

ENVIRONMENTAL GUIDELINES

**STATE OF THE ENVIRONMENT REPORTING
BY LOCAL GOVERNMENT**

**PROMOTING ECOLOGICALLY
SUSTAINABLE DEVELOPMENT**



DECEMBER 1999

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MINISTER FOR LOCAL GOVERNMENT'S MESSAGE



Environmental management is one of the key roles of local government. It is uniquely placed to identify and report on local environmental issues and take action to reduce the threats to the environment and to make our communities more sustainable.

The importance of ecologically sustainable development (ESD) as the chief objective of environmental protection remains undiminished. The principles of ESD should be applied throughout all of council's activities.

These Guidelines, which were originally published in April 1998, seek to assist councils in the conduct of their environmental management roles, with particular emphasis on the State of the Environment (SoE) report and the implementation of ESD principles. Since the guidelines were first released local councils have been at the forefront of demonstrating improvements to reporting frameworks and integrating these frameworks across the operational areas of local government. Much attention has been given to developing more meaningful indicators at the local, state and national levels capable of providing a sound basis for environmental decision making now and into the future.

The main changes introduced into this current edition of the Guidelines are a greater focus on the relevance of SoE outcomes in local council's management planning and Annual Reporting cycle; the integration of the SoE report with the management plan; and the inclusion of a list of core environmental indicators for use by councils. These changes have been developed in consultation with various representatives of local government and NSW government agencies.

I am pleased to present these revised Guidelines, which are intended to give direction to councils in preparing their SoE reports and in the environmental management of their areas generally.

A handwritten signature in black ink, which appears to read 'Harry Woods'.

Harry Woods
Minister for Local Government

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EXECUTIVE SUMMARY

These guidelines are to help councils produce State of the Environment (SoE) reports in accordance with the requirements of the *Local Government Act 1993* and the *Local Government (General) Regulation*, taking into account the 1997 amendments to the Act.

The important role of NSW local government in the implementation of ESD principles has been formally recognised by incorporating the principles of Ecologically Sustainable Development in the NSW Local Government Act and by requiring councils to manage their regulatory and service functions in an ecologically sustainable manner. SoE reporting is a key mechanism for assessing progress towards sustainability.

These guidelines outline the following steps in preparing an SoE report. The guidelines outline the legislative requirements as well as guidance on how to address the requirements. Guidance is also given as to how councils can address sustainability in each step of preparing an SoE report.

Aim of SoE reporting by local government

Local government plays a significant role in environmental management. A local SoE report provides a summary of the attributes of the local government environment and the human impacts on that environment. It also provides a public record of the activities of government, industry and the community in protecting and restoring the environment.

Local SoE reports do not stand alone and should be integrated with environmental management and strategies.

Ecological Sustainable Development – context for SoE reports

The recent legislative amendments and related regulations have clarified the links between SoE reporting and the strategic process of council Management Planning. The aim of these amendments is to enhance the strategic value of SoE reporting to councils and their communities and to ensure that the council is accountable for its application of ESD principles through the Management Plan.

In effect the legislation requires the council to be well informed about the environmental circumstances of its area and to apply the principles of ESD in a fully integrated way through the council's strategic management cycle of direction, action and accountability.

Scope and Content of SoE Reports

Each council must submit an annual SoE report. The first SoE report of a council for the year ending after each election of the councillors must be a *comprehensive* SoE, which addresses the eight environmental sectors of land, air, water, biodiversity, waste, noise, Aboriginal heritage and non-Aboriginal heritage. It must report on all major environmental impacts and related activities, including management plans relating to the environment; special council projects relating to the environment; and the environmental impact of council activities.

Supplementary SoE reports must be submitted in intervening years. These reports must identify any new environmental impacts since the council's last SoE report and update the trends in environmental indicators that are important to each environmental sector.

SoE reporting at the regional level is encouraged.

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Identifying Issues

The relevance of environmental issues to be covered in an SoE report will vary for every LGA and/or region. Councils should identify their local issues and report on those issues that best reflect the concerns of the council and community. In particular these should focus on issues related to sustainability and how these link to council activities, council management plans, and special council projects relating to the environment.

Identifying Indicators

For comprehensive SoE reports, councils must identify and apply appropriate environmental indicators for each environmental sector, considering the pressure-state-response (PSR) model.

A list of core indicators, recommended for use by all councils, is provided in the guidelines. These indicators can be used as a basis for SoE reports and in establishing monitoring programs or research proposals. Council staff in consultation with the community are encouraged to also identify and choose supplementary indicators relevant to local issues (including social indicators) which will assist in assessing the area's progress toward achieving sustainability.

Collecting and Managing Data

For comprehensive SoE reports, councils must for each environmental sector include or refer to all relevant information; drawing on, as required, any environmental data held by other councils relevant to the sector.

Potential data sources include state and national government agencies, council records, and results of monitoring undertaken by council and the community.

There are benefits to both council and the community of improving the management of environmental and related data, including maximising access and reducing costs of collection and retrieval.

Presentation of Report

All SoE reports must be produced in a form that is readily understandable by the general community.

In presenting data, councils should refer to the goals and targets in state, national and international ESD strategies, and work towards determining local sustainability targets.

Councils are encouraged to consider publishing their SoE reports as Internet websites.

Submitting and Releasing the Report

All SoE reports must be submitted to the Minister for Local Government (in practice this means Department of Local Government) within five months following the end of the financial year (that is, by 30 November).

INTRODUCTION

These guidelines are to help councils produce State of the Environment (SoE) reports in accordance with the requirements of the Local Government Act 1993 and the Local Government (General) Regulation 1993, taking into account the 1997 amendments to the Act and Regulation.

Recent amendments to the Local Government Act 1993 and the Local Government (General) Regulation 1993 have altered the requirements for the preparation, content and timing of SoE reports, to address problems identified in the previous requirements. The amendments also strengthen the links between SoE reporting and councils' strategic planning processes.

These guidelines outline the various steps in preparing an SoE report: assessing the scope and content, identifying the issues, identifying environmental indicators, collecting and managing data, presenting results and submitting the report. For each of these steps the legislative requirements are presented as well as guidance on how to address the requirements. Guidance is also given as to how councils can address sustainability in each step of preparing an SoE report. Additional sources of information which may assist councils are presented in References and Further Reading.

The guidelines have been prepared in close collaboration with the Environment Protection Authority and in consultation with the Local Government and Shires Associations of NSW, local government and other bodies. The proposed list of core environmental indicators for reporting by local councils has been compiled in conjunction with representatives of Regional Organisations of Councils and NSW environment agencies. They also closely align with environmental indicators used for NSW SoE purposes and those developed nationally through the ANZECC process. The intention is to avoid duplication of effort and ensure as consistent a reporting framework as possible between state of the environment reporting at the local, regional, state and national levels.

The guidelines are provided to assist councils in preparing their SoE reports for the 1997-98 reporting year. SoE reporting is an evolving field, particularly in the areas of developing indicators and incorporating ESD. Councils, environmental protection organisations, other bodies and the public are invited to provide their comments on the guidelines, which is an evolving document, to assist in the up-dating the document and making it more helpful for users.

1 AIM OF SOE REPORTING BY LOCAL GOVERNMENT

1.1 Role of local government in environmental management

Local government plays a significant role in environmental management through its:

- ◆ activities such as waste collection, disposal and recycling, development control, sewage treatment, drainage management and community education
- ◆ control over planning and development processes which can influence environmental outcomes
- ◆ involvement in regional programs such as Total Catchment Management.

The broad scope of councils' environmental functions can be seen in the table of *Legislation Relating to Environmental Activities of Councils* (Appendix E).

1.2 State of the Environment reports

State of the Environment (SoE) reporting is a tool for environmental management and education. It is used worldwide at the international level (eg. OECD 1997), national level (eg. SoEAC 1996) and state level (eg. NSW EPA 1993, 1995, 1997). In recognition of their significant role in environmental management at the local level, local councils in NSW are required to produce annual SoE reports.

1.3 SoE report in the Management Planning – Annual Reporting cycle

The local SoE report is primarily a management tool of the council. It constitutes a part of the council's annual report and as such, comes within the management planning – annual reporting cycle. The basic elements of the cycle are shown on the diagram below (Diagram 1).

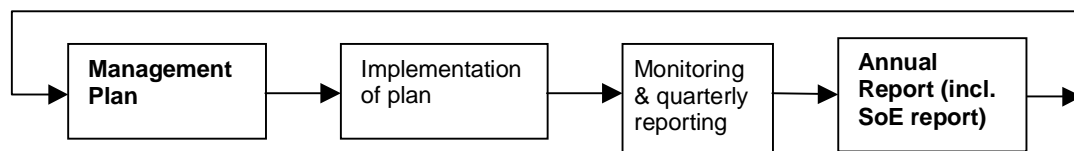


Diagram 1: Conceptual model of the Management Plan - Annual Report Cycle

The issues raised in the State of Environment Report should be used by the council for developing its environmental strategies within the management plan and its policy in relation to its role as an environmental steward and manager. The SoE report has the potential to influence virtually all of the council's functions because most of those functions have environmental implications (see Chapter 2 - *Ecologically Sustainable Development: Local Government Context* and Appendices A, B & E)

A local SoE report provides a summary of the attributes of the local government environment and the human impacts on that environment. It also provides a public record of the activities of government, industry and the community in protecting and restoring the environment. An SoE report is a mechanism for reporting on progress towards ESD.

1.4 Uses of local SoE reports

Local SoE reports do not stand alone and, when integrated with environmental management and strategies, can:

- ◆ provide the public, government and other decision-makers with regular, scientifically sound information about the condition of the environment;
- ◆ report on the effectiveness of policies and programs developed in response to environmental change, including highlighting the cumulative effects of individual projects and environmental pressures across catchments or the local area;
- ◆ assess progress towards achieving environmental standards and targets and ecological sustainability;
- ◆ provide input into the development of long-term, ecologically sustainable economic and social policies by all levels of government, through integrating environmental information with social and economic information;
- ◆ identify current and emerging environmental issues and important gaps in knowledge and data collection;
- ◆ raise community awareness and understanding of their local environment and the contribution individuals make to environmental problems through their use of resources such as energy, water and production of waste.

2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT: LOCAL GOVERNMENT CONTEXT

2.1 What is ecologically sustainable development?

Ecologically sustainable development (ESD) means an approach to using, conserving and enhancing natural resources so that ecological processes, on which all life depends, are maintained, and the total quality of life, now and in the future, is improved (COAG 1992).

ESD represents our commitment to future generations. The application of ESD principles will help to ensure that we pass on a world with sustainable natural resources and with minimal environmental damage to our children and our children's children. This concept underlies the principle of inter-generational equity which is one of the fundamental principles of ESD.

The long term maintenance of sustainability involves efficient and equitable use of resources and proper management of pollution and waste. Sustainability can only be achieved through cooperation and community support at the local, regional, national and global level.

Ecologically sustainable development goes further by recognising the dependence of all living beings on the maintenance of the complex and dynamic systems of living organisms and their natural environment. The application of ESD principles in Local Government requires a shift in priorities, involving the full integration of ecological considerations into development of community goals, economic policies and decision making in every sphere of activity.

2.2 Addressing sustainability

In the past, natural resource management, economic development, social services and environmental protection programs have been largely undertaken in isolation from each other. Today, however, there is a growing understanding that these factors are inter-dependant and interact in complex ways.

Sustainable social and economic development is dependent on maintaining the biological and natural resource base for life and on avoiding irreversible or costly degradation of biological and environmental factors, especially through activities which cause pollution.

SoE reports are a key mechanism in identifying and evaluating sustainability issues, as recognised in the legislative amendments.

The important role of NSW local government in the implementation of ESD principles has been formally recognised by incorporating the principles of Ecologically Sustainable Development in the NSW Local Government Act and by requiring councils to manage their regulatory and service functions in an ecologically sustainable manner (see box below).

The application of ESD principles in local government requires a shift in priorities, involving the full integration of ecological considerations into development of community goals, economic policies and decision making in every sphere of activity.

Legislative Requirements

The Local Government Act now makes specific reference to the application of ESD principles in the following matters:

- ◆ Section 7 (purposes of the Act), requires councils, councillors and employees to have regard to ESD principles in carrying out all of their responsibilities;
- ◆ Section 8 (council's charter), making it clear that ESD is made a fundamental role of local government;
- ◆ Section 89, which provides that councils must have regard to the principles of ESD when determining applications for approval; and
- ◆ Section 403(2), which specifies that in preparing its draft management plan the council must consider "activities to properly manage, protect, restore, enhance and conserve the environment in a manner that is consistent with and promotes the principles of ESD".

Under the ESD Regulation, the council must consider its most recent comprehensive SoE report when preparing the part of its draft management plan dealing with environmental protection activities (cl 6M(b)).

