CENTRAL SPATIAL DEVELOPMENT PLAN

ETHEKWINI MUNICIPALITY
(2009)

ANNUAL REVIEW 2012/2013

REVIEW 3 OF 4

NOVEMBER 2011
“The idea that action should only be taken after having all the answers and all the resources are a sure recipe for paralysis. The planning of a city is a process that allows for corrections, always. It is supremely arrogant to believe that planning can be done only after figuring out every possible variable. To innovate is to start! Hence, it is necessary to begin the process. Imagine the ideal, but do what is possible today!”

Jamie Lerner – Former Mayor of Curitiba, Brazil.
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1. CENTRAL SPATIAL DEVELOPMENT PLAN

1.1 INTRODUCTION

The eThekwini Municipality is currently engaged in establishing a Land Use Management System for the entire municipal area. The system will eventually contain a number of elements (i.e. a planning and development management “toolbox”) which will include a package, or hierarchy, of plans as well as a variety of development policies, planning and development standards, regulations and by-laws.

The establishment of the system includes a range of planning activities all running parallel to each other and with the common purpose of updating, refining, creating or establishing appropriate mechanisms for managing land use and development in the Municipality.

The package of plans being implemented by the Municipality will initiate spatial and physical planning at scales and levels of detail appropriate to the levels of development and management intervention required in different parts of the municipality and are hierarchical and integrated highlighting movement from strategy through to implementation.

Figure 1 and Table 1 indicates the package of plans concept.
Table 1: Emerging Package of Plans

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>Scope</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Term Development Framework</td>
<td>Strategic: Economic Social</td>
<td>Strategic Development Direction for the City</td>
</tr>
<tr>
<td></td>
<td>and Environmental Objectives</td>
<td></td>
</tr>
<tr>
<td>IDP</td>
<td>Strategic: Operational</td>
<td>Strategic Implementation Direction and Imperatives for the Municipality</td>
</tr>
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<td></td>
<td>Implementation</td>
<td></td>
</tr>
<tr>
<td>Spatial Development Framework</td>
<td>Strategic: Spatial Development</td>
<td>Strategic Spatial Development Intentions for the City based on the LTDF and IDP</td>
</tr>
<tr>
<td>Spatial Development Plan</td>
<td>Strategic: Spatial Development</td>
<td>Translation of Spatial Development Intentions into Land Use, Transport, Environmental, Infrastructure implications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broad based Land Use Directives to guide Local Area Planning and LUMS,Bulk Infrastructure and Transportation Planning Directives for the Municipality</td>
</tr>
<tr>
<td>Local Area Plan</td>
<td>Detailed Physical Plan</td>
<td>Detailed Physical Planning Directives for the City and the Municipality Refining Land Use, Transport, Environment, Infrastructure to a level that informs the preparation of a Land Use Scheme. Also includes Urban Design Directives for Public and Privately owned Land. May include implementation proposals</td>
</tr>
<tr>
<td>Precinct Plan/Special Area Plan</td>
<td>Detailed Physical Plan for</td>
<td>Detailed Physical Planning Directives for the City and the Municipality for areas with special environmental, economic, heritage etc characteristics. Detailed Urban Design Directives and / or Proposals. May include implementation proposals</td>
</tr>
<tr>
<td></td>
<td>special areas</td>
<td></td>
</tr>
<tr>
<td>Land Use Scheme</td>
<td>Zoning and Development</td>
<td>Detailed Land Use Management Tool for the Municipality and Allocation of Potential Development Rights to private and publicly owned land.</td>
</tr>
<tr>
<td></td>
<td>Development Control Regulations</td>
<td></td>
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</tbody>
</table>
1.2 SCOPE AND PURPOSE OF THE CENTRAL SDP

The Spatial Development Framework (SDF) of the eThekwini Municipality is the primary spatial strategy response to the development context, needs and vision of the municipality as described in the IDP. It is the primary level of translation of social, economic and environmental development and management policy into spatial terms and is the primary Land Use Management (LUMS) tool of the Municipality.

In order for this spatial strategy to become achievable and successful and in order for the city to be spatially restructured the SDF needs to be translated into more geographically specific physical development and land use management guidelines. This can be achieved through the preparation of Spatial Development Plans (SDPs).

The purpose of the SDP is therefore:

- To translate the policies contained within the ETHEKWINI MUNICIPALITY spatial development framework (SDF) into more detailed and geographically specific land use directives.
- To consolidate, update and review existing spatial planning and development management mechanisms in the Central region.
- To guide the preparation of more detailed local area plans, precinct plans and land use schemes.
- To provide a more concrete spatial and land use guideline policy for use by municipal and other infrastructure service providers in planning and delivering their services.
- To provide direction and guidance to private sector and community investors with respect to the levels, locations, types and forms of investment that need to be made, which the Municipality can support in terms of a phased plan over a period of time.
- The following elements have been generated in line with the vision and development principles of the Ethekwini Municipality’s Integrated development Plan (IDP):
  - A strategic assessment of the Central Spatial Region has been undertaken.
  - Key roles of the Central Spatial Region is in relation to the EMA have been investigated.
  - Development opportunities and constraints of the region are identified.
  - Guidance for subsequent local area plans and land use schemes and overall spatial development have been undertaken.

1.2.1 THE FOCUS OF THE 2012/13 REVIEW

In this 2012/13 minor annual CSDP Review, the key areas of focus for the revision have included:

- Changes made in alignment with the IDP 2012/13.
- Changes made in alignment with the key proposals in Council adopted Local Area Plans (LAPs) and Precinct Plans.
- Verification of alignment between existing land uses and spatial planning intentions.
• Alignment and standardization of densities, nodal hierarchy and mapping across the four SDP’s.
• Participation in numerous climate change initiatives and fora to more fully understand the implications and possible spatial responses to water supply limitations and well as agricultural and food security impacts associated with climate change. In this regard, further engagement with the Department of Agriculture has been sought and an internal working group has been established to pursue investigations around agriculture and various regulatory and spatial planning issues.
• Ongoing stakeholder engagement, particularly to obtain alignment with private sector and broader regional strategic initiatives.
• Changes to mapping and text to reflect new/updated information including:
  - Amended Land-use Mapping and Land use quantums
  - Density Mapping
• The review of the CSDP will allow for the continual strategic refinement of the procgazamkess, the re-assessment of the CSDP based on new information and sector studies as the information becomes available. Of critical importance is the more detailed assessment of Phase 1 Priority areas. Future reviews will take into consideration the Strategic Environmental Assessment of the SDP; the City Densification Strategy; the city visioning process; Reserve Determination and Water Reconciliation studies and the spatial interpretation of Climate Change Data as and when this information becomes available.

1.3 THE STUDY AREA

The eThekwini Municipality is located on the eastern seaboard of Africa within the province of KwaZulu-Natal (KZN) and covers an area of 2,297km². The Municipal area is characterized by diverse topography from steep escarpments and rolling hills in the west, to a relatively flat coastline in the east. It has 98 kilometers of coastline and contains 18 river catchments.

The eThekwini Municipal Area (EMA) can be divided into four cohesive and functional areas by virtue of the geophysical features of the Municipality and the associated settlement patterns and linkages that have developed in response to these. The first division that is apparent is at the metropolitan level where the Umgeni River, the Umlazi River and the Kloof Ridge dissect the municipal area into four sub metro areas (i.e. central, north, west, and south). These features are such that physical linkages between the sub metro areas are constrained to narrow corridors (bridges across the Umgeni and the Umlaas and a very limited access corridor through the Kloof Ridge.

The boundaries of the Central Spatial Region (CSR) extend from the Umgeni River, in the North, along the coast through to the Umlaas Canal in the South and extend to the escarpment in the west. The Umgeni, Umbilo, Umhlathuze and Umlaas catchments traverse the CSR which includes 31 suburbs, and controls development under 9 town planning Schemes. Three Area Based Management (ABM) areas fall within the CSR viz; Inner eThekwini Regeneration and Urban Management Programme (ITrump), Cato Manor Development Association (CMDA) and part of the South Durban Basin (SDB). This region is the Urban Core of the EMA and is home to approximately 1.30 million people which is 34% of eThekwini’s total population of 3.5 million people (Stats SA)
1.4 METHODOLOGY

The first iteration of planning for the Central Spatial Development Plan (CSDP), as manifest in this document, does not presume to be fully comprehensive in its coverage of relevant issues, nor does it purport to have been fully inclusive in its engagement with sector departments. The report relies upon secondary data sources and was mainly conducted by means of a literature search, including some follow-up discussions with sector departments.

Based on this premise the main purpose of this work was intended to be an assessment of strategic issues largely based on the prevailing status quo in order to identify challenges with the aim of subsequently making recommendations for a second phase of planning, being focused interventions at a more localised level.

The Central Spatial Development Plan (CSDP) differs from other SDPs in that it is more focused as a highly developed and serviced area that is under constant change. The focus of this plan is to identify and propose standards at a broad level that tests impacts and sustainability. Large parts of the Central Spatial region are already engaged in further detailed levels of planning that is (Local Area Plans (LAPs) and Precinct Plans that give more city-wide direction in terms of the needs, opportunities and challenges of an area such as the Back Of Port (BOP) Local Area Plan (LAP).

Accordingly, a strategic assessment of the Central Spatial Region was undertaken, the key roles of the area have been investigated; key opportunities and constraints for development of the area were identified, as were spatial development guidelines.
The key informants of the assessment undertaken thus were:

- a desktop status quo analysis of planning, economic, environmental, traffic and transportation, infrastructure and housing issues;
- Identification of projects/plans that can be investigated at a Local Area Plan level;
- Determining the impacts of these plans/projects on the environment, infrastructure (Traffic, Water and Sanitation) and economic viability of the areas.

Accordingly, the “Plan” for the Central Spatial Region does not build up to a spatial concept, it was however developed through investigations of the respective functional areas and subsequent identification of regeneration projects within those areas, due to the region being fully developed.

2. METROPOLITAN SPATIAL DEVELOPMENT APPROACH

2.1 INTRODUCTION

The Ethekwini Municipality is the amalgamation of a myriad of various sized municipal authorities that transformation within local government has required. Each of these local authorities had planning systems and approaches that best suited them as individual entities and which led to spatial and physical planning and development management strategies that they implemented.

New and emerging planning and development requirements, as determined through various pieces of national and provincial legislation, require that planning systems within local municipalities are regularized and are updated in a manner that will result in an improved spatial re-organisation of the municipal area. Specifically the systems and approaches adopted should begin to redress the adverse effects of apartheid and separate areas planning as well as social, economic and environmental sustainability.

As such it has been necessary for the Ethekwini Municipality to develop a spatial planning approach that is consistent with legislation but also which is appropriate to the management requirements of a metropolitan city. The sections which follow outline the approach currently being used and developed by the Municipality as part of the overall spatial development planning initiative and as part of the process of establishing a common spatial planning language for the city.
2.2 THE SPATIAL NATURE OF SETTLEMENTS

2.2.1 Overlapping Systems of Movement and Activity

Human beings experience and use the city through a number of scales of movement and through a wide range of day-to-day activities. At one level they access some of their needs by being able to move all over the city and at another level they access benefits from within their local neighbourhood.

In order for the city to perform optimally for all its inhabitants these overlapping systems of movement and activity need to be accessible to all communities, need to operate efficiently and they need to be sustainable.

The legacy of apartheid is such that some areas perform better than others due to their interconnectedness with other areas and due to their ability to support human activity adequately at the local neighbourhood level. Spatial development planning seeks to ensure that access to opportunity and amenity at the local and metro scale is equally available to all communities through the protection of natural resource systems that benefit human communities and through the establishment of man made movement, activity and service systems that support human activity and endeavour.

The following sections describe the nature of the overlapping spatial systems that need to be either upgraded or established in order for the city to perform at an optimal level for all inhabitants in the future.

2.2.2 Metropolitan Levels of Interconnectedness and Exchange

a) Durban Metropolitan Open Space System (DMOSS) as a Primary Structuring Element

At the metropolitan scale the DMOSS of the city is the primary structuring element of space in that, through its major physiographic features, it physically defines areas of land that are suitable or unsuitable for development. The open space system connects these areas of land through ecological, hydrological and geological processes and systems so that whilst they may be distant or separated from one another they are interrelated and inter dependent. The interconnectedness of the open space system is critical for its own sustainable survival but also for the sustainable delivery of environmental services and benefits it provides for humans (i.e. water supply, flood protection, building materials, medicinal products, clean air and water, carbon sequestration etc.).

b) Metropolitan Movement and Linkage as Primary Structuring Element

The developable areas of land and the communities that are established on them are connected through the primary movement and linkage elements of the city (i.e. major roads or railways). These movement systems allow communities to experience the city at its metropolitan scale and to access benefits, in the form of employment or amenity, that are located large distances from their homes or immediate and local neighbourhoods. This system needs to be upgraded and enhanced to ensure that all communities and metropolitan opportunity and amenity are adequately connected.
2.2.3 Local Levels of Interconnectedness and Exchange

Despite the need to be connected at the metropolitan level individuals and communities experience or undertake most of their day to day activities at a local level in and around their residential neighbourhood, their workplace or where they access goods and services or recreation etc. (i.e. within a local neighbourhood or area which provides one or other form of benefit).

These neighbourhoods are located within the developable portions of the metro as described in the previous section. Invariably there are a number of discrete and or interconnected local neighbourhoods that are linked together and which form larger areas of functionally linked human settlement (i.e. Local Areas).

The manner in which these districts perform as a living environment for its inhabitants will be dependent on the number and quality of services and amenities located therein. The type of services and amenities will also be dependent on the thresholds available in the Local Area to support them. Thresholds will be determined by numbers of people and their income levels.

2.2.4 Objective One : Redress Imbalances

There is a need to redress the adverse impacts of previous planning and group area policies through the elimination of imbalances in the performance and environmental quality of the Municipality’s residential, recreational and business areas.

a) Respond to Existing Outstanding Needs

This will entail the upgrading of poorly-serviced and poor quality residential environments to provide essential services and social infrastructure to be able to support and uplift communities and to promote vitality and a sense of place in these settlements.

b) Restructure Existing Settlements

Existing settlements need to be restructured to ensure that they become functional entities and high performance settlements within the EMA. This will entail the internal re-organisation of these areas to improve access and circulation and it will require the efficient and effective use of vacant and / or underdeveloped land. It will entail the integration of these areas with surrounding urban and rural areas through improved linkages with the main metropolitan movement routes and opportunities.

2.2.5 Objective Two : Build for the future

The CSDP whist focusing on redressing past imbalances also need to build for the future by responding appropriately to future needs and anticipated growth patterns and trends.

a) Accommodate Population Growth

In order to address metropolitan population growth trends, development within the Central region must focus on utilising the capacity of the area to accommodate growth. This will include the densification of some existing areas and the opening up of vacant and / or under utilised land.
b) **Structure New Growth**

Key elements of the desired spatial structure need to be identified, established and or consolidated to guide the future physical growth and development of the Central region towards a more efficient, equitable and sustainable urban form. If the energy and investment directed at accommodating population growth and urban development is correctly harnessed, it holds the potential to redress existing spatial deficiencies as well as create a more efficient, equitable and sustainable municipality. Accordingly, an integrated system of growth axes or corridors and associated nodal service points needs to be established and maintained.

c) **Conserve the Natural Resource Asset Base**

The existing natural resource asset base needs to be conserved to ensure that this asset continues to provide eco-services and benefits to an expanding EMA population. This will entail the restriction of development within important natural areas as well as the management of adjacent and upstream land uses and activities which impact on the ecosystems contained within these natural areas.

d) **Establish More Responsive Settlement Structure and Built Form**

There is a need to identify, promote and establish settlement and building forms which are more responsive to environmental concerns, minimise increases in living costs and support a wider choice of identifiable and sustainable lifestyles within the metropolitan area. This will entail the development of a range of housing options at various densities and in various locations.

2.3 **METROPOLITAN POLICY**

2.3.1 **Ethekwini Integrated Development Plan**

The eThekwini Municipality’s Integrated Development Plan 2010 and beyond is the business plan that will guide development and growth of the Ethekwini Municipal area over the next 5 years. It focuses on helping to realise the vision that “By 2020 eThekwini Municipality will be Africa’s most caring and liveable city.”

