



Harbour Foreshore Authority

Environmental Management Strategy and Policy

Tenant Asset Management Services

Sydney Harbour Foreshore Authority

Document Control

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1 CEO'S STATEMENT

Sydney Harbour Foreshore Authority (the Authority) is responsible for protecting and enhancing the natural and cultural heritage of Sydney's inner harbour foreshore and other facilities. Through its own work and that of its forerunner organisations, the Authority has a charter to achieve this by carefully balancing the demands of heritage conservation, urban renewal, commercial development and community and visitor expectations.

The Authority is the second largest landowner in the City of Sydney. The 400 hectares within its legislative boundaries include The Rocks, Darling Harbour, prime foreshore land at Pyrmont, Blackwattle Bay, the promenades and waterfront interests of Circular Quay, Luna Park Reserve and Australian Technology Park at Eveleigh.

The Authority is committed to achieving Place Leadership in the management of its environment. This leadership will be realised through the engagement of its stakeholders and application of plans and systems that support ecologically sustainable development (ESD), promote the implementation of environmental best practice, encourage innovation, and will be measured within a philosophy of continual improvement.

The Environmental Management Policy goal will be achieved through commitment to:

- Developing and implementing environmental management systems (EMS) appropriate to the location or environmental functionality.
- Ensuring operational and reporting compliance with legislative and regulatory requirements.
- Incorporating environmental aspects in strategic and business planning across the full life of projects, contracts, agreements, leases, relationships, partnerships and events.
- Promoting an environmental awareness program for employees, tenants and contractors that will educate persons, manage perceptions, and encourage innovation to achieve continuous improvement in environmental performance.
- Engaging the community and other stakeholders on environmental issues.
- Adopting a proactive approach to pollution and waste management through detailed planning, environmentally responsible procurement, recycling and reuse strategies, and contingency management.
- Establishing the mechanisms to monitor, measure, improve, report and review environmental performance.

Dr Robert Lang
Chief Executive Officer
November 2003

2 GENERAL

2.1 OVERVIEW

This policy describes the Sydney Harbour Foreshore Authority (the Authority)'s approach to Environmental management, strategies and objectives. It describes the framework in which the Authority's Environmental Management Systems, Management Plans and Functionalities reside.

2.2 PURPOSE

The purpose of this document is to provide clear guidelines for the Authority's Environmental Management Strategy in accordance with NSW Government policies and legislation.

2.3 RESPONSIBILITIES

Who	Responsibility
Asset and Sustainability Manager	Review policy
All Authority business units	Implement Ecologically Sustainable Principles
All Authority business units	Environmental Management
Environmental Manager	Develop Environmental Management System
Project Manager, Building Services	Energy Management Plan targets

2.4 DOCUMENT HISTORY

Date	Author	Modifications
June 2007	Technical Writer	Transferred original document into Corporate template. Some minor formatting and language adjustments made.
Feb 2006	Asset and Sustainability Manager	Created original document.

3 THE ENVIRONMENTAL MANAGEMENT PLAN

The purpose of the Environmental Management Plan is to provide a framework to link policy, systems, reporting and responsibilities within the Authority's management regime. The framework and supporting processes demonstrate a commitment by the Authority's management to its stakeholders and Ecologically Sustainable Development with an effective, efficient and continually improving process.

4 BACKGROUND

The Authority is responsible for managing and developing some of the most environmentally and culturally sensitive locations in Sydney. This sensitivity arises from the community focus, the natural features, the commercial imperatives, development initiatives, urban design and heritage nature of the managed properties and public domain.

The organisational challenge of addressing the sensitivities while embracing ecologically sustainable development requires that an effective and accountable environmental management regime be established. The management regime will be focused on:

- delivering organisational outcomes,
- achieving continual improvement ,and
- be sufficiently dynamic to reflect the changes of community, business, and environmental needs; changes that by their nature be evolutionary or revolutionary.

The goal of achieving place leadership necessitates an integrated and holistic approach to environmental management. Under the legislative requirements of the Sydney Harbour Foreshore Act 1998¹, the Authority is to take into consideration, where relevant, the principles of ecologically sustainable development (ESD) within the meaning of the Local Government Act 1993². ESD needs to be further developed in a manner that reduces the potential for community conflict, realises social and economic benefits, and confirms the Authority's Place Leadership role.

The Authority currently has a number of environmental management processes and regulatory reporting mechanisms in place. These processes and mechanisms are not linked within an organisational framework to optimise the knowledge management requirements; requirements that are essential in engaging all stakeholders and providing visibility of the commitment to environmental practices by Authority management. Historically, Divisions have been achieving good results in environmental and energy management however the opportunity exists to approach environmental and energy management within an integrated approach.

5 SYDNEY HARBOUR FORESHORE AUTHORITY VISION

The Authority's vision is "to make unique places in Sydney that the world talks about".

To achieve this vision, success in sound environmental management and the ability to be sustainable in social, environmental and economic terms can be viewed as being interdependent.

