

sustainability

guidelines for decisionmakers



southern sydney regional organisation of councils

2000

sustainability

Background & Discussion Paper

The purpose of this paper is to introduce Councillors and Council staff to the concept of sustainability and how it relates to the work of Councils. It is intended to encourage discussion as to how Councils and their communities can work towards sustainability through regional cooperation.

...why sustainability

The NSW Government has made changes to the Local Government Act.

On June 23, 1997 the Minister for Local Government issued a media release announcing proposed changes to the Local Government Act.

The changes, which are now law,

- are an acknowledgment that State of the Environment reports have failed to make the link into Local Government management and decision-making processes;
- develop and strengthen links between SoE reporting and Councils' management;
- require Councils to manage in an ecologically sustainable manner.

Council's Charter has changed!

Council's Charter now includes the duty to "properly manage, protect, restore, enhance and conserve the environment in a manner which is consistent with the principles of ecologically sustainable development". Councils therefore need to manage the environment and exercise approvals power in a manner consistent with the principles of ESD.

The amendments strengthen the links between State of Environment reporting with Council's management planning process and encourage Councils to have a better understanding of the broad environmental consequences of plans, policies and programs. The amendments also encourage regional State of the Environment reporting where appropriate.

The changes are a local response to broader international concerns and actions.

The amendments recognise the importance of the role of Local Government in implementing the principles of ecologically sustainable development and are consistent with international trends which gathered force following the United Nation Conference on the Environment and Development in 1992. Prior to 1992, Australia was signatory to a number of international environmental treaties which were largely the responsibility of State or Federal Government to implement. At the 1992 conference, often referred to as the Rio Earth Summit, the international community endorsed the principles of ecologically sustainable development as the ethos for government and community action. At this summit, Australia became signatory to the Rio Declaration of Principles for Sustainable Development and also to Agenda 21, the global action plan to implement the declaration.

Internationally, it is recognised that many solutions to environmental problems lie with local Government.

Local government plans, constructs, operates, maintains and regulates economic, social and environmental infrastructure, oversees planning and development processes, sets local environmental policies and assists in implementation of national, State and regional environmental policies.

Increasingly the community is demonstrating a sophisticated understanding of environmental concerns and recognises the need to have social, economic and personal goals that are in harmony with environmental goals. Agenda 21 recognises that many solutions have their roots in Local Government, because of the range of responsibilities of Local Government and because Local Government is the level closest to the community. Local Government can play a vital role in educating, mobilising and responding to the community to promote sustainable development. Local Government can act as a facilitator for all sectors of the community in fostering sustainability and implementing Agenda 21.

...what is sustainability

Ecologically sustainable development is:

'Development that meets the needs of the present without compromising the ability of future generations to meet their needs'

(Source: *Our Common Future. Report of the World Commission on the Environment and Development, 1987*)

'Development that improves the quality of life, both now and into the future, in a way that maintains the ecological processes on which life depends'

(Source: *National Strategy for Ecologically Sustainable Development, 1992*)

Currently, the way we live and many of the things we do as a society interfere with basic life sustaining processes. The challenge for us is to do things in ways which are sustainable. NSW legislation provides the following definition to help us do that:

'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, the 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) *Intergenerational equity* - namely, that the present generation should ensure 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 and pricing of environmental resources.*' - 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 and 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.

(Source: s.6 Protection of the Environment Administration Act 1991.

This definition will apply to the Local Government Act)

..sustainability what it means to us

The concepts of sustainability are very basic. They are the things we were taught when we were children:

'some things are better left alone'
'if you make a mess, clean it up'
'if you use something, replenish it'
'think of the children'
'prevention is better than cure'

It seems that when, as adults, we have the power to affect our world on a larger scale, we somehow forget these simple maxims. Or maybe we just chose to ignore them. So, what do they mean in the real world?

Some things are better left alone

Once some things are disturbed they can never be fixed. For example natural habitats. Disturbances such as piping or cleaning out a creek will destroy bacteria, fungi, plants, invertebrates and tiny animals which live there and take their place in essential food chains. Wild places have taken all of history to form and cannot be replaced by simple replanting. You cannot replant trees complete with cosy hollows for raising possum families. It is better to make more use of land that has already been disturbed than to disturb more areas. Major redevelopments can dislocate social communities, sever neighbourhoods and result in loss of heritage.

If you make a mess, clean it up

This means we have to keep in mind that whatever we do, we will have to clean things up afterwards. But it really is smarter to plan ahead, because cleaning up is often much harder than making the mess. For example, we can not simply wash away mud that has been tracked across a road, as this causes pollution in the creek. We can not overlook weeds that have been able to overtake a creek, because the longer they are left, the harder they are to remove and the more likely they are to do damage to the environment.

If you use something, replenish it

Using paper that is recycled or timber grown in plantation forests which can be grown again on a piece of dedicated land is sustainable. Destroying new areas of old growth forests, which take 100 years to regrow, is not. If something can not be replenished, like coal and other fossil fuels, then the need to use them in the first place should be reviewed or else alternatives like solar power should be used instead.

Think of the children

This is intergenerational equity in a nutshell, even if the children have not yet been born. We enjoy seeing animals in the wild, so we have to be sure future generations can too. Each species has something to offer. None are expendable. Rare species of tree, such as the Wollemi Pine may be the source of medicines that are needed in the future. If the tree becomes extinct, future generations may be deprived of a potential medicinal source. One legacy we have already left to future generations is the ozone hole. Even though we don't use CFCs any more, the impact continues.

Prevention is better than cure

This is the essence of the so called 'precautionary principle'. Take measures now to avoid catastrophe. Even if you are not sure how bad it's going to get, it is no good ignoring the fact that there may be a problem and it may be too late to do something about it. Although we might not know the exact extent of the consequences, if we do not reduce the use of electricity and guard against increases in greenhouse gases now, then it costs us immeasurably more in the long run. And if we think that a strip of bushland is a habitat corridor, we should not allow it to be destroyed simply because there is not yet the necessary research and evidence available to confirm this.

.. what needs to be sustained

We live in a highly urbanised environment. We therefore deal with complex issues that can have a significant impact on sustainability for example transport, use of resources and energy, development of physical, economic and social infrastructure, management of stormwater and of catchments. We need to think about sustainability in everything we plan and do.

Sustainable development requires the maintenance of the following key components of the environment:

<i>biodiversity</i>	the variety of species, populations, habitats and ecosystems
<i>ecological integrity</i>	the general health and resilience of natural life-support systems, including their ability to assimilate waste and withstand stresses such as climate change and ozone depletion.
<i>natural capital</i>	the stock of productive soil, freshwater, forests, clean air, ocean and other renewable resources that underpin survival, health and prosperity of human communities.
<i>social integrity</i>	the resilience of social systems, social justice, cultural elements and heritage
<i>economic viability</i>	the economy is a tool to meet social needs, not an end in itself. We can't have a sustainable economy if we don't have a sustainable environment. We won't have jobs and production in the future if we deplete or destroy basic resources or don't think about the problems we create for the future.

..so what can councils do?

Councils manage local communities and local environments. So what would a sustainable community be like? A sustainable community is one which provides a high quality of life within the capacity of the environment.

A sustainable community:

- meets its social and economic needs in a way that takes account of the environment;
- encourages employment which safeguards the welfare of future generations and the integrity of the environment;
- minimises the use of non renewable resources and minimises waste production;
- minimises resource usage;
- protects and enhances its natural environment and its cultural heritage;
- is safe and accessible for all;
- protects and enhances biodiversity, maintains ecological processes and systems;
- takes account of the global impacts of local activity;
- engages its citizens to enhance the quality of life and the environment.

Let us look at the operational and regulatory responsibilities of Councils and see which tasks have links with sustainability.

