Preface

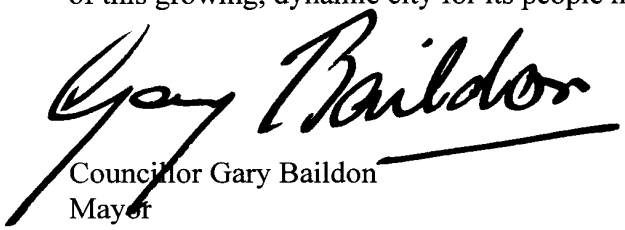
The City of Gold Coast is one of Australia's premier tourist destinations and one of the best places to live in Australia. The environment of the Gold Coast is central to the quality of life of the residents and the enjoyment of visitors and underpins the economy of the City.

The Gold Coast has an incredible diversity of native animals and plants, national and world heritage parks, forests, and wetlands. In addition to these natural assets the Gold Coast boasts a diversity of lifestyle and activities that is also difficult to better.

The City Council, like all local governments in Australia, plays a significant part in managing the local environment. Consequently it is essential for the Council to consider the environment of the City as it grows to ensure that the quality of life for all residents is maintained and enhanced.

This State of the Environment Report marks the beginning of a regular process of reporting and consulting on the environment between the Council and the Community. This report joins a number of recent environmental initiatives that the Council has developed, such as the Nature Conservation Strategy.

I ask you to consider the information contained in this report. It is hoped that future environmental reports and initiatives will be derived from the partnership growing between the Council and the community. Together we must manage the environment of this growing, dynamic city for its people now and in the future.



Councillor Gary Baildon
Mayor

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Acknowledgments

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Community and Industry:

Club Fish Australia Research Foundation
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Wildlife Preservation Society
Ecograph and M. Maher and Assoc.
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Australian Conservation Foundation
Surfrider Foundation
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Government and Universities:

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Department of Environment and Heritage
University of Queensland
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Glossary of Terms

Term	Definition
Acid	Class of substances that neutralise or are neutralised by alkalies and contain hydrogen that can be replaced by metals and of which the principal types are sour and able to corrode metals
Acid sulfate soils	Soils that contain iron pyrites (sulfates) that when moist and exposed to air produce acid (sulphuric acid)
Aerosol	System of colloidal (<.002mm in diameter) particles suspended in a gas (eg. fog or smoke)
Agrarian	Relating to landed property or the cultivation of land
Airshed	System of air currents in the lower atmosphere of an area that controls the movement of the air and particles in the air.
Alluvia	Arising from sediments deposited by flowing water.
Alluviation	Process of forming alluvia
Alluvial	Pertaining to alluvia
Anaerobic	Low or no oxygen conditions
Aquifer	Layer of soil or rock able to hold or transmit much water
Atmosphere	Gaseous layer surrounding the Earth
Biodiversity	The number and abundance of species in an area
Biological Oxygen Demand (BOD) Biochemical Oxygen Demand	The amount of oxygen needed by aerobic decomposers to break down the organic materials in a given volume of water, at a certain temperature, over a specified period of time

Term	Definition
Broadacre agriculture	Large-scale farming producing relatively low-value per hectare commodities such as wheat, beef or wool.
CAMBA	China- Australia Migratory Bird Agreement
Carbon	Chemical element central to all life on Earth. Forms the basis of all organic molecules and tissues and foods. Carbon in foods is combined with oxygen to produce energy and releases Carbon dioxide (CO_2).
Carbon monoxide (CO)	Colourless odourless gas that is formed through the incomplete combustion of Carbon in low oxygen conditions and is highly toxic to living organisms
Chemical Oxygen Demand (COD)	The amount of chemical oxidant required to oxidise the organic matter in a given volume of water, at a certain temperature, over a specified time.
Chlorophyll	Green pigment in plants that uses energy from sunlight to convert CO_2 form the atmosphere into carbon for the production of sugars and proteins and oxygen
City of Gold Coast	The City formed in 1995 from the amalgamation of the former Albert Shire and Gold Coast City
Climate	an area's prevailing conditions of temperature, humidity, wind etc.
Colluvial	Soil material moved largely by gravity and deposited on a lower slope and/ or at the base of a slope.
dB(A)	Intensity of noise measured in decibels (dB) using the electronic 'A' weighting filter. This approximates the response of the human ear.
Diffuse-source pollution	Source of pollutants that is not discrete but spread more generally in the system
Dissolved Oxygen (DO)	Oxygen dissolved in water
Drainage	Man-made or natural system of drains or what is drained off.
Dryland salinity	Soil salinity levels high enough to affect plant

