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DISASTER MANAGEMENT CENTRE DIVISION

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EKURHULENI METROPOLITAN MUNICIPALITY

CORPORATE DISASTER MANAGEMENT PLAN

**(For Inclusion into the Integrated Development Plan as required by the Disaster
Management Act, Act 57 of 2002 and section 26(g) of the Local Government:
Municipal Systems Act, Act 32 of 2000)**

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1 FOREWORD

South Africa has aligned itself to the United Nations International Strategy for Disaster Risk Reduction and in so doing also to the Africa Regional Strategy for Disaster Risk Reduction (ARSDRR). *“The New partnership for Africa Development (NEPAD) and the Africa Union Commission with support from UN/ISDR Africa, AfDB, UNDP-BCPR and UNEP developed the Africa Regional Strategy for DRR (ARSDRR) aimed at facilitating integration of DRR into development programmes of member states and institutional programmes.*

The ARSDRR, is an African Regional Disaster risk reduction framework for action whose mission is to reduce or eliminate the conditions that promote vulnerability to natural hazards and related technological and environmental phenomena which result in human, social, economic and environmental losses in Africa.”

Objectives of the ARSDRR

1. *To reduce the social, economic and environmental impacts of disasters on African people and economies, for sustainable development.*
2. *To increase understanding and knowledge of DRR as an integral part of sustainable development.*
3. *To increase capacity at sub-regional and national levels for mainstreaming and implementing DRR into development processes.*

ASDRR Mechanism of Implementation

1. *African Ministerial Conference for DRR*
2. *Africa Working Group (AWG) of the Global Platform for DRR (headed by the AU, members include heads of all RECs and the AAG)*
3. *Africa Advisory Group (AAG) (Nigeria, Uganda, Kenya, Madagascar, Algeria, Senegal, South Africa, AU, regional consultants)*
4. *Africa Regional Economic Commissions (RECs) i.e: IGAD, EAC, ECOWAS, SADC, ECCAS, IOC, COMESA.*
5. *National Governments*

6. *UN Agencies to support*
7. *Africa Programme of Action*” [Online. <http://www.unisdr.org/africa/af-about/about-isdr-strategy.htm>. Accessed: 12 June 2006]

2 DEFINITIONS AND ABBREVIATIONS

2.1 ABBREVIATIONS

CBO	Community based organisation
COID	Compensation for occupational injuries and diseases
DRR	Disaster risk reduction
IDNDR	International Decade for Natural Disaster Reduction
IDP	Integrated Development Programme
IDP's	Integrated Development Programme's
ISDR	International Strategy for Disaster Reduction
JOC	Joint Operations Centre
MDMC	Municipal Disaster Management Centre
NDMC	National Disaster Management Centre
NGO	Non-governmental organisation
OHS	Occupational Health and Safety
PDMC	Provincial Disaster Management Centre
UNDMTP	United Nations Disaster Management Training Programme
UNDP	United Nations Development Programme
UNDRO	United Nations Disaster Relief Organisation
UN-ISDR	United Nations – International Strategy for Disaster Reduction

2.2 DEFINITIONS

Integrated Development Plan:

“A single, inclusive and strategic plan for the development of the municipality which—

- (a) links, integrates and co-ordinates plans and takes into account proposals for the development of the municipality;
- (b) aligns the resources and capacity of the municipality with the implementation of the plan;
- (c) forms the policy framework and general basis on which annual budgets must be based;” (Municipal Systems Act: 32 of 2000)

Disaster:

“means a progressive or sudden, widespread or localised, natural or human-caused occurrence which—

- (a) causes or threatens to cause—
 - (i) death, injury or disease;
 - (ii) damage to property, infrastructure or the environment; or
 - (iii) disruption of the life of a community; and
- (b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources;” (Disaster Management Act: 57 of 2002)

Disaster Management:

“means a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at—

- (a) preventing or reducing the risk of disasters;
- (b) mitigating the severity or consequences of disasters;
- (c) emergency preparedness;

(d) a rapid and effective response to disasters; and

(e) post-disaster recovery and rehabilitation” (Disaster Management Act: 57 of 2002)

Preparedness:

Means to ensure in times of disaster appropriate systems, procedures and resources are in place to assist those affected by the disaster and enable them to help themselves. (UNDP: Overview of Disaster Management: 1992)

Response:

“means measures taken during or immediately after a disaster in order to bring relief to people and communities affected by the disaster” (Disaster Management Act: 57 of 2002)

Recovery:

Refers to those actions after a disaster, which attempts to bring order to the disaster site and aids in bringing the situation back to normality. (UNDP: Overview of Disaster Management: 1992)

Mitigation:

“means measures aimed at reducing the impact or effects of a disaster” (Disaster Management Act: 57 of 2002)

Development:

“means sustainable development, and includes integrated social, economic, environmental, spatial, infrastructural, institutional, organisational and human resources upliftment of a community aimed at—

(a) improving the quality of life of its members with specific reference to the poor and other disadvantaged sections of the community; and

(b) ensuring that development serves present and future generations;” (Municipal Systems Act: 32 of 2000)

Rehabilitation:

Is the operations and decisions taken after a disaster with a view to restoring a stricken community to its former living conditions. (UNDP: Overview of Disaster

Management: 1992)

Reconstruction:

Are the actions taken to re-establish a community after a period of rehabilitation subsequent to a disaster. (UNDP: Overview of Disaster Management: 1992)

Municipal Entity:

“(a) a company, co-operative, trust, fund or any other corporate entity established in terms of any applicable national or provincial legislation and which operates under the ownership control of one or more municipalities, and includes, in the case of a company under such ownership control, any subsidiary of that company; or (b) a service utility;” (Municipal Systems Act: 32 of 2000)

Sustainable development:

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Comment: This definition coined by the 1987 Brundtland Commission is very succinct but it leaves unanswered many questions regarding the meaning of the word development and the social, economic and environmental processes involved. Disaster risk is associated with unsustainable elements of development such as environmental degradation, while conversely disaster risk reduction can contribute to the achievement of sustainable development, through reduced losses and improved development practices.”

(<http://www.unisdr.org/eng/terminology/terminology-2009-eng.html> Accessed 27 January 2011)

Vulnerability:

“The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

For positive factors, which increase the ability of people to cope with hazards, see definition of capacity.” (<http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm> Accessed: 1 December 2005)

Risk

“The combination of the probability of an event and its negative consequences.

