CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

ENVIRONMENTAL STRATEGY FOR THE CITY OF CAPE TOWN (POLICY NUMBER 46612)

APPROVED BY COUNCIL : 24 AUGUST 2017
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Replaces Previous Policy known as Integrated Metropolitan Environmental Policy (IMEP) approved on 31 October 2001 vide C07/10/01 and reviewed on 25 June 2008 vide C41/06/08

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ISIXEKO SASEKAPA
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ENVIRONMENTAL STRATEGY

OF THE

CITY OF CAPE TOWN

Vision: To enhance, protect and manage Cape Town's natural and cultural resources for long term prosperity, in a way that promotes access and social well- being, and optimises economic opportunities.

1. Contents

2. Definitions and List of Acronyms

2.1. Definitions

Biodiversity: the variety within and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact.

Biodiversity Network: the systematic, fine-scale conservation plan for the Cape Town municipal area developed to meet national biodiversity targets.

City: means the City of Cape Town, a municipality established by Establishment Notice No. 479 of 22 September 2000, issued in terms of the Local Government: Municipal Structures Act, 1998, (Act No. 117 of 1998) or any structure or employee of the City acting in terms of delegated authority;

City of Cape Town Integrated Development Plan: a five year developmental plan that sets the strategic and budget priorities for the City of Cape Town municipality.

Climate Change: Climate change refers to any change in climate over an extended period of time, whether due to natural variability or as a result of human activity.

Climate Change Adaptation: adjustment in natural or human systems in response to actual or expected climatic changes or their effects, which moderates harm or exploits beneficial opportunities.

Climate Change Mitigation: refers to efforts to reduce or prevent emission of greenhouse gases

Cultural Heritage: a tangible or intangible expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values.

Ecological Infrastructure: naturally functioning ecosystems that deliver valuable services to people. Ecological infrastructure is the nature-based equivalent of built or engineered infrastructure.

Ecosystem: a dynamic system of plant, animal and micro-organism communities and their non-living, environment interacting as a functional unit.

Ecosystem Goods and Services: Ecosystem goods and services (EG&S) are the environmental benefits resulting from physical, chemical and biological functions of healthy ecosystems and include tangible goods produced from ecosystems (e.g. food, materials), and the material and non-material benefits provided by ecosystem processes (e.g. clean air and water).

Endemic: refers to the ecological state of a plant or animal species, or vegetation type, being unique to a defined geographic location, such as an island, nation, country or other defined zone, or habitat type.

Energy: refers to all sources of energy used within the city, including electricity, transport fuels, industrial fuel sources, and household fuel usage such as burning wood or paraffin.

Environment: the surroundings within which humans exist and that are made up of—
(a) The land, water and atmosphere of the earth;
(b) Micro-organisms, plant and animal life;
(c) Any part or combination of (i) and (ii), and the interrelationships among and between them; and
(d) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Assets: naturally occurring entities or systems that provide environmental functions, benefits, goods, or services.

Environmentally Sensitive Urban Design: a design philosophy aimed at minimising the impacts of urban development on ecological infrastructure, and maximising the benefits of multi-use environmental systems

Equity: fairness and justice in the way that people are treated in promoting good governance

Green Economy: an economy that results in expanded economic opportunities and more efficient production of goods and services, through improving resource efficiency, enhancing environmental resilience, and optimising the use of natural assets, while promoting social inclusivity.

Green Jobs: jobs that focus on enhanced environmental quality, improved living environments and the restoration and/or protection of municipal green infrastructure and ecosystem services, with a specific focus on skills development and social upliftment

Green Procurement: is the approach by which an organisation integrates environmental criteria into all stages of its procurement processes. Green procurement considers the cost of procured goods/services over their whole life.

Heritage: that which is inherited from past generations, maintained in the present, and bestowed to future generations, and consists of both natural and cultural heritage.

Natural Heritage: refers to the sum total of the elements of biodiversity, including flora and fauna and ecosystem types, natural systems and processes, together with associated geological structures and formations.

Natural Resources: are materials or components which occur naturally within the environment, or are derived from the environment and may include both tangible and intangible goods and services.

Nature Reserves (protected areas): areas conserving fauna, flora, and landscapes, which have been formally proclaimed under the National Environmental Management: Protected Areas Act (Act 57 of 2003)

Natural Systems: natural and semi-natural ecosystems and their associated ecological infrastructure

Non-renewable Resource: a natural resource that does not renew itself at a sufficient rate for sustainable economic extraction in meaningful human timeframes.

Open Space: any open piece of natural or semi-natural land that has no buildings or other built structures, and is accessible to the public.

Overlay Zone: a regulatory tool as part of a zoning scheme, that creates a special zoning for an area, placed over an existing base zone, which identifies special provisions in addition to those in the underlying base zone.

Polluter Pays Principle: an environmental policy principle which requires that the costs of pollution be borne by those who cause it.

Renewable Resource: a natural resource which can replenish itself to overcome usage and consumption, either through biological reproduction or other naturally recurring processes.

Resilience: the ability of an environmental, economic, or social system to respond to disturbance by resisting damage and recovering to a functional state.

Resource Efficiency: using limited resources in a sustainable manner while minimizing impacts on the environment, including efficient use (using less to do the same or more) and conservation (reducing use).

Soft Engineering: the use of ecological principles and practices and natural materials to mimic natural systems in the provision of infrastructure e.g. artificial or managed wetlands or dune systems; Also known as Green Engineering.

Sustainability: a dynamic process in which individuals, communities, and society are enabled to reach their full potential, maximise quality of life, and meet their economic, social, and cultural needs, while simultaneously protecting, enhancing and managing the natural environment and optimising the economic benefits of ecosystem goods and services. This must occur through a framework of good governance and considered decision-making that ensures that these assets, their current functions and future potential are not undermined, and that a burden is not left for future generations.

Vulnerability: the degree to which people, property, resources, systems, and cultural, economic, environmental, and social activity are susceptible to harm, degradation, or destruction on being exposed to a natural or man-made hazard.

Vulnerable groups: groups within society that are particularly vulnerable to natural and man-made hazards, due to demographic, economic, social and/or geographic considerations

Water Demand Management: The adaptation and implementation of a strategy by a water institution or consumer to reduce water demand in order to meet any of the following objectives: economic efficiency, social development, social equity, environmental protection, sustainability of water supply and services and political acceptability.

2.2. List of Acronyms

CDS	City Development Strategy
CFR	Cape Floristic Region
EGS	Economic Growth Strategy
IDP	Integrated Development Plan
IMEP	Integrated Metropolitan Environmental Policy
LBSAP	Local Biodiversity Strategy and Action Plan
MSDF	Municipal Spatial Development Framework
SDBIP	Service Delivery and Budget Implementation Plan
SDS	Social Development Strategy

3. Context Setting

3.1. Problem Statement

3.1.1. Cape Town is situated within a unique and diverse natural environment, that offers significant benefits in terms of the ecosystem goods and services it provides. However, Cape Town, as with many urban areas globally, faces a number of environmental challenges[1,2]:

(a) Rapid urbanisation and urban growth, including both population growth and growth of the urban footprint as household size decreases and demand for housing rises, placing pressure on both land for development and on finite natural resources.
(b) Limited, and increasingly scarce, resources, in terms of energy and water and the capacity to manage solid and liquid waste.
(c) Pollution of the city's air, open spaces, freshwater bodies and oceans.
(d) Exposure to risk from natural hazards and climate change, including resource shortages, fires, and extreme weather events.
(e) A unique cultural heritage and sense of place, and the associated challenge of conserving heritage and landscapes in a rapidly growing city.

3.1.2. Cape Town faces environmental challenges characteristic of cities in developing countries [1,2]:

(a) Under-recognition of the importance and value of ecosystem goods and services and the benefits they provide, and the associated lack of maintenance and upkeep of these services, reducing the city's ecological infrastructure
(b) A significant number of residents without optimal access to economic opportunities as well as basic services such as sanitation and waste removal, resulting in the pollution of natural systems and unhealthy living conditions, with rapid influx of job seekers placing further pressure on resources
(c) Reliance on expensive and resource intensive service delivery modalities and technologies for the provision of basic services; addressing this will require innovative solutions to service delivery
(d) Basic service delivery infrastructure under increasing pressure and facing significant backlogs;
(e) Growth of informal settlements in marginal areas that are prone to environmental risk such as flooding
(f) A significant disparity in the quality of living environments and access to the social and recreational benefits offered by Cape Town's unique environmental assets.
(g) Historically inappropriate planning of formal settlements and urban-natural interfaces, including infrastructure inappropriately located in areas at high risk from natural hazards

3.1.3. As a rapidly growing city that hosts critically endangered biodiversity of global importance, the need to conserve biodiversity is a key challenge.

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[1] City of Cape Town State of the Environment Report 2012 (http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/State_of_Environment_Report_2012.pdf)

[2] City of Cape Town State of Cape Town Report 2014 (https://www.capetown.gov.za/en/stats/CityReports/Documents/SOCT%2014%20report%20complete.pdf)

3.1.4. Cape Town additionally faces a number of socio-economic challenges [1,2]: the city struggles with high levels of unemployment, poverty, inequality, crime, and social injustice and, although steps are being taken to address these challenges, they remain significant, impacting on the environment and related resource sustainability.

3.1.5. The City's approach to managing its environmental assets must occur within a framework that recognises and addresses the above social and economic challenges.

3.2. Need for an Environmental Strategy

A comprehensive environmental strategy is required to address the challenges outlined above. An effective and appropriate strategy is central to city governance, long term planning and optimising resources so as to sustainably manage growth and urbanisation. Without an effective strategy, environmental governance becomes an ad hoc process without appropriate structure and frameworks. Strategy not only sets the principles within which an organisation itself wishes to operate and perform, but is also the central means through which an organisation clearly outlines, articulates and communicates its stance, position and perspective to its employees, its customers (in the City's case its communities) and those it wishes to do business with (developers, investors and the global community). In addition, the strategy sets a transparent framework for the mechanisms and regulations required to achieve the organisation's articulated desired outcomes related to long-term environmental management.

3.3. History of Environmental Strategy and Policy in the City

The City of Cape Town has a long history of environmental management. Prior to the establishment of the Unicity in 2000, various environmental policies and strategies were in place within the various different municipalities and administrations that would later be joined to form the City of Cape Town.

In 2001, Cape Town was one of the first metropolitan municipalities in South Africa to adopt a high-level environmental policy – the Integrated Metropolitan Environmental Policy (IMEP), later accompanied by a set of implementation strategies. In 2008, IMEP was reviewed, and in 2009 the City of Cape Town Environmental Agenda 2009 – 2014 was adopted to stand alongside IMEP.

In 2013/14, a second review was undertaken and it was determined that IMEP, while innovative for its time, did not adequately equip decision-makers in the City to deal with the complex and challenging environmental issues facing the City. It was resolved that IMEP should be replaced by a more up to date, balanced, integrated, and contemporary environmental strategy or policy with a strong focus on contributing to a revised approach to sustainability within the context of the City's Economic Growth Strategy (EGS) and Social Development Strategy (SDS). The Environmental Strategy will therefore stand alongside the EGS and SDS and thereby promote an integrated approach to urban sustainability; this Strategy therefore replaces IMEP and the Environmental Agenda 2009-2014.

4. Framing the City of Cape Town's Environmental Strategy

4.1. Environmental Strategy in the Context of Sustainability

Globally, moving towards or achieving sustainability is a highly complex and challenging task. This challenge is much greater in Cape Town due to its historical and current socio-economic inequalities, and the need for substantial economic growth to uplift communities and create employment, all within a unique natural environment of global importance.

Historically, sustainability has been understood by many as the need to balance environmental, social and economic concerns against each other (see figure 1). This model is problematic in that it includes an assumption that the environment, society, or the economy are substitutable or exchangeable, and that losses in one area could easily be offset by gains in other areas. In Cape Town's own context this model is overly simplistic and does not account for the social and economic imperative of addressing a highly inequitable society, as well as the central role that Cape Town's natural environment plays in this endeavour, and in the local economy.

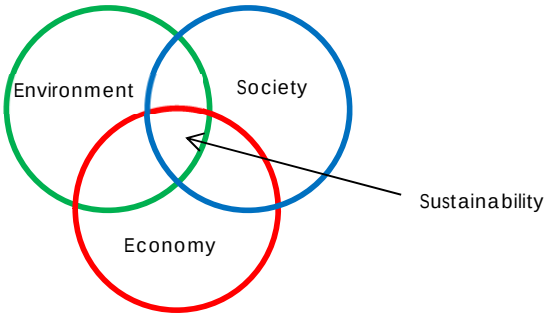

Figure 1: "Balanced" model of sustainability

The short-comings of this historical approach have been recognised internationally and nationally and current thinking recognises that the economy is a system which is embedded within society, which itself is embedded within and is inseparable from the natural environment (see figure 2).

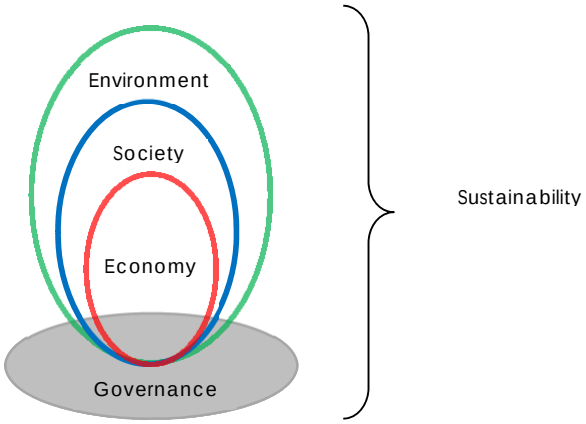

Figure 2: "Embedded" model of sustainability (adapted from the National Strategy for Sustainable Development)

Within this model, it is recognised that a reduction in the ability of the natural environment to sustain itself and the ecosystem services it provides will have a negative impact on society and, ultimately, the economy. Natural resources and services are finite and the implications of this on how the economy and society functions and grows need to be recognised in order to ensure long term viability of all three systems. As such, it must be recognised that sustainability, including economic and social well-being and resilience cannot be achieved without appropriate environmental governance and management. Furthermore, achieving sustainability in the presence of extreme poverty and inequality is impossible, unless the "embedded" model is adopted in this strategy and implementation plans. This is particularly relevant in Cape Town where the natural environment strongly underpins the economy and society and remains one of the city's most important economic assets.