Core Council Responsibilities	Aspects which have links to sustainability
roads	location; design; construction (methods, materials, use of recyclables); maintenance
waste management/solid waste handling/liquid and other waste	services (eg recycling), 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
street cleaning	methods (eg sweeping or washing), disposal of waste
planning and development control	policies directed to sustainability, policies for maintenance of natural and cultural heritage; integration of transport and landuse planning; urban design, development of pedestrian and cycle routes; car parking; extent and nature of urban consolidation; basis of landuse allocation (eg open space); DCPs; requirements for consent; conditions; encouragement of energy efficient housing (eg use of solar hot water) inspection procedures, fines and prosecutions; erosion and sediment control policies
transport planning/traffic management	energy efficient transport; priority bus lanes; public transport infrastructure; negotiating integration of services; LATMs; pedestrian and cycleways; accessibility
local environmental management	monitoring, reporting, management approaches (eg systematic, integrated across activities, involving stakeholders)
stormwater management	nature of stormwater; drainage infrastructure planning; construction and maintenance; catchment based planning and management

Core Council Responsibilities	Aspects which have links to sustainability
recreational facilities etc	site; type; design; construction and maintenance
rates and valuation	criteria for setting rates
libraries	information on sustainability and promotion important customer / citizen interaction point
social/community services	transport; catering arrangements (waste, packaging, food); information and advice; community development.
investments and property rentals	criteria for contracts and selection
energy consumption	choice of lighting; energy efficient equipment; fuels; use of greenpower
office equipment/furniture	sustainable materials eg plantation timbers, high efficiency equipment; purchase, disposal and maintenance
water usage	water management policy; patterns of use; sources; monitoring
purchasing	policy; choice of products, package handling, spoilage, quantity and quality control
pest management and weed control	methods and chemicals used
landscaping, open space	planning and maintenance location of open space (enhance remnant bushland, buffer to urban development); choice of plants (eg 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

s u s t a i n a b i l i t y

Guidelines for Decisionmakers

Volume 1 - Overview

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

how to use these guidelines

...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 (check out our website www.ssroc.org.au).

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 Sustainability Guidelines for Decisionmakers (volume 1) before granting consent to any application to which the policy applies. The Council may vary the provisions of Sustainability 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 (see our website www.ssroc.org.au).

...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 o n e

overview	1.1
how to use these guidelines	1.2
responsible town planning	1.5
energy efficiency	1.7
water conservation	1.8
waste minimisation	1.9
habitat protection	1.10
building materials	1.11
further reading	1.12
appendix A - ESD principles	1.13
appendix B - the ecological sustainability index	1.14

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.

e n e r g y e f f i c i e n c y

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 and 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.

h a b i t a t p r o t e c t i o n

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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Appendix A

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 B

Ecological Sustainability Index

SUTHERLAND SHIRE COUNCIL ECOLOGICAL SUSTAINABILITY INDEX FOR RESIDENTIAL DWELLING DESIGN

Sutherland Shire Council is committed to the principles of Ecologically Sustainable Development (ESD). The actions of the Council must aim to achieve an urban ecosystem that will support the needs of present and future generations. To realise these aims, resource (including water & air) preservation and conservation, habitat preservation and biodiversity maintenance must be achieved.

The aim of the Index is to reduce and optimise the impact that a dwelling has on the environment. In doing so the objectives of ecologically sustainable development should be achieved. The composite impact over many developments will lead to major improvements in environmental quality. The Index aims to provide flexibility in the way a developer “trades off” environmental disbenefits of a project against beneficial aspects of the proposal. However

The Ecological Sustainability Index (ESI) For Residential Dwelling Design has been developed in the Environmental Science Unit as a way of assessing and alleviating the impact of individual urban development on the environment. A similar approach has been adopted in NSW of late in relation to energy efficient housing. The emphasis has been to produce a house that is energy efficient and thus has less environmental impact through the use of energy resources. However that approach only involves one aspect of the environmental impact. The ESI aims to go beyond this single aspect approach to incorporate more areas of the environment into the design and assessment approach. The aim is to provide a more valuable assessment of the environmental impact of the individual dwelling, giving rise to an environmentally efficient house rather than just an energy efficient house.

It is proposed that the ESI be used:

- a) As a tool for use by designers/architects, in formulating proposals, thereby promoting environmentally sound and publicly acceptable building design.
- b) As an assessment tool to refine and standardise the assessment of building and development applications.

The ESI approach may also place a clearer responsibility on a building applicant or proponent to demonstrate effective environmental considerations in design.

The Sustainability Index considers the environmental impact of developments in four key areas:

- (i) Water
- (ii) Materials and Waste
- (iii) Ecosystem
- (iv) Energy Efficiency

A weighting system for each of these key areas is provided to rate the impact of the development and weigh that against environmental benefit that may accrue from ameliorative measures that have been employed for that dwelling.

Many of the desirable outcomes that should flow from the implementation of an ESI, will be outcomes that have been adopted in the Sutherland Shire Strategic Plan. This plan outlined the community's vision for the future of the Shire.

HOW TO COMPLETE THE ECOLOGICAL SUSTAINABILITY INDEX FOR RESIDENTIAL DWELLING DESIGN

The ESI is designed to use a simple spreadsheet to calculate the scores for each item referred to in the index. The spreadsheet comprises three columns. The first column indicates the item to be assessed by the ESI. The second column is where you enter the size or number of the items. The third and fourth columns indicate the weighting that is attached to that item, for a given unit size. The fifth column indicates the calculated index score for that particular item. All you need to do is enter your data into column two and the spreadsheet will do the rest.

Information on the impact of each of the parameters, and information to assist with the determination of scores, etc are included in the accompanying support information package.

COLUMN ONE: This indicates the ESI item that is being assessed. Information on the impacts of these items is included in the support information.

COLUMN TWO: This is the column you enter your data in. The Size/No column refers to the size of the index item or the number of these items in the development. These things fall into four basic categories. Examples of how to fill out the index for these are included below.

Size or area: An example of a size dependent item is item 1. *Rainwater Tank*. Here you enter the size of the tank in litres, in the example we have a 600L rainwater tank.

Area data is required for items such as item 6. *Building area footprint*. Here you enter the area of the building footprint in square metres, in the example 200 sq.m. Where you have more than one dwelling as part of the development, you enter the total for the development.

Per dwelling items: Some items require you to input the number of dwellings that possess that attribute. The maximum number you can record then corresponds to the number of dwellings. For example item 2. *All dual flush toilets*, if your dwelling possesses all dual flush toilets you enter one. If you have two toilets in your dwelling and one is dual flush and the other is not then you enter zero, as they must all be dual flush. Where you have two dwellings as part of your development, if both of them have all dual flush toilets you enter two.

Each: For these items you indicate one for each of the items present, irrespective of the number of dwellings. For example item 48. *Air conditioner*, if your dwelling has no air conditioner you record zero, if you have two air conditioners, you record two. If your dwelling is a dual occupancy and each has one air conditioner you indicate two.

Per unit items, ie trees: These are similar to the each items described above. Again these are for the total number of these items for that development, and are irrespective of the number of dwellings. For example item 25. *Tree removal*, five points are deducted for each tree (above 300 mm girth) that is removed on each development site, regardless of whether it is for a single dwelling of a multi-unit dwelling.

COLUMNS THREE & FOUR: These columns indicate the weighting or how many points you score or lose for each item. For the size and area type items, points are allocated on the basis of the weighting per unit. For example with item *1. Rainwater tanks*, one point is awarded for every 200 L of your water tank. Similar with item *9. Lot size*, where one point is deducted for every 50 square metres of your development lot. With the per dwelling and each items points are allocated for the number of items indicated. For example with item *10. Plantation timber frame* four points are awarded for each dwelling that has such a frame.

COLUMN FIVE: **Do not type anything into this column.** The computer calculates the 'total score' for this column from your response in column two. The 'total score' in this column indicates the score that has been achieved for the particular item, totals for that section, and at the end, the total score per dwelling for that development.

TOTAL NUMBER OF DWELLINGS: Item 50 requires you to indicate the total number of dwellings that you have in your development. In most instances this will be a single dwelling so you would enter 1 here. If your dwelling is a dual occupancy, you enter 2.

FINAL SCORE PER DWELLING: Calculate the 'Final score per dwelling' in Item 51 as instructed. A score of zero is the minimum acceptable score, with the greater the score the more sustainable the development, and the more negative the score the less sustainable the development.

Note: A positive score with the index does not necessarily mean that a development will be approved by council. Many factors such as the social, economic, visual, traffic and other impacts need to be considered, before the total development can be deemed to be acceptable. However a favourable score in the index may lead to a more positive assessment, as it demonstrates that sustainability has been considered in designing the proposal.