Term	Definition
	growth. This can be natural (primary salinity) or through rising saline water tables.
Duplex soils	Soils where there are distinct A and B horizons or layers with distinctly different textures, also known as texture contrast soils
Ecologically sustainable development	Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.
Environment	The sum of surrounding things, conditions, or influences in which people of an area live and recreate.
Environmental indicator	Physical, chemical, biological or socio-economic measurements that indicates the status of a component of the environment.
Environmental value	A recognised quality of the environment.
Ephemeral	Organisms with a short life span, or a watercourse that does not flow all the time.
Estuary	Area of an inlet or river mouth that is influenced by the tides and also by fresh water from the land.
Fauna	The entire animal life of a region
Fire regime	The pattern of fires at a location including the frequency, intensity, and seasonality of the fires.
Flora	The entire plant life of a region
Fluvial	Pertaining to or produced by a river
Forest	A tree covered area in which 60% of the land surface is covered by tree crowns
Former Gold Coast City	The former City that was amalgamated with the surrounding Albert Shire to form the new City of Gold Coast.
Fossil fuel	Any hydrocarbon deposit that can be burned for heat or power, such as coal, oil, and

Term	Definition
	natural gas.
Fresh water	Water containing no significant amounts of salts, potable water suitable for all normal uses
Geographic Information System (GIS)	A package of computer programs specifically designed to deal with data that are spatially related; a set of tools for collecting storing retrieving manipulating, analysing and displaying mapped data from the real world.
Geomorphology	The study of the characteristics, origin, and development of landforms.
Habitat	The place where an animal or plant normally lives and reproduces.
Heath	A vegetation dominated by small shrubs with small hard leaves.
Heavy metal	Metallic element with a relatively high atomic mass (>5.0 specific gravity) such as lead, cadmium, arsenic or mercury. These are generally toxic in relatively low concentrations to plant and animal life.
Heritage	Those places, objects and indigenous languages that have aesthetic, historic, scientific or social significance or special value for future generations as well as for the community today
Intertidal	Between the levels of low and high tide.
Invertebrate	An animal without a backbone composed of vertebrae, eg worms, insects, snails etc.
JAMBA	Japan Australia Migratory Bird Agreement
Joule (J)	A unit of energy
Krasnozem	Red volcanic derived well-drained earth
Leachate	Solution of water that has percolated through a soil

Term	Definition
Leaching	The process of a solution of water percolating through a soil
Littoral	see intertidal
Meta-sediments	Metamorphosed sedimentary rock
Metamorphic rock	Rock that has been transformed by heat, pressure or chemical processes, or a combination of these processes.
Mosaic	Resembling a picture or decoration that was made from small pieces of stone, glass etc.
Nitrogen	Colourless, odourless, gas that forms about 80% of the atmosphere. Major constituent of proteins and tissues in both animals and plants and hence is a major nutrient.
Nitrous oxides	Combinations of nitrogen and oxygen often formed during burning of fuels
Non-vascular plants	Plants with no defined vessels to conduct water, mineral salts and synthesised food material.
Oxygen	Colourless, odourless gaseous element constituting about 20% of the earth's atmosphere.
Ozone	A gas with molecules of three oxygen atoms. It occurs naturally in the stratosphere and provides a protective layer shielding the Earth from ultraviolet radiation. In the troposphere it is usually formed by human activity and is a major component of photochemical smog.
Particles	Very small pieces of solid or liquid matter, such as soot, dust, smoke or mist etc.
Pelagic	referring to plants and animals that live in or near the surface of a body of water
Per capita consumption	The average amount of a commodity used per person
Percolate	To cause a liquid to pass through a porous body. see leachate.