2.3.2 **Metropolitan Spatial Framework**

The IDP strategy recognizes that the Municipality has to make hard choices, not in a vacuum, but within a spatial framework. This will be done by connecting actions, resources and expenditure across the metropolitan area to unlock sustainable growth, whilst ensuring that inequitable, inefficient and unsustainable consequences of past development patterns are addressed over a period of time. These are summarized for ease of reference. This strategy embraces the achievement of different actions in different parts of the Municipality.
### Table 2: SDF Principles

<table>
<thead>
<tr>
<th>Equity</th>
<th>Promote an equitable city by:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>reducing infrastructure and service disparities</td>
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<tr>
<td></td>
<td>redressing imbalances in the location of employment opportunities</td>
</tr>
<tr>
<td></td>
<td>providing adequate, accessible and affordable housing opportunities</td>
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<tr>
<td></td>
<td>promoting integration by linking and reducing distances between people, places and activities</td>
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<tr>
<td></td>
<td>making the city work better for the disadvantaged (the poor, the disabled and women)</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Promote an efficient city by:</td>
</tr>
<tr>
<td></td>
<td>promoting more compact development by encouraging higher densities where appropriate</td>
</tr>
<tr>
<td></td>
<td>reducing the separation between places where people live and work</td>
</tr>
<tr>
<td></td>
<td>optimising development in areas of greatest opportunity</td>
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<tr>
<td></td>
<td>encouraging effective use of infrastructure and facilities</td>
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<tr>
<td></td>
<td>promoting cost effective movement systems</td>
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<tr>
<td></td>
<td>promote accessibility through improving relationships between people, places and activities</td>
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<tr>
<td></td>
<td>promoting a well-managed spatial form</td>
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<tr>
<td>Sustainability</td>
<td>Promote a sustainable city by:</td>
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<tr>
<td></td>
<td>promoting optimal use of remaining land opportunities</td>
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<tr>
<td></td>
<td>promoting the inherent value of the natural and built environment and introducing environmentally sensitive management of development</td>
</tr>
<tr>
<td></td>
<td>alleviating environmental health hazards</td>
</tr>
<tr>
<td></td>
<td>promoting total living environments</td>
</tr>
<tr>
<td></td>
<td>retaining and enhancing positive qualities and productive assets of the DMA</td>
</tr>
</tbody>
</table>
a) A Compact City model, which is underpinned by two important concepts:

- **Urban Core** – being the urban central area which generally has servicing capacity and thus opportunity for densification and support thresholds for a range of services.
- **Urban Edge** – a tool to curb urban sprawl, promotes compaction, public transport, protect environmental assets and prevent inefficient expenditure on infrastructure.

b) Suburban Infill Areas are those that are beyond the urban services edge boundary and where servicing limitations and challenges exist, where it is not cost effective to provide additional services. Within these areas an urban development line will now be introduced which shows areas where urban services will be supported. The phasing of development will have to be aligned with infrastructure capacity and infrastructure planning.

c) Rural areas are those areas where development is a mixture of traditional land tenure interlaced with subsistence and commercial agriculture and supported by basic infrastructure.

**Infill** – refers to the development of Greenfield areas or within brownfield (existing urban areas) sites within designated urban areas.

**Compaction** – refers to redevelopment of existing properties to higher densities and may include subdivision and development of large properties within urban areas.

### 2.4 METROPOLITAN KEY CHOICES

In order to achieve the City’s vision, there are a number of key choices that have to be made. Choices act as a point of leverage for creating a sustainable city that is liveable.

**Making Hard Choices**

*Every “bubble represents a choice that has been made over other options...*

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**Choice 1: Improving our port and goods Infrastructure**

The Port of Durban is the primary contributor to Ethekwini’s economy which is of provincial an national significance. Improving the City’s logistics infrastructure will ensure the maximization of port economic
opportunities. The SDP will have to respond by opening up areas for port related and other industrial development opportunities.

**Choice 2: Promoting Densification and Strategic Management for New Growth Areas**

The Municipality is striving to ensure that people are brought closer to where they live, work, study and relax. While the Council is committed to bringing people closer to areas of economic activity, the principle of sustainability will be the driver to ensure that people are living in harmony with the environment.

Using the municipal Spatial Development Framework (SDF) and supporting package of plans, the Municipality is committed to the zoning of land in appropriate areas in order to increase densities and reduce urban sprawl.

The Municipality will also limit urban sprawl and associated development costs through the prioritization of infrastructure provision to support new growth areas. Brownfield developments, regeneration, and reclaimed land will also be supported through infrastructure upgrades in specific areas.

**Choice 3: Bridging the Digital Divide**

Improved telecommunication is critical for economic and social empowerment, providing citizens with opportunities that they have not previously enjoyed.

**Choice 4: Good public transport System**

Public Transport will reduce the need to increase road networks, will provide a platform of connectivity between people and reduce pollution by minimizing vehicle usage. The SDP will respond by ensuring that densification and nodal development are aligned with public transport infrastructure including rail as an inherent opportunity.

**Choice 5: Ecological and related Tourism**

The natural resources of the City of which a large part is found in the Central region have large benefits for tourism and economic development. If harnessed well, tourism development in the Central region can significantly improve local economic development in the metro.

**Choice 6: Ecological Integrity**

The existing natural resource asset base needs to be conserved to ensure that this asset continues to provide services and benefits to an expanding EMA. This will entail the restriction of development within important natural areas as well as the management of adjacent and upstream land uses and activities which impact on the ecosystems contained within these areas. The balancing of social, economic and environmental needs will result in the efficient usage of all resources and therefore ensure that all forms of development occur within the carrying capacity of the natural environment.
To make the big vision a reality, the IDP sets out eight linked plans that include programmes and projects, and details about when they will be done as well as their budgets which are:

1. Sustaining our natural and built environment
2. Economic development and job creation
3. Quality living environments
4. Safe, healthy and secure environments
5. Empowering our citizens
6. Celebrating our cultural diversity
7. Good governance
8. Financial viability and sustainability

### 2.5 SPATIAL STRUCTURING ELEMENTS/CONCEPTS

A number of spatial elements or concepts can be used to direct development investment and to guide development actions. Collectively these elements form a spatial development management system that can be used to coordinate all municipal departments in their planning and development endeavours, as well as, direct private investment and decision making. It is a system that can be used to define/describe how a metropolitan area should work and function as well as assess its performance as a living environment for people. It will also accommodate and/or protect the variety and diversity of lifestyles of the various communities within Municipality.

<table>
<thead>
<tr>
<th>Metropolitan Spatial Structuring Elements/ Concept</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Areas</td>
<td>Local Areas are identifiable geographic areas within the sub metro area which are physically and functionally connected and which display predominant and homogeneous characteristics i.e. urban, suburban or rural. Each plays an important role with respect to the achievement of the broader based growth and development objectives of the Municipality as well as ensuring that local needs are met.</td>
<td>An important spatial structuring device that can create or protect identifiable, integrated and cohesive districts, precincts and neighbourhoods that perform well in terms of a role in the metropolitan area with respect to living areas, employment areas, economic opportunity areas, tourism and recreation areas etc. An important element of the “package of plans” concept for identifying the boundaries of areas within which more...</td>
</tr>
</tbody>
</table>
### Open Space System (D’MOSS)

An interconnected and functional spatial system of open space which includes ecological assets that need to be protected and or conserved such as wetlands, grasslands, estuaries, rivers, forests, woodlands, coastal zones etc. A primary and fundamental spatial structuring element that will promote the protection and management of ecological assets combined and configured in a manner that will promote the sustainable delivery of ecological services within urban and rural living environments. An important climate change management tool for the metropolitan area.

### Development Corridors

Development Corridors are linear systems of urban or rural land use, oriented and integrally linked to single (or multiple) forms of transportation routes/spines and are serviced by a hierarchy of nodes e.g. business, industrial, social, recreation etc. The corridors vary in type and include:

- Rural Corridors
- Urban Development Corridors (UDC)
- Coastal Corridors

The establishment of spatially defined land use corridors which play a specific role in the development and management of land use, transportation and infrastructure.

### Development Spines: Investment, Movement and Linkage Lines

Development Spines are road and/or rail transportation routes that link various nodes, industrial opportunity areas and high density residential areas into linear urban or rural systems and form the spine to the corridor. The spines vary in scale and type and include:

- **Metropolitan Development Spine** which structure and link into the greater metropolitan area e.g. R102
- **Sub Metropolitan Spine** which links Local Areas e.g. MR 93, M41 and Watson Highway
- **Local Area Spines**

The integration of land use and transportation into more efficient and sustainable urban and rural land use systems. The establishment of diverse landscapes and lifestyles.

The promotion of efficient and effective linkage between urban or rural nodes and their residential thresholds across the metropolitan area. The provision of higher density residential.
which are located within a Local Area and which serve local needs opportunities in close proximity to public transportation

**Development Nodes: Investment and Service Access Points**

Nodes are clusters of mixed land use including residential which provide opportunity for mixed investment and which service surrounding urban or rural areas with respect to commercial and social services and transportation.

The hierarchy of nodes within the metropolitan area includes the following:

- **Metropolitan/Regional Nodes** have metropolitan or regional significance e.g. Durban and
- **Specialized Nodes** such as Gateway, Sibaya, Pavilion etc
- **Sub-Metropolitan Nodes** which are significant to the northern metropolitan area only e.g.

Important structuring elements in the metropolitan area, which establish a hierarchy and variety of service points provide convenient and efficient access to commercial and community facilities whilst at the same time establishing identity and focus and protection of the character of urban and rural areas.

The physical form of the nodes will be dependent on the function, size and age of the node and could take the form of a grid of streets, a single major intersection, a single activity street or single large site, but

- **Local Area Nodes** which serve local areas within the Metropolitan Region only e.g. Malvern, Chatsworth etc.
- **Rural Nodes** which serve local rural communities with basic service needs e.g. Cottonlands
- **Recreation and Tourism Nodes** such as Durban coastal Corridor.

Whilst the nodes, irrespective of hierarchy will invariably be mixed in use each of the nodes will have a primary character or role i.e. business, tourism and recreation, shopping, entertainment.

**Opportunity Areas**

Clusters of existing and/or new Industrial enterprises and land uses. The opportunity areas may play logistics, technology, manufacturing (no heavy polluters) or services roles.

The establishment of industrial areas/districts which support the economic base of the city and which form part of the economic...
### Settlement and Built Form Typologies (Lifestyle Options)

<table>
<thead>
<tr>
<th>Opportunity areas may also be related to business park and commercial opportunities</th>
<th>development strategy and function of the Municipality.</th>
</tr>
</thead>
</table>
| Clearly identifiable types of residential settlement that display varying characteristics with respect to density, building form, public space and landscape and include:  
- Urban  
- Suburban  
- Rural Agricultural  
- Rural Traditional | The protection, conservation, establishment and maintenance of a variety of lifestyle and townscape/landscape options within the NMPR. To provide neighbourhood areas at different densities and with varying characteristics for various income groups, cultures and preferences. The distribution of these types is important in structuring the metropolitan fabric and for ensuring community identity, landscape variety and diversity and sustainable settlement. |

### Urban Development Line (UDL)

<table>
<thead>
<tr>
<th>A line demarcating the extent to which urban development will be permitted to establish in the urban development corridor in the long term. More specifically it is the line that will promote a more convenient, efficient, equitable and sustainable settlement form. Whist the line indicates the outer limit to which urban development will be restricted there will be areas within the UDL that will not be permitted to be developed e.g. environmentally sensitive areas and high value agricultural areas.</th>
<th>A UDL implies that there is a rural periphery or hinterland that is different in character and which has different servicing needs and which supports different lifestyles.</th>
</tr>
</thead>
</table>
| A UDL takes cognisance of the following:  
- geophysical environment including elements such as floodlines, over steep land unstable land, sensitive eco systems etc.  
- river, river catchments | The UDL is important in urban areas for enforcing density targets and physical development patterns within specific time horizons and until such time as growth and development pressures require its review. |
<p>| The line is also demarcated in order to protect agricultural, rural and environmental assets. | |</p>
<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Phasing Line</td>
<td>A line located within the Urban Development Corridor (UDC) indicating the interim spatial limit to which development will be allowed to establish in accordance with infrastructure availability and capacity. This line may coincide with the UDL or it may fall within the UDL boundary. The metropolitan area may have a number of discrete development phasing lines each related to the servicing capacities of discrete towns or urban areas and their infrastructure.</td>
</tr>
</tbody>
</table>
| Densification Through densification and/or compaction | **Infill** - refers to the development of greenfield areas within designated urban areas or within brownfield (existing urban areas) sites within designated urban areas. **Compaction** - refers to the redevelopment of existing properties to higher densities (densification) and may include subdivision and development of large properties within urban areas. **Density:**  
**Gross Density** - determined by dividing total population/residential units of identifiable town/urban/rural area by land area of the town/urban/rural area. **Net Density** - determined by dividing population/residential units by the total residential land only within a town/urban/rural. This only includes access roads in the calculations. Important tool for structuring the metropolitan area in a more efficient manner and for establishing and managing sustainable settlement forms. |
| and waste water catchments | • land use and related patterns  
• demographics and population profiles and trends  
• socio-cultural and historic environment  
• visual resource analysis |
3. STRATEGIC ASSESSMENT OF THE CENTRAL SPATIAL REGION

3.1 INTRODUCTION

Prior to defining and contextualising the spatial structuring elements of the CSR, it is important to understand the status quo of the Region’s human and physical assets and consider some of the threats and opportunities facing this region. This section presents a broad overview of the development context in the CSR.

The Central Spatial Region extends over an area of 677 km\(^2\) (67772.33 ha) and hosts a population of 1,030 508 million people (unlocking development 2007) which accounts for 34% of the metro population. The expected increase in population is estimated at 1.1%. Figure 2 below illustrates that residential land-use constitutes the largest percentage of land cover in the Central Spatial Region with the second highest being the DMOSS followed by industrial land-use.

<table>
<thead>
<tr>
<th>LANDUSE</th>
<th>AREA (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMOSS</td>
<td>16942.79</td>
</tr>
<tr>
<td>Environmental Amenity</td>
<td>95.19</td>
</tr>
<tr>
<td>Existing Business Park</td>
<td>34.48</td>
</tr>
<tr>
<td>Existing Commercial</td>
<td>187.15</td>
</tr>
<tr>
<td>Existing Industry</td>
<td>3502.37</td>
</tr>
<tr>
<td>Existing Office Park</td>
<td>29.59</td>
</tr>
<tr>
<td>Existing Port Logistics</td>
<td>1375.31</td>
</tr>
<tr>
<td>Existing Residential</td>
<td>24228.90</td>
</tr>
<tr>
<td>Institution</td>
<td>351.19</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>1038.04</td>
</tr>
<tr>
<td>Municipal</td>
<td>58.37</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>47843.38</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDUSE</th>
<th>AREA (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>312103</td>
</tr>
<tr>
<td>Population</td>
<td>1030508</td>
</tr>
<tr>
<td>Residential Area</td>
<td>29460.85</td>
</tr>
<tr>
<td>People per House</td>
<td>3.3</td>
</tr>
<tr>
<td>Density/ha</td>
<td>9.4</td>
</tr>
<tr>
<td>Population Density</td>
<td>34.97</td>
</tr>
</tbody>
</table>
Figure 3 above illustrates the existing land-uses of the central region.
The above residential footprint illustrates that the central area constitutes the largest area within the EMA and is essentially the urban core, however this region is characterised by low to medium densities with the highest concentration of people settled around the periphery of the urban edge. This is in part due to the legacy of apartheid planning where the lowest income earners were marginalised and placed on the outskirts of the city.

3.2 ECONOMY

The Central Spatial Region contributes to 56% of the EMA’s GDP and is centred on the transport and logistics activities of the Port. Durban the major port city within this region is home to the second largest industrial hub after Gauteng and plays an important role as a trade route for export and import industries in South Africa, especially from eastern markets.

A substantial portion of the EMA’s economic development opportunities are concentrated in the Central Spatial Region with industry, commerce and tourism being the leading sectors. The Central Spatial Region’s economy is composed of the following major economic sectors: Industrial (noxious, manufacturing, port, maritime, light and service industries), logistics, warehousing, business, commercial, retail and financial services as well as tourism. The economy provides employment for the bulk of its local residents and also employs residents from adjacent local authorities.
3.3 INDUSTRY

Figure 3: Central Spatial Region Industrial sectors

The Central Spatial Region has a strong manufacturing base complimented by a large warehousing and service industry. The petroleum, chemicals, rubber and plastics industry constitutes the largest industrial sector in this region. Given the current spatial structure of the Central Spatial Region and the limited availability of vacant land, industrial expansion within this region will be restricted, unless redevelopment applications are seriously considered. The SDP provides the appropriate context for such redevelopment initiatives and the Back of Port Local Area Plan (LAP) is already advancing in this direction.

According to the draft eThekwini’s industrial spatial strategy, the Pinetown area does provide some opportunities for industrial expansion with an unoccupied 255 hectares (19% of total EMA) of zoned industrial land available for industrial take up. The Central Durban area is on the other hand saturated in terms of take up pertaining to zoned industrial land available, with a negligible 0.3 hectares still remaining unoccupied.

Table 2 – Summary of Land Availability

<table>
<thead>
<tr>
<th>Industrial Sub-Area</th>
<th>Industrial Zoning</th>
<th>Taken up</th>
<th>Unoccupied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hectares</td>
<td>% of Total</td>
<td>Hectares</td>
</tr>
<tr>
<td>South Durban Basin</td>
<td>1667.3</td>
<td>23.5</td>
<td>1541.2</td>
</tr>
<tr>
<td>South Bay</td>
<td>1350.3</td>
<td>19.1</td>
<td>1350.3</td>
</tr>
<tr>
<td>Durban Central</td>
<td>190.5</td>
<td>2.7</td>
<td>190.2</td>
</tr>
<tr>
<td>North</td>
<td>1045.6</td>
<td>14.8</td>
<td>733.9</td>
</tr>
<tr>
<td>Inner West</td>
<td>1367.0</td>
<td>19.3</td>
<td>1111.8</td>
</tr>
<tr>
<td>Outer West</td>
<td>1455.5</td>
<td>20.5</td>
<td>547.0</td>
</tr>
<tr>
<td>TOTAL EMA</td>
<td>7086.2</td>
<td>100.0</td>
<td>4124.1</td>
</tr>
</tbody>
</table>

Source: Adapted from the Draft eThekwini Industrial Spatial Strategy
Industrial Impacts

According to numerous studies undertaken in the Central Spatial Region (CSR) most notably the Durban South Basin Environmental Assessment (SEA) industries in the Central Region are contributing to air, noise and water (river) pollution, however pollutants are being controlled. Air pollution, particularly in older industrial areas, existing and new industrial development are resulting in a number of adverse visual and environmental impacts, including:

- Visual impacts caused by aging and decline of older industrial areas such as Jacobs and Mobeni;
- Visual impacts associated with the development of new industrial areas (which are made possible through major earthworks) which have visual impacts on the “gateway” to the Pinetown CBD and are in contrast with the sub-tropical vegetation of the Umbilo Valley and Kloof Escarpment;
- Environmental impacts associated with pollution of water courses and groundwater supplies.