¹ http://www.austlii.edu.au/au/legis/nsw/consol_act/shfaa1998411/

² http://www.austlii.edu.au/au/legis/nsw/consol_act/lga1993182

6 SYDNEY HARBOUR FORESHORE AUTHORITY CHARTER

The Authority's Charter is to:

- add value by redevelopment of surplus government land through a highly skilled organisation that creates new city precincts on Sydney Harbour,
- capitalise on the economic and cultural worth of foreshore precincts, notably The Rocks, Circular Quay and Darling Harbour, as core attractions for both visitors and Sydneysiders,
- balance economic return, vibrancy and diversity of harbour foreshores, including the working waterfront,
- deliver excellence in its role as place manager for Sydney's premier Harbour sites,
- as custodian, ensure the preservation and interpretation of the natural and cultural heritage around the foreshores, promoting a sense of community ownership, and
- facilitate the opening up of foreshore areas to the public, balancing protection with active use while improving and extending the waterfront public domain.

7 ENVIRONMENT

The environment is defined as the surroundings in which an organisation operates including air, water, land, natural resources, flora, fauna, humans and their interrelation. For the Authority, the factors that most influence the environment can be described as follows:

- Waste
- Pollution (water, air, noise, and land)
- Energy
- Light
- Resource optimisation.

8 BENEFITS OF ENVIRONMENTAL MANAGEMENT

While many benefits associated with responsible environmental management are evident in government guidance and direction, further opportunities exist to realise additional benefits through innovation which may not incur significant additional financial burden. The potential benefits associated with effective and responsible environmental management are:

- assuring stakeholders of a commitment to demonstrable environmental management to encourage trust and to consolidate the Authority's leadership in this area,
- maintaining positive and effective community and public relations,
- enhance the image of the Authority,
- improve cost control,
- reduce environmental incidents that may result in liability,
- conserve input materials and energy, and
- foster development and sharing of environmental solutions that may provide innovation, risk transfer, and collateral cooperation.

9 ENVIRONMENTAL MANAGEMENT FRAMEWORK

To illustrate the linkages within the strategy an environmental management framework will be established. The framework identifies the indicative hierarchy of policy, systems, plans, reports, influences and responsibilities. The strategy is realised with a top down management commitment through definitive and realistic policy, complimentary to bottom up implementation through functional responsibility and business planning processes. The linkage between policy and process is achieved through implementation of environmental systems supported by functional plans and reporting mechanisms. The effectiveness of the environmental strategy will be determined by the relevance of the nesting of system, plan, departmental accountability and individual responsibility.

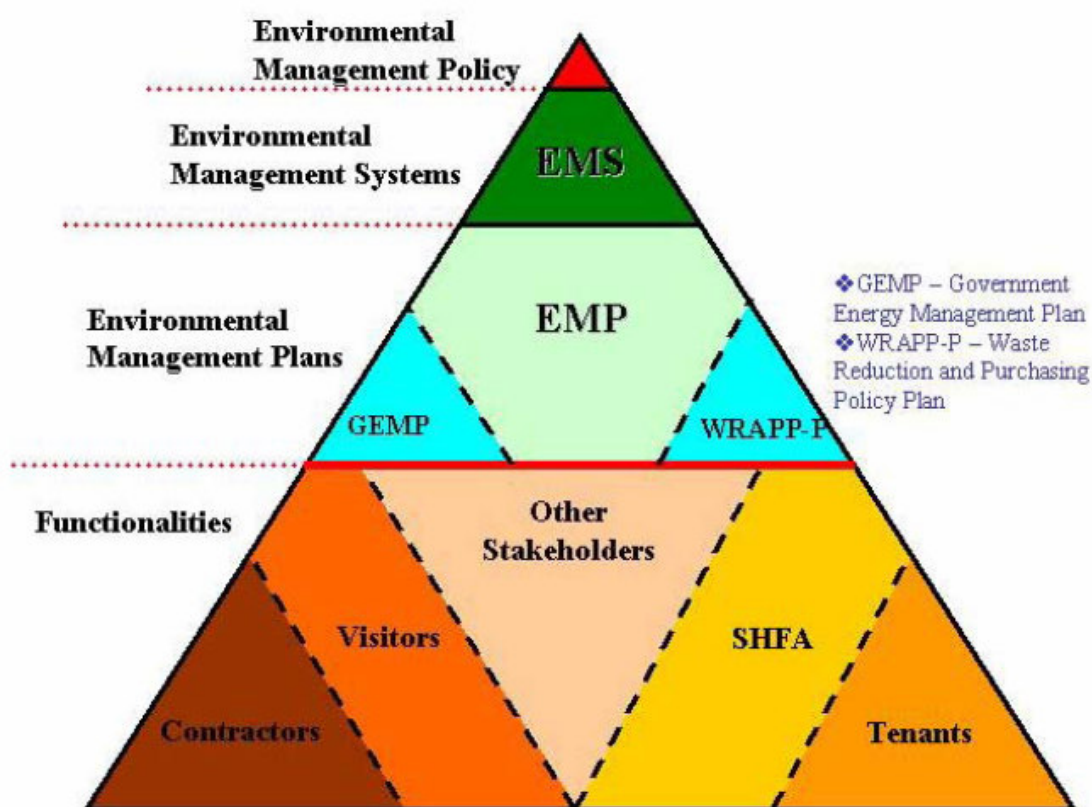


Illustration 1 - Sydney Harbour Foreshore Authority Environmental Management Strategy Framework