The Environmental Sustainability Index spreadsheet (in Microsoft Excel format) can be downloaded from the SSROC website at www.ssroc.nsw.gov.au

ENVIRONMENTAL SUSTAINABILITY INDEX

	Size/No	Score	per unit	Total Score
WATER				
1. Rainwater Tank		1	per 200L	
2. All Toilets Dual Flush		2	per dwelling	
3. Shower and Kitchen Taps Water Efficient Fittings		2	per dwelling	
4. Native Gardens or Bushland		1	per 20 sqm	
5. Pervious Car Wash Area		3	each	
6. Building Area Footprint		-1	per 20 sqm	
7. Additional Impervious Surface		-1	per 20 sqm	
8. Lawn Area		-1	per 50 sqm	
Total				
MATERIALS AND WASTE				
9. Lot Size		-1	per 50 sqm	
10. Plantation Timber Frame		4	per dwelling	
11. Recycling Area Provided		1	per dwelling	
12. Composting Area Provided		2	per dwelling	
13. Recycled Materials Used		3	per 1% total materials	
14. Aluminium Cladding		-4	per dwelling	
15. Metal frame		-1	per dwelling	
16. Weatherboard External		-2	per dwelling	
17. Building Floor Area		-1	per 20 sqm	
18. Rainforest Hardwoods Used		-3	per 1% total materials	
19. Insinkerators Installed		-5	each	
Total				
ECOSYSTEM				
20. Native Landscape Gardens		1	per 10 sqm	
21. Remnant Bushland Retained		2	per 10 sqm	
22. Remnant Bushland Removed		-4	per 10 sqm	
23. Cut and Fill		-1	per 20m cubed	
24. Tree Retention		2	per tree	
25. Tree Removal		-5	per tree	
Total				
ENERGY EFFICIENCY				
26. Solar Hot Water System		7	per dwelling	
27. Off Peak Hot Water		1	per dwelling	
28. Living Areas with Northern Orientation		1	per room	
29. Building Set Back on North Side, Greater than 10m		4	per dwelling	
30. Solar Eaves on North Side		2	per dwelling	
31. Mains Gas Connected		3	per dwelling	
32. Porta Gas Connected (per dwelling)		2	per dwelling	
33. Ceiling Insulated <R2.0 (per dwelling)		3	per dwelling	
34. Ceiling Insulated >R2.0		5	per dwelling	
35. Common Walls		2	per wall, floor & ceiling	
36. External Walls Brick or Insulated		4	per dwelling	
37. Concrete Floor Slab		5	per dwelling	
38. Tiled Slab North Side		2	per dwelling	
39. Outdoor Drying Areas		1	per dwelling, not south	
40. Minimum 2 Breeze Paths		2	per dwelling	
41. Roof light colour		2	per dwelling	
42. Roof dark colour		-1	per dwelling	
43. Deciduous Planting to North Side		1	per dwelling	
44. Evergreen Planting to East/West Side or Shading		1	per dwelling	
45. Living Areas able to be Sealed Off from Other Areas		2	per dwelling	
46. Greater than 50% of Windows on North Side		4	per dwelling	
47. Solid Fuel Stove		-5	each	
48. Air Conditioner		-2	each	
49. Greater than 50% of Windows on East/West Face		-5	per dwelling	
Total				
GRAND TOTAL				
50. Total Number of Dwellings:				
51. Final Score per Dwellings (<i>total score divided by total number of dwellings</i>)				

sustainability

Guidelines for Decisionmakers

Volume 2 - Operational Review

The aim of this document is to improve the overall sustainability of council operations. Legislation now says that council must consider sustainability principles in decision making, but more importantly, councils can lead the way by setting an example to industry or business in their area. To do this, these forms have been designed so that a council can get a snapshot of the sustainability of council operations and move towards addressing 'least sustainable' areas.

Steps to conducting the review...

1. Examine these guidelines carefully. Review the headings at the top of each page and rename according to the departmental structure of your organisation. Next, review the responsibilities of each department, arranging them according to your organisation.
2. Discuss with your GM and/or a senior management team exactly how the results of the review should be used and reported.
3. Arrange an appointment with the manager of the department to be reviewed and explain the purpose of the exercise. Ask them to set aside about 1 hour. It may also be necessary in the case of some departments to observe the actual operation as it is occurring.
4. Before beginning the review, explain what will happen to the results of the survey and who will see them. Make sure the manager signs at the top of the relevant page. Inform the manager that if they claim that a particular area is not the responsibility of their department you will be phoning that department during the interview for confirmation. (Alter who is responsible for each item beforehand - all councils will have a variation of some form or another.) Be sure to make a note of which items fall outside the range of every department and include the list in the final report.
5. Work your way through the list of initiatives, deciding if the department tends more to the 'more sustainable' or 'less sustainable' side of the page for each. Place a tick in the appropriate box. **IMPORTANT:** Only one box may be marked for each point and all decisions should be backed up by evidence. Be sure to keep notes of the evidence you sighted which led to your decision.
6. When finished, add up the scores for each side and write the score in the space provided.
7. Fill out the remainder of the form and tick whether the department as a whole tended toward the 'more sustainable' or 'less sustainable' side, depending on which score was the highest.

volume two

beach management	2.3
building maintenance	2.4
community services	2.5
contract specification	2.6
corporate services and public relations	2.7
council cars	2.8
design engineers	2.9
development and building control	2.10
environmental management	2.11
fleet management	2.12
health/rangers	2.13
human resources	2.14
kitchen/catering	2.15
landscaping and parks management	2.16
libraries	2.17
mechanical workshop	2.18
office workers	2.19
painters/sign shop	2.20
pest management and weed control	2.21
policy making	2.22
property	2.23
purchasing	2.24
senior management	2.25
sport and recreation	2.26
stormwater management	2.27
strategic planning	2.28
street cleaning services	2.29
tourism development	2.30
transport planning and infrastructure	2.31
waste education	2.32
waste management	2.33

beach management

more sustainable...

- Lifesavers have daily access to water quality information and inform public of water pollution conditions.
- Beach is raked only if there is a high level of litter.
- Foredune is vegetated and maintained. Beach access restricted to designated pathways.
- Recycling facilities are installed at convenient intervals.
- Kiosks attempt to buy food which comes with minimal packaging.
- Litter management is undertaken at special events such as surf carnivals.

✓ Score.....

less sustainable...

- No action is taken to warn swimmers of poor water quality.
- Beach is raked whether the high tide line contains litter or natural debris, causing the sand to loosen and be more likely to be blown away.
- Foredune has been flattened and no sand stabilisation is occurring.
- No facilities for recycling are available.
- No consideration given to amount of food packaging.
- No extra measures are taken for litter management at special events.

✗ Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that
it was true at that date.

Signed.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and
found it to be
 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

building maintenance

more sustainable...

- 7. Council buildings are solar-powered. Payback times range from 4-15 years, but the greenhouse savings are immediate.
- 8. Education programs advising staff about energy and water saving practices and benefits are conducted.
- 9. New council buildings required to be well-insulated. In order of importance: ceilings first, then walls, then floor.
- 10. New council buildings required to use natural passive ventilation and 'zoning' ducted air conditioning used to allow targeting of specific spaces.
- 11. Program exists for insulating older buildings to increase energy efficiency.
- 12. Roll cloth towels are installed in washrooms.
- 13. Passive energy options are used, eg. window tintings, manually operated louvres or blinds with a light-coloured backing are installed, pergolas with deciduous vines placed on the northern sides of buildings, verandahs or evergreen trees placed adjacent to western walls.
- 14. The office is refurbished only when necessary, such as around every ten years.
- 15. Council buildings are constructed out of sustainable materials such as brick or rammed earth and plantation timber.
- 16. Use energy efficient compact fluorescent globes and save around \$8 per year for each light (based on a use of 4 hours per day) globes and installing motion detectors for some areas such as stairwells.
- 17. Cleaners are directed not to use air fresheners or toilet water colorant.

✓ Score.....

Manager Statement

This is to certify that on /.... /....

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- Use of renewable energy to supply Council's power needs has not been investigated.
- No education programs are conducted.
- New Council buildings not required to be insulated.
- New Council buildings not required to make use of natural ventilation.
- No program for insulating older council buildings to increase their energy efficiency.
- Paper towels are used in washrooms.
- There has been no implementation of passive energy options to optimise temperature regulation.
- The office is refurbished when furniture is deemed to be outdated.
- Council buildings are constructed out of traditional materials with no requirement to consider sustainable materials.
- Use conventional globes. compact fluorescent globes and save around \$8 per year for each light (based on a use of 4 hours per day) globes and installing motion detectors for some areas such as stairwells.
- Cleaners use unnecessary chemicals such as air fresheners and toilet water colorant.

✗ Score.....

Reviewer Statement

This is to certify that on /.... /....

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

community services

more sustainable...