Driving Forces

- High land costs, lack of land availability, and security issues; zoning regulations and legal requirements (providing assurance for the developer and residents);
- Access to key markets and suppliers, the Port, labour and raw materials (transportation costs, congestion and travelling distances); availability of services and costs – supply and consistency; skills base limits formal and small scaled entrepreneurial activities;
- Labour availability, stability and productivity, government subsidies and incentives (local/national); General environmental conditions: safety, air, amenity, accessibility – demands for high quality & amenity areas encourages location of mono-functional industries.

3.4 COMMERCE

The constraint on land in the Central Spatial Region has led to a significant thrust of development outward toward the adjacent regions particularly toward the north and western regions within the EMA. The decentralisation of commercial development (including office and retail activities), particularly higher order activities, from the Durban and Pinetown CBD’s to more affluent suburbs such as Umhlanga in the Northern Region has resulted in spatial restructuring (including the changing commercial role of these CBD’s with the relative establishment of new nodes). As a consequence of commercial and retail decentralisation, these CBD’s have experienced high vacancy rates as well as declining property values. (Ethekwini Property Market Review 2006/2007, Viruly Consulting (Pty) Ltd)

The loss of critical mass of economic activities within the core Durban and Pinetown CBD’s in the form of decentralisation to shopping malls as suburban models of development is being perpetuated. These shopping centres are increasingly internalised, car oriented and cater primarily for more affluent communities. There is also a tendency towards expanding suburban office nodes and new office park developments which are
attracting offices out of these CBD’s. (Ethekwini Property Market Review 2006/2007, Viruly Consulting (Pty) Ltd)

Table 3 – Summary of Size of the Office Market in total rental area (m²)

<table>
<thead>
<tr>
<th>Type of Space</th>
<th>Durban CBD</th>
<th>Berea</th>
<th>Westville</th>
<th>Umhlanga/La Lucia</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-grade</td>
<td></td>
<td></td>
<td></td>
<td>4,706</td>
</tr>
<tr>
<td>A-grade</td>
<td>114,038</td>
<td>31,596</td>
<td>79,269</td>
<td>158,384</td>
</tr>
<tr>
<td>B-grade</td>
<td>140,639</td>
<td>37,817</td>
<td>78,613</td>
<td>24,168</td>
</tr>
<tr>
<td>C-grade</td>
<td>438,296</td>
<td>24,452</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>692,973</td>
<td>93,865</td>
<td>157,882</td>
<td>187,258</td>
</tr>
</tbody>
</table>

Source: South African Property Owners Association (SAPOA) Office Vacancy Survey - May 2009

The greatest concentration of office space in the EMA as illustrated in the table above lies in the Durban CBD. It appears that the highest concentration of premier grade office space and A-grade office space are located in the Umhlanga/La Lucia node. The Durban CBD and Berea also offer a significant amount of lower (B and C) grade space. This invariably implies that an improvement in market conditions could in due course provide opportunities for renovations, as evidenced by the positive trend of investors taking advantage of Urban Development Zone (UDZ) tax incentives by regeneration and renewal.

Driving Forces

i) General
- Land use zonings often constrain the potential for appropriate integration of land uses such as retail and housing;
- Parking standards limit mixed use development (lack of parking a push factor);
- Lack of clear locational criteria to define public spaces;
- Floor space rentals which might encourage decentralisation;
- Land ownership and costs which might restrict small businesses;
- Transportation – accessibility, congestion, (proximity to regional routes is a major factor in determining the location of regional shopping centres such as the Pavilion.

ii) Retail
- The Retail sector continues to play a critical role in the CBD, serving different income groups, the retail offering is also highly accessible to shoppers without private transport;
- Decentralisation of retail facilities from the traditional core Durban and Pinetown CBD’s are prompted by poor environmental conditions and perceptions of better cleanliness, amenity, convenience and environmental quality offered by shopping centres for example the Pavilion, Musgrave and Sanlam.
Decentralisation from the commercial cores is also prompted by consumer perceptions regarding safety and security including crime and grime.

iii) Offices

- Location of offices determined by proximity to residential areas and growth areas;
- Attraction of office development to areas with perceived high environmental quality, security and good accessibility results in decentralisation;
- No restraint on decentralisation or the establishment of large scale internalised office parks.

3.5 TOURISM AND RECREATION

Undoubtedly, tourism remains one of the most significant components of the metropolitan economy. Durban’s central beachfront in the CSR is arguably the most important tourism and recreation resource in the EMA. According to SA Tourism, research conducted in 2005, the value of foreign tourist to KZN was R6,9 billion with the eThekwini Municipality attracting 1,1 million foreign tourists (equivalent to 78% of foreign tourist to KwaZulu-Natal or 16% of foreign tourists to South Africa). The Durban Beachfront was found to be the most popular attraction among foreign tourists, and was visited by approximately 875 000 foreign tourists (64% of tourism to KZN). Accordingly, the KwaZulu-Natal Tourism Authority analysis of the value of KZN’s regional tourism markets concluded that Durban captures around 33% of foreign consumer spending in the province.

The hosting of the imminent 2010 Soccer World Cup was a definite catalyst for tourism promotion within the CSR. The newly constructed Moses Mabhida Stadium and the King’s Park sports precinct are major tourism destination points which attract an influx of both local and foreign tourists. Another major flagship tourist attraction within the CSR is the Point Waterfront Regeneration Precinct with the Ushaka marine world theme park and the International Conventional Centre (ICC). These tourism opportunities have and will continue to attract higher value uses (office, residential, retail, leisure) and generate new employment opportunities.(eThekwini Municipality Integrated Development Plan 2010 and Beyond (2008 -2009) Review).

Driving Forces

- The ‘golden mile’ is a well known tourism destination with entertainment and beach-related activities however problems with poor urban management has resulted in a decline of the beachfront areas;

1. Perceived crime, safety, littering and a range of illegal activities pose a threat to Durban’s major attractions; and a vulnerability to a lack of investor confidence.(eThekwini Municipality iTRUMP Inner City Plan: July 2005).
3.6 INFRASTRUCTURE

3.6.1 Movement and Linkages

The central area has well-established transport infrastructure (rail and road) and is well-located in respect to the main metropolitan and regional transport hubs including the Port of Durban, Durban and Pinetown CBD’s. The area is structured by a T-shaped movement networked formed by the intersection of the N2 running in a North-south direction and the N3 between Durban and Gauteng which runs in an east-west direction.

3.6.2 Road and Rail

A number of routes serve as regional mobility routes namely the M1, M7 M13 and M19. A system consisting of the proposed MR577 and MR579 will provide important north-south linkages in the central area. These two routes will integrate areas in the Northern and Southern regions with areas in the western and central regions creating a new “outer ring”.

The new linkages will create opportunities for economic development associated with increased thresholds of people moving through these previously separated areas. The proposed new linkages will also increase movement efficiency both at a local and regional level by reducing congestion and overall playing a major role in integrating areas within the central region. There is a need to consolidate and improve public transport attractiveness along this route.

A number of rail systems linking the Durban and Pinetown CBD’s, the Port of Durban, South Industrial Basin and Cato Ridge exist in the form of passenger, business and freight rail. These systems represent significant investment which currently operates under capacity. All future development initiatives within the central area would be aimed at increasing the desirability and usage of this infrastructure.

Driving Forces

- Inadequate infrastructure, especially in remote areas and informally settled areas.
- Lack of integration between land-use and planning.
- Poor management, service quality, and inflexibility of services discourage rail passengers.
- A problem with Inner city congestion and dominance with vehicles rather than pedestrians.
- Peak traffic demands on some local roads have overtaken existing road capacity in certain areas.
- Although the rail infrastructure is under-utilised and spare rail capacity is available, development is not concentrated along these routes and thresholds are therefore too low to make them efficient and sustainable.
- Institutional fragmentation and responsibility.
● The Mini-bus taxi industry has overtaken bus and rail transport as the major mode of public transport.

● Low density sprawling settlements do not create the thresholds needed to support efficient public transport services.

● Historic focus on mobility rather than access based on an assumption that vehicle ownership will inevitably increase.

● Housing location and development.

● Local Road networks, particularly north-south linkages in Pinetown South are inadequate as they are away from services, employment opportunities and public transport.

● Limited internal road infrastructure within the Pinetown South.

● Limited linkages from the M5 and M7.
Passenger Rail (PRASA)

Currently there are 52 train sets (including 5 spare) operating on the current rail network serving passenger rail with plans afoot to acquire additional train sets. The passenger railways are going through a process of modernization. As part of this process, PRASA has already invested a significant amount of money on station upgrades in Rossburgh, Isipingo, Duffs Road, Durban, KwaMashu, KwaMyandu and Moses Mabhida in 2009/2010 to the value of R348m with further station upgrades planned for 2010/2011 for Clairwood, Montclair, Zwelethu, Lindokhule and Avoca stations to the value of R45m.

Since 2009, a total of R500m has also been spent on minor improvements (painting, repairs etc) in a number of stations situated throughout the municipal area. A further seven (7) stations have also been selected in KZN for future Station Precinct Upgrades four of which fall within the eThekwini Municipal area. The stations include KwaMnyandu, Umlazi, Pinetown, KwaMashu, Umgeni Business Park, Scottburgh and Pietermaritzburg stations. This project has only recently been initiated and is currently in progress. PRASA will also in the future, be undertaking a recapitalization of the rolling stock (trains) as well as capacity upgrades to the signalling and infrastructure systems. In this regard, PRASA has indicated that it will be focusing on undertaking capacity improvements on the existing North –South Corridor from Umlazi to Bridge city. The detailed design of these capacity improvements is expected to be complete by 2015.
3.6.3 Sanitation & Water

Sanitation

All areas within the central area fall within the urban edge and seem to have sufficient capacity. The majority of formal areas within the central area are adequately sewered. In terms of existing bulk infrastructure the central area is serviced by namely the Central Waste Water Treatment Works, the Umhlatuzana Waste Water Treatment Works, the Umbilo Waste Water Treatment Works, Southern Waste Water Treatment Works, the New Germany Waste Water Treatment Works, the Dassenhoek Waste Water Treatment Works and Kwadengezi Waste Water Treatment Works.

The total current flow is 271.8 Mega Litres per day with current capacity being 418.4 Mega Litres per day and excess capacity is at 139.5 Mega Litres per day. It is apparent from the figures that sufficient capacity for further development does exist within this region.

<table>
<thead>
<tr>
<th>SDP Region</th>
<th>Current Flow (Ml/day)</th>
<th>Current Capacity (Ml/day)</th>
<th>Excess Capacity (Ml/day)</th>
<th>Planned Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central WWTW</td>
<td>60.9</td>
<td>136.0</td>
<td>68.0</td>
<td></td>
</tr>
<tr>
<td>Umhlatuzana</td>
<td>8.5</td>
<td>20.4</td>
<td>11.9</td>
<td></td>
</tr>
<tr>
<td>Umbilo WWTW</td>
<td>14.1</td>
<td>22.5</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>Southern WWTW</td>
<td>185.1</td>
<td>235.0</td>
<td>49.9</td>
<td></td>
</tr>
<tr>
<td>New Germany</td>
<td>1.0</td>
<td>2.3</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>WWTW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dassenhoek WWTW</td>
<td>1.3</td>
<td>1.1</td>
<td>-0.2</td>
<td></td>
</tr>
<tr>
<td>Kwadengezi WWTW</td>
<td>0.9</td>
<td>1.1</td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

Water

The water supply in the central area is the responsibility of Durban Metro Water Services while Umgeni Water is responsible for the bulk supply of water to Durban Metro Water Services. The bulk water supply infrastructure is in place in most of the central area with adequate trunk mains and storage reservoirs to meet immediate and predicted demands. No capacity problems have been detected.

Generally deteriorating infrastructure and a lack of funds to upgrade and repair existing infrastructure have been a problem in the past, however one of the initiatives of Durban Metro Water Services is the R150 million projects to replace uncoated and problematic water mains. It is also
noted that new trunks which would simultaneously service the central and other regions are currently being installed namely the Western Aqueduct which would increase future capacity in terms of water supply.

Problems with Water Supply

The water supply to the KwaZulu-Natal Coastal Metropolitan Area is experiencing serious difficulties. Above average rainfall over the last few years has led to a false sense of security regarding the water supply situation. A below average rainfall period will result in the need for water restrictions with their associated impacts on the local economy. The continued economic growth and development of the KwaZulu-Natal Coastal Metropolitan area requires an assured water supply in line with DWA’s policy of water for growth and development.

A Reconciliation Strategy for the KwaZulu-Natal Coastal Metropolitan Area Water Supply System was finalised in 2009 by the Department of Water Affairs (DWA), eThekwini Municipality, Umgeni Water, other municipalities and stakeholders. This Strategy identified, prioritised and confirmed the essential interventions necessary to meet the water requirements of the area for the next 25 years and must be integrated with municipal planning. A Strategy Steering Committee (SSC) has been established as a result.

In the reconciliation strategy for the area, the high risk of restrictions was identified and a number of interventions were assessed to reduce the risk. The immediate interventions of constructing the Spring Grove Dam and pipeline and the raising of the Hazelmere Dam have fallen behind schedule. The risk of restrictions has escalated to an unacceptable level resulting in the need to now prioritise these projects.

The water balance diagrams depicting the water reconciliation situation in the Mgeni and Mdloti/Mvoti River Systems are shown in Figure 1 and Figure 2 respectively. The diagrams indicate the proposed timing of interventions to address the shortfalls in yield.

Figure 1: Water reconciliation situation in the Mgeni River System

Figure 1 shows the following:-

- The solid blue line up to 2009 represents actual water use.
- The dotted blue curve represents the high water requirement projection scenario without further WC/WDM as applied in the reconciliation strategy.
- The dotted red curve represents the high water requirement projection scenario with further WC/WDM applied in the reconciliation strategy.
The purple line represents the revised water requirement projection scenario compiled by Umgeni Water in February 2010.

The black line represents the revised low water requirement projection scenario compiled by eThekwini (with further WC/WDM).

The red shaded areas indicate where the water use exceeds the yield – shortfall in yield.

Pink area represents the yield of Spring Grove Dam added onto the existing yield of the Mgeni River System.

The green area represents the planned re-use volume of treated sewage effluent.

Figure 1 highlights the following:

- The immediate risk of water restrictions up until 2013 when Spring Grove Dam was scheduled to deliver water to the Mgeni River System;
- The importance of WC/WDM measures (red dotted and black line) in reducing the water requirement projection curve which will reduce the risk of water restrictions up until 2013;
- The successful implementation of WC/WDM will allow the proposed implementation schedule for the Spring Grove Dam and the treated effluent re-use to meet the water requirement projections after 2012 and beyond.
- The implementation of the Smithfield Dam on the Mkomazi River needs to be completed by 2021.
- The implementation dates of the Spring Grove Dam and the effluent re-use schemes are crucial to achieving a water balance for the Mgeni River System.
- The studies for the Mkomazi River Development should start immediately so that the scheme can be implemented in time.
- The desalination of seawater (a proposed option) could replace the Mkomazi River Development.

Figure 2 shows the following:

- The solid line up to 2009 represents actual water use. The drop in water requirements is due to some of the water requirements normally supplied from Hazelmere Dam being supplied from the Mgeni River System.
- The dotted curve represents the water requirement projection scenario from the reconciliation strategy.
- The purple line represents the revised scenario from Umgeni Water – February 2010.

Figure 2 highlights the following:

- The raising of Hazelmere Dam would have been required by 2009 if the original reconciliation strategy water requirement projection was realized. For the revised projection the dam raising will need to be completed by 2011.
The transfer from the Lower Thukela River is planned for implementation by 2013.
The Isithundu Dam or another dam on the Mvoti River is next scheme planned for development by 2018. This scheme is planned to be developed in two phases.
Once the Mvoti River Development is in place the Ecological Reserve will be able to be fully implemented in the Mdloti River system.

A number of interventions aimed at addressing the water supply problems in the municipal area are currently underway. These include:

**Water Conservation and Water Demand Management**

The first option to deal with water shortages is water conservation and water demand management (WC/WDM). The eThekwini Metro is addressing water losses through replacement of asbestos cement pipelines, leak detection, pressure reduction, rezoning and the improvement of reservoir integrity. The real loss in 2009/2010 was 37.5% and the target is to reduce this to 28% by 2013 and 25% by 2018. However, to achieve the target savings in water losses will take a concerted team effort from all parties involved, particularly the community. Even if completely successful WC/WDM measures will not be sufficient to ensure sufficient future water availability in the area and the following further significant interventions are required:

**Spring Grove Dam and transfer system**

There are potential delays due to appeals on the pipeline. Projected water delivery will be in April 2013 if the project remains on schedule.