The ability of the City to meet its goals in terms of economic and social development is thus strongly dependent on the City's ability to manage and sustain Cape Town's natural assets. At the core of Cape Town's sustainability approach there must therefore be an embedded strategy of recognising and promoting the key role of the city's natural assets in stimulating and supporting both the economy and social development, while at the same time managing and sustaining these natural assets to enhance their productivity and benefits as opposed to eroding their potential.

Given the above, the City of Cape Town adopts the following definition of sustainability:

Sustainability is a dynamic process in which all stakeholders are enabled to meet their economic, social, cultural and resource needs, and improve their quality of life, while simultaneously protecting, enhancing and managing the natural environment, and optimising the economic benefits of ecosystem goods and services. This must occur within a framework of good governance and considered decision-making that ensures that these assets, their current functions and future potential are not undermined, and that a burden is not left for future generations.

This definition highlights the importance of sustainability being seen as a lens to be applied to governance, planning, design, decision-making, and implementation at all times, rather than being simply an end-state to be achieved.

4.2. An Overview of Cape Town's Environment

Surrounded by mountains and the sea, and incorporating a range of natural and semi-natural open spaces as well as terrestrial and aquatic ecosystems that support a variety of plants and animals, Cape Town is home to a unique natural environment. Contained within the City 's 2461km^2 footprint are a coastline of over 300km, spectacular mountain ranges and rolling hills encircling the central "Cape Flats" area. Cape Town is a biodiversity hotspot of global significance. Of the 53 critically endangered vegetation types occurring in South Africa, 11 are found within the borders of the city.

Further, of the six vegetation types endemic to the city, four are critically endangered. Cape Town is at the heart of the Cape Floristic Region (CFR) – the smallest of the world's six floral kingdoms – and is home to approximately 3 500 of the 9 600 plant species found in the CFR. Cape Town is also home to significant heritage assets, both in terms of the built environment and cultural heritage, which give the city a unique sense of place.

4.3. The Natural Environment as an Economic and Social Asset

The natural environment is an irreplaceable asset that provides a myriad of ecosystem goods and services, and a host of associated economic and social benefits, to the citizens of Cape Town. As described in the Millennium Ecosystem Assessment[3], these ecosystem goods and services include regulating functions such as climate regulation and waste assimilation; provisioning functions such as the supply of food, medicine, and fresh water; and cultural functions, such as tourism, recreation and education; all of which are supported by basic supporting services such as pollination and photosynthesis. It can therefore be seen that the "embedded" methodology is critical to ensuring that this intertwined asset is comprehensively managed.

The current and potential economic benefits of these goods and services include the provision of infrastructural services (e.g. air and water filtration, waste assimilation), reduction in risk to infrastructure and people (e.g. natural hazard regulation, such as flood attenuation), and significant opportunities for enabling commercial enterprise development and green job creation (e.g. tourism, green technologies, biodiversity and agricultural products). A 2009 study[4] showed that a conservative estimate of the benefits provided by Cape Town's natural assets is between R2–R6 billion per annum.

Equally important are the social and cultural benefits of the natural environment, which include recreational opportunities (e.g. hiking, picnicking, bird-watching, water sports), educational and scientific research opportunities, spiritual and religious benefits, heritage and sense of place, and offer the opportunity for diverse communities to come together in shared spaces.

Most importantly, Cape Town's natural environment is a common asset belonging to all citizens of Cape Town, which must remain accessible and deliver benefits to all citizens - both current and future generations. It is imperative that the City's Environmental Strategy ensures that the intrinsic value of the natural environment is recognised, the benefits the natural environment provides are managed and optimised in a sustainable manner, historical disparities in environmental access are addressed, a low-carbon, resource efficient, and low-impact approach to development is followed, environmental education and awareness is optimised, and the natural environment is managed and promoted as a common asset. In doing so, this strategy will create a framework for the effective governance and management of Cape Town's natural environment in the best interests of the city, its economy and its communities.

4.4. Locating the Environmental Strategy within the City of Cape Town

Environmental and sustainable development strategies and policies have often been considered to be inter-changeable or one and the same. Nowhere is this more evident than in the City of Cape Town's adoption of the Integrated Metropolitan Environmental Policy (IMEP) in 2001. IMEP was adopted in a vacuum of broader social and economic sustainability strategies or policies and it consequently took the role of the sole City sustainability framework. The City has progressed significantly since 2001 and has since adopted an Economic Growth Strategy (EGS), a Social

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[3] Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC.

[4] DeWit et al. (2009) Investing in Natural Assets: A business case for the environment in the City of Cape Town. Available online at: http://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/EnvResEconomics-Final_Report_2009-08-18.pdf

Development Strategy (SDS), and an overall City Development Strategy (CDS) that add value to its Integrated Development Plan (IDP) as well as guide and inform service delivery and implementation.

It is essential, therefore, in terms of the content of this Strategy as well as associated expectations of this strategy to clarify that the City's Environmental Strategy is not the overarching framework for sustainability in Cape Town, but contributes significantly towards the environmental component of sustainability by providing decision makers with an effective policy and governance framework for decision-making, management, and operational implementation where the environment is concerned, in conjunction with the EGS and SDS, and forms part of an overall sustainability model embedded in the IDP and CDS (figure 3).

The following model, based on figure 2 above, provides an overview of how this Environmental Strategy aligns with other existing, key, city-level City strategies and policies in working towards sustainability:

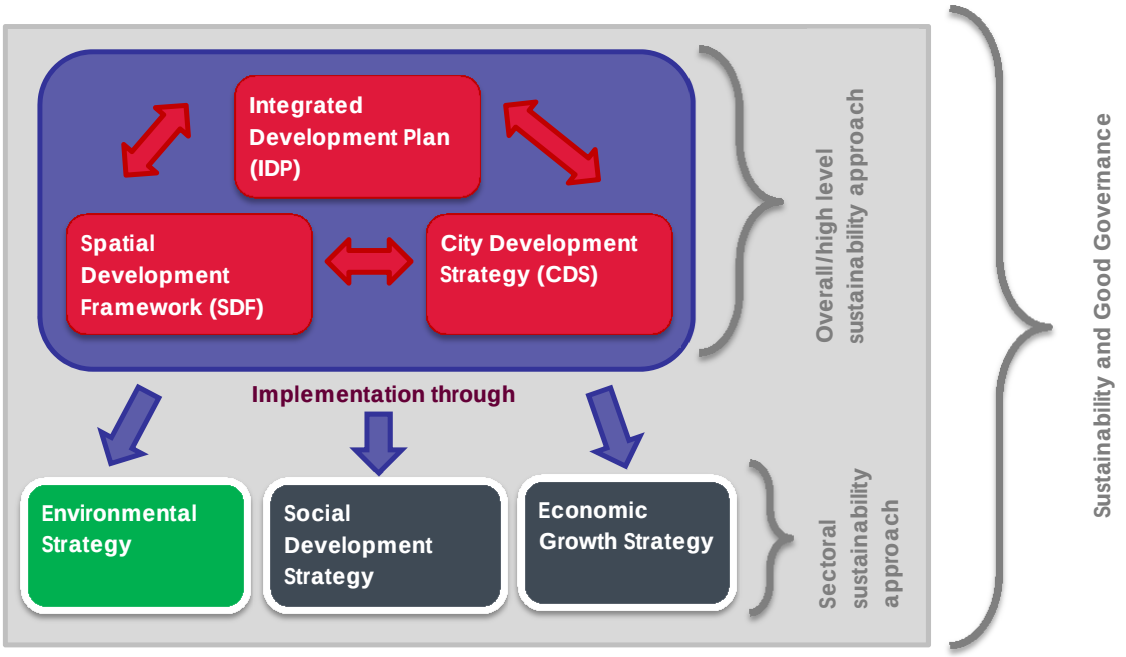

Figure 3: Contextualising the City's Environmental Strategy

4.5. Scope

This Environmental Strategy applies to all directorates and departments within the City of Cape Town.

At the core of this strategy is the principle that the environment of Cape Town is a shared and common asset that is the joint responsibility of all departments to manage and protect in a manner that enables the full spectrum of appropriate utilisation in order to fulfil the broad social, economic, and environmental needs of the city and its communities.

IMEP will be repealed upon approval of this Environmental Strategy. However, various strategies that were associated with IMEP, but approved separately by Council, will remain in place unless specifically repealed by Council or superseded by updated versions.

5. Vision and Desired Outcomes

5.1. Vision

To enhance, protect and manage Cape Town's natural and cultural resources for long term prosperity, in a way that optimises economic opportunities and promotes access and social well-being.

5.2. Long-Term Desired Outcomes

In order to realise the above vision, the City aims to achieve the following long-term outcomes. The City recognises that these long-term outcomes are ambitious and aspirational and should be seen as end-states to strive for and work towards, rather than binding goals or targets.

In the long-term, the City will strive for an environment where:

5.2.1. there is excellent air quality in all areas of Cape Town, and lung irritation and disease due to poor air quality are mitigated;

5.2.2. Cape Town's rivers and wetlands are well managed and where possible planned as cohesive corridors that are well-used recreational spaces and community assets that provide ongoing ecological services;

5.2.3. Cape Town's coastline and marine environment are of excellent ecological quality, free from pollution, accessible to all, provide a central role for recreation, and continue to contribute to Cape Town's economy;

5.2.4. the natural resource base, including biodiversity and the services provided by green municipal infrastructure, is restored, protected and utilised sustainably;

5.2.5. the City actively drives and supports a green economy that results in expanded economic opportunities and more efficient production of goods and services, through improving resource efficiency, enhancing environmental resilience, and optimising the use of natural assets, while promoting social inclusivity;

5.2.6. the City understands and takes active steps to reduce environmental risk;

5.2.7. a safe, clean, efficient, affordable and integrated public transport system servicing all parts of Cape Town is in place, safe bicycle and pedestrian paths and crossings are provided, and transport fuel use and emissions are dramatically reduced;

5.2.8. all citizens have reasonable access to a safe, well maintained, green recreational space, such as a park or greenbelt;

5.2.9. all citizens have reasonable access to safe, well maintained and ecologically diverse natural open spaces such as nature reserves, national parks, large city parks and coastal areas;

5.2.10. A range of open spaces (including parks, nature reserves, public open spaces, recreational and sports facilities, cemeteries and memorial gardens) are provided that meet the full spectrum of community needs (including social, cultural, religious, and spiritual needs), are high-quality community spaces, and are integrated into the City's open space and natural systems planning;

5.2.11. the City optimises the use of water-wise vegetation in all of its open spaces, including parks and road verges, in order to reduce water use and management costs, and where appropriate, the use of indigenous vegetation, in order to conserve natural heritage and contribute to the ecological integrity of Cape Town;

5.2.12. City purchasing of green and renewable energy is optimised, and household renewable energy and energy efficiency technologies (e.g. solar water heaters) are widely used;

5.2.13. water conservation and water security technology is in place in all City operations, businesses and households, Cape Town's aquifers are well managed and conserved, and Sustainable Urban Drainage System (SUDS) controls and waste water treatment and recycling are optimised in a manner which promotes a Water Sensitive Urban Design philosophy and positions Cape Town as a leading example of a truly "Water Sensitive City";

5.2.14. all City operations, businesses and residents use energy and water optimally;

5.2.15. waste generation is minimised, recycling services are widely available, large scale composting of household organic and garden waste is in place, waste diversion is optimised, and the waste economy is thriving;

5.2.16. urban sprawl is reduced, and Cape Town grows inwards to become a denser, more compact city that optimises accessibility, minimises travel distances, optimises service delivery costs and improves resource efficiency

5.2.17. Cape Town's cultural and built heritage environment is appropriately honoured and conserved, and the city's unique sense of place and cultural landscapes are maintained and enhanced; and

5.2.18. all citizens know how to live in a more sustainable way, and make environmentally and socially responsible choices.

6. Principles and Directives

The identified principles aim to collectively enable the City to ultimately achieve its environmental sustainability vision and outcomes. Each principle is given effect through a corresponding directive that is intended to inform and guide ways of working across the organisation. Across all directives, the City will strive to implement the Environmental Strategy through the formation of partnerships and transversal management approaches, where shared responsibility and collaborative decision making between line departments is at the core of implementation.

6.1. Long-Term Approach

Cape Town is a growing and rapidly urbanising city which is dependent on resources (both local and further afield) which are limited, and has a natural environment that is a unique and irreplaceable resource which belongs to both current and future generations.

Principle
In taking decisions, operating, and planning for the future, the City will work to ensure that its actions and decisions do not undermine the long term benefits that the natural environment provides, and that the needs and interests of future generations will be considered and respected.

Directive
In this regard, the City will:

6.1.1. prioritise long term sustainability and consider the consequences for future generations when taking decisions impacting on the environment;
6.1.2. incorporate long term sustainability, resource efficiency, and environmental management considerations into planning, design, decision-making, implementation, and maintenance across City departments;
6.1.3. develop the necessary internal processes and capacity to evaluate and take into account full life cycle costs of decisions made; and
6.1.4. encourage innovation in service delivery that would improve the way the City operates in the long term.

6.2. Equity and Accessibility

The natural environment is a shared asset, held in trust for the common good of all, including future generations. However, the legacy of historical inequity and inequality has led to a significant disparity in access to ecosystem goods and services as well as natural open space and the social, educational, spiritual, and recreational opportunities it provides.

Principle
In taking decisions, operating, and planning for the future, equitable access will be promoted, with an enhanced focus on the needs of vulnerable groups and improving living environments.

Directive
In this regard the City will:

6.2.1. protect the right of all people to fair and equitable access to environmental assets, ecosystem goods and services and environmental benefits;

6.2.2. manage its environment at all times in the best interests of all, and not to the sole benefit or interest of specific individuals or groups;
6.2.3. promote improved access by all citizens to safe, well maintained, and protected natural areas and public open spaces, such as parks, greenbelts, nature reserves, national parks, beaches, and coastal areas, and ensure that the needs of vulnerable groups are considered; and
6.2.4. in all decisions related to development or land use change, ensure that:
    6.2.4.1. land use changes and development approvals do not hamper equitable access to the environment
    6.2.4.2. planning and implementation of multi-functional and multi-beneficial open spaces are prioritised within the context of enabling spatial transformation.