- 18. Access to relevant information, services and facilities is available for all members of the community regardless of physical ability or income.
- 19. Community meeting places for social interaction and information sharing are available for all groups in the local area.
- 20. Opportunities provided for volunteer work on social and environmental projects.
- 21. Community information provided in community languages.
- 22. Access to a community bus for community based organisations.
- 23. Community Information Service Directory available to community.
- 24. Promotional events organised for Seniors' Week, Youth Week and Children's' Week.
- 25. Partnerships developed with state/ federal government agencies and private enterprise to address community issues eg. safer communities.
- 26. Provision of environmental information at community facilities.

✓ Score.....

less sustainable...

- Access to some information and services is restricted for the physically impaired or those without the ability to pay.
- Community meeting places are not available.
- No opportunities provided for volunteer work on social and environmental projects.
- Community information not provided in community languages.
- No access to a community bus for community based organisations.
- No provision of a Community Information Service Booklet.
- Promotional events are organised for Seniors Week, Youth Week and Children's Week.
- No partnerships developed with state/federal government bodies and private enterprise to address community issues.
- No provision of environmental information at community facilities.

X Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that
it was true at that date.

Signed.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and
found it to be
 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

contract specification

more sustainable...

27. Your contractors are required to demonstrate their ESD awareness eg. by having an Environmental Management System.

✓ Score.....

less sustainable...

- Your contractors are not required to demonstrate their ESD awareness.

✗ Score.....

Manager Statement

This is to certify that on ... /... /...

I,,
provided the above information as requested and attest
that it was true at that date.

Signed.....

Reviewer Statement

This is to certify that on ... /... /...

I,, reviewed this department, and
found it to be
 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

corporate services & communications

more sustainable...

- 28. ESD principles are integrated into Council's Management Plan.
- 29. A kit is sent to new residents outlining procedures for accessing council services, public transport, and outlining responsible sustainability practices such as recycling, composting, protection of waterways, energy efficiency measures etc.
- 30. Electronic Council Business Papers are produced. Electronic record-keeping is encouraged.
- 31. An organisation-wide review has been undertaken to bring policies into line which require production of multiple paper hardcopies with paperless office practice.
- 32. Encouragement via awards or newspaper stories is given to members of the community who initiate sustainability innovations.
- 33. Environmental managers are given training in budgeting and reporting procedures.
- 34. Letters in local papers criticising Council for a sustainable practice are responded to in a spirit of community education.
- 35. Program in place to remediate old Council landfill sites.
- 36. All letters, information brochures and promotional material printed on at least 50% recycled paper.
- 37. A car-pooling system has been set up to discourage unnecessary car use to/from work.
- 38. Community events planned with waste reduction and pollution prevention considered.

✓ Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- ESD principles are not integrated into Council's Management Plan
- New residents are uninformed about council services, public transport, and responsible sustainability practices. No information is available to migrants who may have practiced an environmental ethic in their country of origin which is unsuitable here.
- Hard copy business papers are produced. Electronic record-keeping not encouraged.
- No organisation-wide review has been undertaken of policies requiring production of multiple paper hardcopies.
- No encouragement is offered to members of the community who initiate sustainability innovations. Therefore nobody else becomes aware of new ways of sustainability implementation.
- Environmental managers are not given training in budgeting and reporting procedures.
- Letters in local papers criticising Council for a sustainable practice remain unanswered, with a valuable education opportunity missed.
- No program in place for remediation of Council landfill sites, exposing Council to risk of prosecution.
- Recycled paper not used for letters and other Council information brochures.
- No car-pooling system for trips to/from work.
- Waste reduction and pollution prevention not considered in the planning of community events.

✗ Score.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

council cars

Personal sustainability checklist only

more sustainable...

- 39. You book the car into the workshop immediately when problems arise.
- 40. You have never caused an accident in a council vehicle.
- 41. You generally endeavour to drive smoothly and in so doing optimise fuel consumption.
- 42. You keep the car regularly maintained.
- 43. You remove roof racks from the car when they are not necessary.
- 44. You keep as few items in the boot as possible.
- 45. You regularly give your council colleagues lifts to/from work, saving them making a separate trip.
- 46. You arrange joint inspections with your council colleagues whenever possible.
- 47. You wash your car from a bucket on a grassed area or take it to a carwash which recycles its water.

✓ Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- You often ignore car problems and put off going to the workshop.
- You have had several prangs. These cost money and downtime, necessitating the use of another vehicle in the meantime, and use resources for repairs.
- You generally drive using rapid acceleration and jerky stopping. Such driving increases fuel consumption and excessive wear & tear, particularly on brakes and tyres.
- You do not keep the car regularly maintained. Having the incorrect tyre pressure uses extra fuel, increases tyre wear, and is unsafe. Other general maintenance problems which cause unnecessary fuel consumption include clogged air filters (these can increase fuel consumption by 20%), dragging brakes, incorrect wheel alignment.
- You leave roof racks attached for long periods of no use (eg you only use them to go to the snow! -(this can increase fuel consumption by up to 10% due to greater drag!).
- Your boot is often used as a cupboard (where are your golf clubs right now?) - every extra 50 kilos decreases petrol economy by 1%.
- You wash your car with a hose in the driveway and allow the water and suds to flow into the gutter.
- You do not bother to arrange joint inspections or check whether colleagues require transport to the same site.
- You wash your car from a bucket on the lawn or take it to a carwash which recycles its water.

✗ Score.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

design engineers

more sustainable...

48. 100% of road base used is from recycled material.

✓ Score.....

less sustainable...

Road base is not from recycled material.

✗ Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that
it was true at that date.

Signed.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and
found it to be
 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

development and building control

more sustainable...

- 49. Every application is checked for proximity to habitat for endangered species and applications in these areas are referred to officers with appropriate expertise.
- 50. Conditions for soil and water management (erosion and sediment control) are applied to each development approval.
- 51. Conditions for soil and water management are generally well-enforced.
- 52. Cumulative environmental impacts of decisions, such as the annual area of land cleared or no. of trees removed, are recorded.
- 53. The environmental impact of the dwelling is required to be neutralised by various sustainability measures eg. the Ecological Sustainability Index. (see *ESD Guidelines for Decisionmakers Vol 1*).
- 54. No dwelling is approved unless a pervious car wash area is provided.
- 55. At least some living areas are required to be oriented north to maximise solar access (where surroundings allow). Insulation of the appropriate R factor is required for ceilings and walls in all new development.
- 56. Plans, specifications and conditions for ESD compliance are checked at final sign off.
- 57. An elevated slab or insulated elevated floor is required for all new dwellings to encourage energy efficiency and to allow tree root growth and stormwater infiltration.
- 58. The Contaminated Land Policy has been adopted and is being implemented.
- 59. Applications for new dwellings require water-efficiency measures to be incorporated eg AAA-rated appliances, dual-flush toilets and rainwater tanks.

✓ Score.....

Manager Statement

This is to certify that on /... /....

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- Applications are not checked for proximity to habitats for endangered species. New developments can endanger habitats.
- No conditions (or poor conditions) for soil and water management are applied to development approvals. No enforcement of the Clean Waters Act takes place.
- Little enforcement of DA conditions for soil and water management takes place.
- Cumulative environmental impacts of decisions are not recorded.
- The environmental impact of the dwelling is largely unknown and is not required to be ameliorated.
- Dwellings are approved without the requirement for a pervious car wash area.
- There is no requirement for living areas to be oriented north. Insulation of the appropriate R factor is not required for ceilings and walls in all new development. New dwellings continue to be built which attract unnecessary heating and cooling costs.
- No mechanism in place for checking ESD compliance.
- Slab floors are allowed to be placed directly on the ground where they disturb tree growth, or require damaging cut and fill. Piered flooring is allowed without insulation.
- The Contaminated Land Policy has not yet been adopted by council.
- New dwellings continue to be built which consume unnecessary water resources.

✗ Score.....

Reviewer Statement

This is to certify that on /... /....

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

environmental management

more sustainable...

- 60. An Environmental Management System (EMS) or equivalent is being introduced to all departments of council.
- 61. State of the Environment Report is linked with the Management Plan and budget.
- 62. Regular environmental audits are carried out on council operations.
- 63. Program in place for monitoring air quality.
- 64. Program in place for monitoring water quality
- 65. Areas of remnant native vegetation and habitat of endangered species are mapped and made available to Development Control staff
- 66. A system is in place to ensure referral of relevant DAs to an officer with appropriate expertise for comment.
- 67. A system is in place for the environmental management section's early participation in strategic planning decisions and review of DCPs and codes.
- 68. Sustainability indicators or similar tools have been developed for all areas of council operation and are reported upon in the council State of the Environment Report.
- 69. Work in partnership with human resources to provide appropriate environmental training for council staff.
- 70. An ongoing public awareness campaign is in place to ensure that the community is informed about ESD and the initiatives which council is implementing to move towards achieving it.
- 71. Residents are regularly given tips on lifestyle changes which can contribute to sustainability via council newsletters, reports and newspaper articles.