10 ENVIRONMENTAL PRINCIPLES

The following principles underpin the Authority's Environmental Management Policy:

- **Commitment and Primacy** - Environmental management is among the higher corporate responsibilities and is reflected within the Authority's Corporate Plan.
- **Ecologically Sustainable Development** - The principles of ecologically sustainable development are to be applied when applicable in Authority activities in accordance with the *Sydney Harbour Foreshore Authority Act 1998*.
- **Promotion** - Communication both internally and externally is essential in identifying issues and promoting environmental initiatives that will allow the Authority to demonstrate Place Leadership in environmental management.

- **Responsibility** - Environmental management will be the responsibility of all Authority business units and ownership of environmental issues will be extended to individuals to ensure that as an organisation and as staff environmental issues are addressed. Environmental management is to be considered and applied as appropriate across the entire life cycle of Authority activities.
- **Leadership** – Place Leadership and contractor management relies on the demonstration and commitment to environmental management.
- **Measurement and Evaluation** - Evaluate environmental performance against Authority objectives and targets to ensure compliance through accountability. Ensure activities, products and services are evaluated and initiatives are developed to promote continuous improvement in environmental performance.
- **Responsiveness** – Identify initiatives and respond to issues in a timely and appropriate manner within a risk management framework. This includes the development of risk transfer where appropriate and where risk resides with the Authority, that appropriate contingency, emergency and security plans are in place.

11 ENVIRONMENTAL STRATEGIES

The following strategies will shape the manner in which the Authority applies environmental management:

- provide an environmentally aware organisation and manage stakeholders to achieve beneficial environmental outcomes,
- preserve the historical significance and character of our precincts,
- achieve financial and social benefits through environmentally responsible and sustainable developments, achieve operational efficiencies and being responsive to environmental issues and initiatives,
- embrace and integrate environmental considerations across the full range of Authority activities.

12 ENVIRONMENTAL OBJECTIVES

The following objectives will focus the Authority on quantifiable achievements while ensuring that targets are developed in the respective environmental management plans:

- reduce waste
- minimise pollution including noise, visual and odour
- promote environmental awareness in staff and stakeholders
- be recognised as a leader in environmental management in the public domain and precinct design and management
- increase the use of recycled material
- increase energy efficiency
- conserve water resources and minimise wastewater disposal
- provide environmentally responsible new buildings and facilities
- achieve ISO 14001 accreditation by 2006.

13 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

Over the next three years the Authority is committed to the development of an organisation wide EMS. The Authority EMS will provide a practical management system framework by which the Authority can ensure that environmental impacts arising from Authority activities are identified, controlled and monitored. An EMS integrates environmental management into daily operations, long term planning and other quality management systems. The Authority's EMS will be developed so that at the end of the three year period the Authority will be able to seek accreditation in accordance with ISO 14001. ISO 14001 is the standard for Environmental Management Systems. The progressive development of procedures and performance will conform to an iterative 'Plan – Do – Check – Act' process. The Authority's EMS will provide a:

- framework for meeting regulatory requirements and managing environmental risk,
- demonstration of due diligence, and
- pathway for achieving environmental goals and commitments.

The Authority's EMS development and management will be the responsibility of the Authority's Environmental Manager. This position is to be established in 2004.

14 ENVIRONMENTAL MANAGER

At present environmental management, performance monitoring and regulatory reporting is not centrally managed or coordinated. The provision of environmental guidance is project based and is not geared to explicitly support the Authority's goals. The Authority's Environmental Manager will be responsible for developing, managing, monitoring, reporting and continually improving the Authority's EMS.

15 ENERGY MANAGEMENT PLAN

The Authority is progressively developing and implementing a comprehensive energy management plan which aims to:

- articulate the Authority's vision for energy use,
- implement a systemic energy management programme,
- demonstrate a commitment by the Authority to energy management,
- ensure that the Authority uses energy wisely throughout its operations,
- meet the requirements of the NSW Government Energy Management Policy (GEMP), and
- ensure that the Authority's energy management activities are consistent with the Authority's commitment to Ecologically Sustainable Development including staff and contractor awareness.

The Authority's Energy Management Plan has a number of goals to meet and exceed GEMP requirements. The goals of the Authority's Energy Management Plan are to:

- reduce energy consumption by 30% and greenhouse gas emissions by 45% by 30 June 2009 from 2003 baseline, and
- reduce dependence on fossil fuels through an increase in the use of renewable energy.