6.3. Economic and Social Benefits

The natural environment is one of Cape Town's most important economic and social assets, and has the potential to provide a range of corresponding benefits, goods and services to communities, businesses, and individuals.

Principle
In taking decisions, operating, and planning for the future, the social, cultural, and economic value of the natural environment to communities, businesses and individuals, including green jobs, will be recognised, protected, made accessible and promoted.

Directive
In this regard the City will:

6.3.1. work towards creating the enabling environment for the development of a green economy, and implementing key green economy programmes where appropriate;
6.3.2. encourage innovation in stimulating the green economy ;
6.3.3. work to unlock the potential of the City's natural environment to create employment opportunities ;
6.3.4. protect and enhance the economic value of natural and heritage areas, public open spaces, natural resources and the natural environment as a whole, and ensure that developments or land use changes which negatively impact on the economic value of the environment are avoided, or mitigated in a sustainable manner ;
6.3.5. protect the social amenity value of natural and heritage areas, and public open spaces, while working towards restoring and managing degraded natural spaces to create improved social assets ; and
6.3.6. increase investment into the city's ecosystem goods and services in order to safe-guard and maintain the infrastructural services that they provide.

6.4. Resilience

Natural and human induced environmental hazards - including climate change, resource shortages, and natural events such as floods and fires - threaten Cape Town's economy, citizens and natural environment, now and in the future.

Principle

In taking decisions, implementing service delivery, operating, as well as planning for the future, the City will ensure a focus on resilience, enabling the city to withstand and mitigate the negative impacts of environmental hazards, proactively reduce Cape Town's vulnerability, and protect the city's economy.

Directive

In this regard, the City will:

6.4.1. take steps to prevent and minimise the effects of natural and man-made environmental hazards;
6.4.2. recognise that natural functional ecosystems provide the most efficient and cost effective buffers to natural environmental hazards;
6.4.3. ensure that the City has a good understanding of environmental risk, particularly those risks associated with climate change, and develops appropriate plans and tools accordingly;
6.4.4. apply a consistent and risk conscious approach to city development that considers and aims to minimise the potential impact of environmental hazards on both people and infrastructure and addresses the potential City liability for development decisions made;
6.4.5. avoid urban development in areas known to be unsuitable, including flood plains, coastal risk areas, nuclear exclusion zones, within inappropriate noise contours, and other zones which would unacceptably increase risk to inhabitants or infrastructure;
6.4.6. prioritise environmental management and infrastructure development and maintenance approaches that emphasise soft engineering, and the restoration and rehabilitation of natural systems;
6.4.7. ensure that, where natural defences to environmental hazards (e.g. coastal dunes) exist, these natural defences function optimally, and that developments or land use changes that negatively impact on these defences are avoided;
6.4.8. where natural defences to environmental hazards do not exist, or have been negatively impacted and thus have reduced effectiveness, proactively work towards rehabilitation of these defences, with the aim of restoring the defensive function;
6.4.9. ensure that invasive plant and animal species are controlled and/or eradicated as required by national legislation and to minimise the impacts of fires on the city;
6.4.10. ensure that the city's natural resources and natural/semi-natural open spaces are managed according to best practice in order to improve resilience and optimal functioning;
6.4.11. ensure an appropriate urban-natural interface that protects communities from natural hazards; and
6.4.12. ensure that climate change risk is taken into account in the management of natural resources and in the approval and implementation of developments.

6.5. Ecosystems Approach

Cape Town's natural environment provides essential ecosystem goods and services that support and enable the City's service delivery and reduce risk to citizens. These largely free ecosystem goods and services cannot easily be replaced by engineered systems without incurring significant costs.

Principle
In taking decisions, operating, and planning for the future, the contribution (and associated value) of ecological infrastructure and ecosystem goods and services will be recognised, protected, and, where possible, proactively restored.

Directive
In this regard, the City will:

6.5.1. protect, invest in and proactively work towards rehabilitation of ecosystems and ecological infrastructure, with the aim of restoring the functioning of these systems and the ecosystem goods and services they provide;
6.5.2. clearly define, map, manage and rehabilitate ecological infrastructure that provides ecosystem goods and services to the communities of Cape Town;
6.5.3. consider all development, including municipal infrastructure development, and land use changes in terms of the potential impacts on ecological infrastructure and ecosystem goods and services, and ensure that negative impacts are prevented, or where they cannot be prevented, minimised or mitigated;
6.5.4. recognise the interconnectedness and interdependence of ecosystems and their associated goods and services, and ensure that negative cumulative and downstream impacts are prevented, or where they cannot be prevented, minimised or mitigated; and
6.5.5. compare life cycle costs of ecological infrastructure and hard engineering infrastructure and promote the use of ecological infrastructure in place of hard engineering infrastructure where cost-effective and appropriate.

6.6. Preventing, Minimising, and Mitigating Environmental Impacts

The City, individuals and businesses all have a role to play in reducing the negative impact of their activities on the natural environment, including pollution and the generation of waste.

Principle
In taking decisions, operating, and planning for the future, the City will ensure adherence to the principle of proactively preventing adverse environmental impacts, including the impacts of pollution and the generation of waste and, where this is not possible, minimising and managing those impacts.

Directive
In this regard, the City will:

6.6.1. take steps to reduce all forms of environmental degradation in both the City's own operations and in those of external stakeholders, including pollution of land, air, water, and the coast, through appropriate legislation, enforcement, infrastructural improvements, and environmental rehabilitation;
6.6.2. work towards excellent air quality levels in all areas of the city, and significant reductions in ill-health attributable to poor air quality;
6.6.3. work towards significant improvements in the condition and water quality of the city's watercourses, including rivers and wetlands, with the aim of these assets becoming well used recreational and community spaces that support the city's biodiversity and social wellbeing, and allow for sustainable urban stormwater management;

6.6.4. take steps to ensure that the City is able to adequately deal with and treat both solid and liquid waste, and in doing so, prevent, minimise or mitigate the impacts of these waste products on the natural environment;
6.6.5. consider all development, including municipal infrastructural development, and land-use changes in terms of its potential environmental impacts, including an increase in waste or pollution, or a loss of critically important biodiversity or heritage resources, and ensure that negative impacts are prevented, or where they cannot be prevented, minimised or mitigated;
6.6.6. promote and pilot innovative approaches to service delivery and project implementation that aim to prevent, minimise or mitigate environmental impacts, and encourage the implementation of innovative approaches in the broader city context;
6.6.7. adopt the "polluter pays" principle; and
6.6.8. in all decisions related to development or land use change, ensure:
    6.6.8.1. ecosystem goods and services are not severely compromised or lost; and
    6.6.8.2. integration and restoration of environmental assets.

6.7. Resource Efficiency

Cape Town is a water-scarce city, has a high carbon footprint, and has an increasingly limited ability to absorb and treat waste and pollutants.

Principle
In taking decisions, operating, and planning for the future, the City will ensure that resource efficiency and low-carbon development are embedded in all aspects of its work.

Directive
In this regard, the City will:

6.7.1. take steps to reduce consumption of resources in communities where resource use is high, while actively improving affordability of, access to, and sustainable use of resources in communities that have limited access;
6.7.2. support and drive the implementation of innovative technologies and behavioural changes that promote resource efficiency ;
6.7.3. take steps to ensure the security of supply of energy and water resources;
6.7.4. promote the reduction of waste production across all sectors of society and the improvement of waste management, including the reuse of waste products and recycling;
6.7.5. actively promote and implement a shift to renewable energy resources and energy efficient technologies in the domestic, commercial, industrial and government sectors;
6.7.6. actively promote and implement a shift to water efficient technologies in the domestic, commercial, industrial and government sectors;
6.7.7. promote localised food production and/or urban agriculture to reduce the impact of food distribution costs and losses and to improve food security; and
6.7.8. actively increase the City's own contribution to resource efficiency through directed green procurement.

6.8. Environmentally Sensitive and Low Impact Urban Design

The built fabric of the city has a significant effect on the natural environment and can negatively impact the functioning of ecological infrastructure, limiting the ability of the environment to provide essential services.

Principle
In taking decisions, operating, and planning for the future, the City will adopt an urban design methodology that is environmentally sensitive and low impact, in order to ensure the long-term functionality of key ecological infrastructure.

Directive
In this regard the City will:

6.8.1. promote principles of environmentally sensitive and low impact urban design in all development, including municipal infrastructure development;
6.8.2. invest in and proactively work towards an environmentally sensitive and low impact city form, which supports the functioning of ecological infrastructure;
6.8.3. ensure that the provision of municipal services is adequately integrated into planning; and
6.8.4. actively support, enable, and implement the principles of Water Sensitive Urban Design in all development, including municipal infrastructure development.

6.9. Educated and Empowered Citizens

Information and knowledge about environmental sustainability empowers citizens to make better informed and more sustainable choices and decisions, helps citizens improve their quality of life, works towards reducing irresponsible and illegal activities, and enables citizens to be active partners with the City.

Principle
Education and empowerment of all citizens of Cape Town will be prioritised and promoted.

Directive
In this regard, the City will:

6.9.1. prioritise environmental education, awareness, training, and communication as a key means of improving environmental quality in the city;
6.9.2. make information available to all people on how to live, work and play in an environmentally friendly and sustainable manner;
6.9.3. recognise at all times that individual accountability and responsibility of each citizen is dependent on an empowered and informed citizenry;
6.9.4. enable citizens to engage with the City on an ongoing basis on ways to improve implementation of the City's environmental principles; and
6.9.5. lead by example in the implementation of resource efficient and environmentally sensitive technologies.

6.10. Protected Natural Heritage

Cape Town's natural heritage is a significant economic and social asset, and contributes significantly to the unique sense of place, strong global identity, and distinctive landscapes that are characteristic of the city.

Principle
In taking decisions, operating, and planning for the future the City will ensure that the value of the city's natural heritage is recognised, protected and promoted, and that the benefits and opportunities it provides to communities are realised.

Directive
In this regard, the City will:

6.10.1. consider all developments, including municipal infrastructural development, and land-use changes in terms of their potential impact on the city's natural heritage, and ensure that negative impacts are prevented, or where they cannot be prevented, minimised or mitigated, and ensure that positive impacts are identified, maximised, and enhanced;
6.10.2. ensure that the city's natural and semi-natural open spaces that protect indigenous biodiversity and landscapes and promote sustainable economic and recreational activities - including nature reserves, critical biodiversity areas, river corridors, wetlands, estuaries, beaches, and the coastline - are appropriately protected and managed; and
6.10.3. work towards implementation of the Biodiversity Network in order to protect a representative sample of biodiversity pattern, process and natural vegetation to meet national biodiversity targets.

6.11. Protected Cultural Heritage

Cape Town's cultural heritage as it relates to the built environment is a significant economic and social asset, and contributes significantly to the unique sense of place, strong global identity, and community spirit that is characteristic of the city.

Principle
In taking decisions, operating, and planning for the future, the City will ensure that the value of the city's cultural heritage is recognised, protected and promoted, and that the benefits and opportunities it provides to communities are realised.

Directive
In this regard, the City will:

6.11.1. consider all developments, including municipal infrastructural development, and land-use changes in terms of their potential impact on the city's cultural heritage, and ensure that negative impacts are prevented, or where they cannot be prevented, minimised or mitigated, and ensure that positive impacts are identified, maximised, and enhanced;
6.11.2. ensure that the city's scenic drives and cultural landscapes are protected in order to maintain the scenic sense of place and tourism value and potential that these provide;
6.11.3. ensure that the city's cultural heritage, including the built environment and sites of cultural and historical significance that promote Cape Town's unique sense of place and celebrate

the city's diverse cultures, are appropriately protected and managed, while promoting sensitive new development and adaptive re-use in line with the City's densification policy;

6.11.4. identify, assess, conserve, manage and enhance the heritage resources, structures and landscapes of all the people of Cape Town and ensure that the memories and values associated such resources are appropriately represented; and

6.11.5. ensure that cemeteries and memorial gardens that meet the full range of religious, spiritual, and cultural needs, are adequately incorporated into the City's open space planning processes.

7. Strategic Alignment

7.1. Integrated Development Plan 2012 – 2017 (IDP)

The strategic focus areas of the City are enshrined in the City's Integrated Development Plan (IDP) and are categorised into five pillars. While the city's natural environment offers opportunities across all five pillars, these five pillars cannot be advanced to their full potential in the face of a degrading natural environment.

- **The Opportunity City:** There are significant opportunities for the creation of green jobs and for promoting, growing, and supporting the benefits of a greener economy in Cape Town. This strategy supports the City's green economy approach. Maintaining, conserving, and strengthening the natural asset and resource base on which the economy is based also serves to sustain and allow for economic growth.
- **The Safe City:** Cape Town is at risk from natural hazards, including climate change. By promoting an approach that focuses on risk reduction and increasing resilience, this strategy works towards a safer city.
- **The Caring City:** This strategy strives to ensure that all residents and visitors to Cape Town experience an environment which promotes physical and mental well-being and healthy recreation, and in which harmful pollution is actively reduced.
- **The Inclusive City:** By promoting equitable access for all citizens to natural open spaces, and the opportunities and benefits they provide, this strategy aims to promote and support inclusivity and social integration.
- **The Well-Run City:** Through this strategy, the City aims to provide strategic direction, accountability and transparency regarding its environmental decision-making, , planning, management and implementation.

7.2. Economic Growth Strategy

The Environmental Strategy aligns closely with chapter 5 of the City's Economic Growth Strategy (EGS), titled "Sustaining Growth for the Future", which highlights that "understanding the complex interrelationship between economic growth and the sustainable use of natural resources is increasingly recognised as essential for securing a prosperous future" and recognises that the economy will face considerable challenges brought about by climate change. The EGS also states that "Effective environmental resource management, together with climate change adaptation and mitigation measures, must therefore be core components of any forward-looking approach to economic growth".