✓ Score.....

Manager Statement

This is to certify that on /.... /....

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- No EMS has been attempted.
- There is no linking of State of the Environment reports with Management Plans and budget.
- No regular environmental audits are conducted on council operation.
- No program is in place for monitoring the air quality of the local government area.
- No program is in place for monitoring the water quality of the local government area.
- Maps are not available of existing vegetation areas and habitats of endangered species.
- No system in place for referral of relevant DAs to the environmental department.
- No system is in place for the environmental management section's early participation in strategic planning decisions and review of DCPs and codes.
- Sustainability indicators or similar tools have not been developed.
- No attempt made to assess need for environmental management training for staff.
- The degree of public awareness about ESD is unknown. Any ESD initiatives undertaken by council are without community support or understanding.
- Residents are unaware of lifestyle changes which can contribute to sustainability.

✗ Score.....

Reviewer Statement

This is to certify that on /.... /....

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

fleet management

more sustainable...

- 72. 4 cylinder vehicles are offered in the fleet.
- 73. Driver education programs, such as Fleetsafe, which promote vehicle care and safe and efficient driving practice offered to staff.
- 74. Regular vehicle maintenance is carried out. The vehicle is tuned and serviced at least twice per year.
- 75. Having a car pooling system for staff to journey to work, with car spaces set aside for car poolers in the council car park.
- 76. Offering gas-powered or dual-fuel vehicles in the fleet.
- 77. Alternative fuels are used for heavy vehicles.

✓ Score.....

less sustainable...

- Only 6 cylinder vehicles are offered in the fleet - they may get a better return at disposal, but 4 cylinder cars have a variety of other advantages which are not often considered:
 - they are far more fuel efficient
 - they can park in smaller spaces and so cut down on driving to find parking
 - they do not tempt people to use the boot as storage space and hence use less fuel
 - cheaper insurance
- No education programs in place.
- Vehicle maintenance is not carried out on a regular basis.
- Car pooling system for journey to work trips is not in place.
- Only petrol cars are offered in the fleet.
- Only diesel vehicles used.

✗ Score.....

Manager Statement

This is to certify that on ... /... /...

I,,
provided the above information as requested and attest
that it was true at that date.

Signed.....

Reviewer Statement

This is to certify that on ... /... /...

I,, reviewed this department, and
found it to be
 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

health / rangers

more sustainable...

- 78. Industry audits/reviews undertaken on a sub-catchment basis.
- 79. Proactive environmental education programs conducted.
- 80. The law is enforced with environmental protection fines are issued where appropriate.
- 81. Stray companion animals are proactively and regularly removed from public places

✓ Score.....

less sustainable...

- No audits of industry undertaken.
- No proactive environmental education initiatives.
- Environmental offenders are not pursued.
- No program for removal of stray companion animals from public places, allowing them to continue to prey on native wildlife.

✗ Score.....

Manager Statement

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Signed.....

Reviewer Statement

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 more sustainable less sustainable, due to practice
in the areas shown above.

Signed.....

human resources

more sustainable...

- 82. Adherence to 'responsible environmental management' is incorporated in job descriptions. Performance is measured against this (possibly by using these guidelines).
- 83. Alternatives to vehicles, such as public transport travel passes or other benefits, are offered in salary packages.
- 84. Rewards are given to staff who undertake major environmental initiatives relevant to work practices.
- 85. Environmental policies are outlined in orientation handouts.
- 86. A car pooling system is established for workers coming to and from the workplace and spaces are set aside in council car parks for private car pool vehicles.
- 87. Change rooms with showers and storage facilities for bikes is provided so that riding/jogging to work is encouraged.
- 88. Working from home is encouraged for appropriate staff.
- 89. Environmental education conducted for appropriate council staff in the areas of
 - soil & water management
 - green purchasing
 - energy efficiency in building design
 - contaminated land
 - how to ensure that development does not reduce the biodiversity

✓ Score.....

less sustainable...

- 'Responsible environmental management' is not incorporated in job descriptions. Environmental performance is not taken into account at performance reviews.
- No alternatives to vehicles are offered in salary packages.
- There is no recognition for environmental initiatives undertaken by staff.
- No environmental policies outlined in orientation handouts.
- No car pooling system is established for workers coming to and from the workplace and no spaces are set aside in council car parks for private car pool vehicles.
- Change rooms with showers and storage facilities for bikes are not provided.
- Working from home is discouraged, even for staff who do not require to be in the workplace every day.
- Council staff in the following areas have not been given the training necessary to carry out their work in an environmentally responsible manner.
 - soil & water management
 - green purchasing
 - energy efficiency in building design
 - contaminated land
 - how to ensure that development does not reduce the biodiversity

✗ Score.....

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kitchen / catering

more sustainable...

- 90. Microwave ovens are used - they use a quarter the energy of conventional ovens. Or gas ovens are used - they generate up to 70% less carbon dioxide than using traditional ovens.
- 91. Unrepairable fridges sent to a CFC recycler.
- 92. Vegetable wastes placed into the worm farm installed near the kitchen.
- 93. Adequate recycling receptacles provided and used.
- 94. Fridge and freezer positioned away from oven and not in direct sunlight.

- 95. Hot water systems turned off overnight.
- 96. Toaster used rather than the grill.
- 97. Dishwasher used only when full and contents are left to air dry.
- 98. Only products with very little packaging are used.
- 99. Dishwashers: AAA-rated for water efficiency. If machine purchased prior to AAA ratings then it has water-saving capabilities.

✓ Score.....

less sustainable...

- Only a traditional electricity generated oven is provided.

- Unrepairable fridges are sent straight to the tip.
- No worm farm provided for council kitchen vegetable waste scraps.
- Cans, tins, jars, bottles and paper not disposed of separately in recycling receptacles.
- Positioning a fridge or freezer near an oven or where it catches a lot of sun, and fridge temperature set low to compensate. An unnecessary degree can increase energy use by 5%.
- Hot water systems not turned off overnight.
- Grill rather than a toaster is often used, even for small quantities..
- Dishwasher is frequently run when only half full and the drying cycle is used.
- A lot of packaging is discarded in the bin.

- Dishwasher is not water efficient.

✗ Score.....

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landscaping & parks management

more sustainable...

- 100. There is a requirement to choose plants for public spaces/gardens indigenous to the area. The aesthetic trying to be achieved for a public place is synonymous with the natural ecology of the area.
- 101. Wherever there is opportunity, vegetation communities are planted rather than single trees.
- 102. Program in place to convert watering of public gardens and ovals with recycled water or stormwater through drip systems. There are measures in place to ensure gardens are not over-watered.
- 103. There is a design requirement for water features doubling as detention basins to be incorporated into public spaces/gardens where appropriate. This encourages frogs and a variety of other small wildlife as well as encouraging stormwater infiltration.
- 104. A seed bank has been established, providing plants which have been propagated from locally indigenous seed.
- 105. There is a program in place to create vegetation buffers around waterways.
- 106. Council is implementing specific area Plans of Management for open space.
- 107. Tree preservation officers require native trees to be planted in place of any removed and make follow up visits to ensure their continued care.
- 108. Mulch is always used to cover bare soil or gardens to avoid moisture loss and erosion.

✓ Score.....

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less sustainable...

- Exotics (with a higher water demand) are used extensively. The particular aesthetic which is trying to be achieved is at odds with the natural ecology, creating a situation where aesthetic values take precedence over the potential to enhance the ecological value.
- Single trees or pots are used in situations where where vegetation communities could be established.
- Public gardens are watered with fresh (and expensive) water through sprinkler systems. Watering occurs due to a roster and not necessarily because it is required.
- There is no requirement to consider water features or detention basins in design of public spaces/gardens. Thus the opportunity is lost to encourage frogs and other small wildlife and to facilitate infiltration.
- There is no established seedbank or means of providing plants propagated from locally indigenous seed.
- There is no program in place to create vegetation buffers around waterways.
- Council does not have specific area Plans of Management for open space.
- Tree preservation officers do not make follow up visits to ensure continued care of trees planted in place of ones removed.
- Soil in garden is often left bare, which can cause 70% of water to evaporate.