Comment: This definition closely follows the definition of the ISO/IEC Guide 73. The word “risk” has two distinctive connotations: in popular usage the emphasis is usually placed on the concept of chance or possibility, such as in “the risk of an accident”; whereas in technical settings the emphasis is usually placed on the consequences, in terms of “potential losses” for some particular cause, place and period. It can be noted that people do not necessarily share the same perceptions of the significance and underlying causes of different risks.”

(<http://www.unisdr.org/eng/terminology/terminology-2009-eng.html> Accessed: 27 January 2011)

Risk assessment

“A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

Comment: Risk assessments (and associated risk mapping) include: a review of the technical characteristics of hazards such as their location, intensity, frequency and probability; the analysis of exposure and vulnerability including the physical social, health, economic and environmental dimensions; and the evaluation of the effectiveness of prevailing and alternative coping capacities in respect to likely risk scenarios. This series of activities is sometimes known as a risk analysis process. (<http://www.unisdr.org/eng/terminology/terminology-2009-eng.html> Accessed: 27 January 2011)

3 INTRODUCTION

The Disaster Management Act (Act 57 of 2002) provides disaster management managers with a new focus on disaster management. It presents new challenges in not only negotiating and writing up a disaster management plan but also in developing disaster management plans for general public scrutiny. Public scrutiny and acceptance of disaster management plans, prior to its implementation, has become a legislative requirement (Municipal Systems Act, Act 32 of 2000).

The Municipal Systems Act, in section 25 indicates that each municipality should adopt a “*single, inclusive and strategic plan for the development of a municipality.*” The plan referred to is the Integrated Development Plan. The same Act in section 26(g) dictates that “*applicable disaster management plans*”, are a core component of the Integrated Development Plan of a Municipality.

Therefore the challenge is to develop a disaster management plan, which all stakeholders – community, public, commercial, etc - of a municipal entity are able to comprehend and implement within their own setting and which indicates the procedures and processes required to minimise the threat of disaster utilizing a developmental approach. Another challenge includes community and other stakeholder participation in not only the activation of disaster response procedures but also in mitigation and development initiatives, which would lead to sustainable development.

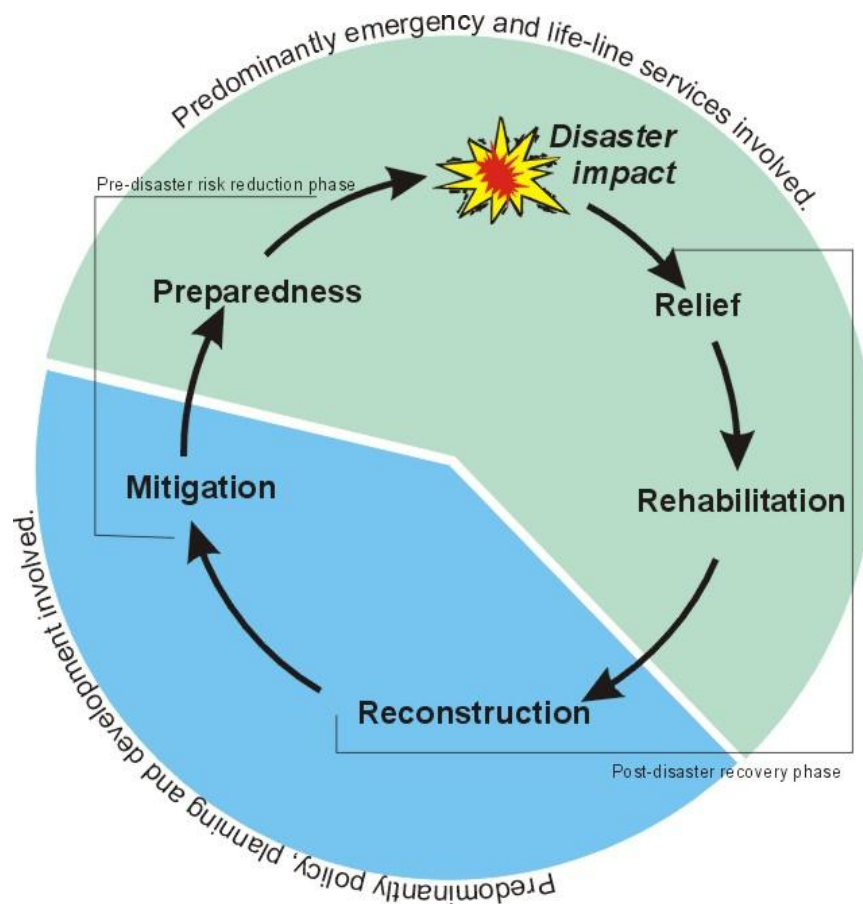


Figure 1: Disaster Management Continuum

Figure 1 illustrates the continuum – it should be noted that Disaster Management is not only reactive, but also involves actions aimed at preventing disasters, or mitigating the impact of disasters. Different line functions and departments must contribute in varying degrees to Disaster Management in the various phases of the Disaster Management Continuum. The needs identified in the corporate disaster management plan will indicate where line functions and departments must contribute. These contributions will then be included in line function and departmental disaster management plans.

Disaster management plans cover the whole disaster management continuum, and must address actions before, during and after disasters. Disaster management plans are compiled on the basis of a generic plan including standard operating procedures and best practice, and then expanded with risk-specific plans that address disaster management for special circumstances where the generic plan needs to be adapted.

4 PURPOSE

This plan predetermines, to the extent possible, actions to be taken by the Ekurhuleni Metropolitan Municipality (EMM) and by cooperating private organizations, to prevent disasters if possible, to reduce the vulnerability of EMM residents to any disasters that may occur, to establish capabilities for protecting citizens from the effects of disasters, to respond effectively to the actual occurrence of disasters, and to provide for recovery in the aftermath of any disaster involving extensive damage or other debilitating influence on the normal pattern of life within the community. The plan focuses on disaster risk reduction as a key strategy to reduce disaster risk, decrease community vulnerability and ensure an increase in coping capacity.

5 POLICY STATEMENT

The Ekurhuleni Metropolitan Municipality is committed to maintaining a vigilant state of disaster preparedness, response, rehabilitation and reconstruction within a safe and sustainable framework for the residents, staff, stakeholders and neighbours, because all are susceptible to disasters. Enlightened self-interest tells us that to be prepared is the greatest weapon against disaster. In recognition of the possibility of both small and large disasters, the Disaster Management Centre devised the following plan to ensure that appropriate actions are taken in the event of a disaster. This plan provides stakeholders with a set of disaster priorities, emergency procedure guidelines, lists of personnel and geographical information (GIS). It will be updated annually to ensure accuracy and currency.