Term	Definition
PetaJoule (PJ)	One thousand million million (10^{15}) Joules
Phosphorus	A solid non-metallic element that is a major nutrient and is used in animal and plant life.
Podzolics	A term applied to acid soils with a strong texture contrast between loamy topsoils and clay subsoils.
Point-source pollution	Pollution emanating from a clearly identifiable single source in the landscape, eg a pipe outlet.
Pollution	The direct or indirect alteration of the physical, thermal, biological or radioactive properties of any part of the environment in such a way as to create a hazard or potential hazard to the health, safety or welfare of any living species.
Potable Water	water suitable for drinking
Precipitation	Any form, or all forms, of liquid or solid water that fall from the atmosphere and reach the earths surface eg rainfall, dew, snow, hail etc.
Pressure indicator	Measures that can be used to describe both positive and negative pressures on the environment, including the quality and quantity of natural resources; such pressures can be caused by human action as well as inaction.
Pressure-State-Response model (PSR)	Simple model of the interactions between the built and natural environments.
Primary treatment	First step in sewage treatment to remove large solid objects by screens, and sediment and organic matter by settling.
Primary contact	All forms of recreational water use especially swimming.
Putrescible	Organic matter that is able to be decomposed by micro-organisms.

Term	Definition
Quaternary treatment	Forth level of treatment for sewage that removes all nutrients and pathogens and produces potable water.
Ramsar agreement	International agreement signed by Australia in Ramsar, Iran for the protection of wetland areas.
Regosols	Soils that are comprised mainly of sands and /or gravels and lie on small sand banks less than 3m above sea level.
Response indicator	Indicator that shows the extent to which society is responding to environmental changes and concerns.
Rhyolite	Fine-grained acid volcanic rock.
Salinity	The concentration of salts in water.
Saltmarsh	Saltwater wetland occupied mainly by herbs and dwarf shrubs, able to tolerate waterlogging and salinity.
Secondary contact	Contact with water from fishing or boating, but not swimming.
Secondary treatment	After primary treatment of sewage, removal of biodegradable organic matter by bacteria and other micro-organisms, activated sludge or trickle filters; also removes about 30% of Phosphorus and 50% of nitrogen.
Sedimentary rock	Rock formed from the consolidation of ocean or lake sediments. eg. sandstone or shale.
Smog	Originally a combination of smoke and fog, but now refers to other mixtures of pollutants in the atmosphere such as photochemical smog and industrial smog
State indicator	A measure that indicates the current condition or status of and environmental system.
State- Pressure- Response model	see Pressure-State-Response model
Stratosphere	The region of the Earths atmosphere roughly

Term	Definition
	15-50 km above the Earths surface.
Sulfuric acid	H_2SO_4, the dibasic acid of sulfur.
Suspended solids	Any solid substance present in water in an undissolved state, usually contributing directly to turbidity.
Tertiary treatment	The removal of nitrates, phosphates, chlorinated compounds, salts, acids metals and toxic organics from secondary treated sewage.
Total suspended solids (TSS)	Includes all particles from the smallest up to 50 μm in diameter.
Troposphere	The lower layer of the atmosphere extending to roughly 15 km above the Earth's surface where typically all life occurs.
Turbidity	• A measure of the extent to which passage of light through water is reduced by suspended matter • The cloudy conditions caused by suspended solids in liquids
Ultraviolet (UV) radiation	Electromagnetic radiation of higher frequencies and shorter wavelengths than visible light.
Vascular plants	Plants that have vessels to conduct solutions of water, mineral salts and synthesised compounds. see non-vascular plants
Vertebrate	An animal with a backbone composed of vertebrae. eg. mammals, fish, frogs, amphibians, reptiles
Visibility	The greatest distance at which an object can be seen and identified with the naked eye in any particular circumstance
Visual amenity	The visual attractiveness of an area.
Volcanic rock	Igneous rocks that have cooled and solidified on the earth's surface, generally originating

Term	Definition
	as lavas (eg. basalt)
Wallum	Coastal heath
Water table	water that flows or exists in the sub-soil layers
Wetland	The land area alongside fresh and salt waters, that is flooded all or part of the time. Marine or estuarine wetlands include tidal basins, saltmarshes, and mangroves.
World Heritage	A term applied to sites of outstanding universal natural or cultural significance which are included on the World Heritage List.