✗ Score.....

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Signed.....

libraries

more sustainable...

- 109. Web page and notice board display information on local environmental issues and organisations information and courses.
- 110. Provision of information resources on sustainable living.
- 111. Daily periodicals are available.
- 112. Covering of selected books with plastic covering protection.
- 113. Provision of a fireproof library book return chute.
- 114. Have promotional events for Earth Week, Water Week and on World Environment Day to teach the community about sustainability.
- 115. Accessible to all members of the community through sensitive site design.
- 116. Accessible to the housebound through provision of mobile library services.
- 117. Electronic information services provided for access to off-site information.
- 118. Provision of idea exchange opportunities, such as topical discussion groups.
- 119. Unwanted books are resold or given to charity.

✓ Score.....

less sustainable...

- No web page and notice board display information on local environmental issues and organisations information and courses.
- No provision of information resources on sustainable living.
- Daily periodicals are not provided.
- Books are not given plastic covering protection.
- Library book return chute is not within a fireproof box.
- Promotional events are not organised for Earth Week, Water Week and on World Environment Day to teach the community about sustainability.
- Site is difficult for physically disabled people to access.
- No provision of mobile library services for aged, disabled and housebound.
- No electronic information services provided for access to off-site information.
- No provision of idea exchange opportunities.
- Unwanted books are thrown away.

✗ Score.....

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mechanical workshops

more sustainable...

- 120. There is a strategy in place for minimization of waste from the mechanical repairs.
- 121. A program to collect and recycle waste oils from the workshop is in place.
- 122. A program is in place that minimizes the production of air emissions to the atmosphere through minimal engine running & tuning times.
- 123. Emergency Response equipment supplied for the clean up of all types of spills within the workshop.
- 124. Information provided and staff trained in the appropriate disposal methods for all waste and waste products in workshop operations.
- 125. Training has been undertaken for all staff in regards to proper Environmental practices in regards to Safe work methods, Checklists, Emergency Response procedures and OH&S procedures.
- 126. Regular Maintenance programs are carried out in accordance with Manufacturers specification for servicing.
- 127. Document system is in place to alert workshop staff that vehicles and machinery hours are due for servicing.
- 128. Appropriate Noise control equipment is worn in regards to machinery testing and servicing.
- 129. Routine Roster and Maintenance program is undertaken for all equipment within the workshop and wash bay area.
- 130. Environmental Management System has been set up for all of the Workshop Operations.
- 131. Workshop can contains all spills and any cleaning within the work area and able to treat the bi products via an oil separator system and a like.
- 132. Have a program in place that minimizes the production of air emissions to the atmosphere through minimal spraying and odours.

✓ Score.....

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less sustainable...

- No waste minimization strategy is used for waste within the mechanical workshop.
- No program to collect and recycle waste oils from the workshop.
- No program in place that minimizes the production of air emissions to the atmosphere through minimal engine running and tuning times.
- No or limited Emergency Response equipment supplied for the clean up of all types of spills within the workshop.
- Information not provided or staff trained in the appropriate methods of disposal of all waste and waste products in regards to workshop operations.
- No Training has been undertaken for all staff in regards to proper Environmental practices in regards to Safe work methods, Checklists, Emergency Response procedures and OH&S procedures.
- No system in place for Regular Maintenance programs to be carried out or checked that they are in accordance with Manufacturers specification for servicing.
- No documentation or system in place to alert workshop staff that vehicles are due for servicing and machinery hours are due for servicing.
- Limited or no appropriate Noise control equipment worn in regards to machinery testing and servicing.
- There is no routine roster and/or maintenance program for undertaking servicing or checking of equipment within the workshop and wash bay area.
- No Environmental Management System has been set up for all of the Workshop Operations.
- Workshop does not or cannot contain all spills and the cleaning of the workshop cannot be contained within the workshop area.
- The by products of any cleaning cannot be treated using an oil separator system and a like.

X Score.....

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 more sustainable less sustainable, due to practice in the areas shown above.

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officers workers

This section should be audited before staff arrive in the morning and observations made immediately after lunch.

more sustainable...

- 133. Water boiler routinely switched off overnight.
- 134. Unnecessary lights are switched off.
- 135. Cans and bottles are absent from office garbage bins.
- 136. All computers, monitors, printers and photocopiers are switched off overnight.
- 137. Photocopier is in energy saver mode.
- 138. Paper is being recycled/reused.

✓ Score.....

less sustainable...

- Water boiler not switched off overnight.
- Unnecessary lights are on.
- Cans and bottles are in garbage bins.
- Computers, monitors, printers and photocopiers are generally not switched off overnight.
- Photocopier not in energy saver mode (obviously NA if this facility doesn't exist).
- Paper is not being recycled/reused.

✗ Score.....

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painters / sign shop

more sustainable...

- 139. Strategy in place for minimization of waste from the painters/signshop.
- 140. Program in place to collect and recycle waste turpentines, paints, thinners from the shop.
- 141. Program in place to minimise the production of air emissions to the atmosphere through minimal spraying and odours.
- 142. Emergency Response equipment supplied for the clean up of all types of spills within the Shop.
- 143. Information provided and staff trained in the appropriate methods of disposal of all waste and waste products in regards to workshop operations.
- 144. Training has been undertaken for all staff in regards to proper Environmental practices in regards to Safe work methods, Checklists, Emergency Response procedures and OH&S procedures.
- 145. MSDS Documentation Systems is supplied within the shop.
- 146. Environmental Management System has been set up for all of the Shop Operations.
- 147. Shop can contain all spills and any cleaning within the work area.
- 148. Regular Maintenance and checking of filters and equipment.

✓ Score.....

less sustainable...

- No strategy for minimization of waste from the painters/signshop.
- No program to collect and recycle waste turpentines, paints, thinners from the shop.
- No program to minimize the production of air emissions to the atmosphere through minimal spraying and odours.
- No Emergency Response equipment supplied for the clean up of all types of spills within the Shop.
- Limited or No Information provided and staff trained in regards to appropriate methods of disposal of all waste and waste products in regards to workshop operations.
- No Training has been undertaken for all staff in regards to proper Environmental practices in regards to Safe work methods, Checklists, Emergency Response procedures and OH&S procedures.
- No MSDS Documentation Systems is supplied within the shop.
- No Environmental Management System has been set up for all of the Shop Operations.
- No provisions for the Paint Shop to contain all spills and any cleaning within the Shop area.
- No regular maintenance and checking of filters and equipment.

✗ Score.....

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pest management

more sustainable...

- 149. There is a program for weed and pest reduction. It is evident that the program keeps weeds and pests in check.
- 150. Operators are trained in appropriate use of weed and pest control products to ensure that correct concentrations are used and so that spraying near waterways is avoided.
- 151. Natural remedies are employed to achieve control of pests and weeds so that pesticides and strong chemicals are avoided.
- 152. A program is in place for investigation of use of alternative methods (such as natural predators) for elimination of pests.
- 153. There is regular maintenance of vegetated areas to ensure weeds are kept to an absolute minimum.

✓ Score.....

less sustainable...

- Weeds and pests are present in large numbers.
- It is not known whether operators over-spray. Some operators have no qualifications in application of the products they use. Spraying is carried out near waterways.
- Harmful pesticides and herbicides, which runoff via stormwater into waterways, continue to be used.
- No alternative methods for elimination of pests explored.
- No maintenance of vegetated sites.

✗ Score.....

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policy making

more sustainable...

Policies are in place for both internal operations and the community which cover:

- 154. energy efficiency in both new and existing buildings
- 155. waste reduction, reuse and recycling for council, residences and businesses
- 156. integrated transport provision
- 157. information provision to all language groups
- 158. biodiversity conservation
- 159. catchment management
- 160. access for all people
- 161. water conservation
- 162. air quality
- 163. erosion and sediment control
- 164. reduction in footpath clutter, enabling easier disabled access and cleaning
- 165. environmentally responsible purchasing
- 166. contaminated land

✓ Score.....

less sustainable...

No policies are in place for both internal operation and the community which cover:

- energy efficiency in both new and existing buildings
- waste reduction, reuse and recycling for council, residences and businesses
- integrated transport provision
- information provision to ethnic groups
- biodiversity conservation
- catchment management
- access for the physically impaired
- water conservation
- air quality
- erosion and sediment control
- reduction in footpath clutter, enabling easier disabled access and cleaning
- environmentally responsible purchasing
- contaminated land

✗ Score.....