Chapter 5 considers four sustainable growth strategies:

Strategy 1: Develop and implement a comprehensive green economy work programme
Strategy 2: Manage water conservation, supply and demand to ensure sustainability
Strategy 3: Investigate options for energy diversification and promote energy efficiency
Strategy 4: Protect environmental assets to sustain and expand the eco-tourism sector

This Environmental Strategy's focus on promoting the green economy, resource efficiency, low carbon development, and environmental protection, supports both the overall implementation of the EGS, as well as the specific strategies of chapter 5.

7.3. Social Development Strategy

The City's Social Development Strategy (SDS) includes a commitment to "reorient service delivery to create and maintain safe and healthy environments". The first objective of the SDS is to 'maximise income generating opportunities for those who are excluded or at risk of exclusion', which is supported by the Environmental Strategy's approach of promoting the management of ecological infrastructure, primarily through low tech, highly labour intensive means where appropriate. Objective four of the SDS is to 'Promote and foster social integration', which is supported through the Environmental Strategy's focus on promoting equity and access to the city's natural resources and its benefits, particularly for recreation and community use. This strategy generally aligns with the SDS by promoting a focus on reducing the negative impacts of waste, pollution, and inappropriate development on communities, businesses, and individuals.

8. Regulatory Context

National, provincial, and local policy and legislation provides a guiding framework for this Environmental Strategy. The following key pieces of legislation provide a supporting regulatory context:

8.1. The Constitution of the Republic of South Africa, 1996

The Constitution enshrines the right of South Africans to a well-managed, clean, and healthy environment.

Section 24 of the Constitution states:

Everyone has the right-

(a) to an environment that is not harmful to their health or well-being; and
(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-
    (i) prevent pollution and ecological degradation;
    (ii) promote conservation; and
    (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Section 152 of the Constitution also gives local government the following mandate:

1. The objects of local government are -
   (a) to provide democratic and accountable government for local communities;
   (b) to ensure the provision of services to communities in a sustainable manner;
   (c) to promote social and economic development;
   (d) to promote a safe and healthy environment; and
   (e) to encourage the involvement of communities and community organisations in the matters of local government.

2. A municipality must strive, within its financial and administrative capacity, to achieve the objects set out in subsection (1).

8.2. National Environmental Management Act,1998 (Act No. 107 of 1998)

The National Environmental Management Act sets out a core set of principles, which apply to the actions of all organs of state that may significantly affect the environment. These principles include a commitment to socially, environmentally and economically sustainable development. A full list of these principles is appended as annexure A.

8.3. Other National and Provincial Legislation

The following national legislation is relevant to the City's Environmental Strategy:

(a) Conservation of Agricultural Resources Act,1983 (Act No. 43 of 1983)
(b) Environment Conservation Act,1989 (Act No. 73 of 1989)
(c) Local Government: Municipal Finance Management Act,2003 (Act No.56 of 2003)
(d) Local Government: Municipal Structures Act,1998 (Act No. 117 of 1998)
(e) Local Government: Municipal Systems Act,2000 (Act No.32 of 2000)
(f) Marine Living Resources Act,1998 (Act No.18 of 1998)
(g) Minerals and Petroleum Resources Development Act,2002 (Act No.28 of 2002)
(h) National Building Regulations and Building Standards Act,1977 (Act No.103 of 1977)
(i) National Environmental Management: Air Quality Act,2004 (Act No.39 of 2004)
(j) National Environmental Management: Biodiversity Act,2004 (Act No.10 of 2004)
(k) National Environmental Management: Integrated Coastal Management Act,2008 (Act No.24 of 2008)
(l) National Environmental Management: Protected Areas Act,2003 (Act No.57 of 2003)
(m) National Environmental Management: Waste Act,2008 (Act No.59 of 2008)
(n) National Energy Act,2008 (Act No.34 of 2008)
(o) National Heritage Resources Act,1999 (Act No.25 of 1999)
(p) Water Services Act,1997 (Act No.108 of 1997)
(q) National Water Act,1998 (Act No.36 of 1998)
(r) National Veld and Forest Fire Act,1998 (Act No.101 of 1998)
(s) Spatial Planning and Land Use Management Act,2013 (Act No.16 of 2013)
(t) Western Cape Land Use Planning Act,2014 (Act No.3 of 2014)
(u) Western Cape Nature Conservation Ordinance, No. 19 of 1974

8.4. City of Cape Town By-laws, Policies and Strategies

The following City of Cape Town by-laws, policies and strategies are relevant to the City's Environmental Strategy:

By-Law	Year	Relevance to the City's Environmental Strategy
Air Quality Management By-law	2010	The Air Quality Management By-law highlights the need to ensure air pollution levels are controlled and mitigated as far as is reasonably possible.
City of Cape Town: Municipal Planning By-law	2015	Criteria for decision making (section 99 (2) and (3) (f)-(h) as well as section 100 (imposition of conditions to mitigate impacts) are relevant here.
Filming By-law	2005	The Filming By-law recognises the success of Cape Town as a filming destination being highly correlated to the sustainability of the city's natural environment.
Integrated Waste Management By-law	2010	The Integrated Waste Management By-law promotes environmentally sustainable waste management for the City of Cape Town.
Outdoor Advertising and Signage By-law	2013	The Outdoor Advertising and Signage By-law supports environmental and heritage conservation in the city.
Public Parks By-law	2010	The Public Parks By-law provides for the sustainable management of parks
Stormwater Management By-law	2005	The Stormwater Management By-law regulates activities which may have a detrimental effect on the development, operation, or maintenance of the stormwater system, including the natural environment.
Treated Effluent By-law	2009	The Treated Effluent By-law allows for the safe re-use of treated effluent in order to contribute to a resource efficient City by reducing waste and pollution.
Water By-law	2010	The Water By-law seeks to reduce water wastage and provides for water conservation and demand management.
Wastewater and Industrial Effluent By-law	2013	The Wastewater & Industrial Effluent By-Law enables the City of Cape Town to enforce control over activities linked to the disposal of waste water and industrial effluent.

Policies, Strategies and Plans	Year	Relevance to the City's Environmental Strategy
Air Quality Management Plan for the City of Cape Town	2005	The Air Quality Management Plan focuses on the need to reduce and minimise air pollution and improve compliance with national standards.
Biodiversity Strategy	2003	The Biodiversity Strategy sets the vision and framework for biodiversity management in the city. The implementation component has been replaced by the Local Biodiversity Strategy and Action Plan (LBSAP) – see below.
Cape Town Spatial Development Framework	2012	The Cape Town Spatial Development Framework (CTSDF) provides a policy framework that guides development and includes a focus on conservation of biodiversity and ecological infrastructure.
Coastal Management Programme	2015	The Coastal Management Programme, as required by the NEMA: Integrated Coastal Management Act, sets out strategic and operational plans for management of the City's coastline.
Comprehensive Integrated Transport Plan (2013-2018)	2014	The Integrated Transport plan sets out the City's approach to transport, including sustainable and non-motorised transport interventions.
Cultural Heritage	2005	The Cultural Heritage Strategy guides decision-making on cultural

Strategy		heritage issues.
Densification Policy	2012	The Densification Policy promotes densification as a sustainable model for city planning.
Development Management Scheme	2015	The Development Management Scheme (a schedule of the City of Cape Town: Municipal Planning By-law) replaces the Cape Town Zoning Scheme, designates open space zones, and provides for the development of both environmental and heritage protection overlay zones
District Plans and Environmental Management Frameworks	2012	Eight district plans have been compiled for each of the planning districts of the City of Cape Town. The plans have been approved by the City of Cape Town as structure plans in terms the Land Use Planning Ordinance, and include an integrated Environmental Management Framework (EMF) developed in terms of the National Environmental Management Act (NEMA).
Energy and Climate Change Strategy and Energy and Climate Action Plan	2007; 2011	The Energy and Climate Change Strategy sets out the vision, objectives, targets, and measures for the City's energy and climate change activities and the Action Plan operationalizes these commitments. This is currently under review.
Environmental Education, Awareness and Training Strategy	2011	The Environmental Education, Awareness and Training Strategy promotes the education and empowerment of Cape Town's residents.
Floodplain and River Corridor Management Policy	2009	The Floodplain and River Corridor Management Policy aims to ensure sustainable development and associated activities within or adjacent to natural and built stormwater systems, and that there is a balanced consideration of potential flood risk, environmental impacts and socio-economic need.
Integrated Coastal Management Policy	2014	The Integrated Coastal Management Policy promotes active sustainable management of the city's coastline to ensure the future economic, social and environmental well-being of the city.
Integrated Metropolitan Environmental Policy (IMEP)	2001	IMEP forms the foundation on which the Environmental Strategy is built. IMEP will be repealed once the Environmental Strategy is adopted.
Integrated Waste Management Policy	2006	The Integrated Waste Management Policy promotes responsible waste management in terms of integrated principles, which require recovery, recycling for reuse and for energy recovery purposes to the standard waste management practice to in support of sustainability.
Local Biodiversity Strategy and Action Plan (LBSAP): 2009-2019	2009	The LBSAP supports implementation of biodiversity projects as part of the City's conservation approach.
Management of Urban Stormwater Impacts Policy	2009	The Management of Urban Stormwater Impacts Policy aims to reduce impacts of urban stormwater systems on receiving waters, by ensuring that all stormwater management systems are planned and designed in accordance with best practice criteria and guidelines that support Water Sensitive Urban Design principles and the following specific sustainable urban drainage system (SUDS) objectives: • Improve quality of stormwater runoff; • Control quantity and rate of stormwater runoff; • Encourage natural groundwater recharge.
Outdoor Advertising and Signage Policy	2013	The Outdoor Advertising and Signage Policy provides for the control of advertising and signage in order to reduce impacts on the natural and cultural heritage environments.
Parks Development Policy	2015	The Parks Development Policy focuses on the sustainable development and management of parks.
Responsible Tourism	2009	The Responsible Tourism Policy includes a strong focus on sustainable

Policy		tourism, and maximising the tourism value of Cape Town's natural assets.
Urban Design Policy	2013	The Urban Design Policy supports sustainable city design and planning.
Water Conservation & Water Demand Management Strategy	2007	The Water Conservation and Water Demand Management Strategy aims to ensure the long-term balance between available water resources and water demand, to postpone the need for expensive capital infrastructure projects for as long as it is economically viable and to minimise water wastage.

8.5. International Agreements and Conventions

The City of Cape Town also plays a role in supporting and implementing the following international agreements and conventions, either as a direct signatory, or through its role in supporting national commitments:

(a) C40 network member
(b) Carbon Disclosure Project (as a C40 network member)
(c) Convention on Biological Diversity
(d) Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Sites)
(e) Durban Adaptation Charter
(f) Mexico City Pact (Global Cities Covenant on Climate)
(g) Millennium Development Goals
(h) Ramsar Convention (Convention on Wetlands of International Importance)
(i) United Nations Framework Convention on Climate Change (UNFCCC)
(j) UNESCO Man and the Biosphere Programme (Biosphere Reserves)
(k) Urban Environmental Accords

9. Implementation Framework

To give effect to the principles and directives detailed in section 6, implementation tools including by-laws, policies, planning tools, and strategies are required. Figure 4 below illustrates the four strategic focus areas as well as four cross-cutting themes that will form the basis of the implementation framework, which will the guide the implementation of this strategy. This framework outlines implementation tools which will give effect to the strategy. The framework is a flexible document that can be updated and reviewed as required and is therefore a separate document to be used alongside this strategy.

The four strategic focus areas are:

1. Natural systems planning and management, focusing on the management of natural resources and ecosystems, including biodiversity, open spaces, river and wetland systems, and the coast.
2. Resource management and efficiency, focusing on the effective management of the city's natural resources (e.g. water, energy).
3. Environmental quality management, focusing on the prevention and control of environmental degradation and enhancement of environmental quality.
4. Heritage management, focusing on the effective management of the City's cultural and visual heritage.

Four cross-cutting themes underlie the four strategic focus areas:

1. Enabling the green economy within Cape Town, focusing on, amongst others: low-carbon, resource efficient, and socially inclusive economic development, and reducing environmental risks and ecological scarcities.
2. Environmental compliance and law enforcement – in both the City's own operations and of business and external stakeholders - including defining the applicable legislation and enforcing the applicable regulations and legislation, as well as implementing proactive compliance and best practice measures.
3. Environmental education, awareness, and communication, with a focus on voluntary behaviour change.
4. Climate change, focusing on both adaptation and mitigation , and building a city that is resilient to climate change impacts.

Figure 4: Strategic focus areas and cross-cutting themes of the City's Environmental Strategy

10. Monitoring and Review

A monitoring and review system, including institutional structures, will be put in place to ensure the ongoing adoption and implementation of this strategy across the City. The monitoring and review system will consist of the following elements:

10.1. Integration with SDBIP and Other Tools

The City's Environmental Resource Management Department will liaise on an ongoing basis with relevant line departments in order to promote the integration of this strategy and its principles and directives into SDBIPs, business plans, and other performance monitoring tools. Targets for implementation may be developed as part of this process.

10.2. Annual Progress Report to Council

The City's Environmental Resource Management Department will put together an annual progress report, detailing the uptake and implementation of the strategy and implementation framework to date, to be submitted to relevant committees and Council. This report will note areas of success and challenges, and may make recommendations for future adjustments to the strategy or its associated tools.

10.3. Five Year Review from Date of Adoption

This strategy will be reviewed five years after the date of adoption, and may be updated and revised accordingly. Lessons learned during the implementation phase of this strategy will contribute to the review and revision process.

Annexure A: NEMA Principles

1) The principles set out in this section apply throughout the Republic to the actions of all organs of state that may significantly affect the environment and-
   (a) shall apply alongside all other appropriate and relevant considerations, including the State's responsibility to respect, protect, promote and fulfil the social and economic rights in Chapter 2 of the Constitution and in particular the basic needs of categories of persons disadvantaged by unfair discrimination;
   (b) serve as the general framework within which environmental management and implementation plans must be formulated;
   (c) serve as guidelines by reference to which any organ of state must exercise any function when taking any decision in terms of this Act or any statutory provision concerning the protection of the environment;
   (d) serve as principles by reference to which a conciliator appointed under this Act must make recommendations; and
   (e) guide the interpretation, administration and implementation of this Act, and any other law concerned with the protection or management of the environment.
2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably
3) Development must be socially, environmentally and economically sustainable.
4)
   (a) Sustainable development requires the consideration of all relevant factors including the following:
      (i) that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
      (ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
      (iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
      (iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;
      (v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
      (vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
      (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
      (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.
   (b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.