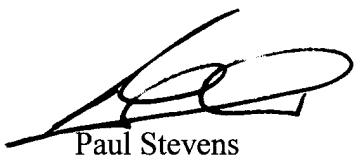
Foreword

The vision for Gold Coast City is for it to be a world city …recognised for its sustainable, world class environment, facilities and services, the creative strength of its development and its position as Australia's exiting tourism capital.

To achieve this vision requires sound planning now and for the future. To this end, the Council has embarked on a process of strategic planning, review and research to provide the necessary frameworks to strive toward this achievement. In particular, the City needs to consider the principles of ecologically sustainable development and it does this in the draft Strategic Plan. The draft Strategic Plan, currently exhibited for public comment, outlines the directions the Council has chosen to take the City over the next five years. A key part of the draft Strategic Plan is the need for appropriate monitoring and measurement to indicate the progress the City is making toward its goals.

State of the environment reporting is a process that Council has chosen to help document this progress. As the process develops an increased involvement of the community will be required to help establish realistic targets for the City and review the progress being made toward the City's environmental goals.

Benchmark 1997 is the first State of the Environment Report (SoER) for the City and has drawn upon information both from inside and from outside the Council and presents this information as a first benchmark on the environment of the Gold Coast. There is much in this report that will stimulate debate, which is one of the aims of its production. It is envisaged that this report will become the basis for regular community consultation on the state of the environment with the view to producing a second report in 1999 and then every two years thereafter.



Paul Stevens
Chief Executive Officer

Introduction

The Gold Coast is one of the most unique and diverse cities in Australia, if not the World, and has some of the most diverse habitat and range of species found anywhere in Australia. It lies in the sub-tropics, and at times experiences tropical weather from the north as well as temperate weather from the south. The terrain of the Gold Coast ranges from coastal beaches, dunes, and plains, to wetlands, mangroves and bays to cool rainforested mountains and includes a wide range of soil-types and landforms. At present the City of Gold Coast covers an area of 145,100 ha and supports a population of over 350,000 people through a number of industries including tourism and recreation, education, agriculture, business services, construction and manufacturing.

Accessibility to the diverse landscapes, habitats, species and opportunities of the Gold Coast is the key to its success as a tourist destination, a retirement haven and a desirable area to live and work. However, this diversity needs understanding and nurturing so that the potential of the Gold Coast can be realised without losing the essential ingredients that hold it together.

The vision of the Council for the City is for it to be naturally the world's best place to be, because the Gold Coast will be a model for maintaining important environmental values and quality of life while managing growth and development. However, to achieve this vision the city must also be ecologically sustainable, and this will require agreement and commitment from Council, industry and the community as partners in the City. This partnership must agree to work toward ecologically sustainable forms of development (ESD) and has an obligation to do so for current and future generations. This obligation is reinforced through the Integrated Planning Act (1997) which specifically adopts the precautionary principal and the need for inter-generational equity.

Achieving ecological sustainability is complex and is not just a question of slowing population growth, reducing pollution, or of preserving natural habitat. ESD involves population but it also involves the way that population lives. ESD involves technology, development and management that enable human populations to sustain themselves while preserving, protecting their environment. ESD must also include the community who have to choose between complex options.

ESD will also require new technologies, attitudes and tools. Of increasing importance will be benchmarking, monitoring and measurement of environmental indicators and tracking progress toward environmental targets and goals. State of the Environment Reporting (SoER) has recently become a popular tool for recording the progress being made toward ESD. These kind of reports have been widely used within Australia at a national, state and local government level, as well as in other countries and globally. They serve a range of purposes but all are focussed on improving decision making toward ESD.