6 DISASTER MANAGEMENT STRATEGY

The main strategy of all disaster management activities will be disaster risk reduction. A risk reduction strategy will ensure alignment with the strategies adopted internationally. In order to demonstrate the components, the following diagramme is provided:

Framework for Disaster Risk Reduction

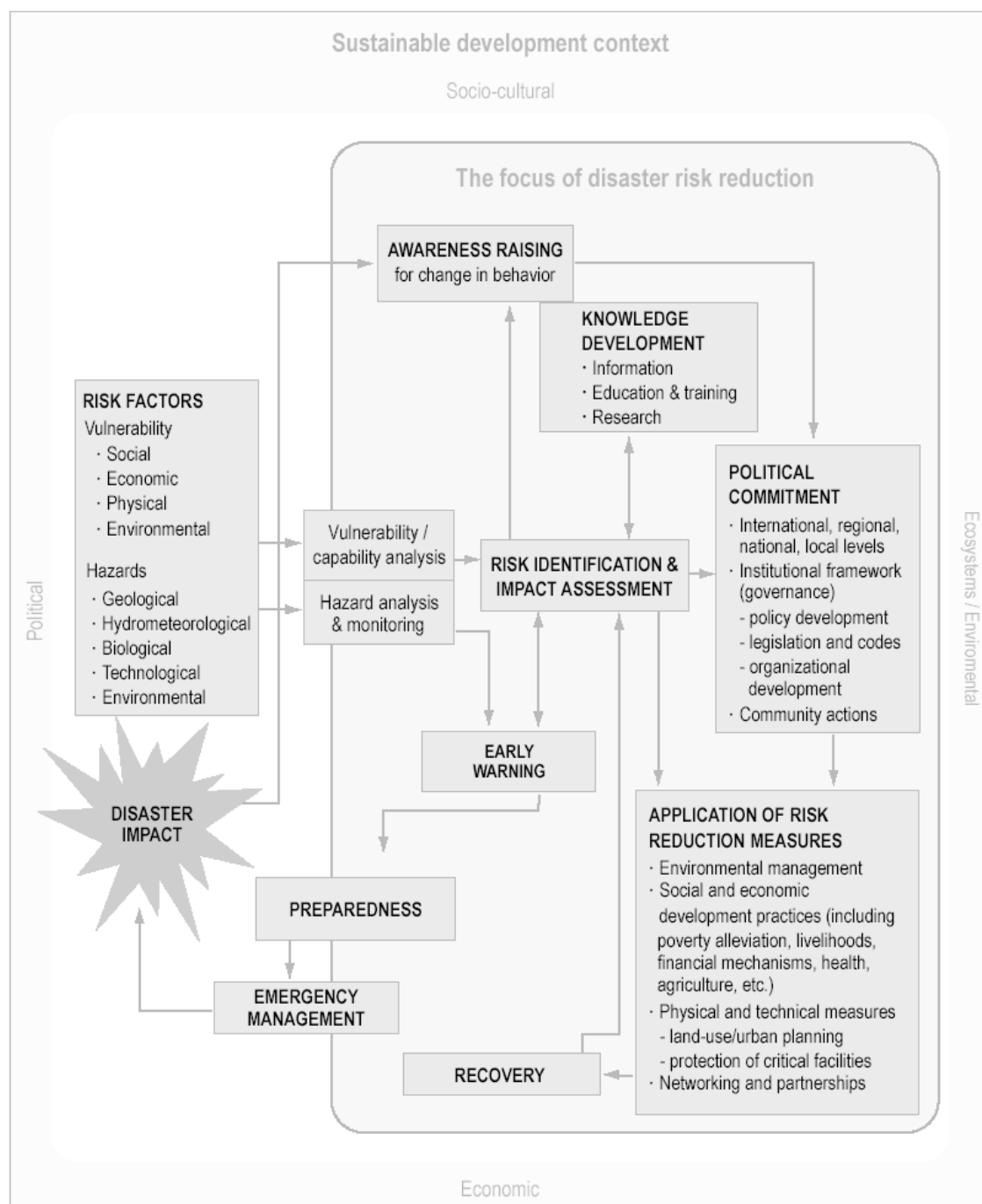


Figure 2: Disaster Risk Reduction Framework.

[Online. <http://www.irinnews.org/webspecials/DR/ISDR-Framework.pdf>.

Accessed: 12 June 2006]

7 STAKEHOLDER CONSULTATION PROCESS

The plan was circulated to all departments in the EMM for consideration and comment. Comment was incorporated into the plan or included into the hazard specific plans which are filed separately. The plan was also placed on Ekurhuleni's publicly available website for comment.

8 ASSUMPTIONS

Situations

The Ekurhuleni Metropolitan Municipality is exposed to many hazards, all of which have the potential to disrupt the community, cause damage and create casualties. Possible natural hazards include sinkholes, extreme cold, floods, tornadoes, heavy rain and other violent storms, and earthquakes due to mining and other activities. Other disaster situations could develop from hazardous materials accidents, major transportation accidents, terrorism, or civil disorder.

Assumptions

The Disaster Management Act, Act 57 of 2002, section 43 delineates the responsibility of the Ekurhuleni Metropolitan Municipality to establish a Disaster Management Centre while section 44 delineates the responsibility for the protection of life and property. Local government has the primary responsibility for its own disaster management activities. When an emergency / disaster exceeds the municipality's capability to respond, assistance will be requested from the provincial and simultaneously national government in terms of section 49 (1) (b). The provincial and national government will provide assistance to the municipality, when appropriate.

While it is likely that outside assistance would be available in most major disaster situations affecting the EMM and while plans have been developed to facilitate coordination of this assistance, it is necessary for the Ekurhuleni Metropolitan Municipality to plan for, and to be prepared to carry out, disaster response and short-term recovery operations on an independent basis.

A major disaster can exhaust the resources of a single jurisdiction or directly impact more than one jurisdiction. It may require resources from numerous agencies and levels of government.

9 MUNICIPAL PROFILE

See the data presented in the relevant section of the Integrated Development Plan.

9.1 Organisational Structure and Succession

The ultimate responsibility for disaster management in the Ekurhuleni Metropolitan Municipality belongs with the Council in terms of section 55 (1) of the Disaster Management Act, Act 57 of 2002, while the Council under Council resolution PS20/2001 has delegated authority to the Executive Mayor to deal with disasters. The Head of the Disaster Management Centre, Director Emergency Services, and Chief of Police provide support and coordination for all municipal disaster operations. The Ekurhuleni Metropolitan Municipality will exercise full authority over disaster operations, when the disaster situation exists entirely within the boundaries of its jurisdiction unless the disaster is reclassified as a provincial or national disaster.