The table below illustrates performance and time objectives.

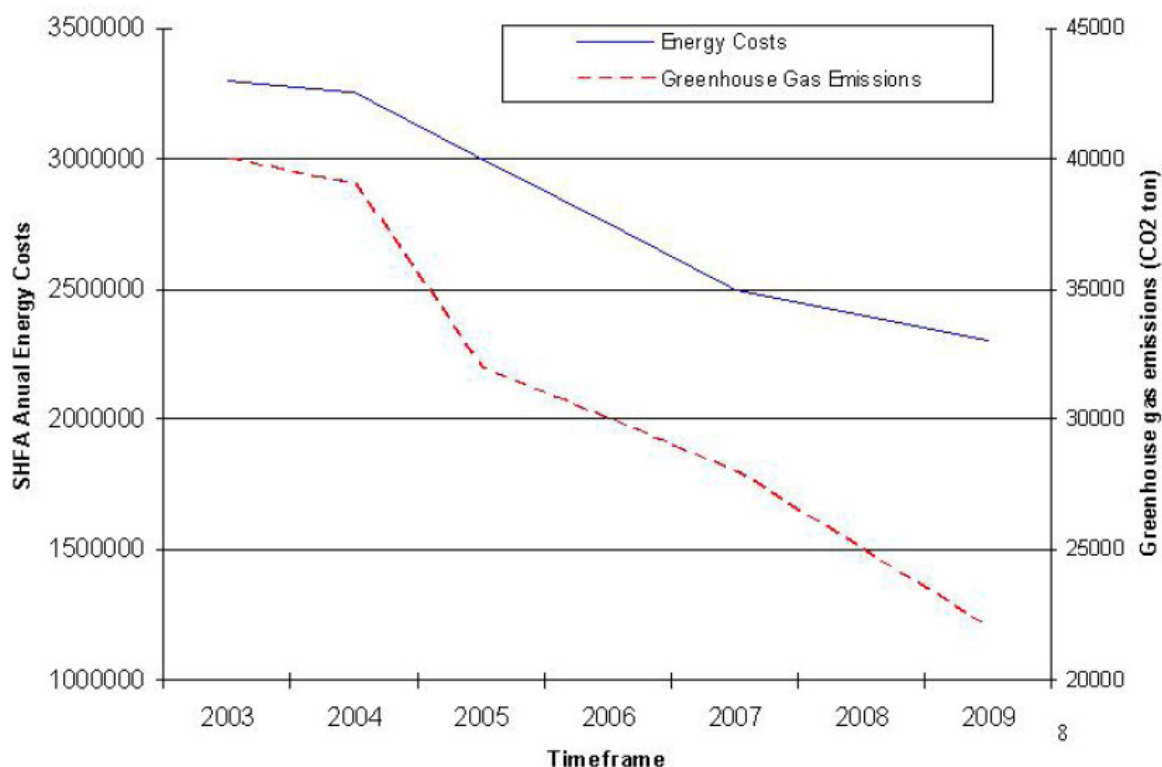


Table 1 – Energy and Greenhouse Gas Emission Projections based on Proposed Sydney Harbour Foreshore Authority Energy Management Plan.

16 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The Australian goal for Ecologically Sustainable Development, or ESD, is for:

“Development that improves the quality of life, both now and in the future, in a way that maintains the ecological processes which life depends”³

The Authority is committed to giving full consideration to the principles of ESD in decision making, strategic planning and operation. The Authority aims to implement the principles of ESD by integrating environmental, social, and economic considerations into its business. When considering ESD, and how it relates to decision making and strategies for its business operations, The Authority considers the four principles of ESD as (paraphrased from the Protection of the Environment Administration Act 1991⁴ and the Protection of the Environment Operations Act 1997⁵):

1. Precautionary Principle – Reduce the chance of serious or long-term environmental problems through the application of appropriate risk management processes.
2. Conservation of biological diversity and ecological integrity – Maintain or enhance the range of flora, fauna and aquatic environment within or adjacent to our precincts.

³ National Strategy for ESD, 1992

⁴ http://www.austlii.edu.au/au/legis/nsw/consol_act/poteaa1991485/

⁵ http://www.austlii.edu.au/au/legis/nsw/consol_act/poteoa1997455/

3. Intergenerational and intra-generational equity. Reduce the effects of activities on the environment that the community, now and in the future, rely upon to meet needs and expectations.
4. Improved valuation and pricing of environmental resources. Improve the way that we undertake valuation of environmental costs and benefits and use this information when making decisions.

17 ECOLOGICALLY SUSTAINABLE DEVELOPMENT INDICATORS

ESD indicators will be used to demonstrate whether our strategies and plans are effective and provide feedback to the decision making process. The indicators provide means by which the Authority can measure its operating performance in relation to meeting ESD principles. Each indicator on its own cannot demonstrate ecological sustainability.