SoERs have been used for benchmarking and have brought together baseline information on a range of environmental issues. This process also identifies knowledge gaps that prevent better decisions being made. SoERs help track progress toward ESD by regularly reviewing the benchmarks established in previous reports against present data and established targets.

By bringing a range of environmental data together from different sources, SoERs improve understanding and communication between all levels of government (including Councils), within Councils and with the community on environmental issues. This increase in dialogue leads toward a clearer understanding of the opportunities and constraints necessary in moving toward ESD. For example, a recent trial survey on environmentally related expenditure, by the Australian Centre for Regional and Local Government Studies and the Australian Bureau of Statistics, showed that approximately one third of this Council's operational budget is spent on environmentally related activities such as water and wastewater, and on the repair of erosion and environmental damage, Planning and Land Management, and protection of the environment from the impacts of urban settlement.

SoERs generally use the Pressure-State-Response (PSR) reporting framework, or model, which seeks to identify simple causal relationships between human activities and environmental consequences. However, in many cases the environmental systems do not operate in such a simple linear way. Despite its simplicity, the PSR model provides a clear way to represent the environmental performance of an area in an understandable way.

This report is the first State of the Environment Report for the City of Gold Coast. The SoER is based on a broad definition of the environment which is *the aggregate of surrounding things, conditions, or influences in which people on the Gold Coast live and recreate* (Thomas 1997). This definition includes residents and visitors and the natural as well as the built environment. It is important for all, Government, Community and Industry, to recognise that their combined, and individual, actions and decisions affect the greater environment, not just their urban surrounds.

The report has taken over twelve months to prepare and has involved extensive consultation within Council, and with many people from the community, to establish the process, derive baseline data and to document initiatives already in place and those proposed. The benefits of this consultation have been to reinforce the interrelationships between the elements of Council activities and the environment. While this first SoER has been developed without extensive input from the community it has drawn heavily on the recent and extensive consultation that the Council has undertaken with the community, such as with the Nature Conservation Strategy. Nonetheless this first report establishes a benchmark for future reporting.

The process for the SoER is to establish baseline data and benchmarks that reflect the current environmental situation on the Gold Coast and has been linked with Council's Corporate Plan, Strategic Plan and Operational plan as one of the tools to measure performance. The need for measurement and monitoring of performance is identified in Queensland's planning legislation.

While no single report can claim to be a definitive statement on the environment of the Gold Coast, this report attempts to bring together environmental data from across the broad spectrum of environmental issues.

The process of developing State of the Environment Reports is progressive in that each report builds on the information contained in the last. In this way the Council and the community gain a better appreciation of the environment and of the information that needs to be gathered and included in subsequent reports.

Through this process the SoER offers a focus for the community to be more involved with the Council in the process of monitoring, measuring and reporting the State of the Cities Environment. This relationship will be fundamental as the City strives toward its vision of being a sustainable world city.

Report Structure

Chapter 1 of this report provides an executive summary containing and overview of the information and conclusions that may be drawn from it. In addition to this it contains a summary of each of the theme chapters. Chapter 2 contains a general description of the City in terms of its environment. This allows each of the themed chapters to focus on the elements of the State-Pressure-Response model. Chapters 3 to 9 present the information for each major environmental theme; Land, Air, Water, Biological Diversity, Noise, Waste, and Socio-economic.

Within each theme-chapter there is a summary of the chapter, an introduction and the detailed information on the state, pressure, responses appropriate to the theme, future responses and conclusions. The conclusions section presents generalised conclusions for the theme. However, specific issues and extra detail are provided within the preceding sections.

The indicators used in each section are listed in the following Section and are derived from Thomas (1997). The relevant subset of indicators has also been reproduced in each chapter. These indicators are based largely on those developed by NSW local government for their SoER process.