**Raising of Hazelmere Dam**

If the project remains on schedule, the gates will be installed and commissioned in 2012, although there is already a delay of two years, and no further delays can be tolerated in the raising of the dam.

**North Coast pipeline and Hazelmere Water Works Upgrade**

The Mvoti Development Scheme will be linked into the North Coast Supply System by 2019. The upgrade of the North Coast pipeline and Hazelmere Waterworks to be completed by 2014.

**Mkomazi River Transfer Scheme option**

The soonest water delivery can take place is 2022 and the professional service providers for the raw water infrastructure will be appointed in January 2011.

**Lower Thukela Transfer**

Construction is planned for commencement in January 2012 for delivery by 2014.
This scheme is on track according to the current planning, with no complications foreseen.

**Mvoti River Development**

It is anticipated that the feasibility studies will start by August 2011.

**Re-use of treated sewage effluent**

Studies are being undertaken by eThekwini Metro to investigate the potential re-use of treated sewage effluent and the implementation plan is due for completion by December 2010. The assessment of the options resulted in the direct re-use option being identified as the preferred option. It is proposed that the treated sewage effluent from the
KwaMashu, Phoenix and Northern works be collected and treated to a potable standard before pumping into the Northern Aqueduct. The project is on track to deliver water by 2016 as planned. Public perceptions of direct re-use could delay or prevent the implementation of the re-use option.

Desalination of seawater option
The potential of seawater desalination as a water supply option for the Durban area was investigated by Umgeni Water in a pre-feasibility study completed in May 2009. The study showed that desalination of seawater is technically and environmentally feasible and competitive with the cost of the Mkomazi River Development Project. Two 150 ML/day plants are planned, one on the north coast and the other located on the south coast.

Due to the seriousness of the future water supply security, the investigation into sea water desalination must be accelerated. The results have a bearing on the Mkomazi River Development Project and possibly the Mvoti Scheme. Desalination of seawater may be implemented more quickly than the surface water projects.

The actions identified in the Water Reconciliation Strategy that eThekwini Metro is responsible for are the following:

- Feasibility study for re-use of treated sewage effluent options
- Implement further Water Conservation and Water Demand Management measures (together with the DWA Directorate: Water Use Efficiency)
- Rain water harvesting (together with the DWA Directorate: Water Use Efficiency)

3.6.4 Stormwater
Most of the formally developed areas within the central area have some form of stormwater drainage system. There are however, many areas where the drainage system is inadequate or where original systems cannot cope.

In addition, many developments which have drainage systems installed do not take the system beyond the boundary of the development whereby no outfall is installed and these results in scouring below the outlets and dongas being formed. Existing methods of stormwater disposal tend to have negative impacts on the environment and on the lower reaches of catchments. Although, overall the current stormwater system within the central area has sufficient capacity for additional development, careful monitoring needs to be implemented to avoid future drainage or environmental problems.
3.6.5 Solid Waste

There are two landfill sites which are used to dispose of solid waste generated within the central area, namely the Mariannhill, and Bisasar Road regional landfill sites. These have limited lifespan and the establishment of new facilities or waste recycling initiatives would need to be investigated within the central area as capacity will soon be maximized.

3.6.6 Electricity and Telecommunications

Durban Electricity is the distributor of electricity in the Central Spatial Region. There is a predominance of tariff based services except in some of the former township areas and new housing projects which function primarily on pre-paid meter systems due to controlled affordability.

In the context of the energy crisis experienced broadly by the entire country, the central region is not unique in terms of electrical capacity and the need to conserve energy. However, in an attempt to resolve anticipated future capacity problems new sub stations are being planned within the central area, with existing overhead cables and sub stations being upgraded accordingly.

The metro policy on electricity has also shifted focus to the developer who has to pay the full cost of reticulation up front. Overall, no supply problems are envisaged in meeting future demands as adequate provisions are being planned for in advance of any anticipated shortfalls.

Conventional telecommunications services to meet the public telephone needs within the central area are readily available within the central region with many competing service providers such as Telkom, Vodacom, Cell C, MTN and more recently Neotel providing the necessary infrastructure to meet the central regions telecommunications supply and demand needs.

Driving Forces

- Lack of resources to upgrade or provide new services and non-payment of service charges limits the capacity of service providers to increase service delivery.
- Vandalism and theft of equipment and supply undermines the economic viability of service provision.
- Policy focus on individual provision limits the distribution of communal facilities. Increasing cost of electricity tariffs and supply shortages and power outages.
3.7 HOUSING

The poor tend to be the major users within the CSR of transport, social, economic and welfare purposes but do not have access to housing due to affordability outside of specialised housing such as hostel dwellings. Limited housing opportunities for the poor exist in the core urban centres such as the Durban and Pinetown CBD’s.

“Rack-renting” especially in the iTrump area in the form of informal conversions of office buildings and warehouses into residential cubicles for rent to the poor is prevalent in the CSR. The Council’s concerns about rack-renting revolve around fire, health, economic and social abuse, and crime as these are unregulated residences.

There are clear income differentials between the different residential areas within the CSR which tend to reinforce the current inefficient spatial structure of the central area. Low income households tend be concentrated at the periphery (e.g. Pinetown South) away from the major commercial and industrial nodes.

High income households are however, concentrated in formal, low density residential areas such as Westville and Queensburgh which have adequate access to urban services, facilities and opportunities. There is also a high incidence of squatting and informal land invasions such as Cato Crest.

The EMA’s current demand for housing for the poor is 204 000 dwellings per annum as opposed to the current supply of between 10 000 and 18 000 dwellings which are actualised per annum. The demand for GAP housing is evident in the central area with limited stock due to constraints such as price and competing land-uses. Demand for Social Housing (subsidised Rental or Rent to Buy- R1500-R7500) and GAP Housing (unsubsidised/marginally subsidised or individual tenure - R3500-R15000) in Ethekwini Municipality is 30000 to 50000. Estimated supply is 500 annually or 1% of the demand. (Housing Report, 2008, Anton Aiello)

In terms of new housing supply in the central area the eThekwini Metro Housing Department has completed 19345 dwelling units through council initiated housing projects for low cost-income earners to date. A further 31880 units are being planned for in the 5 year short term framework and an additional 9108 units are being planned for in the medium to long term timeframe. These include greenfield developments, in situ upgrades, relocations and social housing projects.
Driving Forces

- Land Availability and land costs.
- Affordability of basic service provision for low income groups.
- Availability of services.
- Land ownership constraints.
- Existing zoning.
- Availability and limitations of subsidies.
- Property rates.
- Ability to develop land in terms constraints such as topography, geology, conservation value etc.
- Land invasions and legislation restricting removal of squatters.
- Slow delivery of formal/legal housing opportunities.
- Housing projects that reinforce the current spatial structure of the city and do not create spaces and thresholds for small scale economic activity.
Environmental sustainability and quality of life are major points of focus for officials involved in planning development in the eThekwini Municipal Area (EMA). Planning integrates the social and economic priorities of an area with the environmental resources available to it. The demand for environmental services exceeds supply and consequently the environment is under pressure. Therefore by strategically planning development within the limits of the environment, the carrying capacity of each catchment of the social, economic and environmental impacts can be minimized. The Central Spatial Region contains a number of natural assets which consist of the following:

**River Systems**
- 4 major metropolitan river systems: Umgeni, Umlazi, Umbilo & Umhlatuzana Rivers forming 4 drainage catchment areas which link the hinterland source and coastal discharge points of these rivers. These are critical to ensuring catchment quality and management thereby creating ecologically viable open space.

**Grasslands and Forest/Woodlands**
- New Germany, Palmiet Nature Reserves and Silverglen Nature
- Paradise valley and Roosfontein grassland.

**Coastal**
- Durban Coastal stretch which is a tourism belt.
- Bay and Umgeni estuaries, both of which have high regional rankings in terms of biodiversity value.
- The Coastal Risk Zone (CRZ) is defined as the combination of the most inland edge of the 1m sea level rise line and the slope failure line associated with 1m of sea level rise. This demarcated the Coastal Risk Zone from natural and climate change impacts and provides a broad identification of the risk area. The coastal risk zone will be refined through the process of more detailed work through the Shoreline Management Plans (SMP's) which are a legal requirement for our coastline.

**Driving Forces**
- High levels of pollution in Umgeni, Umlazi, Umbilo & Umhlatuzana Rivers due mainly from effluent discharge upstream from overflows in the sewer treatment works.
- Ecological disturbance to estuary at the Bay due to Harbour Widening.
- High levels of air pollution due to industry i.e. Bluff (Engen Refineries) impacting on surrounding residential areas.
- Sandwinning along the major Rivers results in massive erosion.
- Informal settlements in environmental sensitive areas.
- Lack of Management of solid waste in low-income settlements.
- Conflict between development pressures and protection of natural resources/assets.
- Balancing competing demands and promoting environmental sustainable development.
- Maintenance & protection of natural assets.
- Improve quality of catchment areas by restoring the river heal

**Coastal Risk Zone**

According to the Bruun’s Modeling Scenario for sea level rise in Durban, "The Coastal Risk Zone (CRZ) is defined as the combination of the most inland edge of the 1m sea level rise line and the slope failure line associated with 1m of sea level rise. This demarcated zone comprises of coastal public and private property, coastal protection and control access land.

The coastal risk zone will be refined through the process of more detailed work through the Shoreline Management Plans (SMP’s) which are a legal requirement for our coastline in terms of the Integrated Coastal Management Act (Act No. 24 of 2008). The Shoreline Management Plans will enable the eThekwini Municipality to formulate an appropriate response to climate change impacts within this zone.
4. DEVELOPMENT ISSUES AND TRENDS OF THE CENTRAL SPATIAL REGION

Several development issues and trends are evident in the CSR from the economic, social and environmental overview provided. Consequently, in order to understand the role of the CSR it is useful to highlight the opportunities and challenges facing this region.

4.1 OPPORTUNITIES

The major physical assets of the Central Spatial Region include its highly accessible CBD’s, its well established transport infrastructure (road, rail, and port) that provide strategic national and regional linkages, an extensive industrial and commercial infrastructure, and a range of attractive physical attributes including an attractive cityscape, a favourable climate, several rivers, the sea and beachfront (golden mile), the harbour and the bay.

This region forms the cornerstone of three regional axes which lead northward to Richards Bay, southward to Port Shepstone and westward to Pietermaritzburg. As host to a key trade hub and due to the region’s coastal location this arguably provides the region with a comparative advantage for the location of export-orientated activities.

Regional development corridors linking Durban northwards to Richards bay and onwards to Maputo, and westward to Pietermaritzburg and onwards to Johannesburg are key regional spatial planning tools that build up the competitive advantage of the CSR by exploiting the manufacturing, trade and tourism resources found within this region.

Infrastructural this region has the most capacity to extend services and promote further development in regard to densification and redevelopment initiatives within the context of sustainability. Being the largest employment generator within the EMA, this region’s also contributes to the largest percentage (56%) of the EMA’s GDP. The region also has a large reservoir of manpower in terms of its current labour force and could potentially provide opportunities for further job creation.

4.2 CHALLENGES

The constraint on land in the central area, particularly for residential development, has resulted in a significant thrust for development in the north (and to a certain extent in the west). This growth has manifested in a push for the location of commercial and key community facilities in the adjacent regions where access to or availability of commercial and major community facilities is limited.

Residential densities in the Central Spatial Region have largely been characterised by low density settlements which have been informed by apartheid planning which created a spatial form that was racially structured, highly fragmented and poorly integrated. Urban sprawl as manifest in this region only exacerbates an inefficient public transport system largely due to low thresholds resulting from low densities around the core areas (CSR) and outward sprawl that makes it difficult to provide affordable and effective commuter transport systems. Furthermore due to the excess infrastructure capacity available in this region, opportunities for densification present a challenge due to limited space actually available for development.
Many of the natural resources within the Central Spatial Region are under threat from the continuous development growth and pressures. A disregard for environmental systems reduces opportunities for creating a system of open space which supplies important ecosystem goods and services to the citizens of Durban.

In areas such as the South Durban Basin the ability of such an ecosystem to assimilate pollution is being exceeded. The lack of basic services (water, sanitation and electricity) in informal areas has also put strain on the natural resources. (Durban South Basin SEA: Fully Integrated Report: August 1999 (CSIR ENVIRONMENTTEK)

The limited extent and extreme fragility of the natural assets base require that they are vigorously protected, integrated into a sustainable environmental system and appropriately managed in order to adequately support the levels of anticipated development in the CSR.

In particular the coastal assets will need to be prioritised for protection and management as a vital element of the tourism and recreation base of the Municipality

Infrastructure limitations in the Central Spatial Region as it relates to the Port capacity may arrest economic expansion which translates spatially into pressure between the interface of the port and the city.
### 4.3 ISSUES AND TRENDS

Several development issues and trends are evident from the economic, social and spatial overview provided above. Tables 4, 5, 6 and 7 outline the key development trends and issues affecting the built environment, natural environment, economic and land use management context in both the Central Spatial Region and the DMA overall. In each table the contextual factors facing the region are outlined along with the underlying causes and spatial impacts of the issues.

**Table 4: Built Environment Issues and Trends**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Underlying cause</th>
<th>Spatial impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>World class investment zones</td>
<td>Past expenditure created areas with a high degree of infrastructure, that now present competitive advantages</td>
<td>• Perpetuates the settlement of High degree of investment in Durban’s central business area, beach front, industrial areas and CSR’s high income suburbs</td>
</tr>
<tr>
<td>High dependence upon road-based public transport</td>
<td>Mobility of the majority of the public is largely dependent on public transportation modes, particularly taxis and buses</td>
<td>• Emergence of large commuter hubs at inter modal transfer points and mixed use transportation corridors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bus Rapid Transport (BRT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Integrated land use and public transport planning</td>
</tr>
<tr>
<td>High degree of social need</td>
<td>Historical neglect of housing and servicing needs resulting from past apartheid policies</td>
<td>• Rapid urbanization giving rise to growth of informal settlements</td>
</tr>
<tr>
<td>High social and economic costs of city structure</td>
<td>High degree of segregation of places of work and home due to land use and racial zoning</td>
<td>• Has largely precluded the development of mixed use environments and reinforced dependence upon centrally-located areas of employment and social</td>
</tr>
<tr>
<td></td>
<td>Poor or no planning with respect to optimising efficiency for the majority of the population.</td>
<td>• Sprawl that raises the unit cost of servicing and infrastructure reinforces the imperative to commute, but precludes the efficient operation of public transport systems</td>
</tr>
<tr>
<td></td>
<td>Externality effects attributable to the location of incompatible land uses adjacent to each other.</td>
<td>• Externality effects attributable to the location of incompatible land uses adjacent to each other.</td>
</tr>
<tr>
<td></td>
<td>Externality effects arising from poor planning in inner city, townships and informal settlement areas</td>
<td>• Environmental and social conflict arising from poor planning in inner city, townships and informal settlement areas</td>
</tr>
</tbody>
</table>
### Table 5: Natural Environmental Issues and Trends

<table>
<thead>
<tr>
<th>Issue</th>
<th>Underlying cause</th>
<th>Spatial impact</th>
</tr>
</thead>
</table>
| Poor urban environmental quality | Poor environmental controls on industrial pollution and emissions | • Cumulative effect of pollution in certain industrial districts, notably SIB and parts of Pinetown  
• Poor social and environmental health in neglected areas |

### Table 6: Economic Trends and Issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Underlying cause</th>
<th>Spatial impact</th>
</tr>
</thead>
</table>
| Jobless growth in the formal economy | Decline in labour intensive industrial sectors (e.g. textiles, clothing, footwear), associated with shedding of jobs  
Rapid growth in capital and technology | • Decline and blight associated with closure of businesses in industrial areas  
• Land demands for expansion, and associated infrastructure requirements |
### Infrastructure limitations to economic expansion

- **Capacity limitations for port expansion**
- **Aging and obsolete industrial Infrastructure**
- **Growth in road-based traffic, notably for container**
- **Inadequate supply of utilities**
- **Poor transport linkage between certain economic zones and installations**

- Pressure upon interface between port and city
- Relocation of businesses from aging industrial areas to newly established areas
- Congested transportation routes, mixing of industrial and residential traffic
- Certain forms of development are precluded from economic zones where water, waste disposal, waste water treatment and energy supplies are inadequate to meet requirements of industry
- Development is focused along north, south and west growth paths with limited development in adjacent hinterland

<table>
<thead>
<tr>
<th>Intensive sectors</th>
<th>Emergence of specialist, bulk retailing activities</th>
<th>retailing functions to suburban locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Growth in suburban high grade office space</td>
<td></td>
</tr>
<tr>
<td>Changing location patterns</td>
<td>Emergence of informal/small scale economy</td>
<td>Emergence of specialist/value retail parks outside of CBDs</td>
</tr>
<tr>
<td>Outward expansion of industry</td>
<td>Transformation of mass tourism and leisure markets</td>
<td>Decentralization of offices (especially A-grade) to suburban office parks</td>
</tr>
<tr>
<td>Growth in suburban retail markets</td>
<td>Emergence of niche tourism and hospitality industry</td>
<td></td>
</tr>
</tbody>
</table>
Table 7: Land Use Management (LUM) Issues and Trends

<table>
<thead>
<tr>
<th>Issue</th>
<th>Underlying cause</th>
<th>Spatial impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical lack of strategic spatial guidance</td>
<td>Multiplicity of local entities exacerbated institutional fragmentation</td>
<td>Poorly co-ordinated, uneven spatial development</td>
</tr>
<tr>
<td>Focus on facilitating development</td>
<td>LUM tool (zoning) is prescriptive and not sufficiently flexible and responsive to development</td>
<td>Largely mono-functional land use arrangement</td>
</tr>
<tr>
<td>Weak co-operation between responsible authorities</td>
<td>Lack of co-operative approach to managing shared resources</td>
<td>Inability to yield the most optimal results from key spatial assets</td>
</tr>
<tr>
<td>Weakly developed systems to deal with land use conflict</td>
<td>Highly impacted interfaces between low income community.</td>
<td>Urban blight and social and environmental conflicts</td>
</tr>
<tr>
<td>Land and legal obstacles to development</td>
<td>Complex land registration system due to multiplicity of township establishment procedures and land tenure systems</td>
<td>Lack of development of key land Parcels</td>
</tr>
</tbody>
</table>

4.4 POTENTIAL DEVELOPMENT SCENARIOS

Table 8 outlines a series of potential scenarios that provide the basis for identifying a range of possible development trajectories for the economic, transportation, housing and environmental sectors in the Central Spatial Region. The scenarios broadly revolve around three spatial investment climates. The first investment climate assumes that new large-scale spatial investments are made in the economic, transportation, housing and environmental sectors. The second assumes that ad hoc and incremental spatial investments are made in the respective sectors, and the third assumes that spatial investment declines. As development need not occur evenly across sectors, there are various combinations and permutations of these scenarios.