If more than one municipality is affected or if there is a very serious disaster, the provincial disaster management centre and the national disaster management centre will be notified; but it will not necessarily assume control of all functions. The provincial disaster management centre (PDMC) may decide to restrict its activities - relative to the affected area - to monitoring, coordinating, and providing requested support.

In case of the threat or actual impact of a very destructive, widespread disaster in the Ekurhuleni Metropolitan Municipality, which covers an extended time period, the entire disaster management centre may be activated.

It is vital that the operational management function is provided and that succession planning is planned for as the individuals who occupy these positions may be injured or unable to provide the management function required after a disaster. This section provides the reader with the top management organisational structure. The section further indicates the succession philosophy of the municipality.

The procedures for municipal line of succession follow Local Government: Municipal Structures Act, Act 117 of 1998.

The line of succession for the Ekurhuleni Metropolitan Municipality in the absence of the Mayor, i.e. next in command with authority for Disaster Management responsibilities would be the councillor appointed by the Council at a meeting as described by section 48 of the Local Government: Municipal Structures Act.

The line succession for the office of the City Manager are the Deputy City Managers.

The line of succession for the Head of the Disaster Management Centre is the Executive Manager: Disaster Management: Planning and Operations and the Executive Manager: Disaster Management: Communications.

The line of succession for each department head is according to the operating procedures established by each department. Each department must detail the succession structures in its disaster management procedures.

10 RISK PROFILE

This section describes the risk profile of the municipality.

The preliminary risk and vulnerability assessment performed with the aid of a questionnaire to all Councillors and Ward Councillors indicated the risks and vulnerabilities below. These risks were confirmed in part through a formal risk assessment in the Southern Service Delivery Region:

Risk formula:

$$\text{RISK} = \frac{\text{HAZARD} \times \text{VULNERABILITY}}{\text{CAPACITY}}$$

10.1 Risks

10.1.1 Natural Hazards

- Lightning strikes causing fires and / or damage to:
- Power lines

- Residential, commercial and industrial buildings
- Veld fires

10.1.2 Informal settlements

- Floods - especially close to or affecting informal settlements
- Heat wave
- Extreme cold
- Fires in informal settlements
- Subsidence in dolomite areas
- Strong winds and tornadoes
- Earthquakes
- Thunderstorms
- Health related disasters

10.1.3 Technological Hazards

- Hazardous material spills and accidents (roads, rail and air)
- Mine tremors
- Major accidents (especially along the N1, N3, N12, N17, R24 and R21)
- Aircraft crashes (Johannesburg International Airport and Rand Airport)
- Explosion - e.g. (AEL) African Explosives (LTD)
- Sasol Gas pipeline leaks and explosions
- Petronet pipelines
- Rail accidents and derailments

10.2 Vulnerabilities

- Residents living in unsafe areas (dolomite, mine dumps, along major road and rail corridors, etc).
- Residents in informal settlements close to hazards, i.e. gas and fuel pipelines, high tension electrical / overhead wires.
- Residents not trained in disaster risk reduction actions and preparedness.
- Lack of awareness of disaster risks.

10.3 Manageability / Capacity

Manageability means; Capable of being managed or controlled.

Capacity means;

“A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.

Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.” (<http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm> Accessed: 1 December 2005)

11 CROSS BOUNDARY ASSISTANCE AND AGREEMENTS

At present, a number of cross boundary agreements exist between the Metro Police, the Emergency Services and other Departments. These are operational agreements and should be reviewed on a regular basis.

Where no policy or agreement exists, the City Manager and the Executive Mayor will decide on the rendering or a request for cross boundary assistance. In the event of any cross boundary assistance being provided the agencies will bear their own costs unless other arrangements for this are agreed to.

12 ASSIGNMENT OF RESPONSIBILITIES

It is vital that the primary and secondary risk reduction and response responsibilities are noted. This section provides opportunity for the statement concerning the assignment of duties and responsibilities of municipal departments and includes the duties and responsibilities of National and Provincial departments, NGO's, CBO's and other stakeholders where these have been formalized.

It must be noted that the primary and secondary functions of disaster management role-players provided below may from time to time, change or as a result of organisational or other restructuring, developments or amendments to the plan.