(j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.

(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.

(l) There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.

(m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.

(n) Global and international responsibilities relating to the environment must be discharged in the national interest.

(o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

IMPLEMENTATION FRAMEWORK

FOR THE

ENVIRONMENTAL STRATEGY

OF THE

CITY OF CAPE TOWN

Vision: To enhance, protect and manage Cape Town's natural and cultural resources for long term prosperity, in a way that promotes access and social well- being, and optimises economic opportunities.

1. Contents

2. Introduction

This implementation framework accompanies the City of Cape Town Environmental Strategy, and should be read alongside the strategy. The aim of this implementation framework is to give effect to the principles and directives of the Environmental Strategy; as such, various implementation tools are required.

Figure 1 below illustrates the four strategic focus areas as well as four cross-cutting themes that form the basis of this implementation framework. Figures 2 to 5 on the following pages provide further detail of the required tools (e.g. policies, strategies, plans, by-laws or frameworks) for each strategic focus area. Different types and levels of tools are included here, as all have a key role to play in the implementation of the Environmental Strategy.

Some of these tools already exist, some exist but may need to be used more effectively and some will need to be developed. Importantly, the figures on the following pages do not imply a hierarchy. Additionally, the tools included below do not always represent the tools in their entirety, but may include only the environmental component or aspects of these tools. Each of the tools detailed below is developed, implemented and monitored in accordance with its own monitoring and evaluation programme and is owned by the relevant line function. Monitoring of the Environmental Strategy and Implementation Framework as a whole is undertaken by the Environmental Management Department.

The four strategic focus areas are:

1. Natural systems planning and management, focusing on the management of natural resources and ecosystems, including biodiversity, open spaces, river and wetland systems, and the coast.
2. Resource management and efficiency, focusing on the effective management of the city's natural resources (e.g. water, energy)
3. Environmental quality management, focusing on the prevention and control of environmental degradation and enhancement of environmental quality
4. Heritage management, focusing on the effective management of the City's cultural and visual heritage

Four cross-cutting themes underlie the four strategic focus areas:

1. Enabling the green economy within Cape Town, focusing on, amongst others: low-carbon, resource efficient, and socially inclusive economic development, and reducing environmental risks and ecological scarcities
2. Environmental compliance and law enforcement – in both the City's own operations and of business and external stakeholders - including defining the applicable legislation and enforcing the applicable regulations and legislation, as well as implementing proactive compliance and best practice measures
3. Environmental education, awareness, and communication, with a focus on voluntary behaviour change
4. Climate change, focusing on both adaptation and mitigation, and building a city that is resilient to climate change impacts .

It is important to note that the City's various sector plans cut across the organisation, and address environmental, social and economic issues related to those particular services. These plans are not reflected in their entirety in this implementation plan, as they address complex issues beyond the scope of this implementation framework. It is, however, important to note the key role that these plans play in the implementation of the water, waste and electricity related policies, strategies, and by-laws that are reflected in this document.

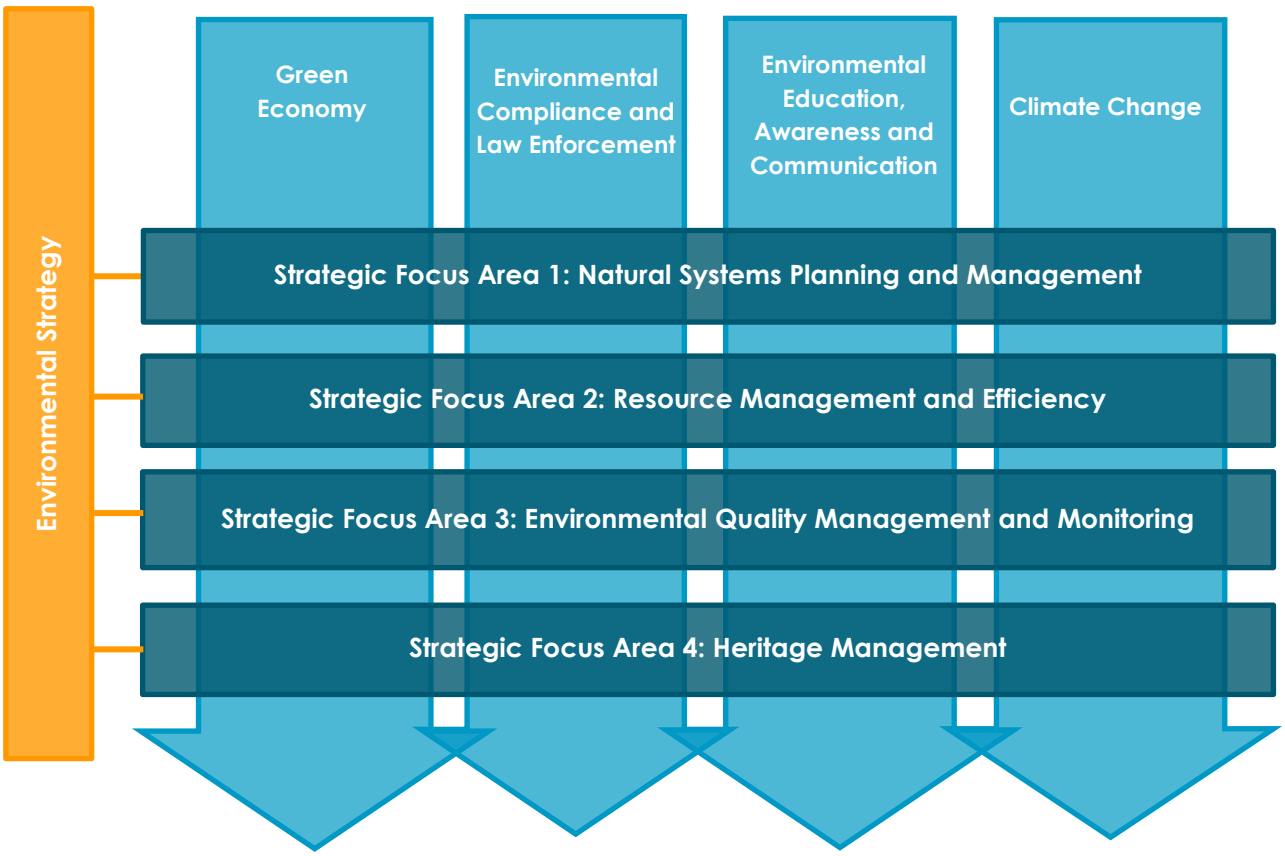

Figure 1: Strategic focus areas and cross-cutting themes of the City's Environmental Strategy

3. Cross-cutting themes	
3.1 Green Economy Strategy and Action Plan	
Lead department/s:	Enterprise and Investment (Directorate of the Mayor)
Supporting department/s:	Environmental Management; Transport Planning; Sustainable Energy Markets; Water and Sanitation Management; Solid Waste Management; Finance Directorate
Description:	A City Green Economy Strategy and Action Plan will be developed to clarify the City's approach to and role in transitioning towards a green economy. The City needs to focus on where it can add most value, both through enabling the external market and through using its own budgets in a way that drives the green economy - through using tools such as green procurement and environmental fiscal reform. The green economy focus will aim to contribute towards both fundamentally changing the way the economy does business and operates (greening the economy) and the development of new, green goods and services. The long term desired outcome of the strategy and action plan would be to contribute to a reduction in carbon emissions, improved resource efficiency, reduced negative environmental impacts, poverty alleviation, and job creation opportunities
Status:	In process

3.2 Environmental Compliance and Law Enforcement Strategy	
Lead department/s:	Environmental Management
Supporting department/s:	Solid Waste Management; Water and Sanitation Management; Informal Settlements and Backyarders; Law Enforcement, Traffic and Co-ordination; Recreation and Parks; City Health
Description:	The existing Environmental Compliance Strategy will be expanded and developed to support the City's approach to compliance monitoring and enforcing of environmental legislation, associated regulations, and by-laws. Compliance monitoring covers the City's own operations and those of residents, business (commercial and industrial) and external stakeholders. Enforcement includes both administrative and criminal enforcement actions. This strategy also includes a focus on the implementation of proactive compliance measures, including the environmental risk register, audit procedures, and best practices (e.g. King 3).
Status:	Working document updated on ongoing basis
3.3 Environmental Education, Awareness, and Communication Strategies	
Lead department/s:	Environmental Management
Supporting department/s:	All
Description:	Environmental education, awareness, training, communication, and advocacy are important areas of work that underpin and support all the strategic focus areas. Two key strategies and action plans give effect to this work area; the Public Environmental Awareness, Education and Training Strategy and the Environmental Awareness, Education and Training Strategy for City Staff and Councillors.
Status:	Approved by Council (August 2011). Both strategies will be revised on approval of the Environmental Strategy.
3.4 Climate Change Policy/Strategy	
Lead department/s:	Environmental Management
Supporting department/s:	All
Description:	The primary risks of climate change in an urban environment are social and economic. How we manage our natural environment and resources can substantially reduce climate risks and the impacts on the city (adaptation) and contribute to reducing greenhouse gases (mitigation). Climate change is therefore a key cross-cutting policy concern for the City of Cape Town. A City of Cape Town Climate Change Policy/Strategy will be developed to provide a guiding framework for responding to climate change that both includes the City's efforts in contributing to a reduction in greenhouse gas emissions and adequately addresses the social, economic, infrastructural and environmental risks of climate change.
Status:	In process

4. Natural Systems Planning and Management

The City of Cape Town is responsible for the management of a number of natural systems and the ecosystem services they provide, including natural and semi-natural green spaces such as parks and nature reserves, water bodies such as rivers and wetlands, and a variety of open spaces that connect these elements, including river corridors. In order to effectively manage the city's natural systems, it is essential to recognise the interconnectedness of these systems, and plan for integrated management accordingly.

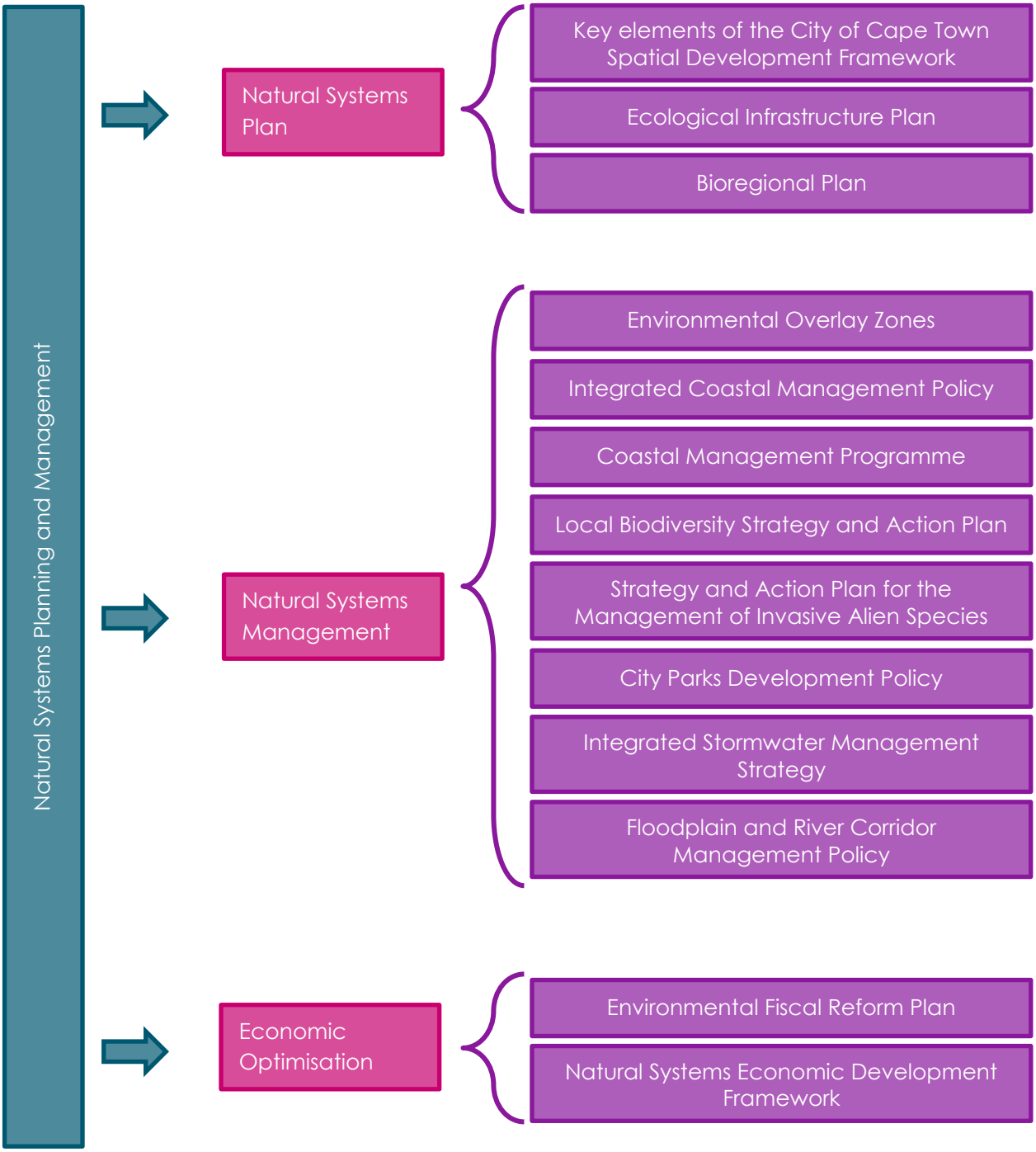

Figure 2: Natural Systems Planning and Management implementation tools

4.1 Natural Systems Plan

The natural systems plan will contain layers which provide information about the city's natural environment (e.g. biodiversity, ecological infrastructure, public open space), with key areas of overlap between the various layers highlighting key management priorities, connectivity between sectors, and multifunctional spaces. The aim of the natural systems plan will be to identify key natural systems in the city and prioritise the management and conservation of these systems. The natural systems plan will bring a coherent approach to natural systems management across the City, with the intention being to eventually incorporate the Natural Systems Plan into the City of Cape Town Spatial Development Framework (SDF). The City's Environmental Management Department will lead the development of this plan, incorporating key aspects of the tools listed below.