The suggested list of ESD indicators is as follows. These will be confirmed when the EMS is developed.

17.1 CONSERVATION OF BIOLOGICAL DIVERSITY AND ECOLOGICAL INTEGRITY INDICATORS

Greenhouse gases	This indicator will provide measurements of the global warming potential of the greenhouse gases (in terms of CO ₂ equivalents): <ul style="list-style-type: none">• produced through the purchase of electricity, gas and fuel for the Authority's facilities, operations and activities
Energy	This indicator will provide measurements of: <ul style="list-style-type: none">• The total energy used by the Authority in property and public domain areas• The amount of renewable electrical energy used as a per cent of the total electrical energy used.
Waste	This indicator will report on the amount of waste generated and sent to landfill or otherwise disposed and the amount of waste that is recycled or reused.
Staff ESD awareness and training	This indicator will report on the development and implementation of programs to provide training, advice and regular information to staff on ESD principles, practices, policies, initiatives, innovation, opportunities and the Authority's EMS.
Environmental standards of contractors	This indicator will report on the development and implementation of the Authority's requirements on contractor performance regarding environmental due diligence.
Water Use	This indicator will provide measurements on water usage by the Authority's property, public domain, and assets including parks and gardens which the Authority is responsible for managing.
Heritage	This indicator will provide measurements on the percentage of the Authority's properties on the State Heritage Register, which are covered by Conservation Management Plans.

Odour	This indicator will provide measurements on the annual odour complaints caused by the Authority's activities, infrastructure, and properties or managed places.
Noise	This indicator will provide measurements on the annual noise complaints caused by Authority activities, infrastructure, and properties or managed places.
Community Consultation	This indicator will provide information on consultation with the community.
Operating Efficiency	This indicator will provide measurements on operating costs per Authority property.

18 NSW GOVERNMENT POLICIES

The NSW Government has a range of legislation that promote better management of environmental management by organisations. The legislative requirements include mandatory reporting mechanisms. These mechanisms include environmental objectives and targets.

The principal covering legislations are:

- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations Act 1997 (POEO Act)
- Environmental Planning and Assessment Act 1979
- Heritage Act 1977
- Sydney Harbour Foreshore Authority Act 1998.

The principal strategies and policies are:

- Waste Avoidance and Resource Recovery Strategy
- Waste Reduction and Purchasing Policy
- Government Energy Management Policy
- Energy Performance Guide for Buildings.

There are also a range of Environmental Management Tools provided by NSW Government Agencies. These include:

- Building Sustainability Index (BASIX)
- Environmental Performance Guide for Buildings (EPGB)
- Energy Savings Manual
- Sustainable Energy Development Authority publications
- Department of Environment and Conservation publications
- Department of Infrastructure, Planning and Natural Resources publications.

The principle reports that the Authority is responsible for are the Waste Reduction and Purchasing Policy (WRAPP) report and the Government Energy Management Policy (GEMP). The WRAPP report is produced biannually and targets selected waste products and procurement of environmentally responsible products. The GEMP reports on energy usage and provides the forum to promote initiatives.

18.1 WASTE AVOIDANCE AND RESOURCES RECOVERY ACT 2001

The waste hierarchy established under the Waste Avoidance and Resources Recovery Act (WARR) is one that is to ensure that resource management options are considered against the following priorities:

- **Avoidance** - including action to reduce the amount of waste generated by households, industry and all levels of government.
- **Resource Recovery** - including reuse, reprocessing, recycling and energy recovery, consistent with the most efficient use of the recovered resources.
- **Disposal** - including management of all disposal options in the most environmentally responsible manner.

As the highest priority, *Avoidance* encourages the community to reduce the amount of waste it generates and to be more efficient in its use of resources.

Resource Recovery maximises the options for reuse, reprocessing, recycling and energy recovery at the highest net value of the recovered material. This encourages the efficient use of recovered resources while supporting the principles of improved environmental outcomes and ecologically sustainable development. Resource recovery can also be used to embrace new and emerging technologies.

An end-of-pipe solution, *Disposal* is the least desirable option and must be carefully handled to minimise negative environmental outcomes.

The WARR has been reinforced by the release of the Waste Avoidance and Resource Recovery Strategy in 2003. While the strategy addresses whole of NSW issues and targets, the framework does focus the Authority on the key areas of:

- avoiding and preventing waste
- increased use of renewable and recovered materials
- reducing toxicity in products and materials
- reducing litter and illegal dumping.

The strategy is complementary to other legislation, guidelines, tools and government initiatives that the Authority is mandated or obliged to support.

18.2 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997 (POEO ACT)

The POEO Act is significant in that this Act, through its Regulations, authorises the Authority to impose penalties through infringements on individuals and businesses for breaches of it. The most applicable regulations relate to littering offences in its various forms but also apply to advertising material, release of balloons and non-compliance with noise abatement orders. The Regulations can be enforced by the Authority's Rangers but are not technically able to at this time.