NAME DEPARTMENT ORGANISATION	OF /	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
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NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
Corporate Legal Services	<ul style="list-style-type: none"> • Responsible for the management of council properties. • Provide legal advice on disaster management related claims submitted. • Provide the necessary legal support in drafting disaster management by-laws. • Land development for risk assessment. • Develop Memoranda of Understanding and Agreement in consultation with the Disaster Management Centre to aid Disaster Management activities. • Provide legal support to Disaster Management. • Ensure that Municipal Courts are able to function during a disaster. • Participate in Disaster Management Advisory Forum activities, when expert input from service 	<ul style="list-style-type: none"> • Assist with committee services at Disaster Management Advisory Forum meetings. • Assist with bulk printing of notices and brochures aimed at enhancing community awareness and preparedness.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	is required (at Forum and / or task team level.	
Water and Sanitation	<ul style="list-style-type: none"> • Prioritisation of restoration of disrupted water supplies. • Coordinate the emergency supply of water during prolonged disruption. • Responsible for ensuring that data on resources relevant to the services, are kept updated and information on this is forwarded to the DMC. • Provide for safe sewerage disposal and repairs systems. • Ensure ERWAT is compliant with approved Disaster Management plans (pre-disaster risk reduction as well as post-disaster recovery plans). • Participate in Disaster Management Advisory Forum activities, when expert input from service 	<ul style="list-style-type: none"> • Assist with monitoring of levels of water pollution. • Assist with emergency radio communication. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	is required (at Forum and/or task team level)	
Public Transport	<ul style="list-style-type: none"> • Transportation of people and goods during evacuation procedures. • Provision of traffic management equipment, e.g. cones. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and / or task team level. 	<ul style="list-style-type: none"> • Assist with emergency radio communication. • Assist with labour intensive tasks. • Assist with bulk transport. • Attend relevant disaster management advisory or task team meetings.
Waste Management	<ul style="list-style-type: none"> • Ensure that relevant disaster management aspects are reflected as a component of the department's IDP submissions (section 26 (g) of the Municipal Systems Act: Core components). • Compile disaster management plans that will enhance risk reduction measures and effective response, relevant to waste management. 	<ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> • Coordinate waste management services during disaster or emergency situations including the waste removal from created temporary shelters. • Identification of suitable temporary refuse collection points for communities to use during a crisis. • Compile contingency plans to accommodate unforeseen large quantities of waste to be disposed of at existing landfill sites • Provide bulk containers at predetermined collection points during major disruptions of service. • Prepare and distribute community awareness information on safe storage and disposal of refuse during a major disruption in 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>service delivery.</p> <ul style="list-style-type: none"> • In conjunction with Environmental Health, monitor and institute remedial action necessary at illegal dumping areas that could pose a (major) health risk or to prevent the health risk from developing. • Participate in major recreational and sports events waste management planning needs in particular where the municipality has been tasked to do so, or is hosting the event. • Procurement & monitoring of acquired additional funds; equipment and other resources for use by Waste Management, during disaster relief operations or for major proactive projects. • Serve on Disaster 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>management Advisory Forum (task teams) when matters related to Waste Management need to be addressed.</p> <ul style="list-style-type: none"> • Coordinate hazardous waste removal (safe storage and disposal thereof). • Coordinate the removal and safe disposal of carcasses after a disaster. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and / or task team level. 	
Economic Development	<ul style="list-style-type: none"> • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and / or task team level. • Develop and manage programmes which supports Poverty Reduction after a disaster. 	<ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
Roads and Storm water	<ul style="list-style-type: none"> • Repair and maintain roads. • Provision of emergency access roads. • Street names in informal settlements to be painted on sidewalks. • Dolomite management. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and / or task team level. 	<ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings.
Energy and Electricity	<ul style="list-style-type: none"> • Responsible for ensuring that electricity cables and facilities do not present a hazard. • Responsible for coordinating awareness programmes on the safe usage of electricity. • Coordinate emergency supplies of electricity to reservoirs. • Coordinate the restoration of major disruptions in power 	<ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>supply according to priority ratings.</p> <ul style="list-style-type: none"> • Responsible for the emergency supply of electricity to a temporary housing centre established for evacuees/refugees. • Responsible for any other power and electricity activity related to the management of a disaster. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level). 	
Human Resource	<ul style="list-style-type: none"> • Coordinate the handling of stress of employees involved with disaster relief and recovery operations. • Maintain records received on specialist skills and qualifications acquired by municipal employees in accordance with the 	<ul style="list-style-type: none"> • Assist with record keeping of disaster management volunteers recruited in terms of the Disaster Management Act and municipal adopted policy. • Investigate and report on building safety after a disaster. • Attend relevant

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>identified needed categories determined by the Disaster Management Centre.</p> <ul style="list-style-type: none"> • Coordination of strikes. • Handling of communication between council and trade unions. • Coordinate municipal employee disputes that have arisen during disaster management operations or projects. • Responsible for Occupational Health and Safety matters during and after a disaster. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level). • Assist with recruitment and screening of volunteers, when such requests are received. • Assist with arranging of training courses 	<p>disaster management advisory or task team meetings.</p>

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	aimed at enhancing disaster management related skills of employees from different departments.	
Metro Police	<ul style="list-style-type: none"> • Maintenance of law and order in terms of relevant legislation. • Coordinate access control to a disaster area. • Coordinate traffic control near/at an emergency housing centre. • Provide escort services to emergency vehicles. • Determine safe alternative routes. • Maintain up to date information on personnel with specialized skills that could be useful during and after a disaster. • Collect data on location and numbers of people in existing and new informal settlements 	<ul style="list-style-type: none"> • Assist with record keeping of disaster management volunteers recruited in terms of the Disaster Management Act and municipal adopted policy. • Investigate and report on building safety after a disaster. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>for forwarding to Housing.</p> <ul style="list-style-type: none"> • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level). 	
Emergency Services	<ul style="list-style-type: none"> • Coordinate and direct fire fighting operations. • Coordinate and direct ambulance services for the EMM (according to the Memorandum of Agreement) • Coordinate and direct fire prevention through community education, awareness and fire safety programmes. • Coordinate and direct the rescue of people from fires and other life threatening dangers. • Coordinate the handling of treating the spillage/spread of hazardous chemicals. • Provide basic training in fire fighting for council 	<ul style="list-style-type: none"> • Assist with (limited) supply of portable water. • Assist with monitoring water levels of streams/rivers, during severe and extended rainfall periods. • Assist with early warning to communities at risk. • Assist with evacuation of areas under threat (not of an emergency service related nature). • Assist with (limited) emergency lighting and pumping equipments. • Assist with projects aimed at risk reduction. • Attend relevant disaster management advisory or task team

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>employees, fire service reservists, identified volunteers and community based organizations.</p> <ul style="list-style-type: none"> • Ensuring that knowledge and records of existing and potential hazards and risks are forwarded and kept updated at a central register. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) • Initiate and direct evacuation and other matters incidental thereto, due to fire or hazmat incidents. • Coordinate and direct triage, treatment and transportation of injured. • Monitor and provide onsite advise on major hazardous installations (MHI) emergency 	meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>planning.</p> <ul style="list-style-type: none"> • Direct applicable programmes aimed at reducing fire and medical risks in the communities including measures to ensure easy identification of water for use in a fire (hydrants). 	
Disaster Management	<ul style="list-style-type: none"> • Provision of two-way radio and telephonic communications • Dispatching of response agencies • Coordination of response actions • Facilitate and disseminate hazard and risk assessment details • Facilitates incident assessments • Facilitates departmental response to the incident • Reports incident to Provincial and National Disaster Management Centres in terms of Disaster Management Act, Act 57 of 2002 • Report to DWAF to be investigated 	<ul style="list-style-type: none"> • Assists with evacuation of affected stakeholders
Sports, Recreation, Arts & Culture (SRAC)	<ul style="list-style-type: none"> • Provision of halls, open spaces and sports grounds should suitable venues be required for 	<ul style="list-style-type: none"> • Assist with providing information on missing and displaced persons should libraries and

