacts from Land Development Sites
28	Protection of the Lake Clifton Catchment
29	Benthic Primary Producer Habitat Protection for Western Australia's Marine Environment
34	Linkage between EPA Assessment and Management Strategies, Policies, Scientific Criteria, Guidelines, Standards and Measures Adopted by National Councils
40	Management of Mosquitoes by Land Developers
41	Assessment of Aboriginal Heritage
49	Assessment of Development Proposals in Shark Bay World Heritage Property
51	Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia
54	Consideration of Subterranean Fauna in Groundwater and Caves during Environmental Impact Assessment in Western Australia
55	Implementing Best Practice in Proposals Submitted to the Environmental Impact Assessment Process
56	Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia

Draft Guidance

No	Title
8	Environmental Noise
19	Environmental Offsets
33	Environmental Guidance for Planning and Development
47	Interim Guidance on Odour as a Relevant Environmental Factor
48	Groundwater Environmental Management Areas

APPENDIX 10: EPA site visits

Date	Site
7 – 11 August 2006	Kimberley Fire Review – Regional site visits.
18 September 2006	Mesa A mine site, Pannawonica.
26 September 2006	Molydenu Mine Project, near Marble Bar
16 October 2006	Mineral Sands Mine Proposal, Keysbrook.
6 - 7 November 2006	Albany Southdown Magnetite Mine, Albany Port Expansion and a number of Albany town planning issues.
29 November – 1 December 2006	Proposed Ichthys Gas Field Development, Maret Islands.
12 April 2007	Fimiston Gold Operations Expansion (Stage 3), Kalgoorlie.
18 -19 April 2007	Straits Salt Project, Exmouth.

APPENDIX 11: Attendance at EPA Meetings

Attendance EPA Meetings – 1 July 2005 to 30 June 2006		
Name	No of Meetings Held	No of Meetings Attended
Dr W Cox ¹	22	16
Mr D Glennon ²	22	17
Ms J Payne	22	22
Ms A Hinwood	22	18
Professor S Halls ³	22	10
Dr C Whitaker ⁴	22	1

Foot Notes:

1. Dr W Cox retired as Chairman on 11 May 2007.
2. Mr D Glennon was reappointed as Member from 1 July 2007 to 30 June 2010.
3. Professor S Halls term of appointment expired on 10 May 2007.
4. Dr C Whitaker appointed as Member from 11 May 2007 to 10 May 2010.

APPENDIX 12: Section 45C List of approved changes to proposals

Statement No	Proposal Title	Variation	Approval date
725	Waroona mineral sands project, Shire of Waroona	Relocation of solar drying dams	31/07/06
476	Rare Earths Mining and Beneficiation At Mt Weld, Laverton and Secondary Processing At Meenaar, near Northam	Construct an access road.	31/7/06

<i>Statement No</i>	<i>Proposal Title</i>	<i>Variation</i>	<i>Approval date</i>
591	Boddington and Hedges Gold Mines Shire of Boddington	Services corridor and sewage treatment plant for accommodation village	18/8/06
690	Pilbara Iron Ore & Infrastructure project: port and north-south railway (stage A)	9ha of access road	18/8/06
551	Wallaby Gold Mine, Lake Carey, Shire of Laverton	Additional disposal to Lake Carey from mine operations	23/8/06
536	North West Shelf Gas Project Additional Liquefied Natural Gas Facilities	LNG Production Capacity as 18.5Mtpa	30/8/06
586	Ammonia Plant, Burrup Peninsula	Numerous: Full NH# pipeline emergency manual trips removed	11/9/06
690	Pilbara Iron Ore & Infrastructure project : port and north-south railway (stage A)	Relocation of Rail Loop, Train Unloader and Rail Alignment	12/9/06
490	Industrial Infrastructure and Harbour Development, Jervoise Bay	Redesign of Eastern Wharf, a new floating dock and associated facilities.	14/9/06
584	Hope Downs Iron Ore Mine, 75km North-West of Newman, Pilbara Region	additional power line	19/9/06
391	Port Geographe - Stage 1	Beach profile rationalisation	19/9/06
652	Coral Bay Boating Facility Monck Head Coral Bay Shire of Carnarvon	Temporary causeway and other actions for Stage 1 implementation	9/10/06
724	Bluewaters PS Phase II. Shire of Collie	Relocation of PS – reduction in clearing of native veg. Clarification of footprint and ancillary infrastructure and construction envelope	9/10/06
666	Mineral Sands Mine, 2.5km north-west of Gingin	90ha of additional solar drying dams	31/10/06
707	Pilbara Iron Ore and Infrastructure Group	New 8km access road	31/10/06
584	Hope Downs Iron Ore Project	Extra clearing for the Lang Hancock railway	31/10/06
208	Mesa J Iron Ore Development, Pannawonica	New Green Pool siding and associated works	13/11/06
683	Wheellarra Hill iron ore mine extension life-of-mine proposal mining lease 266SA, 40 Km east of	Extend area of disturbance by 62ha	17/11/06