18.3 WASTE REDUCTION AND PROCUREMENT POLICY (WRAPP)

The NSW Government's WRAPP was announced by the Premier in September 1997. The policy requires all state government agencies and state owned corporations to develop and implement a WRAPP plan to reduce waste in four scheduled areas:

- paper products
- office equipment and components
- vegetation material, and
- construction and demolition material.

It also requires that priority be given to buying materials with recycled content where they are cost and performance competitive. WRAPP plans provide information on strategies each agency will undertake to reduce waste and increase purchases products with recycled content and provide data on:

- total quantities of scheduled wastes being generated and recycled, and
- total quantities of materials being purchased that contain recycled content.

The policy requires agencies to periodically report progress in implementing their WRAPP plans to the Department of Environment and Conservation (formerly Resources NSW).

18.4 GOVERNMENT ENERGY MANAGEMENT POLICY (GEMP)

The GEMP directs a management regime that targets the efficient use of energy and provides performance targets in reducing energy usage, and consequentially the effects of energy use, in order to produce financial, environmental and social benefits.

In addition to mandating performance reporting, the GEMP directs that the following responsibilities be undertaken within organisations:

- establish accountability through the appointment of an Energy Manager directly responsible to the CEO. (The current appointment is held by Mark Harrison, Hydraulics Mechanical Engineer, Place Management),
- establish performance goals. (These goals shall be included in the annual GEMP report and be the objective base underpinning the Authority's Energy Management Plan),
- monitor performance,
- report consumption,
- publish performance against goals in the annual report, and
- adopt best practice by ensuring energy efficiency is integral to procurement of new or refurbished assets.

The Authority's Energy Management Plan is documented separately to this plan but addresses all the elements and provides strategies, objectives, performance measures and initiatives to ensure that the Authority's energy management reflects the organisational outcomes required.

19 ENVIRONMENTAL MANAGEMENT TOOLS

The NSW Government and responsible agencies have provided a range of tools to further promote and evaluate effective environmental management. The tools include the Building Sustainability Index (BASIX).

19.1 BASIX

BASIX has been developed by the Department of Infrastructure, Planning and Natural Resources (DIPNR) in consultation with a wide range of stakeholders to assist architects, builders and developers to define and standardise better development practices which influence water and energy use across New South Wales. BASIX brings together the best and most current information about all aspects of sustainable building design, eliminating the confusion caused by numerous development control standards and guidelines currently in use. BASIX is designed to simplify and improve the planning process. It is easy to use and aims to be evidence-based to achieve the best possible sustainability outcomes for new residential developments and is also applicable across the majority of developments that the Authority undertakes.

BASIX encourages developers to focus on the areas that can reasonably be addressed at the building construction stage such as energy and water efficient fittings and appliances, building materials and landscaping.

BASIX applied in full, will address the following sustainability indices:

- Water
- Stormwater
- Energy
- Indoor Amenity
- Landscape Diversity
- Recyclables and Waste
- Materials
- Transport
- Social

From 1 July 2004, it will be mandatory for all residential developments in the Sydney metropolitan council areas to meet the BASIX targets set for the Water and Energy indices. Stormwater and Indoor Amenity indices will also be activated in order to achieve these targets. The remaining indices (Landscape Diversity, Recyclables and Waste, Materials, Transport and Social) will function as guidelines only.

For Water, developments approved from July 2004 (in Sydney metropolitan councils) are required to achieve a BASIX rating of 40 for water conservation, representing a potential reduction of potable water consumption of 40%.

For Energy, developments approved from July 2004 are required to achieve a BASIX rating of 25 for energy conservation, representing a potential reduction of greenhouse gases by 25%. This target will be increased in July 2006 to 40 for energy conservation, projected to achieve a 40% reduction in greenhouse gases.

19.2 ENVIRONMENTAL PERFORMANCE GUIDE FOR BUILDINGS (EPGB)

The EPGB provides a full range of strategies that should be addressed across the life cycle of a building project; from design issues through construction through the operation of the building. The EPGB is comprehensive by function and environmental management sector. This guide should be regarded as best practice in development, construction and facility management. It must be noted that best practice may not always be economically feasible. However by applying a risk management methodology the most efficient and practical outcomes can be achieved.

The EPGB builds on the Sustainable Development Guideline in the Total Asset Management Manual and will be incorporated in the Authority's Asset Management Plan (under development) by providing a development process through which sustainable development objectives can be implemented in the planning, acquisition, operation and disposal of a built asset. It details an integrated delivery process that incorporates the environmental issues for stakeholders at all stages of the acquisition and operation of an asset's life to ensure that the finished product delivers high environmental performance with least impact on cost. The benefits of implementing the EPGB can

be readily quantified and the results recorded in an environmental assessment tool and performance report at a project, divisional and corporate level.

The application of the EPGB by the Authority will be most effective in the following areas:

It is anticipated that the Performance Guide will be used for:

- environmental briefs for development – in particular, building projects,
- project managers to set briefs, monitor design development and review and manage environmental impacts,
- planners to review the full scope of design strategies and carry out self-assessment reviews, and
- facility managers to assess building performance and prepare performance improvement strategies.