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>emergency housing.</p> <ul style="list-style-type: none"> • Coordinate the removal of fallen trees that are causing a hazard, in conjunction with fire services. • Coordinate the distribution of leaflets, posters and the like through library points, to enhance awareness and preparedness (Library and Information Services). • Provide public access to general disaster management information including the use of Intranet, in conjunction with ICT (Library and Information Services). • Ensure up to date information is available on departmental resources that could be utilized for disaster management purposes (i.e. capacity and facilities at venues/site. • Participate in Disaster 	<p>recreation centres and sports facilities have to be used as information points (Library and Information Services).</p> <ul style="list-style-type: none"> • Assist with labour intensive tasks. • Assist with vehicles and drivers for mass transport purposes. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level)	
Health and Social Development	<ul style="list-style-type: none"> • Coordinate the actual and potential outbreak of epidemics (Family Health and Special Programmes). • Coordinate the implementation of projects aimed at greater awareness and preparedness of communities on health risk issues (and community health aspects). (Community Development and Family Health) • Stock and coordinate the distribution of blankets and food parcels (Social Health). • Ensure that up to date data is maintained and forwarded to a central register, on health 	<ul style="list-style-type: none"> • Assist in determining the needs of disaster survivors (i.e. vulnerable groups such as orphans, elderly, homeless). • Assist in the manning of emergency first aid posts (Family Health). • Assist hospitals with medical expertise during crisis (Family Health). • Assist with the handling of stress of employees involved with disaster relief and recovery operations (Family Health). • Assist with the handling of stress of victims of a disaster (Family Health). • Assist with medicine controls and distribution (Family Health).

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>related hazards and risks (Family Health).</p> <ul style="list-style-type: none"> • Ensure that up to date data of doctors and health sisters as well as all related pro-active information is maintained and forwarded to a central register. • Maintain health information system and provide management information systems (Special programmes). • Serve on Disaster Management Advisory Forum (task teams) when matters related to Health and Social Development are to be attended to. • Handling of stress of employees involved with disaster relief and recovery operations (Community Development – Social workers). 	<ul style="list-style-type: none"> • Assist by attending JOC meetings when special input of department is required due to the nature of the disaster. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> • Accessing social aid grants (Community Development – Social workers). • Maintain a database of Health Volunteers. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) <p>Environmental Health</p> <ul style="list-style-type: none"> • Ensure that relevant disaster management aspects are reflected as a component of the department's IDP submissions (section 26 (g) of the Municipal Systems Act: Core components). • Coordinate the monitoring of vector control • Coordinate the actual and potential outbreak of epidemics due to environmental health 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>hazards.</p> <ul style="list-style-type: none"> • Provide advice and monitor decontamination measures. • Monitor and provide advice on air pollution related measures. • Coordinate the implementation of projects aimed at greater awareness and preparedness of communities on environmental health risk issues. • Coordinate the hygienic preparation of emergency food supplies and monitor the quality of stocks used for that purpose. • Monitoring the potability of emergency water supplies. • Ensure that up to date data is maintained and forwarded to a central register, on 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>environmental health related hazards and risks.</p> <ul style="list-style-type: none"> • Coordinate environmental health projects aimed at reducing communities' risks and hazards exposure • Serve on Disaster management Advisory Forum (task teams) when matters related to Environmental Health need to be addressed. • Coordinate the monitoring of disposal of health waste. • Procurement & monitoring of acquired additional funds; equipment and other resources for use by Environmental Health, during disaster relief operations or for major proactive projects. • Coordinate external and internal resource 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>management data base for disaster management purposes and ensure that it remains updated.</p> <ul style="list-style-type: none"> • In conjunction with Waste Management, monitor and address waste collection and disposal that could pose a (major) health risk. • Participate in major recreational and sports events where Environmental Health planning needs to be addressed, in particular where the municipality has been tasked to do so, or is hosting the event. • Advice and monitor sanitation measures during and after a disaster (i.e. toilets, washing and laundry facilities). • Provide advice and 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>monitor hygiene issues at emergency accommodation facilities in conjunction with the Human Settlement directorate.</p> <ul style="list-style-type: none"> • Monitor the collection and preparation of bodies and facilities used for mass disposal. 	
Housing	<ul style="list-style-type: none"> • Coordinate the prioritization of relocation of communities living in identified hazardous circumstances. • Coordinate the monitoring of major (subsidized) council housing development projects being undertaken to ensure that disaster risk reduction strategies are not overlooked. • Provide data on locality and estimated number of residences in informal settlements. • Provide humanitarian 	<ul style="list-style-type: none"> • Assist with the correct identification and allocation of suitable land, to ensure that it cannot create or enhance a potential hazard. • Provide assistance within regions with the effective management of an emergency housing centre. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>aid in the form of blankets and food parcels.</p> <ul style="list-style-type: none"> • Provide and manage contracts for reconstruction of damaged / destroyed informal residences. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	
Finance	<ul style="list-style-type: none"> • To budget sufficiently for Disaster Management functions in the EMM. • Administer emergency purchases and funding in line with Disaster Management legislation. • Coordinate the assessment of damages. • To make provision for overtime during major incidents/disasters. • Develop and maintain a list of Council vehicles 	<ul style="list-style-type: none"> • Assist with stock control and issues. • Provide financial advice. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>and facilities which may be required during disaster response activities</p> <ul style="list-style-type: none"> • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) • Coordinate disaster finance reporting mechanisms and provide detailed reports. 	
Internal Audit	<ul style="list-style-type: none"> • Provide assurance to Disaster Management Advisory Forum that roles and responsibilities were carried out as per corporate disaster management plan. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	<ul style="list-style-type: none"> • Provide any other advice relating to risk management, control, and governance process. • Attend relevant disaster management advisory or task team meetings.
ICT	<ul style="list-style-type: none"> • Coordinate the retrieval of ICT data should any have been 	<ul style="list-style-type: none"> • Provide systems support to the Disaster Management Centre.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>lost.</p> <ul style="list-style-type: none"> • Ensure Wide Area connections required are operational. • Provide ICT support to the Disaster Management Centre and other Departments. • Provide maintenance services for ICT equipment. • Implementation of Disaster Recovery Plan. • Provide disaster integration between departments. • Ensure that digital services are restored if damaged after a disaster. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	<ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings. •
Communications	<ul style="list-style-type: none"> • Update and execute the Communications and Marketing plan to ensure that stakeholders are 	<ul style="list-style-type: none"> • Assist with bulk printing of notices and brochures aimed at enhancing community