Definition of ESD in the Local Government Act

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
 - (ii) an assessment of the risk-weighted consequences of various options,
- (b) inter-generational equity namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,
 - (c) conservation of biological diversity and ecological integrity namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
 - (d) improved valuation, pricing and incentive mechanisms namely, that environmental factors should be included in the valuation of assets and services, such as:
 - (i) polluter pays that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

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The recent legislative amendments and related regulations have clarified the links between SoE reporting and the strategic process of council Management Planning. The aim of these amendments is to enhance the strategic value of SoE reporting to councils and their communities and to ensure that the council is accountable for its application of ESD principles.

In effect the legislation requires the council to be well informed about the environmental circumstances of its area and to apply the principles of ESD in a fully integrated way through the council's strategic management cycle of direction, action and accountability.

2.3 ESD, Management Plans and SoE reports

1. Preparation of the council Management Plan

Each council is required to apply principles of ESD when preparing the council draft management plan. It must also have regard to its most recent comprehensive SoE report. ESD principles apply to all of the activities of the council, including regulatory, service, business, land management and financial functions and related civic and administrative processes. Each council is to adopt policies and to determine priorities in a manner that promotes ESD within its area. Further guidelines are being prepared by the Department of Local Government to assist councils to direct council activities in a way which best achieves the objectives of ESD.

2. Implementation of the council Management Plan

Consideration of ESD principles is essential at each stage of the implementation of council management programs. Council should ensure that all members of staff and the wider public are aware of the importance of ESD as a factor in the way the council conducts its business. ESD principles are fundamental objectives for the provision of council services and for the conduct of regulatory functions. The council has a duty to ensure that staff consider and apply the ESD principles when carrying out their activities in accordance with the council's management plan and policies generally.

3. Accountability and Reporting

The council's annual report should indicate the manner and degree to which the council has been successful in applying the principles of ESD throughout all of its activities. The council's SoE report should provide an objective assessment of environmental qualities, informed by community consultation and the application of scientific method.

Appendix A provides examples of how councils may apply the ESD principles when carrying out their activities. The list is not exhaustive.

The South Sydney ROC has produced Volume 1 of its *Sustainability Guidelines for Decisionmakers* which provides a useful explanation of the principles of ESD and its application by councils, developers and builders in the design and construction processes. A copy of Volume 1 is appended (Appendix B).

There is an increasing coverage of ESD and related Agenda 21 issues on the Internet. One starting point is the ICMISS/ACA Development Site (<http://www.nrims.nsw.gov.au/icmiss>). ICMISS (Integrated Community Mapping Information and Support System) is an open technology platform established by the NSW Government for locating, integrating and presenting natural resource information from data sources in a range of formats and at distributed sites. The ACA (Australian Coastal Atlas), implemented in NSW using the ICMISS technology framework, is a distributed atlas of coastal information coordinated nationally by Environment Australia. Another useful site is Environs Australia "CouncilNet" (<http://www.mpx.com.au/~councilnet>). A good international Internet site is Local Sustainability which provides many case studies of sustainability projects from local authorities throughout Europe (<http://cities21.com/europractice>). Additional sources of information are provided in Further Reading.

3 SCOPE AND CONTENT OF SOE REPORTS

Legislative Requirements

- ◆ Councils must submit an annual SoE report.
- ◆ A council's SoE report for the year ending 30 June 1998 must be a comprehensive SoE report.
- ◆ The first SoE report of a council for the financial year ending after each election of the councillors must be a *comprehensive* SoE, which:
 - ❖ Addresses the eight environmental sectors of land, air, water, biodiversity, waste, noise, Aboriginal heritage and non-Aboriginal heritage
 - ❖ Provides for each environmental sector, as a basis of comparison in subsequent reports, a statement outlining the condition of the sector at the date of the report and makes the relevant comparison with the equivalent statement in the last (comprehensive) SoE report;
 - ❖ Reports on all major environmental impacts and related activities, including management plans relating to the environment; special council projects relating to the environment; and the environmental impact of council activities.
- ◆ Other annual SoE reports may be either a comprehensive or a supplementary report.
- ◆ A *supplementary* SoE report must:
 - ❖ Identify any new environmental impacts since the council's last SoE report; and
 - ❖ Update the trends in environmental indicators that are important to each environmental sector.
- ◆ A comprehensive SoE report is taken to include any subsequent supplementary SoE report prepared before the preparation of the next comprehensive report.
- ◆ An SoE report must include information relating to the general region if requirements cannot be met solely by reference to the council's own area and must clearly indicate the parts of the report that relate solely to that area.
- ◆ In preparing an SoE report, council must consider any guidelines and directions relating to preparation of the report that are issued by the Director-General of the Department of Local Government.

Councils must produce a comprehensive SoE report every four years, and at least a supplementary report every other year. There is also scope to use regional reporting to improve the quality of reporting and save on costs and resources (see below). All of the next steps in preparing an SoE report covered in the following sections, relate to comprehensive reports. However, many are also relevant to the other two types of reports (supplementary and regional).

3.1 Supplementary Reports

When preparing a supplementary SoE report the council must:

- ◆ identify any new environmental impacts since the council's last SoE report; and
- ◆ update the trends in environmental indicators that are important to each environmental sector.

Councils are encouraged to be innovative in the types and presentation of environmental information presented in supplementary reports. Potential options include:

- ◆ using a simpler, more accessible 'report card' format for each environmental sector;
- ◆ focusing on council responses to long-term problems in relation to environmental pressures and state;
- ◆ focusing on one environmental sector or major issue in depth (e.g. a model is Bankstown Council's *1996/97 State of the Catchments Report*); and
- ◆ aggregating indicators from comprehensive SoE reports to provide information on 'composite' or overall environmental quality (for example, a water quality index derived from data on a range of water quality parameters).

3.2 Regional SoE Reports

Reporting for local SoE reports on a regional, rather than an individual council basis, is encouraged. This type of reporting has been supported by many councils and regional organisations, the Local Government and Shires Associations, the Department of Local Government (Page 1997a&b) and the EPA because:

- ◆ many environmental issues are regional in nature (e.g. air and water pollution, wildlife corridors, threatened species recovery), requiring regional action;
- ◆ regional cooperation can reduce the time and resources involved in preparing an SoE report;
- ◆ environmental information is often collected and held by government authorities and other bodies on a regional rather than on a local government basis.

Many councils already co-operate for SoE reporting under Regional Organisations of Councils (ROCs) or Total Catchment Management (TCM) programs. Councils increasingly have access to data on the basis of catchments, and in some cases, airsheds.

The benefits of sharing data and information, and reductions in workloads in preparing reports, have been demonstrated by the cooperation of councils within the Southern Sydney ROC, the Hawkesbury Nepean Catchment Management Trust area, the South-East of NSW and in the Macquarie Marshes region.

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Appropriate regions for such reporting include:

- ◆ water catchments or airsheds;
- ◆ bioregions, such as the Interim Biogeographic Regionalisation for Australia (IBRA, Thackway and Cresswell 1995) system for classifying terrestrial ecosystems on the basis of similar landforms, climate, geomorphology, landform and lithology and characteristic flora and fauna;
- ◆ geographical regions (such as the coast, or the highlands);
- ◆ administrative or organisational regions (for example, Regional Organisations of Councils, County Councils, councils in Regional Waste Boards, areas covered by Regional Environmental Management Strategies);
- ◆ areas under environmental pressure from increased human population and urban development (for example, mid and far north coast, far south coast); and
- ◆ regions sharing a common socio-economic identity.

The SoE Report 1997 for the Australian Capital Region Leaders Forum provides a good example of comprehensiveness and innovation in a regional report. The Australian Capital Region Report has also been produced on CD-ROM.

4 IDENTIFYING ISSUES

The relevance of environmental issues to be covered in an SoE report will vary for every LGA and/or region. Councils should identify their local issues and report on those issues that best reflect the concerns of the council and community. In particular these should focus on issues related to sustainability and how these link to council activities, council management plans, and special council projects relating to the environment (see next section).

Identifying the issues to be covered in an SoE report can be achieved by:

- ◆ consulting the community through SoE Working Groups (comprising representatives from community organisations as well as council), through surveys and feedback forms, or through workshops with interested individuals and groups;
- ◆ referring to statewide or regional surveys of community attitudes and practices in relation to the environment, such as:
 - ❖ *Who Cares?* series on the environmental knowledge, attitudes, skills and behaviours of people in NSW in 1994 and 1997 (EPA 1994 & 1997b);
 - ❖ in depth surveys of the attitudes and responses of NSW industry and ethnic groups (EPA 1997c & d);
 - ❖ Australia-wide survey in 1991 of the major environmental concerns of local government managers (Brown and Reynolds 1992);
 - ❖ a survey in 1993 of the priority environmental management information needs of Australian local government managers in the coastal zone (Brown and Burke 1993);
 - ❖ surveys of community attitudes carried out by the Australian Bureau of Statistics (ABS 1996) and private market research firms.

5 IDENTIFYING INDICATORS

Legislative Requirements

For comprehensive SoE reports, councils must identify and apply appropriate environmental indicators for each environmental sector, considering and applying the pressure-state-response (PSR) model.

An environmental indicator is defined as “an aspect of the natural world or built environment that can be monitored to provide information on environmental conditions and trends. Environmental indicators include physical, chemical, biological and socio-economic measures of the environment (such as measurements of contaminants in soil, of the health of fish species and of the number of motor vehicles per household) that can be used to assess natural resources and environmental quality”.

The PSR model means a model for reporting on environmental sectors, which identifies and describes

- ◆ the **pressure** that human activities put on their immediate environment and their natural surroundings
- ◆ the current and projected **state** of the environment
- ◆ the **response** of councils, government agencies, industries and communities to the pressures on, and state of, the environment.

Environmental indicators are simplified measures that represent key elements of a complex ecosystem or environmental issue.

In SoE reporting environmental indicators are used to (SoEAC 1996):

- ◆ reduce the number of measures that would normally be required to give an “exact” representation of a situation;
- ◆ simplify communication of information about the results of measurement to the user; and
- ◆ facilitate monitoring of trends in the environment by providing quantitative measures of changes in well defined characteristics over time.

Over time environmental indicators can signal environmental degradation and provide the impetus for a change in management (responses).

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5.1 Selecting indicators

Environmental indicators for local SoE reporting should be (Fallding 1997):

- ◆ applicable to local or regional issues (as discussed in Section 3);
- ◆ sensitive (able to detect changes in the environment);
- ◆ capable of being monitored at reasonable cost, to provide statistically verifiable and reproducible data which shows changes in the environment;
- ◆ consistent as far as possible with indicators used in other SoE and related frameworks,
- ◆ linked to performance indicators in local and regional statutory and strategic plans;
- ◆ targeted at environmental issues and objectives within council's sphere of influence, such as its regulatory and operational responsibilities, and own environmental performance in carrying out its activities;
- ◆ readily interpretable and understandable by the general community;
- ◆ useful in educating the community about environmental conditions and trends.

A list of core indicators, recommended for use by all councils, is provided in Appendix C. Councils are encouraged to use these in developing their SoE reports and in establishing monitoring programs or research proposals. Indicators that are not applicable to a council's area, eg marine indicators in relation to an inland council, would not be reported on by that council.

As far as possible these indicators are consistent with core indicators currently under development for national, regional and state SoE frameworks and indicators of sustainable forestry and agriculture (see Further Reading for references about this work). However the indicators have also been chosen to address local and/or regional environmental issues.

Councils may use additional indicators which relate to their areas in addition to the core indicators. This is a reflection of the great diversity of environmental and socio-economic conditions across the state.

5.2 Using the PSR model

The PSR model for SoE reporting, developed by the OECD, has been adopted, with some variations, in national and most state SoE reporting frameworks. However, the PSR model has some acknowledged shortcomings. The implied cycle of cause and effect is simplistic and often there is not clear evidence linking pressures with changes in environmental state. It is not always easy to categorise indicators, as they may reflect aspects of "state", "pressure" or "response", depending on the way the issue is approached. For example, clearance of native vegetation can be an indicator of the "state" of vegetation in the local environment,

“pressure” for biodiversity issues, or “response” if the rate of clearance is arrested. Assigning indicators to *pressure-state-response* categories is not as important as the interpretation of the data or selecting measures appropriate to a local scale of environmental reporting and management. The category of each of the indicators suggested in Appendix C is shown.

5.3 Addressing Sustainability

Environmental indicators are increasingly being used to describe progress towards ESD and to report against the sustainability goals of key local, state and national natural resource and environmental strategies, policies and plans (Alexandra and White 1996). Councils can therefore use indicators which are relevant to activities related to sustainability, as listed in Appendix A.

5.4 Reporting on council’s environmental management

The SoE report must specifically refer to council’s performance with regard to each environmental sector with particular reference to:

- ◆ management plans relating to the environment,
- ◆ special council projects relating to the environment; and
- ◆ the environmental impact of council activities.

This reporting would cover, among other things, the application by the council of the principles of ESD throughout its activities. Council functions and activities that may be reported on are contained in Appendices A, B and E.

6 COLLECTING AND MANAGING DATA

Legislative Requirements

For all SoE reports, councils must:

- ◆ involve the community (including environmental groups) in monitoring changes to the environment over time.