Strategies in this framework are divided into five distinct environmental areas, which collectively describe the scope of environmental issues for high environmental performance buildings:

- **Resource Consumption**
 - Energy
 - Land
 - Water
 - Materials
- **Environmental Loadings**
 - Greenhouse
 - Ozone
 - Ecology
 - Solid Wastes
 - Liquid Effluent
 - Physical Impacts
- **Quality of Internal Environment**
 - Air Quality
 - Thermal Comfort
 - Lighting
 - Noise
 - Materials
- **Functionality**
 - Adaptability
 - Maintenance
 - Controllability
- **Wider Planning Issues**
 - Economics
 - Management
 - Transport
 - Cultural Environment

19.3 ENERGY SAVINGS MANUAL

The Sustainable Energy Development Authority (SEDA) has produced the Energy Savings Manual, which provides a comprehensive tool box of techniques and practices to optimise energy management. The manual provides guidance on procurement, facilities management, building services, plant and equipment. This document is complemented by another SEDA publication, Energy Management, which addresses organisational drivers for energy management including staff engagement and awareness.

SEDA also provide a range of other publications that address wider issues on energy issues including a range of documents including their Energysmart program.

19.4 DEPARTMENT OF ENVIRONMENT AND CONSERVATION (DEC) PUBLICATIONS

DEC, formerly Resources NSW, has an extensive range of publications to assist in environmental management. These publications include procurement strategies, industry sector guidelines, construction management, and specific environmental issue guidelines.

20 CONCLUSION

The Authority's Environmental Management Plan provides a strategic framework from which all areas of the Authority can plan, operate, monitor, evaluate and report on environmental performance.

The principles of Ecologically Sustainable Development underpin the Authority's principles, strategies, objectives and responsibilities. Ecologically Sustainable Development Indicators will drive performance areas and be integrated in Authority business processes. The Environmental Management Plan complements the Authority's Corporate Performance Indicators. The Authority's Environmental Management System will be managed by the designated appointment of an Environmental Manager.

21 CONTACTS/REFERENCES

21.1 CONTACTS

For further information about this policy, see the Manager, Risk and Logistics.

21.2 RELEVANT POLICIES/PUBLICATIONS

Attorney General

- Environmental Crime Prevention Strategies - a module of the Crime Prevention Resource Manual
- Plan it Safe - A Guide for Making Public Places Safer for Women

Construction Policy Steering Committee

- Environmental Management Systems Guidelines, DPWS, Sydney, 1998
- OHS&R Management Systems Guidelines, DPWS, 1998

Environment Protection Authority

- Draft: Guidance for the Use of Herbicides Near Waters, EPA, 2000
- Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, EPA June 1999
- Environmental Noise Control Manual, 1994, Sydney.
- Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report, EPA, 1999, Sydney

- Managing Urban Stormwater: Source Control, Dec 98 - (Green Paper)
- Planning for Less Waste - A Waste Planning Guide for Development Applications, Inner Sydney Waste Board, 1999
- Recycling Directory – for Sydney, Central Coast, Hunter, and Illawarra Regions, Western Sydney Waste Board, 1999, EPA
- Waste Reduction and Purchasing Policy - a Guide for Agencies, EPA, 1997

Government Asset Management Committee (Premier's)

- Government Office Accommodation Workspace Guidelines – Workbook, DPWS, 1999
- Total Asset Management (TAM 2000) including:
 - Policy Asset Information Tool (in) TAM 2000 Manual
 - Heritage Assets Tool (in) TAM 2000 Manual
 - Life Cycle Costing Tool (in) TAM 2000 Manual
 - Post Implementation Review Tool (in) TAM 2000 Manual
 - Value Management Tool (in) TAM 2000 Manual

Ministry for the Arts

- NSW Public Art Policy

Ministry of Energy and Utilities

- Government Energy Management Policy, DoE, 1998

National Parks and Wildlife Service

- Aboriginal Cultural Heritage – Standards and Guidelines, NPWS, 1998, Sydney.

Planning NSW

- Better Urban Living -Ideas for improving the design of urban housing in NSW, 1996
- EIS Guidelines, DUAP, 1996, Sydney.
- Is an EIS required? - Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979 (2nd ed.), DUAP, 1999, Sydney.
- Managing Land Contamination: Planning Guidelines SEPP 55 - Remediation of Land, 1998
- Multi-Level Risk Assessment, DUAP, 1997
- Neighbourhood Character - An urban design approach for identifying neighbourhood character, (1998)
- Residential Densities - A Handbook illustrating the urban design characteristics of different densities, (1998)

Resource NSW

- Waste Planning Guidelines for Development Applications, Inner Sydney Waste Board, 1998