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>properly informed of actions being taken to reduce and or combat the effects of the hazard.</p> <ul style="list-style-type: none"> • Ensure proper communications with the media and other stakeholders for pre-disaster risk reduction and post-disaster response and recovery actions. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	<p>awareness and preparedness.</p> <ul style="list-style-type: none"> • Attend relevant disaster management advisory or task team meetings.
City Development	<ul style="list-style-type: none"> • GIS and Development Planning data capture and maintenance: this includes the maintenance of the GIS system, GIS database, GIS software, core GIS data sets as well as other functional GIS data sets. • GIS data dissemination : 	<ul style="list-style-type: none"> • Provide GIS/technical assistance to the ICT department. • Identification of land. • Attend relevant disaster management advisory or task team meetings.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>Compilation of maps and the provision of data to the DMC.</p> <ul style="list-style-type: none"> • Manipulation of GIS resources for purposes of forward planning and response planning. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	
Environmental Resource Management	<p>Parks and Cemeteries</p> <ul style="list-style-type: none"> • Ensure that relevant disaster management aspects are reflected as a component of the department's IDP submissions (section 26 (g) of the Municipal Systems Act: Core components). • Coordinate and prepare sites for the mass burial of deceased. • Provision of open municipal spaces and parks should suitable 	<ul style="list-style-type: none"> • Assist with recreational and education programmes at emergency housing centres. • Assist in the management of persons coming into a disaster site. • Assist with the management of national and international disaster responders. • Assist with the coordinate of actual and potential outbreak of epidemics.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>venues be required for emergency housing /shelter.</p> <ul style="list-style-type: none"> • Coordinate the removal of fallen trees that are causing a hazard • Report on illegal usage of open municipal land owned by the Directorate, which could lead to the development of hazards such as fires and health risks. • Ensure that all new proposed parks development projects are submitted to Disaster Management for information and comment. • Ensure up to date information is available on departmental resources that could be utilised for disaster management purposes. (i.e. capacity and facilities 	<ul style="list-style-type: none"> • Assist with decontamination measures. • Assist with the mass disposal of bodies.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>at venues/sites for temporary shelters)</p> <ul style="list-style-type: none"> • Procurement & monitoring of acquired additional funds; equipment and other resources for use by Parks and Cemeteries, during disaster relief operations or for major proactive projects. • Serve on Disaster management Advisory Forum (task teams) when matters related to Parks and Cemeteries need to be addressed. 	
Economic Development	<ul style="list-style-type: none"> • Ensure that local production efforts are geared towards disaster preparedness, mitigation and recovery. • Support community-based interventions in disaster recovery. • Create opportunity for local development in support of a robust society. 	<ul style="list-style-type: none"> • Assist with human skills development. • Support initiatives which create opportunity for disaster victims to recover from the hazard impact and regain dignity.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	
Customer Relations Management	<ul style="list-style-type: none"> • Coordinate response (within are of responsibility). • Ensure departments deliver services as per agreed plan of action. • Provide a focal point for information between the DMC and community. • Support the Disaster Management Plan. • Provide early warning systems from the community. • Coordinate provision of transport of volunteers. • Participate in Disaster Management Advisory Forum activities, when expert input from service is required (at Forum and/or task team level) 	

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
SPCA	<ul style="list-style-type: none"> • Safety and rescue of animals during major incidents / disasters. 	
South African Red Cross	<ul style="list-style-type: none"> • Coordinate appeals for international aid requested • Coordinate international aid received, (in the form of goods, equipment and finances). Serve on relevant Disaster Management Advisory Forum and Task Team(s). • Administration of victims. • Distribution of assistance in shelters. • Donation management. • Provision of food and any other material needs in shelters. • Volunteers training and usage. • Participate in co-operation Agreements. • Monitor adherence to implementation of the 	<ul style="list-style-type: none"> • First aid related training. • Home nursing training. • Search and rescue operations. • Establishment of an emergency housing centre (temporary shelter assistance) • Establishment of first aid posts. • Implementing awareness and preparedness programmes relevant to Red Cross expertise. • Providing a tracing service for evacuated/rescued persons.

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	Sphere Project.	
South African Council of Churches (SACC) and other faith based organizations		<p>After a disaster (re-active measures)</p> <ul style="list-style-type: none"> • Providing counselling to the bereaved, in the affected area and/or at an emergency housing centre. • Assisting with appeals for addressing of the needs of those affected by the disaster. • Assisting with procurement of feeding and housing items and other important survival needs. • Continued follow up on counselling/other needs during the recovery and re-construction phases after the disaster. • Assisting with potential conflict resolution measures at an emergency housing centre/temporary

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
		<p>housing centre.</p> <ul style="list-style-type: none"> • Could further be requested to become involved in the overall recovery and rehabilitation process for affected communities. <p>Pro-active measures:</p> <ul style="list-style-type: none"> • Assist with implementing programmes aimed at enhancing hazard awareness and preparedness measures.
Salvation Army		<p>After a Disaster (Re-active measures)</p> <ul style="list-style-type: none"> • Providing counselling to bereaved at emergency housing centre. • Assisting with collection and distribution of clothing and essential bedding to homeless at an emergency housing centre. • Assisting with the

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
		<p>establishment and manning of an emergency housing centre.</p> <ul style="list-style-type: none"> • Providing / preparing (limited) basic meals. • Assisting with tracing of relations in areas not affected by the emergency/disaster. <p>Pro-active measures:</p> <ul style="list-style-type: none"> • Assist with implementing major programmes aimed at creating/enhancing awareness and preparedness amongst communities at risk.
South African National Defence Force (SANDF)	<ul style="list-style-type: none"> • In terms of the Constitution of the Republic of South Africa (Act 108 of 1997) Section 200, the SANDF's primary role is: • "to defend and protect the Republic, its territorial integrity and its people, in 	<ul style="list-style-type: none"> • Assisting with the supply of food and other essential commodities needed by a community that has been adversely affected by a disaster. • Assisting with tents/emergency housing/feeding (limited).

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
	<p>accordance with the Constitution and the principles of international law regulating the use of force.”</p>	<ul style="list-style-type: none"> • Assisting with rescue and search operations. • Assisting with emergency repairs of roads/bridges. • Assisting with emergency water supplies and restoration of essential services. • Assisting with protection duties at evacuated areas. • Providing bulk transport. • Supply and manning of (mobile) medical facilities and/or casualty clearing posts. • Supply of helicopter for search, rescue and transport purposes. • Assisting with access control/cordons. • Assist with manpower/transport during extensive proactive campaigns

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
		<p>in the area.</p> <ul style="list-style-type: none"> • Providing mobile telecommunications links. • Assist with handling of trauma cases. • Assist with additional medical personnel at hospitals.
South African Police Services (SAPS)	<ul style="list-style-type: none"> • Maintenance of law and order in terms of relevant legislation. 	<ul style="list-style-type: none"> • Providing a protective role in the event of relief work being carried out where the community could become a “nuisance factor”. • Assisting in search operations for missing person. • Assisting with rescue operations of trapped persons/animals. • Assisting with warnings/instructions to the community. • Assisting with cordoning off affected areas. • Patrolling of evacuated areas

NAME OF DEPARTMENT / ORGANISATION	PRIMARY ROLES AND RESPONSIBILITIES	SECONDARY ROLES AND RESPONSIBILITIES
		against possible looting.
South African Weather Services	<ul style="list-style-type: none"> • Provide early warning of weather related incidents and potential disasters. • Assist with the expansion of localised weather stations for the Disaster Management Centre. 	
City of Johannesburg	<ul style="list-style-type: none"> • Provide support to the EMM as requested 	
City of Tshwane	<ul style="list-style-type: none"> • Provide support to the EMM as requested 	

13 DISASTER RISK REDUCTION

Disaster risk reduction is the key strategy for disaster management. The implementation of disaster risk reduction strategies, by all departments of the EMM, will result in the integration of these strategies into sustainable development.