Indicators

Land

Sub-Theme	Indicators
State- ⇒ Degradation	Area (ha) by severity: eg. Soil erosion (wind, water) ,Salinity, Acidification ,Acid sulfate soils, Water logging /raised water tables Degradation of remnant vegetation
State- ⇒ Urban open space	Total area Area of Individual sites Time-trend in area
State- ⇒ Non-urban open space	Total area Area of individual sites Time-trend in area
Pressure- ⇒ Land clearing and drainage	Proposals, by area and intended use
Pressure- ⇒ Major land use	Area of use (ha, trend) by sector eg. Transport, Urban , Agric & Industry Native veg'n, Canal dev's,Waste disposal
Pressure ⇒ Contaminated sites	Area (ha) and severity of contamination of individual sites Total area (ha) of waste disposal sites.
Pressure- ⇒ population	Changes in total number Population density
Pressure- ⇒ Urban construction	Area of open space under threat
Pressure- ⇒ Transport	Activities to increase public transport use or decrease car use
Current Response- ⇒ Transport	Activities to increase public transport use or decrease car use
Current Response- ⇒ Zoning of land	Restrictive zoning and land use classification
Current Response- ⇒ Open-space programs	Expenditure on maintenance, enhancement and extension

Air

Sub-Theme	Indicator
State- ⇒ industrial, commercial, domestic and mobile sources	Particulates, Nox, Sox, Toxics, lead in air.
Pressures- ⇒ Stationary industrial sources	Location of licensed emissions (by type, total annual volume) including Council facilities
Pressures- ⇒ Traffic	Traffic flow, volume
Current Responses- ⇒ Traffic management plans	Nature of plans zones

Water: lead Section- Environmental Protection

Sub-Theme	Indicators
State- ⇒ Surface and gr'dwater quality	Temperature, suspended solids, Rubbish and weeds in canals and lakes
State- ⇒ Riparian and Stream bed conditions	Status
State- ⇒ Drinking water Quality	E.coli, pathogens,pH, Salinity, nutrients, chemicals
Pressure- ⇒ Surface and groundwater use	Volume of water extracted, Dams, Deliberate stormwater detention/channelling /disruption to stream flow due to urban development, Recreational use of canals, rivers, beaches and reefs.
Current Response- ⇒ audit/inspection /monitoring programs for non-scheduled premises	Nature, Number conducted, Estimated percentage coverage, Cost
Current Response- ⇒ Riparian zone rehabilitation programs	Extent and condition of riparian vegetation
Current Response- ⇒ Industry pollution reduc'tn prog's	no. and type /effectiveness
Current Response- ⇒ Prop. and catch. planning (incl. use of rainwater)	no. and style of groups/plans etc. Cleaner production-storm water

Biological Diversity

Sub-Theme	Indicators
State- ⇒ Current diversity, range, abundance and conservation status of native species.	Local native plants and animals (list and chart by category eg. vulnerable etc.) Natural vegetation cover (total ha, and % remaining, no and size of fragments). Corridors and high sensitivity habitat (total ha, no. and size of fragments, condition and integrity, conservation status. Indicating changes over time
Pressure- ⇒ Introduced species	Species diversity (no. and % of total species, range and abundance of introduced, naturalised plant (weed) and pest animal species.
Pressure- ⇒ Land Clearing	Area of native vegetation proposed for clearing Disturbance of wildlife corridors
Pressure- ⇒ Hunting/ fishing/ harvesting of native species, river dredging, Wetland draining, recreational activity, noise etc.	Annual catch/harvest (by estimated total no. / area affected)
Pressure- ⇒ Fire	Fires (cause/extent/intens./freq./ man.)potential impact on native vegetation and fauna
Current Response- ⇒ Reservation and planning controls	Listed areas of local, state, national or world heritage significance Area protected by planning controls as a % of total. Area not yet protected under threat from development
Current Response- ⇒ Recovery plans	Funds for species/habitat conservation, by source, annual total and area
Current Response- ⇒ Fire management plan	Areas affected by fire management plans methods of hazard reduction used
Current Response- ⇒ Introduced species control plan	Annual funding and area affected

Noise

Sub-theme	Indicators
State- ⇒ Noise from transport	Monitored ambient noise readings for major roads (by time of day)
State- ⇒ Monitored readings from industrial sites and point sources	Monitored readings for major industrial sites and point sources Noise from ERAs
State- ⇒ Noise from other sources	Workplace noise levels Complaints to council and DEH
State ⇒ transport	Traffic volume and location
Pressure- ⇒ Industrial sources	
Pressure- ⇒ residential sources	
Current Responses- ⇒ State or Council codes	Areas where codes apply