For comprehensive SoE reports, councils must:

- ◆ for each environmental sector include or refer to all relevant information drawing on, as required, any environmental data held by other councils relevant to the sector;
- ◆ for each environmental sector identify any gaps in relevant information and indicate the way in which the missing information is to be obtained (or, if it cannot be obtained, why not).

6.1 Data Sources

Some sources of data exist in state and commonwealth government agencies engaged in monitoring of various environmental indicators. Data are collected by:

- ◆ state agencies responsible for environmental and natural resource management, and organisations such as water corporations; and
- ◆ commonwealth departments and agencies such as the Department of Primary Industries and Energy and the Australian Bureau of Statistics (ABS).

The National Pollutant Inventory (NPI) is currently being developed to provide access to information about emissions of specified chemicals being released into the environment. Under the NPI, information will be collected or estimated for sources of emissions to air, land and water. This information will be collated, presented on a geographic information system and made widely available in electronic and printed form. Data from the first year will be available from January 2000.

Under the Natural Resources Information Management Strategy (NRIMS), NSW Government agencies are cooperating on a number of initiatives which will improve local government access to environmental data held by these agencies. For instance, the NSW Natural Resources Data Directory (NRDD), released originally in 1995 as a CD-ROM, will be updated and made public as a searchable website during 1998. The NRDD, developed by the Department of Land and Water Conservation, gives details of over 2,000 natural resource data sets held by commonwealth, state and local governments and other organisations. It allows for searching by subject and geographic area.

Two other projects, Integrated Catchment Management Information Support System (ICMISS) and the Australian Coastal Atlas project will also provide integrated online access to key natural resources data. Additionally, agency 'custodianship agreements' have been negotiated for major datasets, which should contribute to resolving the data access issues raised by a number of councils.

Environmental impact statements often contain original surveys that are specific to the local area. Non-government groups such as Greening Australia, the National Parks Association, local Landcare and TCM committees, and naturalist groups interested in soil conservation, tree planting and habitat protection also collect data. Students these may also contain relevant information. The data collected and reports issued on an occasional basis by the Resource and Conservation Assessment Council (RACAC) and for Comprehensive Regional Assessments for NSW forests, are a valuable source of information about the flora, fauna and ecosystems of regional areas.

Information in map form is available at various scales. The standard map scales used by Commonwealth and state government agencies are: 1:1000, 1:2000, 1:2500, 1:50,000, 1:100,000 and 1:250,000. Councils undertaking original mapping for their reports should as far as possible use a scale consistent with these and appropriate for their local area. For example a small urban area could be mapped at 1:10,000, and a large rural area at 1:100,000 or 1:250,000. Use of the standard Australian Map grid (AMG) map projections will also allow council maps to be integrated with maps from other sources.

6.2 Monitoring by Local Government

Councils collect some of the information required for local government SoE reports in the course of normal activities such as land-use planning, provision of building approvals and regular maintenance works.

For certain environmental indicators, councils may decide to engage in or facilitate groups to undertake environmental monitoring. Such monitoring programs will need to be carefully designed if they are to provide scientifically useful data which must be capable of showing statistically valid trends.

Councils should establish their own monitoring programs in conjunction with their local community to collect environmental data to fill or supplement gaps in knowledge.

It is hoped that increased regional reporting (Section 3.2) will lead to better targeted environmental monitoring and rationalisation of programs between councils (such as in water quality monitoring) through pooling of resources. Duplication and lack of uniformity in the environmental parameters and measurement techniques should be reduced.

6.3 Monitoring by the Community

The community currently collects environmental data useful for SoE reporting. The many advantages of involving the community in monitoring include:

- ◆ improved decision making based on broader information sources and community understanding of the rationale for council decision making;
- ◆ the educational benefits of such programs;
- ◆ increased public commitment to, and ownership of, programs which result from issues identified by or related to monitoring, such as tree planting, salinity management programs, recycling, maintenance of open space areas, etc; and
- ◆ the low cost of information that is labour-intensive and expensive for councils or other bodies to gather.

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Successful models of community involvement in monitoring programs in Australia include the Saltwatch program, Streamwatch (water quality), farmer-initiated soil monitoring, and birdwatching. A useful directory of community monitoring groups and their activities was recently published by the Australian Conservation Foundation (Alexandra et al 1996).

Information from households about environment-related activities, such as resource use and consumption, and recreation and travel patterns, can complement information available to councils from other sources. Sections of the community may have local knowledge or be prepared to undertake special projects devised in conjunction with councils. Examples are separating and weighing waste products, or monitoring household chemical use, to give an estimate for the local government area.

6.4 Managing Data

There are benefits to both council and the community of improving the management of environmental and related data, including:

- ◆ maximising access to data so that, as well as for SoE reporting, it can be used in planning reports, environmental impact statement evaluation, recreation services planning and management, tourism promotion, engineering reports, asset management, management plan preparation, and library and information services.
- ◆ avoiding duplicate purchase or collection of data
- ◆ establishing efficient management of data to minimise ongoing costs

Councils may find a range of computerised technologies useful for the storage, analysis and presentation of data. In particular, councils can use a geographic information system (GIS) to map information as well as manipulate and combine it in ways that can enhance their land and resource management.

Councils may establish these data systems co-operatively, both to distribute costs and to compare environmental information in areas that correspond to ecological boundaries.

Good information management practices include:

- ◆ designing data collection, storage and retrieval processes with the user in mind - rather than the technology or the data managers' preferences being paramount;
- ◆ taking a corporate or organisation-wide approach to managing data;
- ◆ providing a directory or summary listing of data sets to all potential users, which allows the information to be managed where it is used rather than placing it in a central database;
- ◆ bearing in mind that information collected for one purpose can be used for another;
- ◆ keeping appropriate lineage, currency, accuracy and quality records about the data to help future users decide whether or not the data is suitable for their purposes.

The Department of Water and Land Conservation, Division of Information Management and Technology has format guidelines for data directories and data quality records.

7 PRESENTATION OF REPORT

Legislative Requirements

All SoE reports must be produced in a form that is readily understandable by the general community.

Councils must consider and apply the pressure-state-response model in the:

- ◆ analysis and interpretation of data
- ◆ presentation of results in the report.

Comprehensive SoE reports can be structured into eight chapters, each covering an environmental sector. These reports could also be enhanced by prioritising the environmental issues discussed to identify the key state and pressures or threatening processes, and data gaps which require urgent action. This information could be included either as a summary in the chapters on each environmental sector or be incorporated in a final integrative chapter. Prioritising issues will facilitate uptake of SoE findings into council Management Plans and other environmental plans.

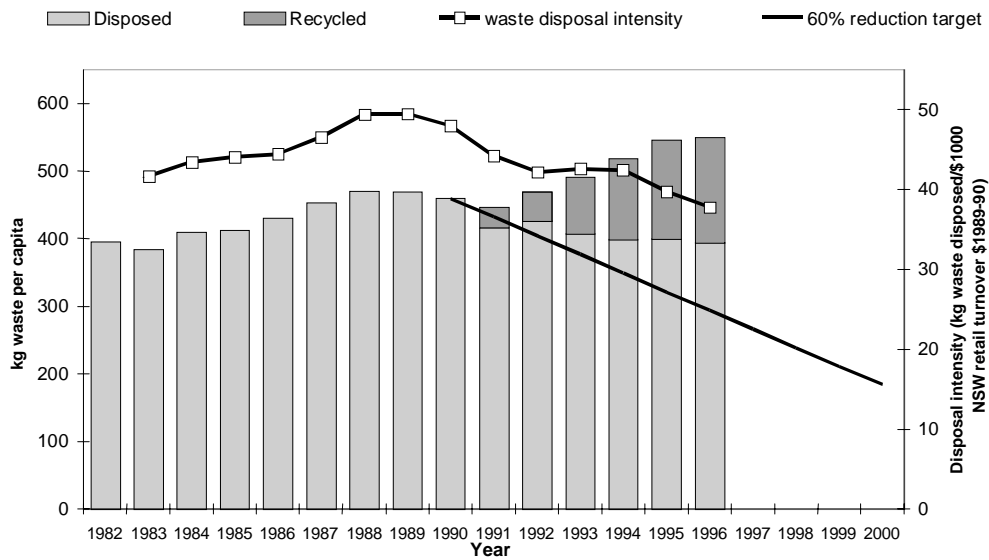
7.1 Interpreting and presenting indicator data

The quality and value of environmental indicator data presented in local SoE reports can be enhanced by:

- ◆ *analysing trends* which requires time series data of sufficient length to identify trends in data characterised by high natural variability. Time series data can be normalised for the effects of population or economic growth to derive per capita measures or express indicators in per constant unit of economic output (e.g. for consumption of certain types of resources).
- ◆ *placing current levels in context* by using a baseline as a reference point. Examples include the point when the earliest data is available; vegetation cover and type at the time of European settlement; 'reference' stream condition developed for the AUSRIVAS model of river health (based on the macroinvertebrate community composition);
- ◆ *comparing measured values of the indicator to agreed standards or goals* that may have been set by environmental or health authorities. These may involve short and/or long term goals, with the aim of moving towards sustainability (see Section 5.3).

Examples of indicators which incorporate some of these methods are shown in Figures 1 and 2.

Figure 1: Generation of municipal waste in the Sydney metropolitan area

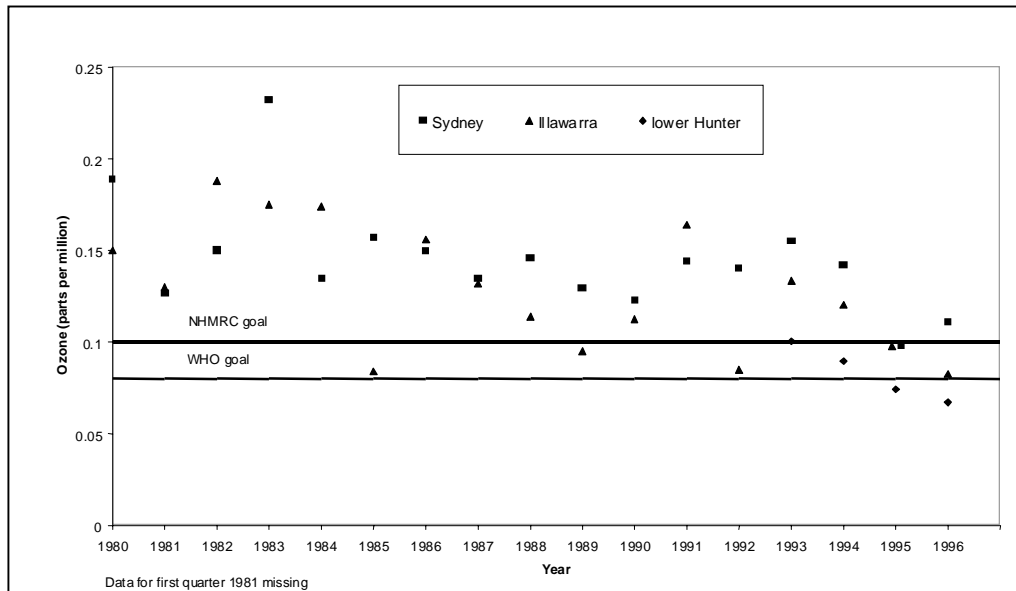


Source: modified from NSW State of the Environment 1997 (EPA 1997a)

This indicator shows:

- ◆ a time series of disposal data for municipal waste (generally collected by councils)
- ◆ data for the last 6 years referenced against the NSW Government's 60% disposal reduction target
- ◆ pressure (quantity of waste disposed) and response (waste recycled) components
- ◆ time series data for a relevant economic indicator (NSW Retail turnover to provide economic context for trends in waste disposal)
- ◆ disposal data expressed in per capita quantities, which normalises for the effects of population growth in the period considered.

Figure 2: Maximum one-hour ozone concentrations at in the Sydney, Illawarra and lower Hunter regions



Source: modified from NSW State of the Environment 1997 (EPA 1997a)

This indicator:

- ◆ shows a time series of ozone maxima data
- ◆ compares yearly ozone maxima to two relevant air quality standards
- ◆ aggregates monitoring data from numerous monitoring sites to derive regional ozone maxima
- ◆ compares ozone maxima for three regions within the Sydney airshed
- ◆ identifies where data is missing or inadequate.

7.2 Addressing Sustainability

Sustainability can be highlighted in the presentation of an SoE report by an integrative chapter focusing on sustainability aspects of the major issues raised in the report. This approach draws links between pressures and responses relevant to more than one environmental sector, encourages an integrated approach to assessing environmental issues and helps to prioritise the issues covered in the report. The concluding chapters ('Towards Sustainability') in the 1996 Commonwealth and the 1997 NSW SoE reports provide useful models (SoEAC 1996, EPA 1997a).

In presenting data, councils should refer to the goals and targets in state, national and international ESD strategies, and work towards determining local sustainability targets (examples of state and national targets are given in Table 1).

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Discussion of environmental trends should also refer to the policy directions and performance targets of national and state strategies related to ESD. These include the National Greenhouse Response Strategy (Commonwealth of Australia 1992b), national and state strategies for the conservation of biological diversity (Commonwealth of Australia 1996, NPWS 1997), NSW Coastal Policy (see Appendix D) and the National Forest Policy Statement (Commonwealth of Australia 1992c).