Sustainable Energy Development Authority

- Australian Building Greenhouse Rating Scheme

- Energy Smart Homes Program for Councils
- Energy Star Program, SEDA
- Green Power Program
- Tenant Energy Management Handbook: your guide to saving energy and money in the workplace, SEDA, 2000
- Sustainable Energy Development Authority
- The Energy Smart Government Program

Treasurer

- Annex 5, Economic Assessment of Environmental Impacts (in) Guidelines for Economic Appraisal, NSW Treasury, June, 1997
- Guidelines for Economic Appraisal, NSW Treasury, June, 1997
- WorkCover Authority
- Safety in Design – Guideline for Major Buildings and Civil Projects, WorkCover, 2000

International Standards

- AS/NZS ISO 14001:1996 Environmental management systems – Specifications with guidance for use
- AS/NZS ISO 14004:1996 Environmental management systems – General Guidelines on principles, systems and supporting techniques
- AS/NZS ISO 14010:1996 Guidelines for environmental auditing – General principles
- AS/NZS ISO 14011:1996 Guidelines for environmental auditing – Audit procedures – Auditing of environmental management systems
- AS/NZS ISO 14012:1996 Guidelines for environmental auditing – Qualification criteria for environmental auditors

21.3 USEFUL WEBSITES - AUSTRALIA

SEDA (Sustainable Energy Development Authority).

<http://www.seda.nsw.gov.au/>

<http://www.energysmart.com/>

Australian Greenhouse Office

Managing energy in local government with applications to the business sector.

<http://www.greenhouse.gov.au>

Australian Building Greenhouse Rating Scheme

Information on achieving high levels of greenhouse performance in commercial office buildings. Includes Rating Calculator to determine your actual greenhouse performance.

<http://www.abgr.com.au>

21.4 USEFUL WEBSITES - OVERSEAS

US Environmental Protection Agency

Energy Star Buildings Upgrade Manual: information covering building services.

<http://www.epa.gov/appdsatr/buildings/manual/index.html>

Pacific Gas and Electric Company

Smarter Energy – Building Purchasing Guide for building services.

http://www.pge.com/customer_services/business/energy/smart/html/equipment_guides.html

Energy Efficiency and Conservation Authority (EECA) – Business Section

<http://www.energywise.co.nz>

Energy Efficiency and Renewable Energy Network (US Department of Energy)

Energy glossary and fact sheets for building services.

<http://www.eren.doe.gov/consumerinfo/>

Energy Efficiency Best Practice Program (UK)

<http://www.energy-efficiency.gov.uk>

22 ANNEXURE A – ENVIRONMENTAL MANAGEMENT GLOSSARY

Energy Efficiency	Energy efficiency is about getting the most production from every unit of energy put in or producing a product using the least amount of energy possible, without compromising quality.
Energy Management	<p>Energy management is the collective term for all the systematic practices to minimise and control both the quantity and cost of energy used in providing a service, while also improving environmental outcomes and the level of service. The practices include:</p> <ul style="list-style-type: none"> • Minimising energy wastage • Optimising energy efficiency through passive means or with suitable technology • Using the most appropriate energy types (eg electricity, gas, solar), with due regard to the environmental benefits • Buying energy at the most economical price • Modifying operations, where possible, to make the best use of energy price structures • Involving, training and raising awareness of staff • Ongoing monitoring to ensure energy use remains within predetermined limits.
Environment	Surroundings in which an organisation operates, including air, land, water, natural resources, flora, fauna, humans and their interrelation
Environmental Aspect	Elements of an organisation’s activities, products or services that can interact with the environment
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s activities, products or services
Environmental Performance	Measurable results
Offensive Noise	<p>"offensive noise" means noise:</p> <p>(a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:</p> <p>(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or</p> <p>(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or</p> <p>(b) that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations.</p>

- Offensive Odour** "offensive odour" means an odour:
- (a) that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances:
 - (i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or
 - (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or
 - (b) that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations.
- Pollution** "pollution" means:
- (a) water pollution, or
 - (b) air pollution, or
 - (c) noise pollution, or
 - (d) land pollution.
- Pollution Incident** "pollution incident" means an incident or set of circumstances during or as a consequence of which there is, has been or is likely to be a leak, spill or other escape of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which waste has been placed or disposed of on premises unlawfully, but it does not include an incident or set of circumstances involving only the emission of any noise or odour.
- Waste** "waste" (unless specially defined) includes:
- (a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or
 - (b) any discarded, rejected, unwanted, surplus or abandoned substance, or
 - (c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the substance, or
 - (d) any substance prescribed by the regulations to be waste for the purposes of this Act.

Water Pollution

"water pollution" or "pollution of waters" means:

(a) placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or

(b) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or

(c) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,

and, without affecting the generality of the foregoing, includes:

(d) placing any matter (whether solid, liquid or gaseous) in a position where:

(i) it falls, descends, is washed, is blown or percolates, or

(ii) it is likely to fall, descend, be washed, be blown or percolate, into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or

(e) placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted,

if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.