Following from these possible trajectories, the vision for the Central Spatial Region requires that the physical development of the region balances and integrates a social needs-based approach with an economic opportunity and an environmental driven approach. The challenge in the Central Spatial Region is thus to ensure spatial development in this region addresses areas of need and opportunity in a way that promotes the relationship between the physical environment (natural and built) activities and people in an efficient, equitable and sustainable manner. This will entail being able to optimize and direct current trends and patterns towards balancing economic growth with the sustainable use of the Central Spatial Region’s limited natural environmental resources.
Table 8: Potential Development Scenarios

<table>
<thead>
<tr>
<th>Variable</th>
<th>New Large scale investment</th>
<th>Incremental investment</th>
<th>Declining investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic sector: Industrial &amp; commercial development</td>
<td><strong>Description:</strong> Economic climate permits new large scale investment in economic generators with downstream spin offs.</td>
<td><strong>Impact:</strong> Revives existing economic core in SDB, Pinetown, and Durban CBD. Also precipitates further decentralized development to the north and west.</td>
<td><strong>Description:</strong> Economic climate results in declining investment in economic drivers.</td>
</tr>
<tr>
<td><strong>Transportation sector:</strong> Transport linkages and connection</td>
<td><strong>Description:</strong> Investment climate permits the construction of new connecting routes and transport systems.</td>
<td><strong>Impact:</strong> Does not fundamentally alter the spatial pattern of the Central Spatial Region.</td>
<td><strong>Description:</strong> Investment climate allows only incremental augmentation of routes and systems and selective new route construction.</td>
</tr>
</tbody>
</table>
### Potential Scenarios

<table>
<thead>
<tr>
<th>Variable</th>
<th>New Large scale investment</th>
<th>Incremental investment</th>
<th>Declining investment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Housing sector:</strong> Housing form and settlement pattern</td>
<td><strong>Description:</strong> Housing and land policies permit high density, formally planned and serviced settlement to be realized.</td>
<td><strong>Description:</strong> Housing and land policies permit a mixture of formal settlement programme and planned incremental housing opportunities.</td>
<td><strong>Description:</strong> Housing and land policy breaks down leading to informal/unplanned settlement.</td>
</tr>
<tr>
<td><strong>Impact:</strong> Enables the take up of well located housing opportunities, reduces the tendency of outward sprawl and improves viability of fixed rail public transport systems.</td>
<td><strong>Impact:</strong> Continues the dominant pattern of low to medium density settlement, placing pressure on agricultural and tribal land at the edge of the Metro Area.</td>
<td><strong>Impact:</strong> Achieves relatively high density settlement in the Central Spatial Region, albeit at a high social and environmental cost.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| Environmental sector: Environmental resource protection | <strong>Description:</strong> Restoration and reclamation of ecosystems and open spaces takes place. Made possible by higher settlement densities and controlled housing programme. | <strong>Description:</strong> Open spaces and ecosystems are largely retained or expanded on an ad hoc basis where formal land use controls permit. | <strong>Description:</strong> Open space and ecosystems are difficult to protect as a consequence of the break down in housing and land policy. |
| <strong>Description:</strong> Open spaces and ecosystems are largely retained or expanded on an ad hoc basis where formal land use controls permit. | <strong>Impact:</strong> Improvements create benefits in the form of reduced servicing costs and enhanced eco-tourism potential. | <strong>Impact:</strong> But growing settlement needs places tribal areas under pressure. Housing and land policies largely mitigate the impacts of such development. | <strong>Impact:</strong> Core environmental areas come under threat of informal settlement encroachment and new growth development pressures. |</p>
<table>
<thead>
<tr>
<th>Metropolitan Role</th>
<th>Central Spatial Region Role</th>
</tr>
</thead>
</table>
| **Economic Growth and Development** | • Logistics and freight hub with a trading port containing South Africa’s most important trade hub in terms of value of goods handled (port and maritime industry)  
• An industrial centre - containing one of South Africa’s largest industrial districts  
• Financial and services hub containing commercial and retail centres - Durban CBD which serves large parts of the Southern Africa  
• Largest employment stock in the EMA  
• A tourism centre and gateway - containing South Africa’s premier convention centre and a large stock of hotel facilities and infrastructure |
| • International and National Logistics Hub: Airport and Harbour  
• International, National and Provincial Tourism Destination  
• International, National and Provincial Trade Centre  
• International and National Industrial Infrastructure and Housing Development | |
| **Social** | • Urban formal lifestyle options  
• EMA tourism and recreation destination  
• Urban services nodes and networks |
| • Improving Quality of Life  
• HIV/Aids, Poverty and Crime Reduction, Travel Times Life Style Choice  
• Meet basic needs  
• Sustainable Livelihoods  
• Enhance skills, capacity and technology  
• Safety and security  
• Alleviation of conflicts | |
| **Environmental** | • EMA ecological services priority areas – Durban Bay, Umgeni Estuary  
• Protection of water supply, estuaries protection, flood attenuation, regional biodiversity etc.  
• Sustainable waste disposal (landfill sites)  
• Natural resources supply – Nature reserves, natural parks, valuable survival products to the informal population (medicinal plants etc.) |
| • Integrated Eco Services Delivery.  
• Biodiversity Protection.  
• Catchment Management.  
• Climate Change Impact Management  
• Pollution minimisation  
• Disaster Management | |
| **Spatial** | • A transportation and communications hub situated at the confluence of development corridors linking Durban to Johannesburg and Richards Bay.  
• Gateway to EMA and nationally, via Port of Durban  
• Tackle densification through densification of urban core.  
• Protect accessibility of the core  
• Reinforce all modes of mass public transport. |
| • Densification of the Core  
• Creation of an Urban Development Line(s).  
• Improve High Priority Linkages network.  
• Creation and Consolidation of Nodes and Investment Corridors.  
• Balance work/home trips  
• Decrease spatial inequalities wrt distribution and performance of infrastructure and services.  
• Accommodating physical growth in a balanced manner. | |

**NOVEMBER 2012**
4.5 THE FUNCTION OF THE CENTRAL SPATIAL REGION

- Urban core of Metro (commercial, retail, financial & administrative hub)
- Major trading port
- Transport & logistics hub
- Key Industrial centre
- Largest employment generator
- Events & Tourism Hub Logistics Support Largest employment generator
- Significant Coastal Resources
- Range of lifestyle options
- Range of service nodes
4.6 THE VISION OF CENTRAL SPATIAL REGION

“A WORLD CLASS LOGISTICS, INDUSTRIAL & FINANCIAL SERVICES REGION WITH OPTIMIZED RESIDENTIAL DEVELOPMENT”

The vision for spatial development of the Central Spatial Region has been formulated in accordance with the strategic role this region serves in the wider context of the metro and has been underpinned by its inherent characteristics and capacities to support development.

4.7 THE SPATIAL INTENT OF CENTRAL SPATIAL REGION

- Mix of residential type and quality
  - High density
  - High amenity
  - Ease of affordability

- World class and integrated Logistics Hub

- High levels of connectivity & convenience

- Events and tourism Hub

- Commercial and Industrial hub

- Public Transport Hub

4.8 ASSUMPTIONS

- Ability to attract a range of income groups
- Development of a range of housing typologies
- Optimization of public transport service
- Dedicated logistics and freighting capacity
- Maintenance & Enhancement of Infrastructure Capacity - waste water
- Upgrading of services implemented at LAP level
5. KEY STRUCTURING ELEMENTS

This section outlines the guidelines to be used to give expression to the key elements underpinning spatial structuring. These provide the tools for translating spatial principles into tangible actions. They give emphasis to the importance of the public face of the city, the visible places that create the image of the city and the physical characteristics that reflect the functioning and economic performance of the EMA. Their identification is based on a need to take account of and build on current trends and opportunities and to utilise new growth as a resource to enhance the performance of existing areas. While each element is presented separately, the SDP places emphasis on drawing these elements together into an integrated framework.

Nodes and corridors provide the framework within which to locate and capitalize on areas of opportunity, especially with respect to building on the economic generation potential of the EMA. Transport linkages help to reinforce the system of nodes, to minimize travel, to maximize social and economic interaction, and to integrate areas of need to wider metropolitan opportunities. Guided by the constraints and potentials of a well-managed natural system (D’MOSS), this framework can be used to identify opportunities to construct viable living environments.

Densification and infill can be used to reinforce the investment framework by maximizing opportunities and contributing to the restructuring of the urban environment. Strategic spatial investment areas highlight opportunities for reinforcing and linking spatial principles and elements. Concern for maintenance of existing good quality environments and infrastructure is crucial to generating economic development within the EMA.

5.1 NODES

Nodes are places of high accessibility usually located at important transport interchanges and characterised by a concentration of a mix of uses. Sometimes, transport interchanges generate a node, and other times, a node may encourage transport development.

Well-planned activity nodes allow people to conduct different activities in one place, thereby improving overall accessibility to a range of goods and services. There is a hierarchy and typology of nodes peculiar to the EMA. This needs to be taken into account when formulating the implementation framework because it illustrates the significance of those particular nodes and highlights appropriate areas of intervention.

Further, LAPs need to examine nodes in terms of their present and potential significance and locate the role of key nodes within the context of broader EMA development goals.

At a metropolitan level, the Durban and Pinetown CBD nodes are key structuring elements that are priority areas for densification, integration, intensification and improvement of environmental quality. Nodal points within the well-serviced areas such as Westville provide opportunities for capitalising on their locational advantage.

As established growth points, these are areas where intensified development could be encouraged. Nodes that open up areas of need become important linkage elements (e.g. Pinetown South, Clermont and Kwadabeka). These areas need to be supported by public investment and targeted for the encouragement of private sector involvement.
5.1.1 Hierarchy of Nodes

The hierarchy of nodes within the EMA is important in terms of identifying areas which may serve varied catchments of people for different purposes. For example, a nationally important node such as the CBD/Inner City fulfills a number of functions for a wide spectrum of end users because of the convergence of the national transport routes N2 and N3. The spin-offs from this large scale intersection benefit the national economy as well as being the fulcrum of economic development within the Province.

At the other end of the scale, “local” nodes such as Chatsworth meet the daily requirements of a smaller population in a particular area, which may include the provision of local shopping and/or local public sector services. Existing and potential nodes have been identified in accordance with their metropolitan significance - nationally important, regional, sub-regional and local. Within this range, nodes may currently perform certain functions, but have the potential to provide greater needs and undertake other roles and have been ordered in terms of a hierarchy namely: metropolitan node; sub-metropolitan node, urban node and specialized nodes (tourism and recreation node, opportunity areas and major economic investment node).

5.1.1.1 Metropolitan Node

The characteristics of the metropolitan area are such that inherent opportunities for different types of specialised activity exist within its different sub metropolitan areas. This represents the opportunity to establish and/or consolidate a number of specialised development nodes which serve and benefit an area wider than just the sub metropolitan area in which they are located. Metropolitan nodes are generally those of a mixed use character which fulfil a variety of higher order services meeting the needs of a large population which could serve both the metro and outside the metropolitan boundaries.

The Durban CBD/Inner City is the EMA’s only metropolitan node with its business/industrial typology has a wide range of mixed uses, including its CBD role, recreation, formal and informal residential, and tourism. The primary function of the node is its port operations and associated transport activities which service the region and beyond as a multi-modal transport hub. The port is the foundation upon which the economic success of the EMA depends.

The area falling within the CBD/Inner City comprises a range of nodes and corridors which, because of their agglomeration and proximity to each other, create a large mixed-use node. Furthermore, these nodes and corridors have particular foci and characteristics, such as the port operations and industry focus, CBD focus, residential focus, entertainment focus and sports focus.

Proposals for the CBD/Inner City include the rationalisation and re-arrangement of harbour activity, the encouragement of mixed uses and medium to higher residential densities within the CBD, encouraging varying densities within the residential areas of the Berea and Umbilo areas, building on the beachfront tourism focus to stimulate further leisure activities and facilitating the development and rationalisation of sporting activities within the Kings Park Sports Precinct area in anticipation of the imminent 2010 World Cup.
5.1.1.2 Sub-metropolitan Node

Sub-metropolitan nodes provide accessible day to day business, transport and social services for existing and future local communities. These nodes serve sub-metropolitan areas of large districts and are well connected to metropolitan public transport systems and to their adjacent residential areas. They are generally situated on mobility spines supported by mobility roads and have access to urban freeways offering a full variety of higher order uses with a sufficient mix that may be in tight competition with other such nodes.

Pinetown is a sub-metropolitan node within the EMA which acts as a regional retail and service industrial node supported by the sub-regional industrial nodes of New Germany and Westmead. The Pinetown CBD is currently experiencing significant disinvestment and outflows of capital, whilst traffic congestion also poses severe problems. Key interventions envisaged for Pinetown include the revitalization and consolidation of the CBD through the refurbishment of old buildings, the sub-letting of portions of existing industrial sites and attracting other uses such as high-tech industry. This node also serves as a major intermodal transport hub within the EMA. Other projects requiring public investment include rehabilitating areas impacted on by industrial pollution, and locating trading facilities and small business units in established industrial and business spines, amongst others.

It is therefore important that the land, infrastructure and urban development control mechanisms relevant to the CBD are replanned in detail to ensure vitality and sustainability. Uses other than retail (including offices, higher density residential and industry) either need to be attracted or re-attracted, to ensure the sustainable mixed use role of the node.

5.1.1.3 Urban Node

Urban nodes are existing and new well located lower order nodes serving the needs of local areas only. These nodes are located at transport interchanges and or at the intersections of development spines. Their role is to provide essential ‘day to day’ commercial needs and social and commercial services to immediately adjacent communities. These local nodes are varied in activity mix and are determined by the thresholds which they serve.

Existing urban nodes in the Central Spatial Region are Chatsworth, Malvern, Westville, Musgrave and Glenwood/Berea as they meet the daily requirements of smaller populations in their specific locales. These nodes provide local shopping and/or local public sector services such as civic and community uses and need to be maintained, consolidated or expanded to ensure long-term viability.

Clermont and Kwadabeka are identified as future urban nodes within the Central Spatial Region which are however located on the periphery of the EMA. Potential uses include the provision of retail, public and institutional facilities to the surrounding community, and the facilitation of emerging economies, informal economies, as well as emerging, small, micro and medium enterprises. The necessary interventions required will prioritize investment in housing, infrastructure and service delivery. The stimulation of these potential nodes will also involve the provision of rental stock, the improvement of social facilities and hostels and locating trading facilities and small business units in emerging market areas.
5.1.1.4 Recreation and Tourist Nodes

Recreation and tourism nodes provide leisure and destination outlets for potential local and international tourists as well as lifestyle recreational opportunities for local residents. The significance of these nodes is paramount to the stimulation of economic generation through tourism related revenue earned.

A series of recreation and tourism nodes are prevalent in the Central Spatial Region, which need to be consolidated and exploited to their full potential. The “golden mile” is a well-known tourism destination with beach-holiday-related infrastructure and leisure related facilities. There is a significant public sector capital investment in this region’s beach, sea and coastal zone, although not matched with sound urban management. These nodes need to be maintained in a sustainable manner so as not to reduce or destroy the extent and nature of the environmental conditions and quality which provides the recreation and tourism opportunity and attraction.

The key drivers that form the strategic focus of increasing tourism in this region beyond the traditional seasonal holiday makers that Durban has relied on in the past are sports events and MICE (Meetings, Incentives, Conferences/conventions and Exhibitions). These key drivers are essential in transforming the image of the City from that of a local beach resort destination into an all year round, high profile, internationally recognised and competitive destination. In this respect the ICC, the Point Waterfront Development and Ushaka Marine World as well as the established Sun Coast Entertainment Complex are recognised as tourist and recreation nodes due to their prevailing attributes that support the role that the coastal corridor plays within the metropolitan area and due to their proximity to the beach and sea and the coastal zone character of the region.