Local SoE reports can reflect a focus on sustainability by comparing trends in environmental indicators to sustainable or acceptable levels of change and to relevant targets and goals set down in local environmental planning documents. This approach will also enhance the links with management plans and council's other strategic planning processes (see Section 3). Councils are encouraged to develop their own targets and goals for environmental indicators, as an action consistent with implementing ESD principles. An example is Waverley Council's 1997 SoE report which outlines a suite of sustainability indicators addressing each environmental sector, gives data for the 1996 baseline year and sets targets for these for 2006 (Waverley Council 1997).

It may also be appropriate to compare data to other similar councils areas or to the state or national averages. The national and state SoE reports are a useful source of this information. NSW reports (EPA 1995 & 1997a) are accessible on the Internet (<http://www.epa.nsw.gov.au>) and the national report (SoEAC 1996) is accessible in CD-ROM or book form.

Table 1: Examples of environmental goals and targets

Issue	Organisation	Examples
Enhanced Greenhouse Effect	◆ NSW Government June 1997	Reduce energy consumption of government buildings by 25% by year 2005
Metropolitan air quality	◆ NSW Government, Action for Air	<i>Interim goals</i> 1-hour maximum concentrations of ozone and nitrogen dioxide of 0.10ppm and 0.125ppm, respectively 24 hour concentration of particulate matter (PM ₁₀) of 50mg/m ³
Transport	◆ NSW Government, Action for Air kilometres travelled (VKT) by 2011	Zero per capita growth of vehicle Zero growth in total VKT by 2021
Residential Development	◆ NSW Government, Cities for the 21 st Century (Sydney region)	Proportion of multi-unit dwellings to increase to 65% of total built each year by third decade 21 st century
Water quality	◆ NSW Government proposed interim Water Quality Objectives for Inland and Coastal Rivers	objectives for physico-chemical water quality for protection of aquatic ecosystems, recreation, agriculture and drinking water uses
Generation of waste	◆ NSW Government 1996	60% reduction target for per capita waste disposal between 1990 and 2000
	◆ ANZECC Industry Waste Reduction Agreement – Packaging Industry and Packaging Waste NEPM	Year 2000 proposed recycling targets: - all materials at least 50% diversion - aluminium, PET and glass beverage containers: 75% - non-HDPE & PET plastics: 25% - all materials at least 10% source reduction from 1990 level

7.3 Electronic Publication of SoE reports

As well as producing printed documents, councils may wish to consider publishing their SoE reports as Internet websites. Although this technology is currently accessible only to approximately 10% of the community, it carries a number of advantages:

- ◆ it provides convenient 'desktop' access (for those with Internet connections);
- ◆ once the website is established, the cost of each information request is negligible;
- ◆ website logs provide detailed feedback on who is interested in which types of information;
- ◆ seamless links are possible between a council's SoE website and those of neighbouring councils, ROCs, State of the Catchment reports and the NSW and Australian SoE reports;
- ◆ users can search SoE information for particular words and phrases;
- ◆ councils can update information cheaply; and
- ◆ councils can publish detailed environmental data where appropriate, in a form suitable for further analysis.

The EPA's State of the Environment website, containing the whole text of the 1995 and 1997 reports (<http://www.epa.nsw.gov.au/soe/>) has proved very popular, being accessed about 10,000 times a month (in 1999). The EPA will provide links to councils' SoE websites from its SoE website. Councils considering an SoE website are invited to contact the EPA's Environmental Reporting section by email: soe@epa.nsw.gov.au

8 SUBMITTING AND RELEASING THE REPORT

Legislative Requirements

- ◆ All SoE reports must be submitted within five months following the end of the financial year (that is, by 30 November).
- ◆ The supplementary (annual) SoE report continues to be part of the Annual Report and therefore must be submitted to the Minister (in practice this means the Department of Local Government), together with the rest of the annual report.

8.1 Submitting and releasing the report

If a regional report is prepared (Section 3.2), councils are still required to submit individual SoE reports to the Minister for Local Government but in practice this means the Department of Local Government. Regional reports may be modified to be appropriate for the local area. This may result in one or more environmental sectors being developed on a regional basis, while other sectors are developed by each individual council. Councils have to determine if a regional report adequately meets the needs of their local community, and if not, council must include additional information that addresses their local characteristics that have not been included in the regional report.

Community response to the SoE report can be assessed using questionnaires and public forums held after the release of the report. These responses can assist councils in reviewing council's Local Agenda 21 plans or environmental management plans, and in seeking community involvement in projects dealing with issues identified or confirmed by the SoE report.

8.2 Relationship between SoE Reports and Local Agenda 21 Plans

SoE reports are an effective means by which accurate, relevant and current environmental information can be made available for the development of Local Agenda 21 plans.

As many problems and solutions have their roots in local activities, the participation and cooperation of local councils is critical for the success of the Agenda 21 document which originated from the United Nations Rio Earth Summit in 1992. Local councils develop and operate the economic, social and environmental infrastructure in our society. Councils oversee planning processes, establish local environmental policies and regulations, and assist in implementing state and national policies. Councils also play a critical role in educating, mobilising and responding to their communities. A local Agenda 21 expands the scope of environmental strategies by integrating economic, social and environmental objectives so as to move towards sustainable living.

A council may enter into a dialogue with its community, local organisations and private enterprises to develop and adopt a Local Agenda 21 plan for addressing environmental issues or together with other objectives such as health, education and economic and social development. The adoption by a council of a comprehensive local Agenda 21 plan would assist councils in applying the principles of ESD throughout all their activities, as provided by the recent amendments to the LG Act (see section 2 of Guidelines). Sustainability indicators (economic, social and environmental) developed for Agenda 21 programs would also be useful for the SoE reports of councils.

9 INTEGRATING THE SOE REPORT WITH THE MANAGEMENT PLAN

9.1 Basic Principles of Integration

The SoE report is part of the council's management planning – annual reporting cycle (see 1.3). For it to be effective, the management planning and the SoE reporting processes should be linked together in a manner that ensures that the relevant information and proposed directions feed from one into the other.

- The management plan should be sufficiently comprehensive and detailed to provide the persons monitoring the environment and preparing the SoE report to know the key areas that should be included in the SoE report.
- The SoE report should report on the environmental issues identified in the management plan, as well as identifying other environmental issues affecting the area, and may suggest tangible and achievable responses to those issues.

The subsequent management planning process should address the issues identified in the SoE report and, where funding is available, specify projects within the management plan to address environmental issues. The management plan may also include a list of the proposed environmental projects that were not adopted to provide the public with a clearer idea of the full range of environmental issues competing for the council's funds.

The integration process will be on-going as new environmental issues emerge and council's organisational structures evolve. Key staff from the relevant operational and administrative divisions of the council will need to be involved in the ongoing integration processes.

9.2 Achieving Integration

The way in which a council achieves integration will depend on any policies determined by the council, the organisational structure of the council and possibly other local circumstances. Two models developed by Gosford City Council and Willoughby City Council, respectively, are provided as examples of how SoE reports and management plans may be integrated (Diagrams 2 & 3).

9.2.1 The Gosford Model

Gosford City Council has taken steps to develop direct linkages between the SoE Report and the City Management Plan. It has sought to achieve this through the establishment of an effective working relationship between the Strategic Planning Unit and the State of the Environment Co-ordinator (this working relationship is also being used to help address broader organisational issues such as balancing economic, social and environmental issues in decision making). The outcomes of this process are:

- ◆ An SoE report that clearly identifies key issues and suggests tangible and achievable responses;
- ◆ A City management plan that outlines strategic responses to issues identified in the SoE report;
- ◆ Establishment of a system for developing ongoing linkages.

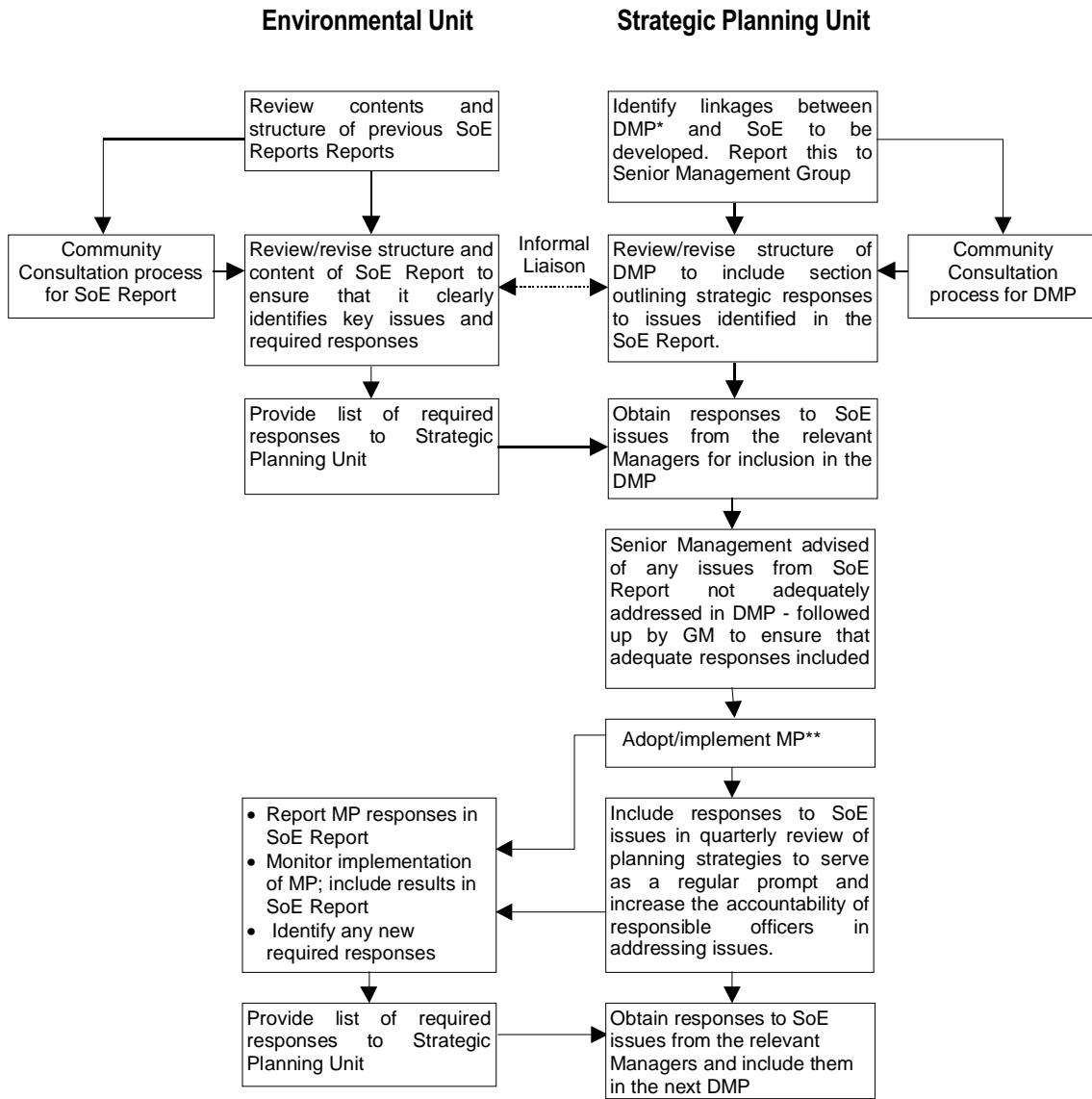


Diagram 2: The Gosford model for the integration of the SoE report with the Management Plan

(* DMP = Draft Management Plan; **MP = Management Plan)

When applying this model to other councils, the term “Environmental Unit” would apply to the unit of the council (eg Health and Environment Unit) or persons preparing the SoE report. The term “Strategic Planning Unit” would apply to the unit (eg Corporate Services Unit) or persons responsible for producing the management plan.

9.2.2 Willoughby Council: Relationship between SoE Report, Environmental Management Plan and Council Management Plan

Willoughby City Council is developing an Environmental Management Plan (EMP), which will be a long-term strategic planning document to guide council activities. It will be the community's and Council's vision for managing the environment and developing a sustainable future. Like other council policy documents the EMP provides strategic direction for the development of the council management plan. All of council's activities should reflect the philosophy and directions provided by the EMP. The SoE is the annual report card on Council's progress with implementing the EMP.