<i>Statement No</i>	<i>Proposal Title</i>	<i>Variation</i>	<i>Approval date</i>
	Newman, Shire of East Pilbara		
206	Marandoo Iron Ore Mine & Central Pilbara Railway	Rail sidings and optic fibre cables	29/11/06
514	West Angelas Iron Ore Project Shires of East Pilbara, Ashburton and Roebourne	Rail sidings and optic fibre cables	29/11/06
645	Kemerton Power Station Kemerton	Increase Liquid Fuel Usage to 600 hrs for 2006/07 Financial year.	18/12/06
731	Dampier port upgrade dredging	Increased depth of dredging at Parker Point and East Intercourse Is.	18/1/07
208	Mesa J Iron Ore Development	Stage 1 Fibre Optic Cable	06/3/07
727	Jack Hills Iron Ore Murchison	New borefield and rearranged mine footprint	12/3/07
723	Cockburn Mineral Sands, Shark Bay	Change Mining Method from BWE to Bulldozers	16/3/07
675	Wastewater Treatment & Disposal	Expansion of Albany WWTP second storage dam and additional treelot	27/4/07
690	Pilbara Iron Ore & Infrastructure Project, Port & North-South Railway	FMG on behalf of Port Hedland Port Authority to dredge an additional 170,000 m3 at Utah Point	27/4/07
286	Marandoo Iron Ore Mine & Central Pilbara Railway	Additional Rail Siding - Dove siding	24/5/07
265 & 657	Clay excavation Lots 40 & 41 Apple St, Upper Swan.	Change of title for subdivision of lots to 42 & 43	28/6/07

APPENDIX 13: Financial Report

The administration costs of the EPA are as follows:

	2006-07 (\$'000)	2005-06 (\$'000)	2004-05 (\$'000)	2003-04 (\$'000)	2002-03 (\$'000)
Recurrent					
Salaries and allowances	659	591	577	579	452
Other Expenses					
Advertising expenses	25	41	66	0	0
Staff related expenses	38	13	19	16	41
Communications	8	6	9	10	10
Services and contracts	17	27	17	24	254
Consumable supplies	26	3	6	14	13
Repairs, Maintenance and Depreciation		0	1	2	2
Total	773	681	695	645	772

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:

1. Total expenditure for 2006/2007 was \$25 212 (2005/06 – \$41 154).
2. Expenditure of specified amounts of \$1 600 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 \$1 600 or greater expended on advertising in the above categories to be notified in the annual report.

APPENDIX 14: Abbreviations

ACMER	Australian Centre for Minerals Extension and Research
AHC	Australian Heritage Council
ARI	Assessment on Referral Information
CALM	Department of Conservation and Land Management
CAMBA	China Australia Migratory Bird Agreement
CCWA	Conservation Commission of Western Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEC	Department of Environment and Conservation
DoA	Department of Agriculture
DoF	Department of Fisheries
DoH	Department of Health
DoW	Department of Water
DIA	Department of Indigenous Affairs
DoIR	Department of Industry and Resources
DPI	Department for Planning and Infrastructure
CITES	Convention on International Trade of Endangered Species
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMIAA	Environmental Management Industry Association of Australia
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act (1986)</i>
EPASU	EPA Service Unit
EPP	Environmental Protection Policy
EPS	Environmental Protection Statement
EQC	Environmental Quality Criteria
EQO	Environmental Quality Objectives
ERMP	Environmental Review and Management Programme
EV	Environmental Values
FMP	Forest Management Plan
GBRS	Greater Bunbury Region Scheme
HRA	Health Risk Assessment
JAMBA	Japan Australia Migratory Bird Agreement
LoA	Level of Assessment
MoU	Memorandum of Understanding
MPRA	Marine Parks and Reserves Authority
MRWA	Main Roads Western Australia
NAP	National Action Plan
NEPC	National Environmental Protection Council
NHT	Natural Heritage Trust
NWQMS	National Water Quality Management Strategy
NRM	Natural Resource Management
PER	Public Environmental Review
PUEA	Proposal Unlikely to be Environmentally Acceptable
RO	Reverse Osmosis
SCP	Swan Coastal Plain

SEP	State Environmental Policy
SoE	State of the Environment
SOER	State of Environment Reporting
SRG	Stakeholder Reference Group
SRT	Swan River Trust
UNEP	United Nations Environment Program
UNESCO	United Nations Education Scientific and Cultural Organisation
VOC	Volatile Organic Compound
WA	Western Australia
WALA	Western Australian Land Authority
WALGA	Western Australian Local Government Association
WAPC	Western Australian Planning Commission
WMWA	Waste Management WA
WRC	Water and Rivers Commission