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property

more sustainable...

- 167. Active program for purchase of identified Green Web sites.
- 168. No further clearing of bushland.
- 169. Energy, water and waste audits regularly conducted on all council-owned property.
- 170. Council buys a certain amount of 'green power'.
- 171. Solar energy is used for all council facilities. Passive solar design incorporated into all new buildings.
- 172. Secure bike racks are installed at all council buildings to encourage non-motorised transport.

✓ Score.....

less sustainable...

- No program for purchase of identified Green Web sites.
- Bushland continues to be cleared instead of providing facilities on previously cleared sites.
- Energy, water and waste audits not conducted on council-owned property.
- Council does not purchase 'green power'.
- Council uses electricity for all its power needs. No consideration given to passive solar design.
- No bike racks are installed in council buildings.

✗ Score.....

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purchasing

more sustainable...

- 173. The purchasing policy gives consideration to the environmental impacts of products purchased by Council, including ability for recycling or reuse and level and type of packaging. The policy has an environmental checklist which must be satisfied before purchase.
- 174. Office equipment (computers, monitors, printers, fax machines, photocopiers) required to have an energy star rating of 3 or more and have the ability to revert to 'sleep' mode if left on when not in use.
- 175. All photocopiers purchased or leased have the ability to make automatic double-sided copies. All faxes, printers and photocopiers have the capacity to use recycled paper.
- 176. Where possible, products purchased are made from renewable resources, eg. desks made from recycled or plantation timbers.
- 177. Old furniture and materials created during refurbishment are either reused by council, or space donated to charity or sold.
- 178. Before an item is purchased, there is a requirement to question whether the item is in fact required.
- 179. All office memo pads used are those made out of recycled office paper.
- 180. Extra weighting is given to local producers as this reduces transportation energy used.

✓ Score.....

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less sustainable...

- The ability for recycling or reuse, embodied energy, biodegradability, toxicity, residual product life, ultimate disposal of end product (buying single-use throw away items is not good) and level of packaging are not considered when purchasing.
- Office equipment not required to have an energy star rating of 3 or more or the capacity for 'sleep' mode.
- All photocopiers purchased or leased are not capable of automatic double-sided copies. All faxes, printers and photocopiers are not capable of using recycled paper.
- Resource renewability is not considered when purchasing items. Products made from non-renewable resources, such as hardwood timber, continue to be purchased.
- Old furniture and other materials are discarded during refurbishment.
- Items reordered without analysing why there is a need to reorder with such frequency or even order the product at all.
- New memo pads made from fresh non-recycled paper continue to be purchased.
- No attempt is made to buy local Australian products as a priority.

✗ Score.....

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senior management

more sustainable...

- 181. Budget and Management Plan address key issues identified in the State of the Environment Report.
- 182. Senior Management have initiated sustainability training for managers and staff.
- 183. Initiate employee incentive schemes specifically for suggestions for sustainable work practices.
- 184. Support programs to reduce greenhouse gas emissions.
- 185. Ensure an EMS (Environmental Management System) or equivalent is in place in the organisation to ensure that environmental policy is being implemented including compliance with environmental legislation.
- 186. Council is implementing Local Agenda 21.

✓ Score.....

less sustainable...

- Budget and Management Plan bear no reference to the State of the Environment Report.
- Senior Management have not initiated sustainability training for managers and staff although CCT and other training has been offered.
- There are no employee incentive schemes for initiating sustainable work practices.
- Support programs to reduce greenhouse gas emissions.
- Ensure an EMS (Environmental Management System) or equivalent is in place in the organisation to ensure that environmental policy is being implemented including compliance with environmental legislation.
- Council is implementing Local Agenda 21.

✗ Score.....

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sport and recreation

more sustainable...

- 187. Flood lights are used at ovals only when the field is in use.
- 188. Sports facilities incorporate the sustainable design principles outlined in Volume 1.
- 189. Facilities make use of solar-powered lighting or purchase 'green power' to offset the environmental impact of electricity use.
- 190. Programs are in place to convert facilities to be 'accessible' for physically impaired people.
- 191. Use of natural lighting in change rooms and other indoor areas is a design requirement of all new sports facilities.
- 192. AAA-rated water efficient devices and recycling facilities are installed in all new facilities. These devices are required to be installed upon upgrade of facilities.
- 193. Program in place to convert to use of recycled water for watering ovals and gardens and toilet flushing.
- 194. There is provision for under -used car parks, rooftops or vacant lots to be used as skateboard facilities.
- 195. Kitchen waste and litter is always collected immediately after events.
- 196. Adequate recycling facilities provided for cans, bottles, plastics, greenwaste.
- 197. Shade trees are provided for spectators at ovals.

✓ Score.....

less sustainable...

- Flood lights used on ovals when field not in use.
- Sports facilities do not incorporate sustainable decision principles.
- Facilities use electric lighting produced by the burning of coal (a non-renewable resource which produces large amounts of the greenhouse gas CO₂ upon combustion).
- No program to ensure that facilities are accessible for people who are physically impaired.
- There is no requirement for facilities to be designed to make use of natural lighting instead of electric lighting.
- AAA-rated water efficient devices and recycling facilities are not installed in new facilities.
- Expensive fresh water is used for watering ovals and gardens and toilet flushing.
- There is no provision for under -used car parks rooftops or vacant lots to be used as skateboard facilities. Few facilities are provided for youth.
- Kitchen waste and litter is not always collected immediately after events.
- Recycling facilities not provided.
- Spectators at ovals stand out in the sun as no shade is provided.

✗ Score.....

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stormwater management

more sustainable...

198. Ecologically sensitive areas are identified and protected from engineered stormwater flows.
199. Consultation occurs with relevant catchment stakeholders. These may include other councils, Catchment Management Committees/Trusts, and residents of the catchment (particularly a street if kerb and guttering is to take place).
200. Effective stormwater management is integrated into all areas of council, including areas responsible for maintenance, construction, infrastructure planning, drainage design, environmental services, development services, parks and reserves and strategic planning.
201. Design of gully pits includes access for water sampling.
202. Trash racks and GPTs are regularly cleaned and rubbish removed.
203. Community awareness programs (eg drain stencilling) are undertaken.

✓ Score.....

less sustainable...

- Ecologically sensitive areas are not identified, let alone protected from engineered stormwater flows.
- Council does not consult with stakeholders or conduct environmental assessment before commencing works (such as kerb and guttering).
- Effective stormwater management not integrated into all areas of council.
- Design of gully pits does not take water sampling access into account.
- There is no program for regular maintenance of trash racks and GPTs.
- Community awareness program not undertaken.

✗ Score.....

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strategic planning

more sustainable...

- 204. A zoning review has been undertaken to ensure that zoning is appropriate to the environmental sensitivity of the land.
- 205. There is a requirement to ensure that strategic transport planning is undertaken in relation to any new plan to ensure provision for adequate public transport infrastructure.
- 206. All Plans take ESD into account, eg. allowance of building forms conducive to energy efficient design, water conservation and retention of deep soil planting, plus all points under Development and Building Control.
- 207. There are planning incentives for industries which close the production loop by using the waste from nearby producers as raw material. Cleaner production is encouraged through planning incentives. There are also incentives for employment provision for the local workforce.
- 208. High-density housing is only allowed in areas which are serviced by public transport and other important services such as schools and shops.
- 209. There are planning incentives to encourage 'adaptable' housing provision for a variety of requirements and budgets.
- 210. 'Conservation zones' are created where vegetation or development needs protection.
- 211. There are incentives to encourage 'mixed use' or 'corner shop' type development, where residents have access to a variety of services without having to travel far.

✓ Score.....

Manager Statement

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less sustainable...

- Zoning still exists which does not take the environmental sensitivity of the land into account.
- Strategic transport planning is not undertaken during formulation of new plans. There has been no attempt to reduce the 'vehicle kilometres travelled' generated by the developments within the plan.
- Plans do not take ESD into account. There are no provisions for building forms conducive to energy efficient design, water conservation or retention of deep soil planting.
- There are no established planning incentives for cleaner production. There are no incentives for local industry to match the local workforce. Industry and commerce is allowed that does not meet community needs and doesn't provide local employment.
- Increased densities, including dual occupancies, are allowed to proliferate in areas poorly served or unable to be served by public transport.
- There are no strategies to encourage provision of affordable housing or a range of housing choice.
- There are no 'conservation zones' to protect significant vegetation or historic places.
- There are no established incentives to encourage 'mixed use' or 'corner shop' development. Residents must travel distances to access regular services.