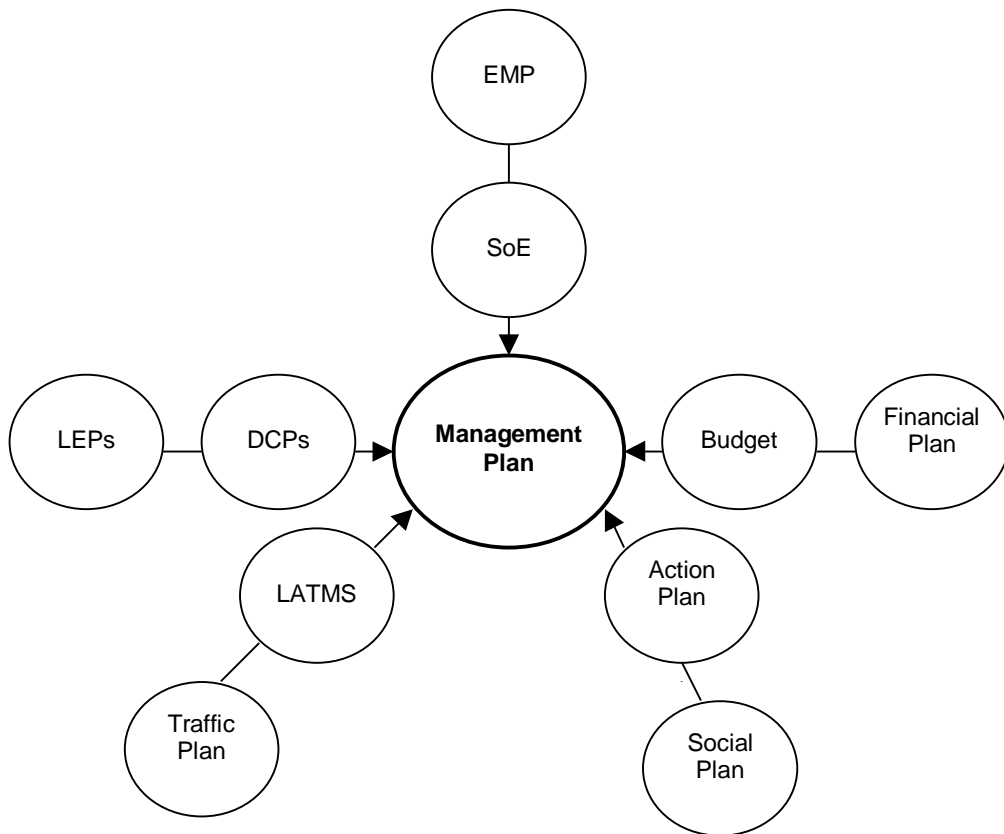


Diagram 3: The Willoughby model for the integration of the SoE report with the EMP and the Council Management Plan

Note: This diagram only shows some of council's policy documents, which direct council's management plan.

(EMP = Environmental Management Plan; LATMs = Local Area Traffic Management Studies; LEP =Local Environmental Plan; DCP = Development Control Plan

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APPENDIX A EXAMPLES OF APPLYING ESD PRINCIPLES IN COUNCIL ACTIVITIES

This Table is based on the South Sydney ROC's Sustainability Background and Discussion Paper but has been redesigned and expanded.

COUNCIL FUNCTIONS & ACTIVITIES	ASPECTS WHICH HAVE LINKS TO SUSTAINABILITY
Approvals	Sustainable policies, e.g. ESD principles in DCPs and LEPs, requirements for consents and approvals, conditions.
Catchment and coastal management	Policies (NSW Coastal Policy, NSW Wetlands Policy); practices; engineering; facility development; landuse planning; reporting, climate change, conservation initiatives
Community land – use and management	Policies directed towards sustainability, ESD principles in LEPs and plan of management, sustainable use and management.
Compulsory acquisition	Apply the principles of ESD for conservation of biological diversity and ecological integrity for the purposes of wildlife corridors, environmental protection and native vegetation conservation.
Education – community education and participation (community right to know) groups.	Policies; priorities; projects; level of activity; target groups; cultural preservation and development for traditional and new
Education – environmental	Information, courses and workshops on sustainability, ESD principles, promotion, waste management and minimisation, recycling and composting; models demonstrating sustainable practices and technologies; encourage public transport use, energy conservation.
Employment development	Location and landuse zoning; transport planning; type of emissions produced; encouragement of sustainable industries; regulatory and educational activity; encouragement of cleaner production & environmentally sound practices; inspection and prosecutions; encouragement of industry and commerce that meets local needs and provides employment that matches local workforce.
Energy consumption, including production, supply and conservation	Choice of lighting; energy efficient equipment; fuels; use of greenpower, education (promote free energy audits).
Entry onto land	Avoid damage to environment.
Environmental management -local	Monitoring, reporting, management approaches (e.g. systematic, integrated across activities involving stakeholders); community involvement in monitoring, landcare and dune care projects etc
Fire prevention, protection, mitigation services and facilities	Sustainable bush fire management, policies directed towards sustainability.

COUNCIL FUNCTIONS & ACTIVITIES	ASPECTS WHICH HAVE LINKS TO SUSTAINABILITY
Health – public health services and facilities	Management of hazardous waste, collection procedures, disposal methods, waste management and minimisation; recycling; cleaning agents, construction and use of health centres
Housing development	Urban design; subdivision pattern; building design; encourage housing types that meet demographic needs; housing affordability and social mix; energy efficient housing
Impounding	Site; type; design; construction and maintenance of pounds; effect on environment if animal or article not removed.
Industry development and assistance	Provision of local employment, encouragement and assistance to industries that minimise their impact on the environment and use sustainable technologies; encouragement of industries which give the community access to information such information regarding licences to pollute.
Investments and property rentals	Criteria for contracts (including leasing) and selection criteria for sale/purchase of operational land, purchase of community land.
Landscaping, open space	Planning and maintenance Location of open space (enhance remnant bushland, buffer to urban development); choice of plants (e.g. drought resistant species, species that reinforce greening or wildlife corridors, species that attract birdlife or support wildlife) mowing and maintenance practice, bush regeneration methods, amount and source of water used, roadside vegetation; recovery plans for threatened species, regional vegetation plans (Native Vegetation Conservation Act).
Libraries and information services and facilities	Information on sustainability and promotion, important customer/ citizen interaction point.
Management plans	Plans containing ESD principles and directed towards sustainability.
Management of local environments	Policies and programs e.g. for catchment protection, protection of wetlands, protection of migratory birds; habitats protection, heritage conservation; community education; climate change.
Management of ozone depleting substances	Awareness of use (fire extinguishers, refrigeration, air conditioning); replacement programs, methods of disposal.
Office equipment/furniture	Sustainable materials e.g. plantation timbers, high efficiency equipment; purchase, disposal and maintenance.
Pest management and weed control	Methods and chemicals used; education and reminders (when to spray), (see also landscaping).

COUNCIL FUNCTIONS & ACTIVITIES	ASPECTS WHICH HAVE LINKS TO SUSTAINABILITY
Planning and development control	Policies directed to sustainability, policies for maintenance of natural and cultural heritage; integration of transport and landuse planning; urban design, subdivision policies, development of pedestrian and cycle routes; cycle facilities; car parking; extent and nature of urban consolidation; basis of landuse allocation (e.g. open space); ESD principles in LEPs and DCPs, requirements for consent; conditions; encouragement of energy efficient housing (e.g. use of solar hot water, energy smart homes programs) inspection procedures, fines and prosecutions; erosion and sediment control policies; tree preservation orders, cumulative impacts.
Pollution control	Licensing/ monitoring/ prosecutions (Protection of the Environment Act), planning/approvals/ remediation of contaminated sites (Contaminated Land Management Act)
Public land – acquisition/sale, classification and reclassification	Policies directed towards sustainability; ESD principles in LEPs and plans of management for community land.
Purchasing	Policy; choice of products, package handling, spoilage, quantity and quality control.
Rates, charges and fees	Criteria for setting rates; rate exemptions for land subject to conservation agreements, user pays approach to waste, recycling and composting.
Roads	Location; design; construction (methods, materials, use of recyclables); maintenance
Sewerage and drainage works – approvals	Requirements for consent conditions; policies directed toward sustainability, ESD principles in DCPs and LEPs, sustainable sewerage treatments, reuse of wet and dry components, sustainable trade waste policies.
Sewerage and drainage works and facilities – infrastructure	Policies directed toward sustainability; sustainable sewerage treatments; reuse of wet and dry components; demand side management of source control; sustainable trade waste policies.
Social, cultural and community services	Transport; catering arrangements (waste, packaging, food); information and advice; community development.
Special events	Policies, projects, level of activity, target groups.
Sporting, recreational & entertainment services & facilities	Site; type; design; construction and maintenance, services.
Staff management	Employee incentive schemes, OHS, local job opportunities.
Stormwater management	Nature of stormwater, drainage infrastructure planning; construction and maintenance; catchment based planning and management, climate change, flood prevention, source control of stormwater.

COUNCIL FUNCTIONS & ACTIVITIES	ASPECTS WHICH HAVE LINKS TO SUSTAINABILITY
Street cleaning	Methods (e.g. sweeping or washing), disposal of waste.
Tourist development and assistance	Provide local employment; encourage tourism that minimises impact on the environment; encourage understanding of natural and cultural heritage.
Transport/fleet management	Choice of vehicles; fuel type; maintenance; alternative employee incentives (e.g. public transport, walking, cycling, cashing in car).
Transport planning/traffic management	Energy efficient transport; priority bus lanes; public transport infrastructure; negotiating integration of services; LATMs; pedestrian and cycleways; cycle facilities, e.g. bikeracks; accessibility and equity; planning location of essential services at modes. airports – site, location of facilities.
Waste management/solid waste handling/ liquid and other waste	Services (e.g. recycling) and re-use centres, facilities (composting bins, recycle bins, worm farms, location and management of landfills, waste conversion plants etc); education; collection procedures; disposal methods and options, reduction, reuse, recovery options, toxic chemical collections.
Water usage	Water management policy; patterns of use; sources; monitoring, recycling, demand side management, effluent reuse (see also landscaping).

APPENDIX B

sustainability

guidelines for decisionmakers

In the past, programs for economic development, social development and environmental protection were generally carried out in isolation from each other. Today, however, there is a growing awareness that these systems are interlinked and that social, economic and ecological objectives are interdependent. Sustainable social and economic development is dependent on maintaining the natural resource base and avoiding activities that cause irreversible or costly environmental degradation. The solution is Ecologically Sustainable Development or ESD.

The 4 principles of ESD are as follows (these are explained in Appendix A):

- (a) the precautionary principle
- (b) inter-generational equity
- (c) conservation of biodiversity
- (d) improved valuation of environmental assets

The Local Government Act 1993 was recently amended to enhance the environmental management responsibilities of councils. The amendment, known as The Local Government Amendment (Ecologically Sustainable Development) Act 1997, causes the principles of ESD to permeate all aspects of the Local Government Act. The amendment creates links between council's environmental charter, approval functions, management planning, Annual Report, and State of the Environment (SoE) Report. Councils are now expected to adopt a strategic "whole of council" approach towards the recognition of ESD and to respond positively to environmental problems in their area.

To assist councils in this task, SSROC produced the Sustainability Discussion Paper in 1997, which explained the importance of implementing ESD, its central themes and guiding principles and its global context. The document also flagged many areas in local government where ESD could be applied. ESD Guidelines for Decisionmakers takes this a step further, providing a 'launching pad' for ideas about what should be incorporated in an ESD policy, and suggested factors for inclusion in site- or issue-specific policies and DCPs.

Volume 1 of this document

- Provides a foundation document to enable Councils to prepare more detailed and specific guidelines for ESD in the future
- Encourages councillors and other decisionmakers to gain an understanding of ESD principles
- Encourages developers and builders to begin incorporating these principles into their design and construction practices

Volume 2 is designed primarily for use within a local council, however it can be applied to most businesses. This volume

- Details the responsibilities of various council departments for implementing ESD
- Provides a checklist of sustainable and unsustainable practice for each area of council business

h o w t o u s e t h e s e g u i d e l i n e s

...if you are a councillor

ESD principles must now be incorporated into councils' management planning and environmental reporting structure. Therefore these principles must become fundamental to all policies, plans and codes. This document enables easy implementation of the concepts introduced in the SSROC Sustainability Discussion Paper (1997; contact SSROC for a copy)..

Councils are at different stages in ESD implementation and so this guideline is designed to be a flexible information base that can be adopted in part or in whole. Councils may wish to:

- Incorporate these guidelines into specific DCPs or the LEP
- Distribute them as an information resource for developers
- Use them to train staff in sustainability principles
- Use the guidelines as an assessment tool for development applications
- Use Volume 2 to become a 'sustainable council' through incorporation of ESD principles in all aspects of business

Councils further down the track of ESD integration may wish to consider adopting the Ecological Sustainability Index (ESI; Appendix B) as part of the approvals process as a means of achieving more responsible development..

...if you are a developer

Volume 1 may be used as a checklist for putting the principles of ESD into practice. It is not intended to be exhaustive in content, but is designed to be a thought trigger.

In Volume 1; Appendix B, the principles of the Ecological Sustainability Index (ESI), developed by Sutherland Shire Council, are shown. The ESI is a means of assessing the sustainability of a home (either single dwelling or multi-unit) through use of a spreadsheet scoring package. Points deducted for adverse impacts may be retrieved through a range of environmental improvements. This index reveals the relative impact of different factors, and enables the user to gain an objective assessment regarding the sustainability of the proposed development. It also allows the owner, rather than the council, to make the choice as to how they will effect the necessary improvements to the environment which will help balance any negative impact they have made.