4.1.1 Key elements of the City of Cape Town Spatial Development Framework

Lead department/s:	Urban Catalytic Investments; Urban Integration
Supporting department/s:	All
Description:	Key portions of the City's existing SDF will contribute to the Natural Systems Plan. These include development edges, floodlines, open space categories, and other ecological systems.
Status:	Approved by Council (May 2012), and as amended as part of the subsequent MSA process; review pending

4.1.2 Ecological Infrastructure Plan

Lead department/s:	Environmental Management
Supporting department/s:	Recreation and Parks; Water and Sanitation Management; Transport Planning; Urban Catalytic Investments; Urban Integration
Description:	An ecological infrastructure plan will be developed for the City that will identify the ecosystems and areas that must be maintained and enhanced to provide long term ecological support services to the economy and society. The Ecological Infrastructure Plan will inform the City's Spatial Development Framework and Development Management Scheme, and/or other tools where appropriate. This plan will be strengthened through the development of business cases for the management of ecological infrastructure, as compared against the cost of providing the same services through hard engineering infrastructure.
Status:	Proposed

4.1.3 Biodiversity Sector Plan

Lead department/s:	Environmental Management
Supporting department/s:	Recreation and Parks; Urban Catalytic Investments; Urban Integration; Development Management; Informal Settlements and Backyarders; New Market Development; Transport Planning
Description:	The Bioregional Plan is a city-wide plan comprising a biodiversity profile, the Biodiversity Network, or BioNet, (which is a map of biodiversity priorities), with accompanying land-use planning and decision-making guidelines, and additional management recommendations. The purpose of the Bioregional Plan is to inform and guide planning, environmental assessment and natural resource management by a wide range of sectors whose policies and

	decisions impact on biodiversity. The aim is to create a more integrated, cost-effective approach to environmental management and conservation in the bioregion.
Status:	Approved by Council (July 2015)

4.2 Natural Systems Management

While the above outlines the mapping and identification of natural systems that need to be supported in the city, this section outlines tools required for the management of those natural systems.

4.2.1 Environmental Overlay Zones

Lead department/s:	Environmental Management
Supporting department/s:	Development Management
Description:	Overlay zones provide a mechanism which allows for the provision of more specific development rules to achieve the purpose of a particular City policy(s). The existing Environmental Overlay Zone within the City of Cape Town Municipal Planning by-law and Development Management Scheme will be further developed and specific provisions included; the overlay zone will also be spatially defined. A set of local area Environmental Overlay Zones will also be developed and will include land use regulations that will enable the City to maintain and support ecological infrastructure, as well as providing clear development guidelines for specific ecologically sensitive areas.
Status:	In process

4.2.2 Integrated Coastal Management Policy

Lead department/s:	Environmental Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination; Disaster Management and Public Emergency Communications Centre; Transport Planning; Recreation and Parks; Solid Waste Management; Local Tourism Development
Description:	The City's Integrated Coastal Management Policy is central to reducing risk, both to the City and its communities, and is core to retaining and enhancing the many current and future economic, social and environmental opportunities of Cape Town's unique coastline into the future. The ICMP defines clear roles and responsibilities across multiple line departments at both an operational and strategic level.
Status:	Approved by Council (September 2014)

4.2.3 Coastal Management Programme

Lead department/s:	Environmental Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination; Disaster Management and Public Emergency Communications Centre; Transport Planning; Recreation and Parks; Solid Waste Management; Local Tourism Development; Water and Sanitation Management
Description:	The City's Coastal Management Programme is an implementation plan that gives effect to the Integrated Coastal Management Policy and formalises the City's approach to coastal management, as required by the NEM: Integrated

	Coastal Management Act. The Coastal Management Programme includes a strong focus on managing ecological infrastructure along the coast, including specific chapters on estuary management and dune management.
Status:	Approved by Council (May 2015)
4.2.4 Local Biodiversity Strategy and Action Plan	
Lead department/s:	Environmental Management
Supporting department/s:	Recreation and Parks; Urban Catalytic Investments; Urban Integration; Development Management; Informal Settlements and Backyarders; New Market Development;
Description:	The City's Local Biodiversity Strategy and Action Plan (LBSAP) is a guiding strategy, complemented by an implementation plan with specific actions. It is adopted by the City to achieve optimal and realistic governance in the management of biodiversity and ecosystem goods and services that underpins a sustainable city. In addition to incorporating the BioNet, the LBSAP sets definitive targets, deals with conservation planning, protected area expansion and management, invasive species management, biodiversity restoration, education and awareness, human-wildlife conflict, and green jobs.
Status:	Approved by Council (May 2009); review pending
4.2.5 Strategy and Action Plan for the Management of Invasive Alien Species	
Lead department/s:	Environmental Management
Supporting department/s:	Recreation and Parks; Informal Settlements and Backyarders; Asset Management and Maintenance (Transport and Urban Development Authority); City Health; Solid Waste Management
Description:	This strategy works towards minimising the impact of invasive alien species in the city, and focuses on the management of invasive alien plant (terrestrial and aquatic) and animal (vertebrate and invertebrate) species across the City.
Status:	Approved by Council (September 2008), review pending
4.2.6 Parks Development Policy	
Lead department/s:	Recreation and Parks
Supporting department/s:	Environmental Management; Informal Settlements and Backyarders; New Market Development; Urban Catalytic Investments; Urban Integration
Description:	The City Parks Development Policy provides a framework to guide decision making in new park and cemetery development, upgrading of existing parks, and the provision of specific recreational facilities in parks, as well as the management of open spaces managed by Recreation and Parks. The policy supports a number of environmental policy focus areas, including: considering 'green' techniques and technologies; providing opportunities for informal sport and recreation and spaces that improve psychological wellbeing; and promoting the conservation of biodiversity within the City's parks through management agreements.
Status:	Approved by Council (January 2015)

4.2.7 Integrated Stormwater Management Strategy	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	All
Description:	The strategy will focus on the management of stormwater to minimize the impacts of flooding while taking an integrated and co-ordinated catchment based planning approach, and promoting Water Sensitive Urban Design. The strategy, along with its associated tools, will support the protection of urban water resources including rivers, wetlands, sub surface, and coastal waters from pollutants, the development of infrastructural solutions that are cost effective, environmentally sensitive and maximize social and amenity value, and the involvement of communities and other stakeholders in the management of the urban stormwater network, river systems and river corridors.
Status:	Draft
4.2.8 Floodplain and River Corridor Management Policy	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	Environmental Management; Recreation and Parks
Description:	The Floodplain and River Corridor Management Policy outlines the procedure for managing development adjacent to watercourses and wetlands, taking cognisance of the flood regime, aquatic and riparian ecology as well as socio-economic factors.
Status:	Approved by Council (May 2009)

4.3 Economic Optimisation

The City provides services that could be delivered in a more environmentally friendly manner at the same or less cost to the City and the economic use of the natural environment needs to be well managed. This section therefore outlines tools that would be able to assist to improve the economic optimisation of natural resources in a sustainable manner.

4.3.1 Environmental Fiscal Reform Plan	
Lead department/s:	Finance Directorate
Supporting department/s:	Environmental Management
Description:	The Environmental Fiscal Reform Plan will aim to identify areas of service delivery that can be redesigned to deliver the same or better services, or service areas previously not serviced, in a manner that is environmentally beneficial, is cost effective to the City and creates jobs where possible. This will include demonstrations of cost benefit analyses of alternative approaches and will strive towards the more efficient use of existing City budgets.
Status:	Proposed

4.3.2 Natural Systems Economic and Social Development Framework	
Lead department/s:	Environmental Management
Supporting department/s:	Urban Catalytic Investments; Urban Integration; Recreation and Parks; Solid Waste Management; Water and Sanitation Management
Description:	The manner in which we use our natural resources is key to their long term sustainability. A framework will be developed to guide the sustainable economic and social use of the natural environment, where deemed appropriate, including both goods and services, for the benefit of both local communities and the city-wide economy, and including a particular focus on the tourism economy. The framework will focus on areas or aspects of the City's natural environment which have not reached their full potential, and could benefit from increased investment.
Status:	Proposed

5. Resource Management and Efficiency

Cape Town is currently energy intensive, with an associated high carbon footprint, produces a high per capita output of waste, and is water-scarce. The use of natural resources in an unsustainable manner and the pollution created as a result of this consumption impacts negatively on the city's natural environment. At the same time, many poorer communities in the city have limited access to resources. The City will seek to improve the efficiency with which resources are used, enable reduction of both resource consumption and waste production across high income commercial and residential sectors, while providing improved access to cleaner and more efficient resources for poorer households and businesses.

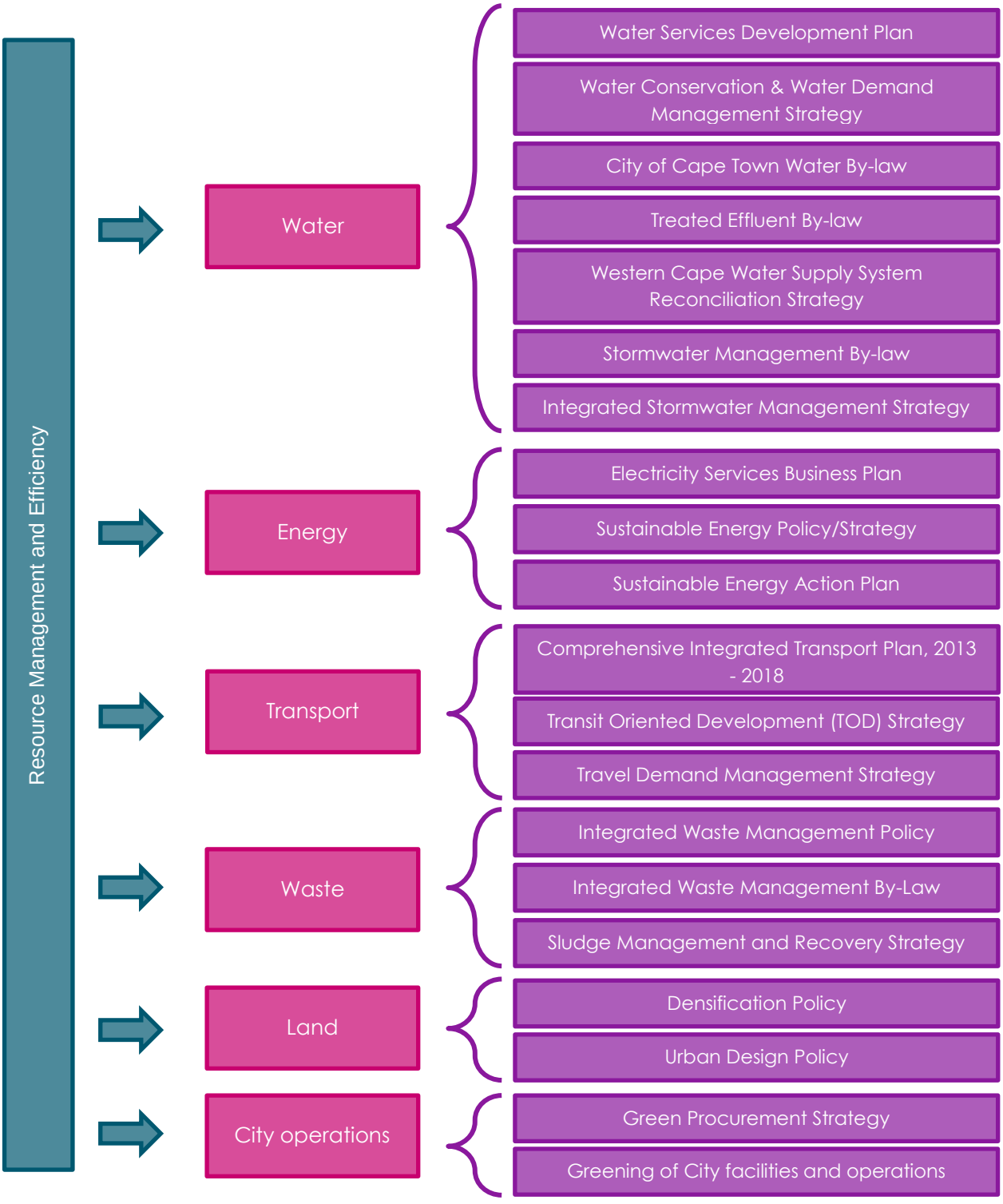

Figure 3: Resource management and efficiency implementation tools

5.1 Water

In terms of water management, the City will utilise the following tools to improve resource management and efficiency. Management of water resources within the urban environment includes potable water, wastewater, stormwater and natural aquatic ecosystems, which together comprise the "urban water cycle".