X Score.....

Reviewer Statement

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 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

street cleaning service

more sustainable...

- 212. Use of materials for footpaths which are made from recycled material and do not require frequent cleaning.
- 213. Adequate provision of lidded rubbish bins for putrescible, recycling and green waste, emptied before full.
- 214. Streets and pits are cleaned through sweeping/suction.
- 215. If plant and equipment are not available when required, there is a sharing agreement in place with adjoining councils.
- 216. Gross pollutant traps cleaned when necessary (ie more frequent clearing in stormy weather).

✓ Score.....

less sustainable...

- Use of materials for footpaths which are not made from recycled material and require frequent cleaning.
- Inadequate provision of lidded rubbish bins for putrescible, recycling and green waste, and sometimes not emptied until rubbish overflowing.
- Water washing of streets and footpaths is carried out.
- When plant and equipment are not available to do a job, no effort is made to share the equipment of adjoining councils.
- Material left to build up in gross pollutant trap at risk of causing flooding.

✗ Score.....

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tourism development

more sustainable...

- 217. Guidelines ensure that ecological integrity of sensitive areas is never compromised, but rather, protected and enhanced by tourism initiatives. Endangered habitats and species are properly protected from tourists.
- 218. Tourist numbers and frequency is strictly limited in ecologically sensitive areas.
- 219. Tourism brochures are printed on recycled paper.
- 220. Tourism brochures provide enough information to allow people to access the attractions using public transport.
- 221. Ensure that to qualify as a 'tourist zone', adequate recycling bins must be provided and the site must be accessible by public transport.
- 222. There is a requirement to ensure that walkways and other tourist infrastructure is sensitively designed, eg. using duckboard for beach access.
- 223. There is a requirement that tourist operators are trained in sustainable practice.
- 224. Backpacker accommodation is provided in or nearby 'tourist zones' as it is recognised that these tourists inject the highest amount of revenue into the local community.

✓ Score.....

Manager Statement

This is to certify that on ... /... /...

I,,
provided the above information as requested and attest that it was true at that date.

Signed.....

less sustainable...

- There are no guidelines to ensure protection of sensitive areas. The ecology is not protected from unscrupulous operators. Endangered habitats and species are made even more vulnerable due to overeager tourists.
- Number and frequency of tourist visits to sensitive areas are not known.
- Tourism brochures are not printed on recycled paper.
- Tourism brochures do not provide information about public transport, assuming that tourists will arrive by vehicle, which only encourages vehicle use.
- There are no requirements to ensure that 'tourist zones' have sustainability measures such as recycling bins and public transport access.
- There is no requirement to ensure that walkways and other tourist infrastructure is sensitively designed.
- There are no requirements for tourist operators to be trained in sustainable practice.
- Backpacker accommodation is not encouraged near 'tourist zones'. A great amount of tourist revenue is therefore lost to the local business community.

✗ Score.....

Reviewer Statement

This is to certify that on ... /... /...

I,, reviewed this department, and found it to be
 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

transport planning

more sustainable...

- 225. Developers encouraged to provide public transport infrastructure in lieu of parking spaces, eg. bus shelters, timetable displays, information brochures.
- 226. There is a program for provision of bus shelters and timetable displays at popular stops.
- 227. New subdivisions and new high density development designed with all residences within 300 metres of bus stops or train stations, and buses service the area as soon as the first occupants move in.
- 228. Secure facilities provided for bicycles and skateboards at major trip-generating venues, particularly youth centres.
- 229. Convenient access for walkers is provided across busy thoroughfares. Permeability of the streetscape is a design requirement.
- 230. Bicycles and skateboards encouraged as a legitimate form of transport.
- 231. Entrances to public transport nodes, particularly train stations, required to be delineated by large displays, clearly visible from all approaches to both walkers and vehicles.
- 232. Bus priority signals are in place at appropriate intersections (chosen through consultation with bus companies).
- 233. 1 out of 3 lanes are provided on arterial roads for bikes and buses

✓ Score.....

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less sustainable...

- Developers required to provide parking at trip-generating venues without the requirement to boost public transport infrastructure.
- There is no program for provision of bus shelters and timetable displays.
- No requirement for all homes to be within short walking distance to a bus stop. Bus infrastructure is not provided until a 'viable' population demonstrates use (by which time residents will have a well-established pattern of car use).
- Secure facilities for bicycles and skateboards are not provided at major trip-generating venues.
- Convenient access for walkers is not provided across busy streets. Street layout has low permeability.
- Bicycles and skateboards discouraged by not allowing them on footpaths.
- No directional and locational signage around public transport nodes
- No provision of bus priority signals at intersections.
- No lanes are provided on arterial roads for bike and bus transport. Instead, cars are permitted to use the third lane of major arterial roads for parking.

✗ Score.....

Reviewer Statement

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 more sustainable less sustainable, due to practice
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Signed.....

waste education

more sustainable...

- 234. Picture signs are provided adjacent to the photocopier advising workers to:
 1. use paper recycling bins. Every tonne of paper recycled saves 17 trees.
 2. reset or press the energy saver button on the photocopier after use
 3. make double-sided copies whenever possible
 4. place unwanted pages with printing on only one side for collection to make memo pads.
 5. Use recycled paper.
- 235. All packaging that comes into council is reused or recycled with suppliers asked to replace unsustainable packaging
- 236. Worm farm installed near the council kitchen and catering staff instructed in its use.
- 237. Recycling receptacles provided for cans, bottles, and milk bottles, and on every desk for paper within easy access for every department and in lunchrooms.
- 238. Recycling facilities installed in popular outdoor lunch areas adjacent to council buildings.
- 239. Community gardens have been established.
- 240. Instruction has been given to staff about the 3Rs. Reminder signs are placed near garbage bins.
- 241. Recycling facilities provided at council events.
- 242. No throwaway cups used in lunchrooms or for meetings.
- 243. Litter reduction program in place for parks and beaches

✓ Score.....

Manager Statement

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Signed.....

less sustainable...

- Picture signs adjacent to the photocopier not provided to advise workers to:
 1. use recycle bins
 2. reset or press the energy saver button on the photocopier after use
 3. make double-sided copies whenever possible
 4. place unwanted pages with printing on one side only into bin for collection to make memo pads.
 5. Use recycled paper.
- Packaging is not reused. No attempt made to request suppliers to use more sustainable packaging materials.
- No worm farm for council kitchen and catering staff not instructed in its use.
- No recycling receptacles provided for cans, bottles, and milk bottles, and on every desk for paper within easy access for every department and in lunchrooms.
- No recycling facilities in popular outdoor lunch areas adjacent to council buildings.
- No community gardens established.
- No instruction has been given to staff about the 3 Rs - How they can Reduce, Reuse and Recycle office and foods 'wastes'.
- No recycling facilities provided at events.
- Throw away cups are used.
- Litter reduction program in place for parks and beaches

✗ Score.....

Reviewer Statement

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 more sustainable less sustainable, due to practice in the areas shown above.

Signed.....

waste management

more sustainable...

- 244. Have strategy for minimisation of construction and demolition waste on new building sites.
- 245. Contracts are sought out with users of recycled products.
- 246. Programs in use for composting or other recycling of green wastes. Compost bins and worm farms provided to residents.
- 247. Program in place for white goods and other household items put out for cleanup to be resold or repaired.
- 248. Use central waste/recycling collection points for communities living in areas which are awkward for collection vehicles to access.
- 249. Information provided about cleaner production and waste minimisation to all residents and local businesses.
- 250. A standardised colour bin system provided with information on the bin to improve efficiency of services offered eg. sorting requirements.
- 251. Greenwaste recycling provided for all residents, including unit dwellers who require it.

✓ Score.....

less sustainable...

- No strategy for minimisation of construction and demolition waste on new building sites.
- No effort is made to seek new avenues for the reuse of recyclable material collected from the community.
- No programs for encouraging recycling of greenwaste. Compost bins and worm farms not encouraged.
- No program for white goods and other household items put out for cleanup to be resold or repaired.
- No central waste/recycling collection points for communities living in areas which are awkward for collection vehicles to access.
- Information about cleaner production and waste minimisation not provided to all residents and local businesses.
- There is no colour standardisation of bins and no information provided on bins regarding sorting requirements.
- No greenwaste recycling for residents.

✗ Score.....

Manager Statement

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Reviewer Statement

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printed on 100% recycled paper