...if you are council staff

Volume 1 provides a list of actions which will ensure that the main principles of ESD are addressed during development design. As such, councils may wish to incorporate as much or as little of these guidelines as appropriate in its DCPs or LEP.

The following Clause could be included in Council's LEP in the event that it is considered appropriate to provide additional status to this guideline:

"The Council shall comply with the provisions of ESD-Guidelines for Decisionmakers (volume 1) before granting consent to any application to which the policy applies. The Council may vary the provisions of ESD-Guidelines for Decisionmakers (volume 1) only in the following circumstances:

(a) it is in the interest of the environment and the public to do so; or (b) the proposal will have no additional adverse impact on the environment or the community and the outcome of the proposal would be likely to be improved as a result of doing so."

If council planners wish to use this approach, advice should be sought from the relevant DUAP officer as the above approach may contravene a Section 71 Determination issued by the Minister in March 1989, reform of Part 3 of the EPA Act (1979) as amended may enable councils to adopt such an approach.

Councils may wish to amend their approvals delegations to encourage developers and property owners to embrace the Ecological Sustainability Index (ESI; Appendix B).. In essence such a change could result in council planning officers being unable to exercise their approvals delegations if a score of say 0 or less is obtained, thus necessitating the application to be determined by council.. Such measures may encourage better quality development in order to avoid the further scrutiny of council.

Volume 2 provides a detailed listing of sustainable and unsustainable practice in every area of council business. This volume fleshes out those areas of council business flagged in the SSROC Sustainability Discussion Paper (contact SSROC for a copy)..

...if you run a business

Volume 2 of this document, although primarily designed for councils, is easily applied to any business wishing to move toward sustainable operation. It shows how to incorporate sustainability in all areas of business from office equipment to investment.

v o l u m e 1

1. responsible planning

2. energy efficiency

3. water conservation

4. waste minimisation

5. habitat protection

6. building materials

further reading

appendix A - ESD principles

**appendix B - The Ecological
Sustainability Index**

v o l u m e 2

[pending]

responsible town planning

The difference between property
development
and land exploitation

desired outcomes

- Responsible use of the land resource
- A configuration of streets and lots which delivers the optimum opportunity for sustainable home design and public/passive transport efficiency
- Diverse neighbourhoods which are safe and self-sufficient to the greatest possible extent

reasoning

Sustainable development does not prevent development - just ensures that it occurs with the future of the whole community in mind. Situations which require decisions between benefits to the whole community and the profit-making rights or personal desires of individuals, have the capacity to influence sustainability more than any other area.

developing a community culture

- Encourage a mix of housing types to accommodate the needs of the entire community, including the aged, families, singles, low and high income housing
- Preserve items of significant historical and cultural value
- Provide public spaces for meeting and exchange of information, goods and services

resource-efficient communities

- Maximise the number of lots aligned north-south to gain optimum solar access and design lots with a north-south rectangular shape, with uniform setbacks along east-west streets and staggered setbacks along streets running in other directions
- Place taller buildings on the north side of streets so that shadows fall across the street rather than on adjacent buildings. Increase densities on north-facing slopes close to public transport

- If the development is likely to be a popular destination, or is going to be used for high density residential purposes, choose a site near public transport
- Design street layouts to accommodate efficient, accessible bus services and safe pedestrian and cycle routes without facilitating high traffic speeds

safe and self-sufficient communities

- Design homes to allow for surveillance of pedestrian thoroughfares
- Plan for attractive and useable community open space and community produce gardens
- Encourage small community shops so as to reduce the need for travel

energy efficiency

Comfort begins with
good design

desired outcomes

- Reduce greenhouse gas emissions through energy conservation
- Reduce reliance on fossil fuels
- Comfortable and attractive homes and buildings

reasoning

In Australia, most electricity is produced at coal-fired power stations. These stations use brown coal, a fossil fuel of poor efficiency and high CO₂ (a greenhouse gas) emissions. Home heating and cooling account for the greatest proportion of energy used in the home. Smart design can greatly reduce the need for temperature modification.

passive design

- Orientate the building within 20 degrees west and 30 degrees east of true north
- Maximise distance from buildings and trees to the north to enhance solar access
- Maximise area of north facing windows and shade with eaves
- Minimise area of west facing windows, or if not possible, shade them by planting trees or installing blinds
- Living zones within the house should be to the north; sleeping zones to the north, south or east; service and circulation zones to the south, west or east
- Increase opportunity for cross ventilation and circulation by installing closable vents
- Install ceiling, wall and floor insulation and use curtains or blinds with insulating lining
- Ensure proper sealing of windows and doors to reduce air leakage to the outside
- Doors should separate living areas to enable heating of the occupied area only.
- Use tree barriers and landscaping mounds to divert cold westerly winds away from buildings

water conservation

Don't throw your money
down the drain

desired outcomes

- Reduce water consumption
- Alleviate peak pressures on stormwater systems and local creeks through reduction in stormwater runoff, through infiltration and on-site re-use
- Reduce pollution of rivers and beaches

reasoning

Most of the water purchased by households in Sydney, although of drinking water standard, is used to keep the garden alive. However, water for the garden does not need to be of the same high quality as that required for drinking. In fact the garden thrives on the water we treat as waste - stormwater runoff from paths and roofs, and some of the water we wash down the drain. If we reuse some of this water by diverting it to our gardens we are encouraging infiltration to the soil, and reducing the cost of watering. This means that both the sewage and stormwater systems deposit less polluted water to creeks, rivers and beaches.

greywater & rainwater harvesting

- Divert waste water from the laundry, shower, bath and hand basin to the garden or to flush the toilet. (Consideration must be given to the design of the system and its maintenance. Water from the kitchen sink and toilets are excluded due to the level of pollutants. Legal prohibition and proximity to waterways may limit application of grey water in some areas)
- Rainwater tanks may be installed to harvest rainwater. Tank water is suitable for washing, toilet flushing, vehicle washing and garden irrigation. Check if your local council has a rainwater tank policy.
- Depressions and contours within the landscaped area can allow maximum infiltration of water before it leaves the site.

w a s t e m i n i m i s a t i o n

Waste not...want not

desired outcomes

- To reduce the amount of waste going to landfill
- Conservation of resources through increased reuse of products and materials, and recycling
- Remediation of contaminated land

reasoning

Sydney is running out of waste landfill sites. All levels of Governments are confronted with the issue of waste minimisation and management and have set waste reduction targets. As a service provider of waste collection and a regulator of building and land development approval, Council's role is to encourage all sectors of the community to become actively involved in waste avoidance, reduction, reuse and recycling. By minimising waste, a positive contribution is made towards reducing consumption of raw materials, and conserving energy. It also reduces the need for new landfill sites and reduces the potential contamination of water and soil.

on-site facilities

- A Waste Management Plan should be prepared and submitted to Council. The plan is to comply with Council's Guidelines on developing a Waste Management Plan. The plan is to incorporate practical ways of better avoiding waste. This includes designing to standard material sizes, utilising modular and pre-fabricated construction and preparing a bill of quantities to ensure the ordering of the correct amount of required quantities rather than over ordering.
- Garbage and recycling storage cupboards should be installed
- Common facilities for garbage separation, waste storage and recycling areas are to be provided, for multi-unit, and commercial premises, ensuring clear and easy access for vehicles collecting waste and recyclables. Waste volume reduction equipment to be utilised where feasible.
- Common facilities for composting should be provided

N.B Worm farms and composting bins are available from Council at competitive rates.

habitat protection

Help reinstate attractive native landscapes

desired outcomes

- Protect natural ecosystems during development and minimise the effects of ongoing human activities so that ecosystems remain robust
- Create attractive and functional natural habitat corridors within urban areas

reasoning

The area that is now Sydney was originally one of the most biologically diverse regions in Australia. Much of that biodiversity has now been lost. However, bushland remnants provide habitat for the native flora and fauna which remain, including several endangered species. Protecting and conserving a range of habitats is important to maintaining species diversity. Private gardens play an important role in providing habitat through effective landscape design.

smart landscaping

- Provide a landscaping plan with each development application indicating the number, type and location of plants and hard landscaping features (ie paths, water features etc).
- Use native plants indigenous to the area to create habitat for fauna. Native plant species require less maintenance, don't require much water or fertiliser, and continue to flower through extended dry periods. Refer to Council's species lists as a guide.
- Use porous pavements, modular paving or on-site infiltration systems for courtyards, driveways and open carparking areas to improve infiltration of rainwater.
- Create a water feature at a low point in your garden to attract frogs and detain stormwater

during construction

- Fence off areas of bushland to be retained, and don't place fill around the base of trees.
- Allow only one entry point for vehicles accessing the site so that the soil is not compacted
- Minimise the amount of cut and fill and preserve the soil profile

building materials

Stop and think about the origins of your materials

desired outcomes

- Building materials from sustainable sources which do not compromise human health
- Reduced cost of building materials and waste disposal through reuse and recycling

reasoning

Past building practices have used certain materials that are now a recognised health risk or lead to environmental decline. Alternative methods and materials are now available which lead to cost savings as well as causing less environmental impact.

toxic substances

- Do not use fibro or any other material which contains asbestos. For asbestos removal from an existing building, consult WorkCover guidelines
- Do not use paint bought prior to 1970 which may contain lead. Ask at your local hardware or paint store for more information, or call the EPA Lead Hotline on 008 803 772
- Put used solvents, cleaners, paints etc in sealed containers for hazardous waste collection. Never burn these substances and never allow them to infiltrate the soil. Find out from Council how to dispose of hazardous materials in your region

construction waste

- Reduce waste by ordering only the required amount, by using all off-cuts and by telling your manufacturer when they've over-packaged their products
- Reuse materials wherever possible, especially in renovations where the quality of older materials is often better than new
- Separate and sort materials on-site for recycling, before they deteriorate
- Repair worn equipment before replacing it
- Drain wastewater into skips before flocculating (to remove suspended pollutants) if there is no space for a wastewater pond on-site

further reading

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ESD principles

Ecologically sustainable development (ESD) means using, conserving and enhancing our natural resources so that ecological processes on which life depends, are maintained, and the total quality of life, now and in the future, is improved. ESD improves the total quality of life for those of us alive now and also for future generations.

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) *the precautionary principle-namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
- (ii) *an assessment of the risk-weighted consequences of various options,*
- (b) *inter-generational equity, namely that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,*
- (c) *conservation of biological diversity and ecological integrity, namely that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) *improved valuation, pricing and incentive mechanisms, namely that environmental factors should be included in the valuation of assets and services, such as:*
- (i) *polluter pays - that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
- (ii) *the user of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
- (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

APPENDIX C DRAFT CORE ENVIRONMENTAL INDICATORS FOR LOCAL GOVERNMENT

Environmental sector/ Key issue	Indicator	Pressure	State	Response	Possible data source
Background					
	Population change - population figures (include area of council in square kilometres) - growth rate - residential; commercial/industrial	✓			ABS Council - DA approvals
	Monthly mean maximum and minimum temperatures		✓		Bureau of Meteorology
	Monthly rainfall		✓		Bureau of Meteorology
	Social indicators (optional), eg population by country of birth or language spoken, employment rate, level of education, crime rate, extent of voluntarism within community etc	✓			Council -Social Plan
	No of local pollution complaints received - show by air, noise, water, chemical and other incidents.		✓		Council, EPA
Land					
	Number of development consents and building approvals for subdivisions, single lots, commercial	✓			Council
	Land use (and Changes in Land use) [Classifications to be used should overlap with those required under the appropriate planning legislation but typically would include area (in hectares); percentage of lg area coming within categories of residential (high and low density), commercial and/or industrial, agricultural and/or primary producing, open space and other. Use rating categories or zoning]		✓		Council
	Area of Open Space [Breakdown should be by the appropriate categories shown under the Local Government (Community Land Management) Act 1998 administered by each Council, roughly showing amount of land (hectares) or as a percentage (or both) of natural area, sportsground, park, land of cultural significance, general community use, bushland, wetland, escarpment, watercourse and foreshore.]		✓		Council; catchment studies; DLWC
	Changes in vegetation coverage (where possible or over time, differentiate between native vegetation, exotic vegetation and noxious weeds)	✓			DLWC
	Number of sites of contaminated land indicating no. of contaminated land remediated)		✓		EPA; Council
	Area of new release proposals impacting on environmentally sensitive land; rural subdivisions	✓			Council
	Extent of dryland salinity		✓		DLWC
	Areas with potential acid sulphate soils		✓		DLWC
	No. of local pollution complaints received		✓		Council
	No of EPA licences		✓		EPA
	Area burnt by bushfires		✓		Council; NPWS; State Forests
	New road construction (qualified by the nature of the environment in which it is constructed) by total area or distance in kilometres or change to area of paved road space)	✓			Council