The impact of the imminent hosting of the World Cup necessitates a focused tourism/economic strategy specific to this event which will have major economic implications. The development of the iconic new Moses Mabhida Stadium and the associated Kings Park Sports Precinct will provide a powerful catalyst for destination creation leading to value add and urban regeneration and has thus been identified as key recreation and tourist node.

5.1.1.5 Major Economic Investment Nodes

The predominant role of major economic investment nodes is to maintain and develop the major existing economic development areas of metropolitan, provincial and national significance.

The Southern Durban Basin (SDB) combined with the Port give the EMA its comparative advantage over other South African cities and is identified as major economic investment nodes in the Central Spatial Region. The SDB is overwhelmingly characterised by heavy industry and large blighted areas in need of regeneration/revitalization. Besides the heavy industry located here other uses such as formal and informal residential, recreation and protected areas are located adjacent to each other in an incompatible manner. Potential uses envisaged for the SDB include a world class industrial area, brownfields development and specialized industrial uses, e.g. a petro-chemical cluster. There is also significant potential for industrial infill to accommodate demand for additional land.
The D’MOSS areas situated within the SDB include the Clairwood racecourse, and the Bluff Dune Slopes. The primary focus of public investment in the SDB node will be regeneration and revitalization of industrial uses and ameliorating the negative effects of incompatible land uses. Other interventions would include locating trading facilities and small business units in established industrial and business spines and corridors.

Development of the port as an economic, manufacturing and trading hub and promoting it as a gateway especially to the East, needs to be located within an integrated development plan for the port that includes linking its planning with that of the CBD, and with the adjacent industrial areas to the south.

5.1.1.6 Opportunity Areas

Opportunity areas provide a platform to illicit development intent by directing the path of growth in a positive manner contributing to both consolidation and restructuring of the metropolitan area.

The Springfield Industrial Park in the Central Spatial Region has been identified as a potential opportunity area that could be consolidated into a mixed manufacturing and business park.

The Cato Manor area has tremendous potential as an opportunity area for mixed-use development and the promotion of higher densities due to its high accessibility and well location.

The Pinetown South area which comprises mainly large thresholds of low-income residents and has former R293 status is also identified as a future opportunity area which needs strategic intervention in terms of infrastructure improvements and economic stimulation to bring back opportunities to an area of need. These areas will therefore need to be accorded first priority in terms of the allocation of resources aimed at the promotion of equity, capacity building and sustainability.

More specifically, they need to be integrated and become functional components benefiting from the economic and social aspects of the EMA. This includes being a focus for initiatives that promote income-earning opportunities and that supply or extend educational and training facilities and health services. Consideration should be given to longer term viability, especially in terms of location and potentials for long-term infrastructural improvements.

5.2 CORRIDORS

The spatial structure of the EMA indicates a network of movement corridors that serve to reinforce the hierarchy of nodes. These corridors fulfill different purposes, and reinforce a range of activities and connections. In addition, the existing framework of the EMA requires the development of other corridors to ensure maximum accessibility to goods, services and destinations. It is envisaged that this would occur through accessibility corridors and mobility corridors, as these elements together would facilitate a wider range of activities for residents, thereby improving their life choices and opportunities.

Accessibility corridors are linear mixed-use areas containing a concentration of facilities such as retail, office, work, residential, entertainment and community facilities. They can occur at different scales and levels, and reflect a range of different characteristics, for
example, at a Provincial level the EMA falls within its north, south and western corridors, at the National level with the focus on ports, the Pietermaritzburg, Durban, Durban Richards Bay corridor is part of the National spatial strategy.

The central area is structured by a number of metropolitan and local scale activity corridors which are linear activity systems connecting nodes by well defined movement and public transport routes. These corridors can be categorized as follows:

5.2.1 National corridors

The (N3) Durban-Pietermaritzburg-Johannesburgh and (N2) South Coast-Durban-Richards Bay are significant because:

1. At a national level and at a macro scale, these corridors focus activities into the Durban Metropolitan Node and the sub metropolitan nodes such as Pinetown, facilitating economies of scale.
2. At a detailed level, these corridors expedite the rapid movement of people and goods in an east-west and north-south direction.

5.2.2 Regional corridors (Road and Rail)

Existing regional accessibility corridors within the central area include the M1, M7, M13, M19 and R102 (both road & rail). These routes can facilitate economic generation potential in the central area by developing appropriate spaces for stimulation of emerging economies: The M1 connects Mariannhill with Westmead and is an important route for people living in and beyond Pinetown South to facilities and services provided by the Pinetown CBD. The following routes have the potential to be accessibility & priority areas for integration, mixed use and densification:

- Regional Routes – R102 – road & rail (north/south link) forms part of High Priority Public Transport Network (HPPTN)
- Metropolitan routes - M1, M13, M19
5.2.3 Mobility corridors

Mobility corridors are primarily high speed routes to access different areas. The N2 is a national route which at a national level is an accessibility corridor and at a local level a mobility route. It is generally a high speed, limited access route linking the north and south regions with the Durban Metropolitan Area. The N2 is a primary carrier of freight, commercial and tourist traffic along the Durban-Richards Bay corridor.

The N3 is the primary vehicular route from Durban to Gauteng. It is a high speed, limited access route and the primary carrier of freight, commercial and tourist traffic along the Durban-Pietermaritzburg-Gauteng corridor.

5.2.4 Future regional corridors

The MR577 will link KwaMashu in the North with Clermont/Kwadabeka in the west, providing a much-needed crosslink to the Pinetown area. This corridor is generally characterized by peri-urban settlements and it is envisaged that this corridor will open up the peripheral areas of the EMA, to link the northern parts of the EMA with the western portions, thereby improving access and stimulating economic potential in these areas. The MR577 will potentially provide appropriate spaces for emerging economic activity, including the informal sector, as well as facilitating movement between areas of need and wider metropolitan opportunities.

The MR579 will connect Umlazi with Pinetown south and is seen as an “arm” that together with the MR577 will provide an outer ring road that will facilitate movement between areas of need and wider metropolitan opportunities to develop spaces to facilitate emerging economic activity, such as the informal trading economy and small, micro and medium-enterprises.
5.2.5 Proposed new road linkages

**M4- Grimsby Interchange** (through Racecourse): This link according to the ITP (2005-2010) is an accessibility focussed proposal which has been identified to support the future redevelopment of the Clairwood Race Course. Should the size and scale warrant access to the Southern Freeway, the best road network improvement will be the extension of Grimsby Road (M1) to the Southern Freeway (M4).

**Cato Manor link Rd (N2/Booth Road Interchange):** The proposed Booth Road interchange on the N2 is a critical point of access from the regional road network to the Cato Manor area. Implementation of this project remains subject to the approval of the National Roads Agency who is not supportive of this proposal due to their concern over some of the technical aspects.

**Umhlatuzana Arterial & N2 Interchange:** The proposed new interchange at Coedmore and a new arterial from South Coast Road to N2 are capacity related road projects which are required within medium to long-term which are associated with the port activities.

5.2.6 Coastal/Tourism corridor

The Durban Coastal corridor is highly fragile, but a relatively intact coastal asset which should be vigorously protected to provide a high quality natural coastal experience which complements the hard working urban beachfront of the central metropolitan area. This corridor is to be appropriately sustained as a consolidated mixed use and mixed density residential, recreation, entertainment and tourist oriented corridor.

5.2.7 Activity Corridors/Spines

Activity corridors are linear mixed-use areas that contain a concentration of facilities such as retail, office, business, residential, entertainment and community facilities that occur at different scales and levels, and reflect a range of different characteristics. Existing activity corridors along the north and south axis in the Central Spatial Region are Umbilo & Sydney Roads, Umgeni Road, Stamford Hill, Florida Road, Spine Road and North and South Coast Roads, Essenwood Road, Musgrave Road, Sydney Road, Booth Road, Old Main Road (Pinetown) and the Southern Freeway. The extension of these corridors provides opportunities around which to attract investment.
5.3 DURBAN METROPOLITAN OPEN SPACE SYSTEM (D’MOSS)

The DMOSS (Durban Metropolitan Open Space System) layer identifies land and water areas, which contain important biodiversity features and which supply a range of environmental services, like flood reduction and water supply, to Durban’s citizens and residents. The layer is amended from time to time as more information becomes available and planning techniques improve. The DMOSS layer is not a zoning, but indicates that the identified land is environmentally sensitive. Much of the area included in DMOSS cannot be developed because it is oversteep, falls within areas prone to flooding or is legally protected, for example. The Municipality, in collaboration with various stakeholders, aims to secure and manage as much of the DMOSS layer as is possible in pursuit of its broader sustainable development agenda. In order to assess the potential impacts of proposed activities in the DMOSS layer, all proposals within or adjacent to the DMOSS layer are assessed by the City’s Environmental Management Department. In most cases solutions can be found where there is conflict between environmental protection and development, but in some cases no development may be possible.

DMOSS stands for Durban Metropolitan Open Space System. It is an environmental layer that identifies areas important for biodiversity conservation and the sustained supply of environmental goods and services. The layer is amended from time to time as more information becomes available and biodiversity planning techniques improve. The Environmental Management Department must be contacted to obtain the latest DMOSS layer when interpreting Municipal spatial plans.

D’MOSS is an integral and essential component that constitutes as a spatial structuring element and must be seen as a resource that contributes significantly to the visual attractiveness and economic prosperity of the EMA which provides the basis for a desirable and sustainable urban system which improves the quality of life of all residents.

The open spaces within the Central Spatial Region provide a diverse range of environments which are acknowledged as being largely responsible for the visual attractiveness of our metropolitan area. Being a coastal region, the open space in the CSR provides not only terrestrial and freshwater but also estuarine and marine ecosystem habitats all of which represent the natural resources upon which our tourism industry depends.

Apart from the positive visual impact that open space resources have, there are a range of services that the open space system provides which are not widely acknowledged and yet which contribute to the economy and which greatly improve the quality of urban living within the Central Spatial Region and the EMA. A few of these services are:

- Food production (fish, crops, fruit etc. by non-commercial farming).
- Water supply (rivers, watersheds and reservoirs for agricultural, industrial and household use).
- Recreation (ecotourism, sport fishing, swimming and other outdoor recreation activities).
Waste treatment (breakdown of waste and detoxifying of pollution).

Disturbance regulation (flood control, drought recovery etc.) and,

Gas regulation (carbon sequestration, oxygen and ozone production).

In order for D'MOSS to continue to deliver these services, it needs to be both sensitively integrated and effectively managed within a developing metropolitan area. If this were not done it would place a cost on society in the form of ameliorative actions having to be instituted in the future and/or a decline in the quality and sustainability of the metropolitan living environment which would impact negatively on all EMA residents. Therefore, it is imperative that development within the EMA positively incorporates rather than destroys and replaces natural systems. “This layer is considered critical to the development of a sustainable city so all other land-uses have followed as a secondary layer.”

The metropolitan open space has been identified, mapped and quantified to establish an inventory of open space assets contained in the Central Spatial Region. This catalogue of natural and urban open spaces is characteristic of the EMA and includes a coastline, rivers, estuaries, grasslands, geological features and bio-diverse ecosystems. The D'MOSS extends across the entire central region occupying a total area of 3513,04ha, or 19% of the Central Spatial Region’s land area.
5.4 INFILL AND DENSIFICATION

Infill refers to development of vacant or under-utilised land within existing urban areas. In order to promote more compact urban development, attention should be given to those areas that are not densely developed but are well serviced and centrally located. These gaps within the urban fabric should be identified for priority projects. Vacant land within the central area provides infill opportunities to make use of existing services and to strengthen internal development. Vacant land beyond the central area provides opportunities for linking and integrating peripheral areas.

The inability to access well-located land for low-cost housing perpetuates continued outward expansion and sprawl and the ability to escape poverty. Densification of established, well located areas (including areas around nodes and along corridors) will promote more efficient use of existing infrastructure and help to create thresholds for public transport. These areas represent important opportunities in that they offer the potential not only for residential densification but also for diversification into mixed land uses and activity corridor development.

The densification processes to be adopted are dependant on the spatial context of the development, the site-specific characteristics, the capacity of the existing infrastructure and the impact that the development will have on the environment. Consideration also needs to be given to the negative community perceptions of densification and to the constraint of low-cost housing delivery processes that provide very few options for increasing densities.

5.5 RESIDENTIAL AND HOUSING

In order to ensure long term sustainability within the central area and meet the demand for gap and social housing it becomes important to increase overall densities through both the compaction of existing areas and through infill. The central area provides a unique opportunity to densify due to excess service capacity and is the most accessible in terms of providing additional services and infrastructure.

Specific densification initiatives, either through compaction, infill or redevelopment, would be prioritized based on where accessibility and amenity are greatest and where impacts are least likely to occur. This would also be supported by additional or upgraded social infrastructure such as the Northern Corridor Project which proposes new mixed uses and densification options all centred on existing public transport infrastructure.

A wide range of housing options would be encouraged to provide for different income groups in strategically available spaces. The appropriate densification of existing low density formal settlements in areas such as Westville, Queensburgh, New Germany and Pinetown would be promoted. Former township areas such as Pinetown South are areas of greatest need with the least investment. These areas provide an opportunity to introduce a wide range of housing and higher density options. Densification and infill will be used to reinforce the investment framework by maximising opportunities and contributing to the restructuring of this region. These efforts would be guided by detailed planning at a local level which would ensure adequate protection of existing environmental character and adequate provision of transportation, infrastructure and social facilities.
5.6 SPATIAL DEVELOPMENT PLAN

CENTRAL SDP MAP

Legend
- Metropolitan Areas
- Main Economic Activity Nodes
- Urban Areas
- Proposed Linkages
- Public Open Spaces
- Conservation Areas
- Proposed Infrastructure

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5.7 DEVELOPMENT PRIORITIES

The identification of strategic spatial investment areas at a metropolitan level highlights the areas that can play an important role in promoting spatial principles. While each of these opportunities presents its own set of issues and concerns, if the Spatial Development Plan is to have maximum impact, it needs to draw together these largely unrelated claims for attention so that they work to reinforce and support one another and are directed to achieving the aims of the metropolitan vision.

All of the areas listed below are currently covered by a range of projects and initiatives. Realising the opportunities that these areas present requires that they are accommodated within the Spatial Development Plan and are linked to other spatial elements.

1. Development of the Port as an economic, manufacturing and trading hub and promoting it as a gateway especially to the East. This needs to be located within an integrated development plan for the port that includes linking its planning with that of the CBD and with the adjacent industrial areas to the south. The Department of Trade and Industry’s National Spatial Development Initiative (SDI) provides the opportunity for focusing on the co-ordination of different levels of government and different stakeholders.

2. Promotion of the inner city as a commercial and tourist gateway. This requires building on the current strengths of the inner city as well as utilising opportunities for residential densification and economic growth. The work of the current inner city ABM (iTRUMP) must give guidance to realising this potential.

3. Ensuring that Cato Manor still represents an opportunity for well-located mixed-use development and the promotion of higher densities. Land Use Management Systems should be flexible enough to promote the realisation of these potentials.

4. Maximisation of the economic potential of the existing Airport land. This can be realized with commitment to the renewal of the Southern Durban Basin corridor in order to ensure a more attractive investor environment. All development proposals in this area would need to be investigated within the current Strategic Environmental Assessment (SEA) process and alignment with the South Spatial Development Plan.

5. Accommodating the promotion of Durban as the Gateway to the Indian Ocean Rim countries, with the attraction of head offices to stimulate the commercial sector, could also be addressed in this area.

6. Development of the coastal management plan to ensure that opportunities are not lost. A local assessment of possible strategic assets may reveal opportunities that may have significant impact at a metropolitan level (e.g. state owned land, areas for rehabilitation, well located low density suburbs). These may need promotion and facilitation at a metropolitan level to ensure maximum impact.

7. In terms of balancing physical, social and economic benefits, optimising the opportunities offered by the coastal area includes the need to ensure that tourism enhances the quality of the
environment and is undertaken in a sustainable manner, and that other competing uses are managed.

8. Historically advantaged areas and infrastructure that serve the metropolitan area are major assets for the city in terms of sustaining and generating economic opportunities. The city needs to maintain infrastructure and services and renew aging infrastructure, particularly where this infrastructure is intensively used or has the potential to address needs in the EMA. With continued pressure to do more with less, it is crucial that more cost effective and creative methods of maintenance be identified.

9. Concern for maintaining assets also includes consideration of protecting the qualities of the existing built and natural environment. Identifying places and elements of historical, cultural and natural significance, and ensuring their maintenance and enhancement, is not only important for contributing to a local sense of place but also for promoting a positive image of the EMA that is compatible with the drive for economic prosperity.

5.8 STRATEGIC SPATIAL INVESTMENT/PRIORITY AREAS

1. The Upgraded and Expanded Port

The need for current expansion of the Port of Durban has been precipitated by prolonged congestion arising from a capacity crisis in virtually every aspect of port operations. Steady and accelerating economic growth and the lowering of barriers to international trade have resulted in increased volumes of seaborne traffic to the port. As a major generator of transport activity and economic generation, the port will need to be a strategic focus area for more detailed planning and intervention.