5.1.1 Water Service Development Plan

Lead department/s:	Water and Sanitation Management
Supporting department/s:	N/A
Description:	The Water Services Development Plan (WSDP) is the Water and Sanitation Management Department's key guiding document, and provides a plan for the sustainable, fair, equitable, reliable and financially viable (affordable) provision of water and sanitation services to Cape Town. The WSDP includes a strong focus on protecting and conserving water resources and managing the negative environmental impacts of wastewater.
Status:	Approved by Council (annually, as part of IDP)

5.1.2 Water Conservation and Water Demand Management Strategy (integrated into WSDP)

Lead department/s:	Water and Sanitation Management
Supporting department/s:	N/A
Description:	The City's Water Conservation and Water Demand Management Strategy, part of the WSDP, aims to ensure the long-term balance between available water resources and water demand in order to postpone the need for expensive capital infrastructure projects for as long as it is economically viable, and to minimise water wastage.
Status:	Approved by Council (annually as part of WSDP)

5.1.3 City of Cape Town Water By-Law

Lead department/s:	Water and Sanitation Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination
Description:	The City's Water By-Law provides for the control and regulation of water services in the City and covers, amongst others, provisions relating to the supply of water and water restrictions and conservation.
Status:	Approved by Council (October 2010), Promulgated (February 2011)

5.1.4 Treated Effluent By-Law

Lead department/s:	Water and Sanitation Management
Supporting department/s:	Recreation and Parks; Law Enforcement, Traffic and Co-ordination
Description:	Treated effluent is increasingly being used as an alternative water source, primarily for municipal (in-service infrastructure and irrigation use), industrial, agricultural and domestic (irrigation only) use. The Treated Effluent By-Law provides for treated effluent to be used in several applications, with the aim of

	ensuring that the demand for valuable potable water is decreased, and promoting significant potable water savings.
Status:	Approved by Council (October 2009), Promulgated (July 2010)
5.1.5 Western Cape Water Supply System Reconciliation Strategy	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	N/A
Description:	The Western Cape Water Supply System Reconciliation Strategy includes recommendations of interventions that need to be implemented or studied further to ensure long term water supply. The City of Cape Town is responsible for implementing this strategy on behalf of the National Department of Water and Sanitation.
Status:	Strategy owned by National Department of Water Affairs
5.1.6 Stormwater Management By-Law	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination
Description:	The Stormwater Management By-Law aims to provide for the regulation of stormwater management in the area of the City of Cape Town and to regulate activities which may have a detrimental effect on the development, operation and maintenance of the stormwater system, including the receiving environment. This strategy also significantly contributes to the effective management of the City's water resources, as described in section 4.1 above.
Status:	Approved by Council (August 2005), Promulgated (September 2005), currently under review
5.1.7 Integrated Stormwater Management Strategy	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	All
Description:	The strategy will focus on the management of stormwater to minimize the impacts of flooding while taking an integrated and co-ordinated catchment based planning approach, and promoting Water Sensitive Urban Design. The strategy, along with its associated tools, will support the protection of urban water resources including rivers, wetlands, sub surface, and coastal waters from pollutants, the development of infrastructural solutions that are cost effective, environmentally sensitive and maximize social and amenity value, and the involvement of communities and other stakeholders in the management of the urban stormwater network, river systems and river corridors.
Status:	Draft

5.2 Energy	
In terms of energy, the City will utilise the following tools to improve resource management and efficiency:	
5.2.1 Electricity Services Business Plan	
Lead department/s:	Energy Directorate
Supporting department/s:	Environmental Management
Description:	The Electricity Services Business Plan is the guiding document for the City of Cape Town's Electricity Services department, and provides for implementation of a number of key business plan objectives. The plan also includes measures aimed at improving energy efficiency and makes provision for facilitating the use of renewable energy.
Status:	Approved by Council (annually, as part of IDP)
5.2.2 Sustainable Energy Policy/Strategy	
Lead department/s:	Sustainable Energy Markets; Environmental Management; Enterprise and Investment
Supporting department/s:	Transport Planning; Informal Settlements and Backyarders; New Market Development; Specialised Technical Services; Disaster Management and Public Emergency Communications Centre
Description:	A City of Cape Town Energy Policy/Strategy will be developed in order to set the City's position on energy issues within the current legislative framework, and determine areas of priority intervention for the City.
Status:	Proposed
5.2.3 Sustainable Energy Action Plan	
Lead department/s:	Sustainable Energy Markets; Environmental Management; Enterprise and Investment
Supporting department/s:	Transport Planning; Informal Settlements and Backyarders; New Market Development; Specialised Technical Services; Disaster Management and Public Emergency Communications Centre
Description:	The City's Sustainable Energy Action Plan will provide an implementation plan for the proposed Energy Policy/Strategy, and will include a number of actions, projects, and programmes.
Status:	Proposed

5.3 Transport	
In terms of transport, the City will utilise the following tools to improve resource management and efficiency.	
5.3.1 Comprehensive Integrated Transport Plan, 2013 - 2018	
Lead department/s:	Transport Planning

Supporting department/s:	All
Description:	As part of the City's Comprehensive Integrated Transport Plan, various transport strategies, programmes and projects have been initiated in order to facilitate a shift towards an integrated sustainable transport system. These include the development of an Integrated Public Transport Network Plan; Non-motorised Transport Strategy; Universal Access Strategy; Travel Demand Management Strategy; Travel SMART Behavioural Change Programme; Parking Policy, Transit Oriented Development; and Fleet Greening Framework. The strategies aim to reduce or avoid the need to travel; encourage and enable a modal shift from energy intensive single occupancy vehicles to more efficient options; improve vehicle and fuel efficiency and optimise transport infrastructure.
Status:	Approved by Council (December 2013)
5.3.2 Transit Oriented Development (TOD) Strategy	
Lead department/s:	Transport Planning
Supporting department/s:	All
Description:	For the City's public transport system to be viable and efficient, more passengers have to live and work in close proximity to key transit routes. Additionally, land has to be developed in such a manner that it leads to increased density along these routes, with the right mix between residential and commercial, to allow people to easily travel between work, home, and recreation. The Transit Oriented Development (TOD) Strategy aims to realise these goals.
Status:	In process
5.3.3 Travel Demand Management Strategy	
Lead department/s:	Transport Planning
Supporting department/s:	All
Description:	The Travel Demand Strategy focuses on promoting a diversity of sustainable travel modes and practices that will influence the choices made by commuters, in order to reduce the overall number of trips, minimise travel time, and optimise travel cost – especially during peak times.
Status:	In process

5.4 Waste	
In terms of waste, the City will utilise the following tools to improve resource management and efficiency.	
5.4.1 Integrated Waste Management Policy	
Lead department/s:	Solid Waste Management
Supporting department/s:	All
Description:	The City's Integrated Waste Management Policy recognises the City's

	responsibilities to reduce and minimise waste and impacts on resources and the environment caused by the management of waste. The City therefore aims to regulate the interventions, mechanisms and technologies applied within the city's boundaries to minimise and manage waste in a sustainable, effective, equitable and efficient manner that will reduce social, health, environmental and economic impacts as far is practically possible. This policy is further supported by a "Policy for the accreditation of service providers of waste management service in Cape Town", which has a regulatory function in support of national environmental and road traffic legislation to minimise impacts and optimise benefits gained from IWM practices. (approved by Council 28 October 2009)
Status:	Approved by Council (May 2006), currently under review
5.4.2 Integrated Waste Management By-Law	
Lead department/s:	Solid Waste Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination
Description:	The City's Integrated Waste Management By-Law (2009) and amendment (2010) provides for the regulation of the avoidance, minimisation, generation, collection, cleaning and disposal of waste, including the disposal of treated sludges to acceptable standards, as well as illegal dumping.
Status:	Approved by Council (March 2009), Promulgated (August 2009), Amendment approved by Council (March 2010), Promulgated (June 2010), currently under review
5.4.3 Sludge Management and Recovery Strategy	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	Solid Waste Management
Description:	The City is in the process of implementing a strategy to transform its approach to dealing with sludge produced as the result of wastewater treatment. The aim of this approach is to beneficiate sludge to become a resource rather than a waste product, and ensure sustainable utilisation of this resource.
Status:	Proposed

5.5 Land Use	
In terms of land use management, the City will utilise the following tools to improve resource management and efficiency.	
5.5.1 Municipal Planning By-Law	
Lead department/s:	Development Management
Supporting department/s:	All
Description:	Land use will be managed and controlled through the provisions of the Municipal Planning By-Law (MPBL) and Development Management Scheme. The procedures and criteria for considering all land use applications are set in

	the MPBL.
Status:	Approved by Council. Commenced July 2015
5.5.2 Densification Policy	
Lead department/s:	Urban Catalytic Investments; Urban Integration
Supporting department/s:	All
Description:	As stated in this policy, densification is a necessary step to promote the longer-term sustainability of Cape Town's valuable natural, urban and rural environments. The Densification Policy provides a framework for assessing density related development applications, with the aim of promoting and enabling appropriate densification to take place across the city.
Status:	Approved by Council (February 2012)
5.5.3 Urban Design Policy	
Lead department/s:	Urban Catalytic Investments; Urban Integration
Supporting department/s:	Transport Planning; Informal Settlements and Backyarders; New Market Development
Description:	Internationally it has been recognised that design, and more specifically urban design, can add value to development processes and play a positive role in urban transformation. The policy provides guidelines and a framework for the inclusion of urban design considerations in development proposals and applications, with an overall aim of promoting effective urban design across the city.
Status:	Approved by Council (December 2013)

5.6 City operations	
The City will utilise the following tools to improve resource management and efficiency within its own operations	
5.6.1 Green Procurement Action Plan	
Lead department/s:	Environmental Management; Supply Chain Management
Supporting department/s:	All
Description:	A City Green Procurement Action Plan will be developed and implemented to stimulate the city's green economy and other principles of the Environmental Policy through promoting the use of City budgets in a way that promotes local economic development while providing a base demand for green products and services, saving costs, operating in a more efficient or sustainable manner, improving health conditions and reducing liability (e.g. reducing hazardous substances). The action plan will also include a focus on mainstreaming environmental engineering principles through design.
Status:	In process
5.6.2 Greening of City facilities and operations	
Lead department/s:	Facilities Management; Environmental Management

Supporting department/s:	All
Description:	Ongoing work is taking place to green the City's facilities, including office facilities, as well as its operations. This includes the installation of energy and water efficient technologies and greening of the City's vehicle fleet. Additional opportunities are being identified on an ongoing basis, and implemented where possible.
Status:	In process

6. Environmental Quality Management and Monitoring

Environmental degradation is ongoing and backlogs in basic service provision in the City contribute to high levels of pollution. The city is currently losing ecosystem goods and services that are freely provided by the natural environment and constitute key ecological infrastructure. The City will aim to better control and prevent pollution of its air and water resources and receiving environments through the key tools outlined below.

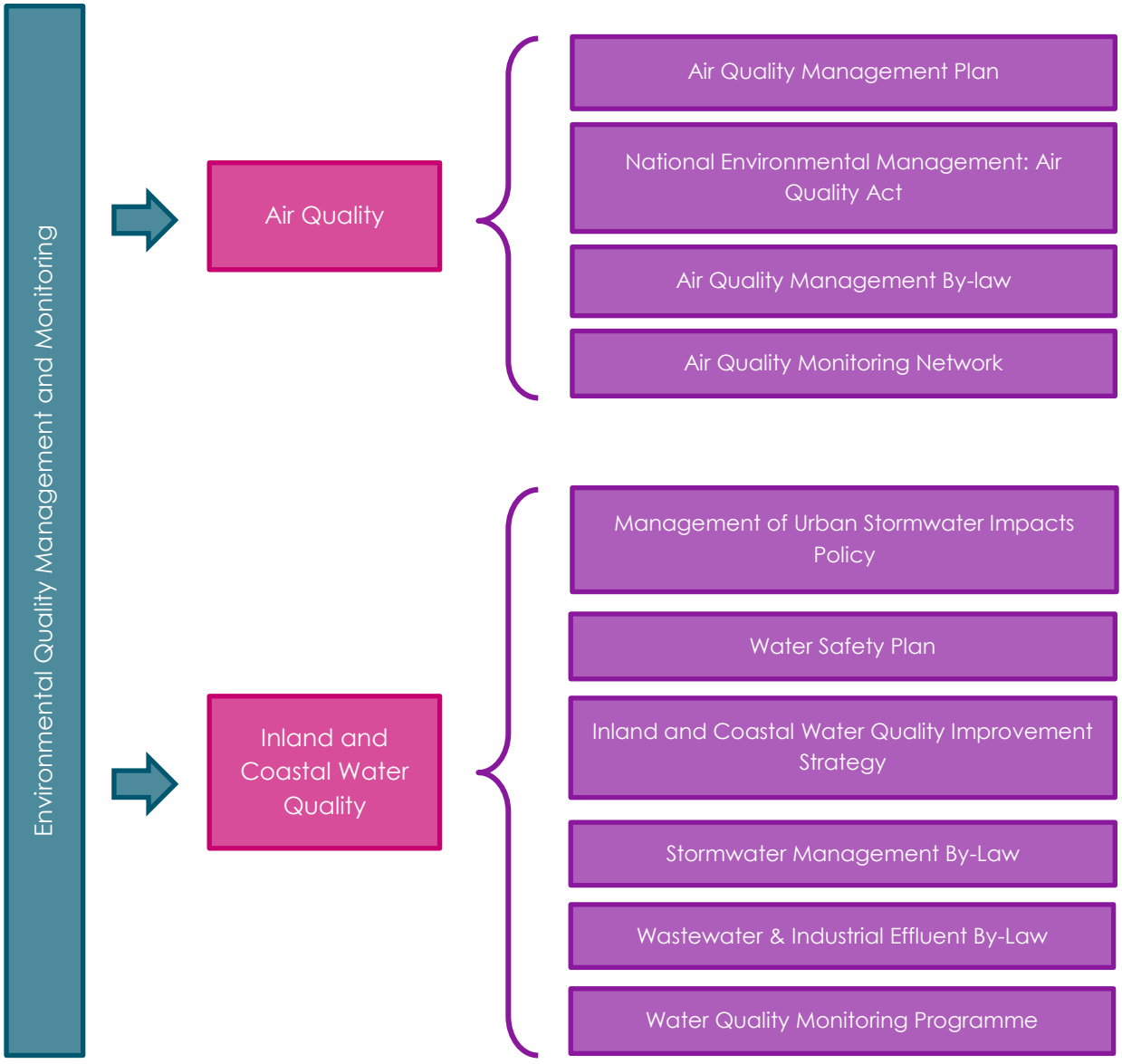

Figure 4: Environmental Quality Management and Monitoring implementation tools

6.1 Air Quality	
The City will utilise the following tools to manage air quality.	
6.1.1 Air Quality Management Plan	
Lead department/s:	City Health
Supporting department/s:	Transport Planning; Water and Sanitation Management (Scientific Services); Solid Waste Management; Energy Directorate; Fleet Management; Environmental Management; Development Management; Recreation and Parks
Description:	The City's Air Quality Management Plan aims to ensure that clean air is achieved and maintained in the City over the next 10 to 20 years. The plan contains 11 objectives to meet its commitment: "To be the city with the cleanest air in Africa".
Status:	Approved by Council (September 2005)
6.1.2 National Environmental Management: Air Quality Act	
Lead department/s:	City Health
Supporting department/s:	Development Management
Description:	The City of Cape Town is responsible for the enforcement of aspects of the NEM: Air Quality Act in terms of Chapter 4 and 5 including the regulation of declared controlled emitters and atmospheric emissions licensing; and ensuring compliance and enforcement .
Status:	Approved (Act 39 of 2004)
6.1.3 Air Quality Management By-law	
Lead department/s:	City Health
Supporting department/s:	Law Enforcement, Traffic and Co-ordination; Development Management; Environmental Management
Description:	The Air Quality Management By-Law provides the legal framework for the implementation of aspects of the City's Air Quality Management Plan. The by-law seeks to ensure management of air quality and the control of air pollution within the area of jurisdiction of the City and to ensure that air pollution is avoided or, where it cannot be altogether avoided is minimised or remedied.
Status:	Approved by Council (March 2010), Promulgated July 2010
6.1.4 Air Quality Monitoring Network	
Lead department/s:	Water and Sanitation Management (Scientific Services); City Health
Supporting department/s:	Information Systems and Technology; Energy Directorate; Solid Waste Management; Water and Sanitation Management; Law Enforcement, Traffic and Co-ordination
Description:	The Air Quality Monitoring Network which is managed by Water Services-Scientific Services Department on behalf of City Health, consists of ambient air quality monitoring, carried out at fixed, permanent air quality monitoring stations. City Health's Air Quality Management Unit conducts daily diesel vehicle emissions testing carried out at various high risk locations on an ongoing

	basis.
Status:	Ongoing programme

6.2 Inland and Coastal Water Quality

The City will utilise the following tools to manage the quality of the city's freshwater bodies, estuaries, and coastal receiving environment.