Environmental sector/ Key issue	Indicator	Pressure	State	Response	Possible data source
Air					
	Vehicle kilometres travelled. (include at least VKT of Council vehicles)	✓			Council
	Method of travel to work. (census data) – possibly only for greater Metropolitan area		✓		ABS, STA
	Regional pollution index or exceedences of particular air pollutants as described under the National Environment Protection Measure (NEPM) for Air – possibly only for Greater Metropolitan Region	✓			EPA
	Number of premises with EPA air licenses		✓		EPA
	Extent of bicycle lanes, cycleways (option – new cycleways) by distance in kilometres		✓	✓	Council
Water					
Drinking water	Compliance of water with NHMRC guidelines and recording variations		✓		Council
	Volume and consumption by sector (residential, industrial, agricultural)	✓			Council
Freshwater and estuarine	Compliance with river flow and water quality objectives in the catchment based on river or water management plans.	✓			Council; local water authority; DLWC
	Water flows and diversions/extractions (dams etc)	✓			Council
	No. of known point of pollution sources (eg licensed sources, floodgate for acid drainage, stormwater drains)	✓			Council, EPA
	Riparian vegetation – extent of coverage (where possible or over time, differentiate between native vegetation, exotic vegetation and noxious weeds)		✓		
	River health monitored by assemblages of macroinvertebrates (where possible extension to other species such as frogs, fish and waterbirds)		✓		CM trust; DLWC; NSW Fisheries
Marine	No. of swimming days lost		✓		Council
	No. of stormwater discharges (outlets) to beaches, creeks or other watercourses	✓			EPA?, council
	No. of sewer outfalls	✓			Council
	Beach pollution (days within bacterial pollution guidelines)	✓			Council
Groundwater	Rise in water table levels	✓			DLWC
	Sustainable yield of groundwater (Water extraction –v- availability)	✓			DLWC
	No of exceedences of water quality guidelines for groundwater systems	✓			DLWC
Biodiversity					
	Extent of terrestrial or marine protected areas within (or adjacent to) council's area, eg national parks, marine parks, (eg Intertidal Protected Areas, Habitat Protection Plans). [This is in addition to areas as described under the land-use categories referred to in the environmental indicators for Land]		✓		Council; NPWS; State Forests
	Significant locations (chunks) withof viable remnant vegetation; % of LGA		✓		DLWC; Council
	Actions taken to improve the conservation of specific species of flora and fauna listed under the Threatened Species Conservation Act or other documents (including aquatic environment and birds)		✓		Council

Environmental sector/ Key issue	Indicator	Pressure	State	Response	Possible data source
	Actions taken to minimise the impact or reverse the spread of declared feral animals (including aquatic environment and birds)	✓			Council
	Actions taken to minimise the impact or reverse the spread of species of declared noxious weeds (including aquatic environment)	✓			Council
	Area (in hectares) or % of native vegetation cleared in past year and since 1788	✓			DLWC; Council
	Area covered by voluntary conservation agreements and areas known to be revegetated with native species through Council activities		✓		NPWS
	Report on implementation of plans relating to the environment, eg Regional Vegetation Plan, Biodiversity Action Plan (in accordance with the NSW Biodiversity Strategy), Species Recovery Plans etc			✓	Council
Waste					
	Total waste disposed	✓			Council
	Total waste to landfill	✓			Council
	Total waste recycled and domestic waste recycled		✓		Council
	Components of domestic waste		✓		Council
	Proportion of total waste by source		✓		Council
	Capacity of waste landfill sites; projected life of sites		✓		Council
Noise					
	Number of premises with EPA noise licenses		✓		EPA
Aboriginal Heritage					
	No. (of types) of Aboriginal sites		✓		Council
Non-Aboriginal Heritage					
	Heritage sites in register of National Estate; National Trust Register or LEPs		✓		National Trust; Council; NSW Heritage Office
	Buildings lost / added to heritage inventory		✓		Council

APPENDIX D NSW COASTAL POLICY 1997

The *NSW Coastal Policy 1997 – A Sustainable Future for the New South Wales Coast* is based on the principles of ESD. The Policy now applies to coastal estuaries, lakes, lagoons, islands and rivers in recognition of the strong connection between coastal estuarine processes and oceanic coastal processes.

The Policy applies to the following coastal councils: Ballina, Bega Valley, Bellingen, Byron, Coffs Harbour City, Copmanhurst, Eurobodalla, Great Lakes, Greater Taree City, Hastings, Kempsey, Kiama, Lismore City, Maclean, Maitland City, Nambucca, Port Stephens, Richmond River, Shoalhaven City, Tweed and Ulmarra.

The Policy does not apply in the urban areas of the Sydney, Newcastle, Illawarra and Central Coast regions, to reduce potential conflict with the large range of regional plans and policies which protect sensitive coastal areas in these regions. However, the offshore component of the coastal zone (see above) will still apply to these areas, so the large number of strategic actions in the policy relating to oceanic water quality and protection of beaches are given effect.

The Policy sets a framework for decision making by local councils and state agencies. The Coastal Policy indicates that local councils (and state agencies) should report on their implementation of the Policy through their State of the Environment reports (or annual reports for state agencies). The level of reporting will vary according to the location of the council and the area of the council which falls into the defined coastal zone. This will provide part of the information base for the Coastal Council to monitor implementation of the Policy.

Implementation of the Policy will occur through a variety of mechanisms, including the local environment plan making and development control under the Environmental Planning and Assessment Act, and management planning and SoE reporting under the Local Government Act.

Councils should note that the Policy is now overtaken by the 1997 amendments to the Local Government Act in relation to management plans (strategic action 5.2.2 of Policy) and the environmental sectors on which councils have to report (strategic action 8.3.3 of Policy).

APPENDIX E LEGISLATION RELATING TO ENVIRONMENTAL ACTIVITIES OF COUNCILS

GENERAL

Protection of the Environment Operations Act 1997

S91 Council can issue clean-up notices in relation to certain pollution incidents

S93 Clean-up directions may be given orally

S96 Council may issue prevention notices in relation to certain activities being carried on in an environmentally unsatisfactory manner

S 147-153 Duty to notify pollution incidents causing or threatening material harm to the environment

S308 Council must maintain a public register of clean up notices issued, prevention notices issued and noise control notices issued, and details of convictions

Protection of the Environment Operations (Penalty Notices) Regulation 1999

Lists all the pollution control and waste management offences that Councils can deal with by way of penalty notice, including penalty notices for failure to comply with a clean-up notice or a prevention notice.

LAND

Contaminated Land Management Act 1997

s.23 Order by EPA for council to carry out remediation of land.

s.30 Order by EPA for council to carry out the requirements of an investigation or remediation order.

s.59 The EPA must inform the local authority for the area in which land is situated of the following matters that relate to the land:

- that a declaration or any investigation or remediation order has been made,
- that a voluntary investigation proposal has been the subject of the EPA's agreement under section 19,
- that a voluntary remediation proposal has been the subject of the EPA's agreement under section 26,
- that a declaration or order has ceased to be in force,
- the completion of the carrying out of a voluntary investigation proposal that has been the subject of the EPA's agreement under section 19,
- the completion of the carrying out of a voluntary remediation proposal that has been the subject of the EPA's agreement under section 26.

s.60 Duty to report contamination to the EPA in certain circumstances.

Commons Management Act 1989

s.7 The Minister may appoint a local authority to manage commons

s.22 Council, as commons trust manager has the authority to enter into temporary licenses, without consent, and for low-impact activities.

s.25 Councils may be required to prepare a draft plan of management, which upon Ministerial adoption, becomes a regulatory instrument.

s.30 Council must be both financially and environmentally accountable, keep and furnish records.

Crown Lands Act 1989

s.10 Principles of Crown land management – environment protection principles be observed; natural resources (incl. water, soil, flora, fauna and scenic quality) be conserved.

s.95 Council may be appointed to manage reserved or dedicated Crown land.

s.112 Councils may be required to prepare a draft plan of management, which upon Ministerial adoption becomes a regulatory instrument.

s.122 Council must be both financially and environmentally accountable; and keep and furnish records.

Crown Lands Regulation 1995

Cl. 32 Council, as trust manager, has authority to enter into temporary licenses, without consent, and for low-impact activities.

Dangerous Goods Act 1975

s.6 The WorkCover Authority may appoint as an inspector of dangerous goods a person employed by a local authority.

Environmentally Hazardous Chemicals Act 1985

s.52 EPA register of declared chemical wastes, chemical control orders and licences.

Environmental Planning & Assessment Act 1979

s.5B Council must have regard to the register of critical habitat kept by the Director-General of National Parks and Wildlife under the Threatened Species Conservation Act 1995 when exercising its functions under the EP&A Act.

Part 3 Making of environmental planning instruments by councils.

Part 4 Development assessment by councils

Part 4A Certification of development by councils

Part 6 Implementation and enforcement by councils

Environmental Planning & Assessment Regulation 1994

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement:

- any environmental impact on a community,
- any transformation of a locality,
- any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,
- any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations,
- any long-term effects on the environment,
- any degradation of the quality of the environment, any risk to the safety of the environment,
- any reduction in the range of beneficial uses of the environment,
- any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply,
- any cumulative environmental effect with other existing or likely future activities.

Environmental Planning Instruments

SEPP 53 – Metropolitan Residential Development Greater Metropolitan REP 1 - Redevelopment of Urban Land

Local Government Act 1993

s.36 A council must prepare a draft plan of management for community land. The land is to be categorised as a natural area, a sportsground, a park, and/or general community use. A natural area is to be further categorised as one or more of the following:

- bushland,
- wetland,
- escarpment,
- watercourse,
- foreshore,
- a category prescribed by the regulations.

s.68 Approvals, to:

- Install a manufactured home, moveable dwelling or associated structure on land.
- Install a temporary structure on land
- Operate a public car park
- Operate a caravan park or camping ground
- Operate a manufactured home estate

s.124 Order not to keep birds or animals on premises, other than of such kinds, in such numbers or in such manner as specified in the order.

s.125 Council may abate a public nuisance or order a person responsible for a public nuisance to abate it.

Unhealthy Building Land Act 1990

s.7 A council that gives approval to a subdivision of unhealthy building land is to notify the EPA of the prescribed particulars relating to the subdivision.

AIR

Environmental Planning & Assessment Act 1979

Environmental Planning & Assessment Regulation 1994

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement:

- any long-term effects on the environment,
- any degradation of the quality of the environment,
- any risk to the safety of the environment,
- any pollution of the environment,
- any cumulative environmental effect with other existing or likely future activities.

Local Government Act 1993

s.68 Approval to install a domestic oil or solid fuel-heating appliance.

s.125 Council may abate a public nuisance or order a person responsible for a public nuisance to abate it. Rural Fires Act 1997 and Regulation

Protection of the Environment Operations Act 1997

s.91 Council can issue clean-up notices in relation to certain pollution incidents

s.93 Clean-up directions may be given orally

s.96 Council may issue prevention notices in relation to certain activities being carried on in an environmentally unsatisfactory manner

s.124 Air pollution from failing to maintain non-domestic plant in an efficient condition or from failing to operate such plant in a proper and efficient manner is an offence

s.125 Air pollution from carrying out maintenance work on non-domestic plant other than in a proper and efficient manner is an offence

s.126 Air pollution from failing to deal with materials on non-residential premises in a proper and efficient manner is an offence

s.127 Standards of air impurities not to be exceeded

Clean Air (Control of Burning) Regulation 1995

Cl.5 Control of burning by open fire in certain local government areas.

Cl.6 Control of burning in incinerators in certain local government areas.

Cl.7 Burning by open fire or in an incinerator must use such practicable means as are necessary to prevent or minimise air pollution.

Clean Air (Plant and Equipment) Regulation 1997

Cl 8 Restrictions on use of high sulphur liquid fuel

Cl.14 Control of solid particle, emissions from non-scheduled premises.

Cl 16 Control of smoke emissions from non-scheduled premises

Cl 18 Control of soot emissions from non-scheduled premises

Part 10 Control equipment in respect of storage tanks and large tank vehicles

Rural Fires Act 1997

s.66 Notice by council to require the occupier or owner of land to carry out bush fire hazard reduction work.

s.74 Annual review by council of bush fire hazards on private lands.

WATER

Catchment Management Act 1989

14(2) Council membership of a catchment management committee.

22(2) Council membership of a catchment management trust.

Coastal Protection Act 1979

4B(3) Council must ensure that maps outlining the coastal zone that relate to its area are available for inspection at principal council office.

Environmental Planning & Assessment Act 1979

Environmental Planning & Assessment Regulation 1994

- Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5: any long-term effects on the environment,
- any degradation of the quality of the environment, any risk to the safety of the environment,
 - any reduction in the range of beneficial uses of the environment,
 - any pollution of the environment,
 - any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply,
 - any cumulative environmental effect with other existing or likely future activities.