2. South Durban Basin

This area contains South Africa’s largest manufacturing enterprises in the midst of relatively poor residents. The aim in this area is to regenerate the industrial base, creating cleaner, greener industries, whilst improving the residential conditions of people in the area. The aim of the SDB ABM is to improve resident’s access to social, recreational, economic and environmental facilities in the area. As a strategic focus area the objective in the SDB is to restore business confidence, consolidate existing
enterprises and stimulate new development, facilitate renewed socio-economic investment and improve quality of life by tackling environmental problems, addressing operational deficiencies and improving the built environment in a sustainable manner.

3. iTRUMP Inner City Regeneration

The Inner eThekwini Regeneration and Urban Management Programme (iTRUMP) programme drives regeneration and urban management in the Durban inner city. A complex range of issues from the flight of offices to the suburbs to the problems of the urban poor, informal trading etc all require innovative responses and is thus a strategic focus area. The iTRUMP ABM was established as a response to the need to prioritise regeneration of the inner city and places strategic value at the core of its business which seeks to maximize its multiple opportunities. The focus of this area comprises of six outcomes namely:

- Increasing economic activity;
- Reducing poverty and social isolation;
- Making the inner city more viable;
- Effective and sustainable urban management;
- Improving safety and security and
- Developing institutional capacity.

4. Cato Manor ABM

As an inner city residential area which was the focus of forced removals, this area houses some of the poorest urban poor. The objective of this area is to deliver increased public services in terms of added infrastructure and enhance economic opportunities due to the area being optimally located in terms of access to the Durban CBD and its economic potential. This area has been identified as having major densification potential.

5. Moses Mahiba Stadium and Kings Park Sports Precinct

The 70 000 seat stadium is due for completion by mid 2009 and will be the anchor development around “the central park of Africa” which will be established. The stadium is estimated to cost at R1,6 billion and will be a large infrastructural investment on the part of the city. The magnitude of this venue is expected to enhance the tourism sector by attracting both foreign and local tourist and possibly attracting major forthcoming events such as the Olympics and Commnwealth Games.
6. Durban Point Waterfront

Located at the entrance of the busiest port, the Durban Point Waterfront is a premier existing property development precinct that enjoys access to a range of modes of transport including road, rail, and sea. Over the years this area has been subject to urban blight and large vacancies yet paradoxically it represents the most under-utilised asset within the city. Intentions to revitalize the area has been mooted in recent years and a significant redevelopment has occurred.

Much of the renewed impetus for this initiative has been the implementation of the uShaka Marine World project which created a much needed development impetus for the city as a catalytic project regarded as a “must-see-must-do” attraction.

The Point Development precinct is thus not just an attempt to extend the city fabric, nor is intended as a mere theme park or tourist resort, rather this area is about to become a significant, well-defined addition to the city which will be a sought after place to live, work and play. It is envisaged to encompass a range of activities in a mixed-use environment which will eventually contain a host of urban functions and reflect a true urban place with 24-hour activity.
6. LOCAL AREAS

This section highlights eight local areas that are identifiable geographic areas within the Central Spatial Region which are physically and functionally connected. These districts are stratified from one another by amongst others major topographical features, natural systems such as rivers and valleys and major transport routes such as main roads.

Each local area has its own inherent character and presents unique opportunities for development which need to be managed and planned accordingly. The objective in the case of these districts is to encourage local activity systems which provide a range of facilities, opportunities and services required by local residents.

These local areas also play an important role with respect to the achievement of the broader based growth and development objectives of the municipality. As an important spatial structuring device these districts have a role to perform in respect to living, employment, economic opportunity, tourism and recreation areas.

The role, key characteristics, spatial development concepts and key actions are outlined for each of the Local Areas in the foregoing sections. More detailed planning will be undertaken at a local level in terms of the “package of plans” which is either at a precinct or local area plan level.

6.1 LOCAL AREA: GREATER PINETOWN

6.1.1 Key characteristics

The Greater Pinetown Local Area is located in the north western part of the central area. This Local Area is bounded by the Kloof escarpment to the west, the M13 to the south, the M5 to the east and the Umgeni River to the north. The key characteristics of this Local area is that it comprises of a mixed economic base and more importantly provides access to convenient well located residential areas which accommodate a range of middle, high and low income residents. The region also serves as a major...
interchange for metropolitan wide public transportation networks and access systems.

6.1.2 Role of the Local Area

The district is a commercial and retail core district within the central region for surrounding communities. The district supports a large number of small, medium and large industries and is an important industrial core area and economic generator within the EMA. The Pinetown CBD is a sub-metropolitan node and also plays an important role as a multi-modal transport hub. A number of regional and metropolitan social facilities are also located in this District.

The key components of this local area are:

- Economic core area - commercial and industrial core and employment centre for residents within the central region,
- Important regional district,
- Middle to high density, convenient medium to high income residential area,
- Low-income residential housing in the Pinetown South area
- Metropolitan transportation hub and public transport interchange around the Pinetown station and bus terminal,
- Transport connection for commuters travelling around the eThekwini Metro.

6.1.3 Planning: residential

Maintain and consolidate high quality residential areas by accommodating a range of income low, middle and high income residents. Upgrade facilities and infrastructure in the Pinetown South areas so as to improve overall quality of living for the residents in this region. Encourage densification opportunities in areas with potential for infill and compaction especially in vacant and underutilised areas and adjacent to HPPTN.

6.1.4 Planning: Industrial

- Encourage the development of a range of industrial activities by:
- Encouraging the development of both large formal and small/micro industries,
- Concentrating micro industries around the existing industrial hives along existing activity corridors.

6.1.5 Proposed mixed used

Protect the viability of the core CBD and strengthen the mixed economic base by intensifying mixed use development especially in the core Pinetown CBD. Permit planned expansion of the CBD. Maximise mixed use opportunities within urban nodes of Clermont and Kwadabeka to stimulate the local economy and attract a spectrum of varying income earners.
6.1.6 Proposed movement system
- Establish a clear movement hierarchy and link rail systems to road based transport systems to road by:
- Maintaining and upgrading low friction metropolitan routes (M13, M5, M7),
- Creating a well-defined network of local linkages between these higher order routes.

6.1.7 Open space/environment
- Maintaining a high quality open space system by:
  - Protecting and upgrading important river systems such as the Palmiet and Aller River valleys, the Umbilo & Umhlatuzana Rivers and the Kloof Escarpment,
  - Ensuring that development does not occur on the slopes of the Kloof Escarpment and in Paradise Valley to prevent downstream flooding,
  - Ensuring that river corridors and public open spaces become an active part of the urban environment which enhance the unique character of the area,
  - Protecting the New Germany Nature Reserve and other important public open spaces.

6.1.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.1.9 Current Interventions:
- Pinetown Precinct Plan
- Clermont/Kwandabeka Local Area Plan

6.1.10 Proposed Interventions:
- Pinetown South Local Area Plan

6.1.11 Overall Strategy:
Regeneration - expand industrial opportunities and CBD regeneration

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Existing Density  50
Proposed Density  50
6.2 LOCAL AREA: GREATER WESTVILLE

6.2.1 Key characteristics

The Greater Westville local area is located to the east of the Greater Pinetown local area and is mainly residential in character with relatively low densities. The area is bounded by Umbilo River to the south, the N2 to the east, the M19 to the north and New Germany Nature Reserve. The district contains a range of social facilities as well as commercial activities and offices. A substantial portion of this district is demarcated as DMOSS due to the significant natural resources contained within this district.

6.2.2 Role of the Local Area

This local area is a predominantly high quality residential area with a range of medium and low density housing that is well linked to metropolitan movement systems close to economic opportunities. The district also supports a number of regional and metropolitan commercial and office facilities with a regional shopping centre. The key components of this Local Area are:

- An upper income, medium and low density residential settlement with a high aesthetic quality-metropolitan asset,
- Important intersection of east-west and north-south regional routes with most east-west metropolitan routes passing through the area,
- Local and metropolitan commercial and office nodes including Westville Town Centre, Westway Office Park, Derby Downs Office Park, and the Pavilion regional retail node,
- A local area with various regional social facilities and public institutions:
  - Administrative facilities
  - Regional private and public hospital
  - University of Kwa-Zulu-Natal
  - Westville Prison.
6.2.3 **Planning: residential**
Maintain a high quality, well balanced residential environment with clear edges between the built and natural elements of the environment:

- Prevent new development from encroaching in important D’MOSS areas,
- Encourage densification in areas of opportunities especially around important nodes and activity corridors.

Increase residential densities and encourage mixed use development along activity corridors and activity nodes.

6.2.4 **Planning: Industrial**
Restrict or limit industrial development within this region as the aim is to maintain a high quality, well balanced residential environment with possible mixed uses encouraged at strategically appropriate points.

6.2.5 **Proposed mixed use:**
Encourage mixed use development along activity corridors and around activity nodes:

6.2.6 **Proposed movement system**
Develop and maintain a clear movement hierarchy:

- National and regional movement routes/freeways (N2, N3)
- Metropolitan routes (M13, M19)

- Local activity and public transport routes (Spine Road and Jan Hofmeyer)
- Local linkages linking residential areas to activity and public transport routes.

6.2.7 **Open space/environment**
- Significant local river corridors – Umbilo, Palmiet and Umkumbane
- Nature reserves of regional and national significance- Palmiet and Roosfontein (important grassland habitat in the eThekwini Metro)

6.2.8 **Services**
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.2.9 **Current Interventions**
No current interventions

6.2.10 **Proposed Interventions:**
No proposed interventions

6.2.11 **Overall Strategy:**
Service maintenance and enhance operational value.
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6.3 LOCAL AREA: GREATER SPRINGFIELD

6.3.1 Key characteristics
This local area is characterised by an emerging business park precinct with a large portion also serving a residential population of middle to low income earners. There is a mixed density profile in this district with low, medium and a substantial high density component.

6.3.2 Role of the Local Area
The role is predominantly a mixed use local area with residential, business and industry all forming part of the district composition.

6.3.3 Planning: residential
The area has a significant amount of aging and old residential stock as well as business and need to be regeneration and revived through renewal strategies. Maintain the varying densities and increase densities through infill and compaction where possible.

6.3.4 Planning: Industrial
Encourage and promote this district for further industrial expansion especially ITC related industry development

6.3.5 Proposed mixed use:
Encourage mix-uses along activity spines such as Sydenham Road and Alpine Road and maintain existing profile.

6.3.6 Proposed movement system
The local area experiences high traffic volumes and high levels of traffic congestion due to the road network being used as an alternative route to the national freeways from areas like the South. Proposals would entail the overall increase of the capacity of the road networks to cope with excess volumes which would be identified by Ethekwini Transport Authority.
6.3.7 Open space/environment
Maintain the limited open space reserved as D”MOSS.

6.3.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.3.9 Current Interventions:
No current interventions

6.3.10 Proposed Interventions:
ICT complex – private development

6.3.11 Overall Strategy:
Growth in industrial development – enhance ICT

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6.4 LOCAL AREA: GREATER CATO MANOR

6.4.1 Key characteristics
This local area is predominantly residential with medium to low densities and caters for low-middle income earners with a substantial amount of informal dwellings.

6.4.2 Role of the Local Area
The role of the local area is predominantly residential, although the future intent is to develop a mixed-use zone in this district that would support higher thresholds of residential populations and opportunities for economic upliftment. The district also contains a number of social facilities to cater largely for the low-income residents that reside in the area.

6.4.3 Planning: residential
The opportunity to develop this large area close to the city centre and the HPPTN fits well with the IDP principles for densification and efficient use of infrastructure. Encourage densification opportunities in areas with potential for infill and compaction especially in vacant and underutilised areas and adjacent to HPPTN.

6.4.4 Planning: Industrial
No interventions proposed.

6.4.5 Proposed mixed use:
Encourage a range of mixed uses to provide income-generation opportunities for the districts residents.

6.4.6 Proposed movement system
Since the vision for Cato Manor was that public transport would be a major mode of transport for its residents the services provided must be integrated into an effective municipal public transport system that ensures accessibility to residential, economic, social and community opportunities. Improved access to the regional road system is seen as important to the development of Cato Manor and as such the following is proposed:
• N2/Booth Road interchange in order to improve access throughout the municipal area via the regional network

• Additional overall transport facilities.

6.4.7 Open space/environment
Nature reserves of regional and national significance- Palmiet and Roosfontein (important grassland habitat in the eThekwini Metro)

6.4.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.4.9 Current Interventions:
Cato Crest Social Housing

6.4.10 Proposed Interventions:
Roosfontein development.

6.4.11 Overall Strategy:
Infill, densification, service provision, social housing and LED opportunities.

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6.5 LOCAL AREA: GREATER CHATSWORTH

6.5.1 Key characteristics
This local area is predominantly residential in character with medium to high densities and caters for low to middle-income earners. There are various forms of residential accommodation with well connected movement corridors to the EMA via the M1, the Higginson Highway as well as a rail corridor. The housing typology consists of publicly owned blocks of flat, high-density mixed income accommodation as well as low-income accommodation. Small-scale industry and offices are land-use trends that are being encountered in this district.

6.5.2 Role of the Local Area
The district plays a primary role as a residential area for middle to low-income earners with a good cluster of social facilities and a range of commercial activities such as the Chatsworth regional shopping centre and RK Khan Hospital. Maintain a high quality, well balanced residential environment.

6.5.3 Proposed residential land use and densities
Encourage densification opportunities in areas with potential for infill and compaction especially in vacant and underutilised areas and adjacent to HPPTN.

6.5.4 Planning: Industrial
Pressure for industrial use is evident in this district, there is however limited space for development. Considering the residential character of the district the encouragement of industrial uses within this region is not likely a suitable option as conflict between residential and industrial uses would ultimately manifest in time.

6.5.5 Proposed mixed use:
No current mixed use interventions identified at present however there is an influx of illegal uses prevalent in this district.
6.5.6 Proposed movement system

The local area experiences high volumes of traffic and some congestion problems due to insufficient capacity of road network. No current major interventions are planned although the Ethekwini Transport Authority will look at improving overall road capacity in the region.

6.5.7 Open space/environment

Maintain the existing quality of D’MOSS in terms of the open space such as Silverglen Nature Reserve.

6.5.8 Services

Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.5.9 Current Interventions:

No current Interventions

6.5.10 Proposed Interventions:

Local Area/ Precinct Plan level:

- Florence Nightingale Road
- Sunset Avenue – industrial complex

6.5.11 Overall Strategy:

Maintain services and enhance operational value

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6.6 LOCAL AREA: GREATER BLUFF

6.6.1 Key characteristics
This local area is predominantly residential in character with a low to medium density housing typology that caters for low, medium and high income residents. The quality of the built environment is under stress due to the district housing large petro-chemical industries represented by MONDI, ISLAND VIEW and the ENGEN refinery complex that are impacting mostly on the air quality of the district due to these highly polluting industries. The area also has significant natural assets with a good quality coastal belt, wetlands and a nature Reserve which are declared as environmental reserves. The district also abuts the South Durban Basin which is a major industrial node that supports the Port activities. The area also experiences conflict between incompatible land-uses which manifest in social activism combined with the historical legacies of apartheid.

6.6.2 Role of the Local Area
This local area plays primarily a residential role with a significant industrial focus. The coastal belt is an important natural asset that plays both a recreational and leisure role for local residents and residents within the EMA overall. Collectively the nature of the existing industries plays a key strategic role nationally and regionally by contributing significantly the national and provincial GDP.

6.6.3 Planning: Residential
Maintain the residential amenity of the area by maintaining the existing use rights. Maintain the existing densities as status quo.

6.6.4 Planning: Industrial
Maintain the existing industrial areas and limit any further industrial expansion within this district. Enforce strict monitoring guidelines for gauging the impacts of pollution from industries within the district to ensure health and safety standards are upheld and risks associated with harmful emissions are minimised.
6.6.5 Proposed mixed use:
Tara Road has the potential for being a future mixed-use corridor.

6.6.6 Proposed movement system
The area has a well connected movement network system that serves both the local residents and the freight needs of the existing industries. Incompatible land uses has generated traffic between industry and residents. The area encounters friction between freight vehicles with local passenger type vehicles and as such it is proposed that the dedicated HAZCHEM freight route is more strictly enforced.

6.6.7 Open space/environment
Maintain and preserve ecologically sensitive areas namely the wetlands and the coastal belt.

6.6.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.6.9 Current Interventions:
The South Durban Basin ABM addresses operational and social infrastructure requirements in the district.

6.6.10 Proposed Interventions:
Local Area/Precinct Plan level:
- Partly attended by Back of Port LAP

6.6.11 Overall Strategy:
- Buffer Bluff residential form adjacent industries.
- Regulate HAZCHEM freight routes
- Public transport: create link to M4

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Existing Density | 30
Proposed Density | 30
6.7 LOCAL AREA: PORT & BACK OF PORT

6.7.1 Key characteristics

Port

As South Africa’s premier Port, the Port of Durban handles most of the country’s trade in high value goods principally in the form of general cargo and containers and as such is a major asset to the country and a vital transport link to the rest of the world. Being the busiest port in Africa with the largest container carrying capacity, the port is an important employer and source of income for the EMA and its contribution towards growth in the cities transport sector, as well as its ability to offer the city a comparative advantage in the important manufacturing sectors cannot be underestimated. The bay, sea and Bluff estuary contained within this local area are highly sensitive ecological areas that constitute part of the EMA’s D’MOSS.