Waste

Sub-Theme	Indicators
State- ⇒ Waste disposal or treatment facilities	Current capacity and projected longevity of site by type of waste received Condition of sites Compliance with DoE Environmental Authority
Pressure- Solid waste generation ⇒ Domestic ⇒ Commercial/industrial ⇒ Construction/demolition	Composition of solid waste stream by category and annual weight for domestic waste, construction /demolition, commercial waste, industrial waste. Total annual weight of solid waste to landfill. Estimate of green waste/organic wastes for possible composting. Licensing of waste collectors/transporters.
Pressure- Solid waste generation ⇒ Regulated waste	Weight and type of regulated waste generated (specify by type and source). Information from DoE waste tracking system (when introduced) Licensing ERAs
Pressure- Solid waste generation ⇒ Litter (Parks, streets, bins, waterways etc.)	Category and annual weight of litter collected. Cost and frequency of service.
Pressure- Liquid waste generation ⇒ Sewage	Total liquid waste disposed to sites (specify by type of waste and site)
Pressure- Liquid waste generation ⇒ Interceptor traps (including night soil)	No. and type of trade waste permits Licensing of collectors and transporters of liquid waste
Pressure- Liquid waste generation ⇒ storm water	Refer to SoE theme on Water (aquatic systems)
Pressure- Gaseous waste generation ⇒ Landfill Gases	Amount and type of gases produced
Pressure- Gaseous waste generation ⇒ Industry emissions	Licensing of ERAs
Pressure- Gaseous waste generation ⇒ Open or pit Burning	No. of complaints received No. of authorities-to-burn issued
Pressure- Gaseous waste generation ⇒ other air issues	See SoE theme on Air

Sub-Theme	Indicators
Current Responses- ⇒ Waste Minimisation ⇒ Kerbside recycling ⇒ Other recycling ⇒ Strategies for Commercial and Industrial Premises	Cost and freq. of collection. Total quantity of recyclable material collected. Total weight of recyclable materially actually recycled, by category and destination. % of total waste stream recycled. Cleaner production and Waterwise programs
Current Responses- Clean-up programs	Cost, nature and site remediation (contaminated lands) Cost and nature of spill cleanups

Socio-economic

Sub-Theme	Indicators
State- ⇒ Energy	Energy consumption per capita and as a ration with the gross domestic product of the LGA
State- ⇒ Economy/employment	GDP and industry split over time, employment history and prospects by industry, wage levels, cost of living/housing, housing standards, travel to work times, traffic flow and safety , visual pollution
State- ⇒ Human Health	Mortality rates, Epidemiology, and morbidity, service needs for age groups by location, living space (persons per room) yard size (m2) and persons/m2 by area.
State- ⇒ Crime	Crime stats. for different locations
State- ⇒ Access to/participation in facilities/education, recreation, parks, scenic beauty,	Weighted average distance between C.D.s and facilities etc. for different locations. No of people using facilities.
State- ⇒ Heritage listing for Aboriginal and non-Aboriginal heritage	Number, nature, condition and percentage of total and non-Aboriginal sites and structures, those listed under local/state/national Estate legislation or codes.
Pressures- ⇒ Demographics/area	age, sex, ethnic background, employment, expectations
Pressures- ⇒ Population growth/density	population growth and density trends including age groups
Current Responses- ⇒ Energy use initiatives	rate of uptake of energy conservation measures by domestic and industrial users and designers, State and local Govt. initiatives/education programs
Current Responses- ⇒ Developing a wider industrial base	Council and state initiatives to attract new industry to Gold Coast
Current Responses- ⇒ improve access and participation in facilities	Council initiatives that will encourage people to access and use public facilities. Planning for improved access to key facilities and transports nodes
Current Response- ⇒ Programs for heritage conservation	Types of program, annual expenditure, by source of funds, and total LGA expenditure.