Fisheries Management Act 1994

s.193(2) Councils are to have regard to any habitat protection plan that is relevant to the exercise of their functions.

s.193(3) A council is to notify the Minister of any function it proposes to exercise that is inconsistent with a habitat protection plan.

ss.194-197 Councils must not impact on fish and aquatic habitat within an Aquatic Reserve.

s.200 A council must not carry out dredging or reclamation work in any waters except under the authority of a permit issued by the Minister.

ss. 204-205 Councils must not harm marine vegetation (mangroves, seagrasses, macroalgae)

s.218 Councils must provide fishways in the construction of dams and weirs.

s.220V A council must have regard to the existence of critical habitat in relation to any of the land concerned of which it is a landholder.

s.220ZS A council is to take appropriate action to implement measures for which it is responsible in recovery and threat abatement plans.

s.220ZU A council must not exercise a function in a manner that is inconsistent with the implementation of measures included in a plan unless it has given notice of the proposed exercise of the function to the Director of Fisheries.

s.221V A council may enter into a joint management agreement with the Minister for Fisheries in relation to an action that is jeopardising the survival of a threatened species, population or ecological community

s.243 The Minister for Fisheries may appoint a person employed by a council as a fisheries officer.

Hunter Valley Flood Mitigation Act 1956

The council may have flood protection works, etc, constructed and maintained.

Local Government Act 1993

s.68 Council may hold a DLWC approval for works relating to:

- water supply,
- water treatment,
- sewerage treatment, and
- flood retardation

s.68 Approvals of private works, particularly:

- Carry out water supply work
- Carry out sewerage work
- Carry out stormwater drainage work
- Dispose of waste into a sewer of the council
- Install, construct or alter a waste treatment device or a human waste storage facility or a drain connected to any such device or facility.

s.124 Orders, particularly:

- To demolish or remove a building where building is erected in a catchment district and is likely to cause pollution of the water supply.
- To repair or make structural alterations to a building, where building is erected in a catchment district and is likely to cause pollution of the water supply.
- To prevent damage to the physical environmental damage as a result of drainage, drainage works, or obstructing a natural watercourse.
- To control the flow of surface water across land.
- To connect premises to the council's water supply.
- To connect premises with a sewerage system.
- Not to use or permit the use of a human waste storage facility on premises .

s.638 Offence of discharging any prohibited matter into a public sewer, a fitting connected to a public sewer, a public drain, or a gutter of a council.

s.639 Offence of wilfully or negligently does any act which damages or pollutes a public water supply, or a source of that supply.

s.640 Offence of wilfully or negligently acts in contravention of a prohibition or a notice erected in a catchment district by a council.

Protection of the Environment Operations Act 1997

s.91 Council can issue clean-up notices in relation to certain pollution incidents

s.93 Clean-up directions may be given orally

s.96 Council may issue prevention notices in relation to certain activities being carried on in an environmentally unsatisfactory manner

s.120 Prohibition of pollution of waters (other than in accordance with an environment protection licence – s 122). Note: this offence can be dealt with by way of penalty notice – see Protection of the Environment Operations (Penalty Notices) Regulation 1999.

Water Act 1912

s.10 The council may hold a DLWC licence for town water supply from a river.

s.115 or 116 The council may hold a DLWC licence for town water supply from a bore.

s.175 The council may obtain DLWC approval for flood protection works.

BIODIVERSITY

Environmental Planning & Assessment Act 1979

- s.5A Factors council must take into account in deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities or their habitats.
- s.5B Councils must have regard to the register of critical habitat when exercising a function under the EP&A Act.
- s.26 Contents of environmental planning instruments, including reservation of land for open space, protecting or preserving trees or vegetation, and protecting and conserving native animals and plants, including threatened species, populations and ecological communities, and their habitats.
- s.34A A council must consult with NPWS before preparing an environmental study or a draft LEP if critical habitats or threatened species may be affected.
- s.76A(6) Complying development provisions do not apply to development where
- concurrence of NPWS is required;
 - land is a critical habitat;
 - land is a wilderness area;
 - land comprises or on which there is an item of environmental heritage; or
 - land is an environmentally sensitive area.
- s.78A Environmental prerequisites before development consent can be granted:
- Consent under the Wilderness Act if application is in a wilderness area;
 - Environmental impact statement if application is in respect of designated development;
 - Species impact statement under Threatened Species Conservation Act if application is in respect of land that is a critical habitat or is likely to affect threatened species, populations or ecological communities.
- s.79B Environmental prerequisite before development consent can be granted:
- Concurrence of Director-General of NP&WS if application is in respect of land that is a critical habitat or is likely to affect a threatened species, population, or ecological community, or its habitat.
- Part 5 Environmental assessment provisions. Focus on protection of land that is a critical habitat or is likely to affect threatened species, populations or ecological communities, and their habitats; or protected fauna or protected native plants within the meaning of the National Parks and Wildlife Act.

Environmental Planning & Assessment Regulation 1994

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5:

- any environmental impact on the ecosystems of the locality,
- any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,
- any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974),
- any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air,
- any long-term effects on the environment,
- any degradation of the quality of the environment,
- any risk to the safety of the environment,
- any cumulative environmental effect with other existing or likely future activities.

Environmental Planning Instruments

SEPP 14 - Coastal Wetlands

SEPP 32 - Urban Consolidation (Redevelopment of Urban Land)

SEPP 44 - Koala Habitat Protection

Local Government Act 1993

s.124 Order not to keep birds or animals on premises, other than of such kinds, in such numbers or in such manner as specified in the order.

s.629(1) A person who wilfully or negligently injures or unnecessarily disturbs any plant or animal in a public place is guilty of an offence.

s.629(2) A person who, without lawful excuse, removes any plant or animal from a public place is guilty of an offence.

National Parks and Wildlife Act 1974

s.11 The NPWS may, with the approval of the council concerned, make use of the services of any of the officers or employees of a council or county council.

s.47O The care, control and management of a regional park may be vested in a council, with the concurrence of the council.

Native Vegetation Conservation Act 1997

Provide for the conservation and management of native vegetation on a regional basis. Councils are not (in principle) exempt from the Act. They are bound to it, subject to the exclusions for noxious weeds, bushfire management plans etc.

- s.51 Council membership of a Regional Vegetation Committee.
- s.28 Council must be notified of a draft regional vegetation management plan.
- Sch 1 List of local government areas partially exempted from the Act.
- Sch 2 List of local government areas wholly exempted from the Act.

Noxious Weeds Act 1993

- s.14. A council must control noxious weeds on land occupied by it and on roads in its area.
- s.18. A council may, by a weed control notice given require an occupier of land to control noxious weeds on that land.
- s.20. A council may control noxious weeds on land if the occupier fails to comply with a weed control notice given by the council.
- s.22. The Minister may, by a weed control notice , require the council to carry out any of its obligations to control noxious weeds.
- s.36. A council also has:
 - to develop, implement, co-ordinate and review noxious weed control policies and noxious weed control programs
 - inspection of land within the local area in connection with its noxious weed control functions
 - to report, at the request of the Minister, on the carrying out of the local control authority's functions
 - to co-operate with councils of adjoining areas to control noxious weeds, where appropriate

Threatened Species Conservation Act 1995

- s.70 A council must report in its SoE report on action taken by it to implement measures included in a recovery plan.
- s.87 A council must report in its SoE report on action taken by it to implement measures included in a threat abatement plan.

WASTE

Environmentally Hazardous Chemicals Act 1985

s.52 EPA register of declared chemical wastes, chemical control orders and licences

Environmental Planning & Assessment Act 1979

Environmental Planning & Assessment Regulation 1994

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5:

- any long-term effects on the environment,
- any risk to the safety of the environment,
- any pollution of the environment,
- any environmental problems associated with the disposal of waste,

Local Government Act 1993

s.68 Approvals, particularly:

- For fee or reward, transport waste over or under a public place
- Place waste in a public place
- Place a waste storage container in a public place
- Dispose of waste into a sewer of the council
- Install, construct or alter a waste treatment device or a human waste storage facility or a drain connected to any such device or facility
- Operate a system of sewage management (Cl. 45 Local Government (Approvals) Regulation 1999)

s.124 Order to store, treat, process, collect, remove, dispose of or destroy waste which is on land or premises.

Local Government (Approvals) Regulation 1999

Cl. 30 Concurrence of DLWC is required for trade waste discharges by private operators into council works. The DLWC concurrence is assumed where DLWC has approved council's trade waste discharge policy.

Protection of the Environment Operations Act 1997

- s.91 Council can issue clean-up notices in relation to certain pollution incidents
- s.93 Clean-up directions may be given orally
- s.96 Council may issue prevention notices in relation to certain activities being carried on in an environmentally unsatisfactory manner
- s.143 Unlawful transport of waste (waste dumping)
- s.144 Permitting land to be used unlawfully as a waste facility
- ss.145 and 146 Littering, including littering from vehicles.

Note: the above waste offences can be dealt with by way of penalty notice – see Protection of the Environment Operations (Penalty Notices) Regulation 1999.

Protection of the Environment Operations (Waste) Regulation 1996

- Cl.16 Requirements relating to non-licensed waste activities .
- Cl.17 Requirements relating to non-licensed waste transporters.
- Cl 29 Special requirements relating to asbestos waste
- Cl 30 Special requirements relating to clinical waste

Waste Minimisation and Management Act 1995

- s.21 A council is to comply with the plan or with any requirement arising under the regional waste plan of its waste management region.
- s.22 A Waste Board may direct any one of the constituent councils to comply with the regional waste plan.

NOISE

Environmental Planning & Assessment Act 1979

Environmental Planning & Assessment Regulation 1994

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5:

- any environmental impact on a community,
- any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,
- any long-term effects on the environment,
- any degradation of the quality of the environment,
- any pollution of the environment,

Protection of the Environment Operations Act 1997

s.96 Council may issue prevention notices in relation to certain activities being carried on in an environmentally unsatisfactory manner

s.264 Issue noise control notices where the council is the appropriate regulatory authority

s. 276 Issue noise abatement directions where quick response to temporary offensive noise is required.

Noise Control (Marine Vessels) Regulation 1996

Cl.8 Authorised officer power to inspect and test vessels.

Noise Control (Miscellaneous Articles) Regulation 1995

Cl.7-12 Regulation of noise from grass-cutting machines, lawn mowers, edge-cutters, string-trimmers, brush-cutters.

Cl.19 Time limits on the use of power tools and equipment

Cl.20. Time limits on the use of musical instruments and sound equipment

Cl.21. Time limits on the use of air conditioners

Cl.22. Use of building intruder alarms

Noise Control (Motor Vehicles and Motor Vehicle Accessories) Regulation 1995

Part 3 Use of noisy vehicles and motor vehicle accessories, including refrigeration units, sound systems, horns and intruder alarms

ABORIGINAL HERITAGE

Environmental Planning & Assessment Act 1979

s.121S Orders affecting heritage items.

Environmental Planning & Assessment Regulation 1994

Cl.53AA Consultation concerning relic or Aboriginal place requiring approval under s.90 of the NPWS Act

Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5:

- any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,
- any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.

Heritage Act 1977

s.25 The Minister may authorise a council to make interim heritage orders for items in the council's area. A council may make an interim heritage order for a place, building, work, relic, moveable object or precinct in the council's area that the council considers may, be found to be of local heritage significance, and that the council considers is being or is likely to be harmed.

s.26 No notice is required of intention to make interim heritage order.

s.28 Procedure for notifying interim heritage orders.

s.29. A council may revoke an interim heritage order that the council has made.

s.32 A council may request that a place, building, work, relic, moveable object or precinct be listed on the State Heritage Register.

- s.82 Heritage Council may request a council to prepare a draft environmental planning instrument in respect of land within a precinct to which an interim heritage order made by the Minister or listing on the State Heritage Register applies.
- s.84 Guidelines for preparation of EPIs.
- s.166 A council may submit to the Heritage Council particulars of a building, work, relic or place which, in the opinion of the council, is an item of the environmental heritage and worthy of conservation.

National Parks and Wildlife Act 1974

- s.90 Requirement to obtain the Director-General's consent for damage to or destruction of an Aboriginal relic or place.

NON-ABORIGINAL HERITAGE

Environmental Planning & Assessment Act 1979

- s.121S Orders affecting heritage items.

Environmental Planning & Assessment Regulation 1994

- Cl.82 Factors to be taken into account concerning the impact of an activity on the environment when preparing an environmental impact statement under Part 5:
- any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations,
 - any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974),

Heritage Act 1977

- s.25 The Minister may authorise a council to make interim heritage orders for items in the council's area. A council may make an interim heritage order for a place, building, work, relic, moveable object or precinct in the council's area that the council considers may, be found to be of local heritage significance, and that the council considers is being or is likely to be harmed.
- s.26 No notice is required of intention to make interim heritage order.
- s.28 Procedure for notifying interim heritage orders.

- s.29. A council may revoke an interim heritage order that the council has made.s.32 A council may request that a place, building, work, relic, moveable object or precinct be listed on the State Heritage Register.
- s.82 Heritage Council may request a council to prepare a draft environmental planning instrument in respect of land within a precinct to which an interim heritage order made by the Minister or listing on the State Heritage Register applies.
- s.84 Guidelines for preparation of EPIs.
- s.166 A council may submit to the Heritage Council particulars of a building, work, relic or place which, in the opinion of the council, is an item of the environmental heritage and worthy of conservation.