Back of port

The South Durban Basin (SDB) extends south from Durban’s port to encompass the industrial areas of Congella, Clairwood, Jacobs and Mobeni. The local area is predominantly industrial with the exception of the Clairwood and Merewent residential areas. This key industrial zone has a unique locational advantage, based on:

- It’s proximity to Africa’s busiest port.
- It’s proximity to the airport, as well as national road, rail and pipeline networks.
- Many of the industrial areas are contiguous and collectively support a considerable amount of infrastructure and services.
- The fact that the length of the SDB is served by arterial routes.
- Its proximity to the financial and commercial services of Durban’s CBD.

6.7.2 Role of the Local Area

The SDB is a significant economic driver in the national and regional contexts, being the engine of the EMA’s economy whilst containing South Africa’s leading port and Durban’s most established industrial areas. Many of the country’s leading firms, operating in nationally important sectors, are located in this area and account for approximately more than
60% of employment in the EMA. The district also plays a dominant logistics role and can be considered as a multi-modal transportation hub.

**6.7.3 Planning: residential**
Increase cohesion between communities and business by developing urban renewal and revitalisation programs for the residential areas in need of upgrade. Improving the interface zones between industrial and residential land-uses. Develop social management and mitigation programs for residential areas affected by existing and future industry. No increases in residential densities are proposed in this district.

**6.7.4 Planning: Industrial**
Develop urban renewal and revitalisation strategies for the industrial zones in need of upgrade. Promote and market the SDB as a world-class investment zone. There is generally a lack of land/space to expand. Provide infrastructure to improve the efficiencies of the port. Planning for port growth and expansion is to be further determined by the Back of Port LAP.

**6.7.5 Proposed mixed use:**
The district has a range of mixed uses with residential, industrial, commercial and other land-uses although the predominant use still remains industrial.

**6.7.6 Proposed movement system**
Due to the indirect effect of port growth and possible expansion, the load bearing capacity of road infrastructure in this district is being exceeded.

The district is also characterised by high levels of friction between residential and industrial traffic.

The port area particularly Bayhead and Maydon Wharf is extremely congested. This is mostly attributed to logistics activity of various kinds of activity occurring on a massive scale on infrastructure that is mostly inadequate. The problem is primarily concerned with access to container terminals but also naturally includes linkages to other parts of the city.

The decline in the use of rail over the past 20 years has affected all companies within the Port and Back of Port district and has contributed directly to the proliferation of truck transport in recent years thereby increasing road based congestion which has directly resulted in a major shift in land side transport from rail to road.

All proposed movement and transport systems would be investigated and determined by the final outcomes of the Back of Port Local Area Plan.

**6.7.7 Open space/environment**
As identified in the strategic assessment of the situational phase of the Back of Port Local Area Plan, the following are implications for the environment in this district:

- **Biodiversity** – important bio-geographic transition zone with several endangered species within the district and a number of estuarine and aquatic habitats, development of almost any undeveloped area could have negative biodiversity consequences.
In planning the possible use of current undeveloped areas it will be necessary to consider alternatives as well as possible mitigation measures such as compensation to ensure that biodiversity levels are maintained, these will be tested during the detailed planning phase.

- Water quality is currently poor but this is generally due to pollution from sewage. It is envisaged that Back of Port development will lead to improved transport infrastructure, light industry and logistics development. None of these elements are likely to significantly affect levels of effluent of sewage effluent entering local water courses. In areas of pollution impacted by industrial pollution, the development of light industry and particularly transport related businesses could exacerbate these problems. In order to manage water quality issues arising due to industrial uses, enforcement is critical.

- Air pollution is experienced in this district due to industrial pollutants and the various options for development considered for development of the Back of Port will determine the extent and variance air quality impacts.

- Risks associated with future development in the Back of Port area are shown to be only a minor constraint to development.

- Contaminated Land - The extent of contaminated land in this district is largely unknown, however, this is not likely to be a major restraint to development according to the environmental assessment undertaken as per the strategic assessment of the Back of Port LAP.

### 6.7.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

#### 6.7.9 Current Interventions:
- Back of Port LAP
- Port Expansion

#### 6.7.10 Proposed Interventions:
To be still determined by the outcomes of the Back of Port LAP.

#### 6.7.11 Overall Strategy:
Regeneration of Area to support Port related business/industries

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6.8 LOCAL AREA: GREATER DURBAN CBD

6.8.1 Key characteristics
The strategic advantage of the Durban CBD lies in its location, particularly in relation to the Port, Warwick Junction transportation hub and the coastline. The proximity to the Port and the possibilities to facilitate increased capacity of the Port, the potential to improve the quality of the inner city environment with improved access and use of the City, the Port edge and the possibility to build on the tourism assets, on the beachfront are significant. Beyond the locational advantage of the Durban CBD, the area presents an advantage in the relatively high thresholds and concentration of activity related to the residential areas, CBD, beachfront and commuting the Inner City.

6.8.2 Role of the local Area
The identification of the current roles fulfilled by the Durban CBD is an important starting point to mapping a new development path for the Inner City. The role reflects not only the functions currently performed by the CBD but also give an indication of the relevant scale and influence of these roles:

Decision Making Role
The Inner City as the seat of the Metropolitan Council and local authority departments plays a role in decision making and the co-ordination for the EMA. The ICC reinforces the decision-making role of the Inner City and provides an international dimension.

Meeting Role
The Inner City continues to command a role as a formal and informal meeting place. The ICC is a formal meeting place at a large scale, but not the only one: for example, the hotels, beaches and entertainment hubs namely Suncoast Casino, Ushaka Marine World and the Point Waterfront etc

Iconic Role
The governance role of the Inner City is reinforced by the symbolic and iconic dimension and value of the Inner City. The Inner City is an icon that
is an easily recognisable symbol of the KZN Province’s urban core and a significant tourism icon. The Inner City is a recognised symbol of the city and the broader region.

Service Provision Role

In addition to governance functions, provincial government departments and regional offices of national departments are also found in the Inner City is centre of service provision for a range of the province’s public services, the official centre of service provision for the eThekwini Municipality and a hub of service provision for many private sector bodies.

Residential Role

The Greater Durban CBD offers a range of formal and informal accommodation that performs the function of a local residential area.

Economic Role

The Greater Durban CBD is the EMA’s only metropolitan node and is a place that offers a range of formal and informal employment and economic activity. This Local Area is a place in which people active in the informal economy seek to make a living and plays the role as an employment hub for the region. Despite economic decline, the area continues to have a very significant status as a place of formal business and employment too.

In summary the major roles of the Greater Durban CBD District are:

- National – Business & Financial Services Hub
- Residential Areas – medium – high density
- Major Inter-modal Hub
- Tourism & Recreation Hub

6.8.3 Planning: residential

There is a complexity in the residential typology which includes formal residential (rental & ownership), tourist accommodation, social housing, a hostel, transitional housing and student accommodation which reflect a diverse socio-economic profile of the residents of this district. While a significant number of residents have very low-incomes, there are few formal accommodation options for the poor. Some private sector responses to the demand are exploitative. The aim in this district is therefore to increase opportunities for housing the poor in this district through densification options, Revitalisation and redevelopment of aging stock and broadly maintaining a variety of housing typologies to meet the needs of various income level earners.

The overall strategic outcome is to reinforce and extend the residential role for the inner city by driving the following objectives:

1. Retain existing residential stock and promoting new residential investment across the affordability spectrum (high, middle and low income).
2. Promote new models of accommodation for those currently not served.
3. Reclaim dysfunctional stock to minimise dysfunctional practices such as rack-renting and poor maintenance practices.

4. Promote new stock i.e. an increased resident population across the affordability spectrum

5. Investigate densification options through redevelopment either through infill or compaction.

6.8.4 Planning: Industrial
Play a supporting role to the Port and logistics function of the district in the EMA by improving infrastructure and movement patterns to increase port efficiency.

6.8.5 Proposed mixed use:
Encourage the “live, work and play” concept by repositioning the Inner City by a re-orientation of land use, regulation and public space to allow for a diversity of mixed-use activities.

6.8.6 Proposed movement system
There are major movements through the inner city with no inner ring system to alleviate congestion. In some areas the road network constrains redevelopment. Generally there is a low frequency and very low patronage of the rail use. The district houses the busiest port in the southern hemisphere but has no freighting route. The overall traffic and transportation strategies are to:

- Focus on the improvement of the Inner City infrastructure including the capacity of the road network
- Reinforce the multi-modal transportation interchange function of the Inner City with an emphasis on the north-south rail link
- Strengthen local and regional transportation linkages
- Rationalise freight routes through the inner city

6.8.7 Open space/environment
There are significant environmental assets within this region which include the Beachwood Mangrove Nature Reserve, the northern bank of the Umgeni River and parts of the Umgeni Estuary as well as the Durban coastline which offer both environmental and recreational services. This district form part of the “green network” as it contains the Beachwood Mangrove Nature Reserve and the “blue network” which forms part of the river and estuary (rivers, sea and harbour) that form some of eThekwini Municipality’s key natural assets that impacts locally on the quality of the inner city’s water edges. The strategies are thus as follows:

- Develop and intensify the coastal green corridor through to the civic heart,
- Develop and promote the creation of a corridor of green indigenous public spaces.
- The Umgeni Estuary is included in the Kings Park Sports Precinct study area and it is likely that more intensive recreational uses will be developed in this area. The Greater Kings Park planning process should articulate a number of development options for
the golf course and the southern banks of the Umgeni River. These options need to be considered in relation to the significant environmental role that this District plays.

- Protection of coastal corridor through a Coastal Management plan.

6.8.8 Services
Upgrade and maintain existing service infrastructure to ensure ongoing capacity is maintained.

6.8.9 Current Interventions:
• Sports Precinct – 2010 stadium
• Point Development
• iTRUMP

6.8.10 Proposed Interventions:
R102 – corridor densification of mixed uses and residential typologies.

6.8.11 Overall Strategy:
• Maximise densification
• CBD regeneration and redevelopment
• Service maintenance and operational efficiencies

<table>
<thead>
<tr>
<th>GREATER DURBAN CBD</th>
<th>QUANTUMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANDUSE</td>
<td>Area ha</td>
</tr>
<tr>
<td>DMOSS</td>
<td>801.31</td>
</tr>
<tr>
<td>Environmental Amenity</td>
<td>12.73</td>
</tr>
<tr>
<td>Existing Commercial</td>
<td>61.56</td>
</tr>
<tr>
<td>Existing Industry</td>
<td>8.93</td>
</tr>
<tr>
<td>Existing Port Logistics</td>
<td>67.27</td>
</tr>
<tr>
<td>Existing Residential</td>
<td>1327.30</td>
</tr>
<tr>
<td>Institution</td>
<td>43.12</td>
</tr>
<tr>
<td>Mixed Use</td>
<td>893.19</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3215.41</strong></td>
</tr>
<tr>
<td>Existing Density</td>
<td>80</td>
</tr>
<tr>
<td>Density Proposed</td>
<td>80</td>
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</table>
Central Spatial Region: Synthesis of Issues

<table>
<thead>
<tr>
<th>Priorities:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Densification - LUMS</td>
</tr>
<tr>
<td>• HPPTN optimization</td>
</tr>
<tr>
<td>• Back of Port</td>
</tr>
<tr>
<td>• Services to former R293 areas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenges:</th>
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</thead>
<tbody>
<tr>
<td>• Decentralization of business</td>
</tr>
<tr>
<td>• Port growth</td>
</tr>
<tr>
<td>• Housing opportunities within ltd space</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Focus Areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Point Waterfront</td>
</tr>
<tr>
<td>• Port</td>
</tr>
<tr>
<td>• SDB</td>
</tr>
<tr>
<td>• Pinetown South</td>
</tr>
<tr>
<td>• DIA (outside central region – south)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Consolidate &amp; integrate spatial development by developing land in proximity to public transport facilities &amp; existing services</td>
</tr>
<tr>
<td>• Pro-actively manage land use in accordance with the appropriate levels of service to achieve sustainability in the urban core.</td>
</tr>
</tbody>
</table>
7. TOWARDS AN IMPLEMENTATION FRAMEWORK

This document has provided an assessment of the current development context of the Central Spatial Region and presented the emerging picture with respect to spatial elements that form the key structuring elements for this region. In translating the elements to practical actions emphasis is given to how the elements relate and link to one another and how they each relate to issues of equity, efficiency and sustainability.

It is necessary to conceptualise the spatial elements as providing the tools that release a network of opportunities that linked together can be used to respond to the challenges facing the Central Spatial Region and the EMA overall. The strategies and actions identified reflect this approach and give emphasis to the spatial elements as tools for achieving desired outcomes of the spatial principles and guidelines as identified in the eThekwini IDP.

At a more closer level, the identification of the respective local areas each play a significant role as spatial structuring devices that can create or protect identifiable, integrated and cohesive districts, precincts and neighbourhoods that perform a particular role in the EMA with respect to living areas, employment areas, economic opportunity areas, tourism and recreation areas etc. For future planning these areas will need to be more closely scrutinized and detailed planning interventions would have to be undertaken at a local level as per the “package of plans” concept.
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11. eThekwini Municipality: South Spatial Development Plan: October 2008 (South Spatial Planning Team)
12. eThekwini Municipality: Outer West Spatial Development Plan: August 2008 (Asha Nasook )
14. eThekwini Municipality: Back of Port Environmental Status Quo: November 2008 (John Marshal et al)
ANNEXURES

ANNEXURE A: PUBLIC TRANSPORTATION

Current National Public Transport Strategy provides a strong focus on accelerated modal upgrading and integrated rapid public transport networks. It seeks to articulate the vision and steps required to implement a public transport system that integrates all modes into a seamless and high-quality network. The development of such an Integrated Rapid Public Transport Network (IRPTN) for eThekwini (Figure 23) is particularly crucial to providing a full network covering the expanse of the municipal area with appropriate services based on road, rail and non-motorised options. Residents of eThekwini depend upon the efficient provision of public transport services to fulfil their daily mobility needs. The integration of the different rail, bus, minibus, and non-motorised transport options remains a major goal in delivering more convenient and cost-effective services.

The system envisaged is of sufficiently high quality that will both attract existing car users and greatly enhance the travel experience of current captive public transport customers. The overall goal of this initiative is to improve the quality of life for the City’s residents through the provision of an Integrated Public Transport Network that is rapid, safe and secure, convenient, clean, affordable, and socially equitable.

No single public transport technology is right for all circumstances. The appropriate solution depends greatly upon the local context, including physical, financial, social, environmental, and cultural conditions. Amongst the various technological tools available to cities are heavy urban and regional rail, underground metro rail, light rail transit, bus rapid transit, conventional bus services, minibus taxi, metered taxi and non motorised transport. eThekwini has a mix of different technological tools to suit different travel and demand conditions. To function efficiently, road, and non-motorised options should be mutually complementary and act as a single system.

The framework for Ethekwini’s IRPTN system is based on several synergistic rail and road services. The IRPTN has nine trunk corridors, of which eight are road based. Rail plays a significant role in the North-South corridor in terms of acting as the backbone of the public transport system.

The nine trunk corridors are as follows and are illustrated in Figure 1.

C1: From Kwamashu via Malandela Road, Inanda Road and Umgeni Road to Durban CBD.

C2: is the North-South Rail Corridor, from KwaMashu station and Bridge City via Effingham and also Greenwood Park to Central Durban and down to Umlazi and Isipingo station.

C3: Bridge City via M25 and MR577 to Pinetown CBD, with a spur from Clermont.

C4: Bridge City via M25 and N2 to Mobeni with a spur via Edwin Swales Drive to Clairwood.

C5: Hillcrest via the R103 to Gillitts and a spur from the N3 (M13) via the M13 to Pinetown, thence via South Coast Road to Durban CBD.

C6/C7: Hammarsdale via the N3 to Durban CBD, with a spur from central Pinetown via the M13 and N3 to Durban CBD.
C8: From Durban CBD via Umgeni Road, North Coast Road, Blackburn Road, Umhlanga Rocks Drive (with a spur from Umhlanga Rocks via Lighthouse Road), continuing northwards through Cornubia and Dube West to King Shaka International Airport, with a future extension via Dube Trade Port and Watson Highway to Tongaat CBD.

C9: Bridge City via Phoenix Highway and Cornubia to Umhlanga New Town Centre, continuing via Lighthouse Road to Umhlanga Rocks.

The nine trunks corridors are, supplemented by a fine grain of feeder and complementary services, as shown in Figure 1.

Figure 1: Main trunk routes

The following corridors have been supported and approved by the eThekwini Municipality, as the Phase 1 of the IRPTN roll-out.

C1: Bridge City to Durban Central Business District (CBD)

C2: North-South Rail line

C3: Bridge City to Pinetown and New Germany via MR 577
C9: Bridge City to Umhlanga via Cornubia along Phoenix Highway and Cornubia Boulevard.
EThekwnini has adopted the package of plans (suit of plans) as way to carry out the metro’s spatial development intentions from the IDP into specific projects as well as interpret and implement the priorities at metro, regional and local development scale. The broader spatially intention is represented through Spatial Development Framework (SDF), which is in the metro scale to guide the formulation of the four regional plans: the Central Spatial Development Plans which is currently in reviewing process. The eThekwini Municipality has 26 Priorities and the SDF only reflects only the metro wide priorities i.e Dube Trade Port in the North, Cato Ridge in the Outer West and Back of Port in the Central South Regions.

Other priorities are curried out though Regional Plans (SDP’s) as well as number of local area plans for implementation. In the current Central Spatial Development Plan the regional priority is the Back of Port, Durban central, Pinetown New German and number of local priorities stated above.