6.2.1 Management of Urban Stormwater Impacts Policy

Lead department/s:	Water and Sanitation Management
Supporting department/s:	All
Description:	The Management of Urban Stormwater Impacts Policy intends to minimise the undesirable impacts of stormwater runoff from developed areas by introducing sustainable drainage principles to urban planning and stormwater management in the Cape Town metropolitan area.
Status:	Approved by Council (May 2009)

6.2.2 Water Safety Plan

Lead department/s:	Water and Sanitation Management
Supporting department/s:	Solid Waste Management
Description:	The aim of the Water Safety Plan is to ensure the safety and long-term security of drinking water through the use of a comprehensive risk assessment and risk management approach that encompasses all steps in water supply from the catchment to consumer.
Status:	Approved by Council (annually, as part of WSDP)

6.2.3 Inland and Coastal Water Quality Improvement Strategy

Lead department/s:	Water and Sanitation Management
Supporting department/s:	All
Description:	The Inland and Coastal Water Quality Improvement Strategy aims to address poor water quality in the city's rivers, wetlands, and coastal waters by addressing the root causes of water pollution through a cross-departmental and multi-disciplinary approach.
Status:	Ongoing programme

6.2.4 Integrated Stormwater Management Strategy

Lead department/s:	Water and Sanitation Management
Supporting department/s:	All
Description:	The strategy will focus on the management of stormwater to minimize the impacts of flooding while taking an integrated and co-ordinated catchment based planning approach, and promoting Water Sensitive Urban Design. The strategy, along with its associated tools, will support the protection of urban

	water resources including rivers, wetlands, sub surface, and coastal waters from pollutants, the development of infrastructural solutions that are cost effective, environmentally sensitive and maximize social and amenity value, and the involvement of communities and other stakeholders in the management of the urban stormwater network, river systems and river corridors.
Status:	Draft
6.2.5 Stormwater Management By-Law	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination
Description:	The Stormwater Management By-Law aims to provide for the regulation of stormwater management in the area of the City of Cape Town and to regulate activities which may have a detrimental effect on the development, operation and maintenance of the stormwater system, including the receiving environment. This strategy also significantly contributes to the effective management of the City's water resources, as described in section 4.1 above.
Status:	Approved by Council (August 2005), Promulgated (September 2005), currently under review
6.2.6 Wastewater & Industrial Effluent By-Law	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination; Solid Waste Management
Description:	The Wastewater & Industrial Effluent By-Law enables the City of Cape Town to enforce control over activities linked to the disposal of waste water and industrial effluent, including those that are likely to have a negative impact on the natural environment.
Status:	Approved by Council (May 2006), Amendment approved by Council (January 2014), Promulgated (February 2014)
6.2.7 Water Quality Monitoring Programme	
Lead department/s:	Water and Sanitation Management
Supporting department/s:	N/A
Description:	The City actively monitors water quality in the city's rivers, wetlands, and coastal waters. Water quality is measured and evaluated in terms of both public health (bacterial pollution) and ecological health (trophic state).
Status:	Ongoing programme

7. Heritage

Cape Town is an historic city. It derives its character from evidence of a layered and multi-faceted history, its dramatic scenic setting, its historical townscapes and cultural landscapes, its cultural and heritage diversity and the traditions and memories that arise from its past. The City's vision is of a city where the heritage of its past and present inhabitants is respected, protected and enhanced through appropriate heritage management practices, adherence to sensitive, socially aware and appropriate heritage concepts, and integration with other City responsibilities and policy objectives.

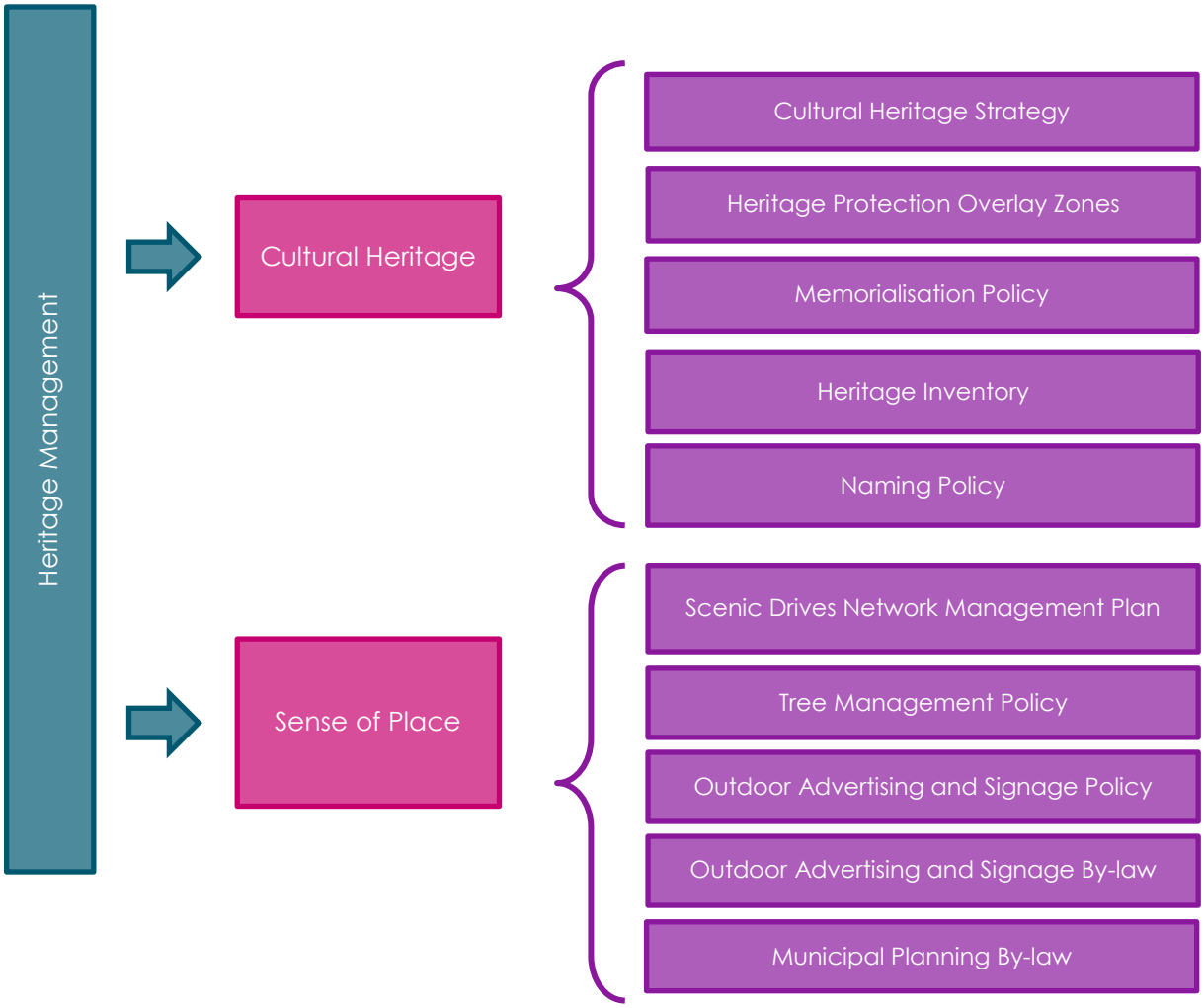

Figure 5: Heritage Management implementation tools

7.1 Cultural Heritage	
The City will utilise the following tools to facilitate management of its cultural heritage.	
7.1.1 Cultural Heritage Strategy	
Lead department/s:	Social Development & Early Childhood Development (Arts and Culture); Environmental Management
Supporting department/s:	All
Description:	The City's Cultural Heritage Strategy provides the management framework, targets and goals for the integrated management of the City of Cape Town's cultural heritage resources. The strategy's key objectives are to identify, assess, conserve, manage and enhance the heritage resources, structures and landscapes of all the people of Cape Town and ensure that the memories and values associated such resources are appropriately represented.
Status:	Approved by Council (April 2005)
7.1.2 Heritage Protection Overlay Zones	
Lead department/s:	Social Development & Early Childhood Development (Arts and Culture); Environmental Management
Supporting department/s:	Development Management
Description:	Heritage Protection Overlay Zones have been defined as part of the City of Cape Town Zoning Scheme. The overlay zones make provision for the protection of heritage places entered on the heritage register maintained by the provincial heritage resources authority, heritage areas as provided for in terms of the heritage legislation and heritage places the City of Cape Town considers to be conservation-worthy in terms of its heritage strategies.
Status:	Approved by Council as part of Integrated Zoning Scheme (November 2012)
7.1.3 Memorialisation Policy	
Lead department/s:	Social Development & Early Childhood Development (Arts and Culture)
Supporting department/s:	Environmental Management; Recreation and Parks; Urban Catalytic Investments; Urban Integration
Description:	The draft Memorialisation Policy provides a high-level, cohesive and robust framework to guide decision-making when requests are received for the consideration of a memorial. The City of Cape Town recognises the importance of memorials in celebrating Cape Town's history, culture, environment, people, organisations and events and is committed to appropriately managing the establishment of memorials and commemorative events.
Status:	Approved by Council (July 2015)
7.1.4 Heritage Inventory	
Lead department/s:	Environmental Management
Supporting department/s:	Urban Catalytic Investments; Urban Integration
Description:	The City of Cape Town maintains a publicly accessible Heritage Resources

	Inventory of audited cultural heritage sites and places in the metropolitan area.
Status:	Ongoing programme
7.1.5 Naming Policy	
Lead department/s:	Public Participation
Supporting department/s:	Environmental Management; Transport Planning
Description:	Cape Town belongs to all its people, and has a long history of human settlement and a rich and diverse heritage. The names of places should reflect and recognise the city's multi-cultural society.
Status:	Approved by Council (August 2012)

7.2 Sense of Place	
The City will utilise the following tools to facilitate the management of its sense of place	
7.2.1 Scenic Drives Network Management Plan	
Lead department/s:	Urban Catalytic Investments; Urban Integration
Supporting department/s:	Environmental Management; Development Management
Description:	The Scenic Drives Network Management Plan defines nine scenic drives (of 40) within the borders of Cape Town, which are public roads that traverse areas of outstanding scenic quality or that provide a view of scenic areas, facilitate appreciation of Cape Town's natural, built and cultural heritage, are attractions in their own right and key drivers supporting the tourism industry. These will ultimately have policy status, which can then inform the assessment of development applications on relevant properties.
Status:	Approved by Council (2003), 2014 update available
7.2.2 Tree Management Policy	
Lead department/s:	Recreation and Parks
Supporting department/s:	N/A
Description:	The tree management policy provides a guideline for the provision of trees in parks and neighbourhoods, and the management of existing trees. Trees form an important part of the urban fabric, and contribute to a sense of place in the city. The management of heritage trees will be integrated into the policy in the future.
Status:	Approved by Council (March 2015)
7.2.3 Outdoor Advertising and Signage Policy	
Lead department/s:	Environmental Management
Supporting department/s:	N/A
Description:	The Outdoor Advertising and Signage Policy aims to ensure that the visual

	environment, particularly with regard to the conservation of the characteristics of sensitive environmental, heritage and tourist areas, is effectively managed.
Status:	Approved by Council (August 2013)
7.2.4 Outdoor Advertising and Signage By-Law	
Lead department/s:	Environmental Management
Supporting department/s:	Law Enforcement, Traffic and Co-ordination
Description:	The City's Outdoor Advertising and Signage By-Law aims to regulate outdoor advertising in the jurisdiction of the City of Cape Town in a manner that is sensitive to the environmental quality of different parts of the city. It seeks to strike a balance between outdoor advertising opportunities on the one hand, and the conservation of visual, tourist, traffic safety, environmental and heritage characteristics on the other hand.
Status:	Approved by Council (December 2001), Amendment approved by Council (August 2013), Promulgated (January 2014)
7.2.5 Municipal Planning By-law	
Lead department/s:	Development Management
Supporting department/s:	All
Description:	Land use will be managed and controlled through the provisions of the Municipal Planning By-Law (MPBL) and Development Management Scheme. The procedures and criteria for considering all land use applications are set in the MPBL.
Status:	Approved by Council. Commenced July 2015