13.1 Risk Reduction Actions

- 1.1.1. Through training, shift the approach from disaster response to risk reduction.
- 1.1.2. Integrate risk reduction into sustainable development planning.
- 1.1.3. Promulgate by-laws in support of risk reduction.
- 1.1.4. Provide for sufficient budget for staffing and administration.
- 1.1.5. Maintain the legislative requirement for a Municipal Disaster Management

Advisory Forum.

- 1.1.6. Keep accurate information on hazards, vulnerability and capacity assessments.
- 1.1.7. Ensure risk monitoring capabilities.
- 1.1.8. Develop and implement risk assessment and environmental impact assessments and tools.
- 1.1.9. Use effective indicators for forecasting and prediction of disasters.
- 1.1.10. Implement early warning and dissemination strategies.
- 1.1.11. Institute disaster reduction training, education and awareness in schools, the community and other institutions.
- 1.1.12. Increase media involvement in disaster risk reduction. (e.g. disaster risk reduction day)
- 1.1.13. Continue research into disaster risk reduction.
- 1.1.14. Interface between environmental management, city development and disaster risk reduction.
- 1.1.15. Develop and implement sustainable livelihood strategies.
- 1.1.16. Support urban renewal and local economic sustainable development strategies, i.e. land use planning.
- 1.1.17. Ensure effective preparedness, logistic and response planning.
- 1.1.18. Develop focal points for Disaster Management within each Customer Care Centre which would bring disaster management to the residents.
- 1.1.19. Establish and maintain volunteer units.

14 RELATIONSHIP TO DEVELOPMENT PROJECTS

14.1 Background

“For a long time the cause and effect relationship between disasters and social and economic development was ignored.

...

Development programs were not assessed in the context of disasters, neither from the effect of the disaster on the development program nor from the point of whether the development programs increased either the likelihood of a disaster or increased the potential damaging effects of a disaster.

Disasters were seen in the context of emergency response-not as a part of long term development programming. When a disaster did occur, the response was directed to emergency needs and cleaning up. Communities under disaster distress were seen as unlikely places to institute development.

The post-disaster environment was seen as too turbulent to promote institutional changes aimed at promoting long term development. The growing body of knowledge on the relationships between disasters and development indicates four basic themes.” (Stephenson, R.S. (1994), Disasters and Development, UNDP: DMTP)

According to Stephenson (1994), relationships between disasters and development have the following basic themes:

1. Disasters set back development programming destroying years of development initiatives.
2. Rebuilding after a disaster provides significant opportunities to initiate development programs.
3. Development programs can increase an area's susceptibility to disasters
4. Development programs can be designed to decrease the susceptibility to disasters and their negative consequences.

14.2 Development Strategy:

Since disaster risk reduction begins within the development realm, it is vital that all development projects of the municipality are evaluated from a disaster management perspective.

Developments within the City of Ekurhuleni will be assessed against identified risks and the impacts of the development on society as well as the impact of the risk on the development initiatives. These assessments and amendments to the development will be made in order to ensure that the development is both sustainable and does not contribute to an increase in the risk profile of the Municipality.

Approved developmental projects are included in the IDP's Capital budget section.

15 DISASTER RESPONSE

Disaster response consists of relief actions after a disaster and continues with rehabilitation and reconstruction processes and actions in order to return the affected communities to normal while, ensuring that they are not again exposed to the threat in the same manner.

Details related to hazard specific disaster response are confidential and not for publication.

15.1 OVERVIEW OF DISASTER RESPONSE ACTIONS

- If possible, early warning of a disaster will be provided either through a loud hailer system or through other means including the use of local radio stations.
- Emergency Services and other response agencies are dispatched to the location of a disaster.
- All responding agencies implement their standard operating procedures for the disaster type.
- Should extraordinary response be required, the Disaster Management Centre is activated and additional human and material resources dispatched in accordance with agreed procedures and Memoranda of Understanding.
- The Provincial and National Disaster Management Centres are simultaneously notified of the disaster.
- Additional national agencies like South African Police Services and the South African National Defence Force are activated as required.
- Disaster assessments are completed and executive decisions on further response is made by the Disaster Management Centre in conjunction with political stakeholders and the community.
- Adjustments to operational plans are made by Divisional Heads of Department as the situation warrants.
- The Disaster Management Team, community leaders and other stakeholders in the affected area(s) lodge a fully fledged assessment e.g. nature/location of incidents, number of people affected, magnitude of damage/losses, risks/potential risks the incidents hosts, for surrounding(s) and or neighbours/adjacent areas, estimated population density and record all findings.
- Detailed reports and progress of the disaster response are provided to the Executive Mayor and the media through the relevant approved structures.
- Rehabilitation and when necessary reconstruction actions are developed once the disaster nears completion and communicated to stakeholders.

16 DISASTER MANAGEMENT CENTRE

The establishment of the municipal Disaster Management Centre is a legislative requirement.

The Ekurhuleni Metropolitan Municipal Disaster Management Centre is situated at 3 Hawley Road, Bedfordview. A Manager with the title: Manager: Disaster Management Centre is responsible for all the activities of the Centre on a corporate level. The Manager reports directly to the Head of the Centre.

The Centre deals mainly with the following:

- Implementation of a Geographical Information System
- Volunteers training and Administration
- Research
- Corporate disaster response
- Corporate risk reduction
- Corporate early warning systems
- Disaster financing
- Managing of disasters, which include resource lists and logistical arrangements.

17 VOLUNTEER POLICY

In accordance with the Disaster Management Act (2002), volunteers may be appointed within a municipality. All volunteers are subjected to the published Regulations as they may be determined from time to time. All residents of Ekurhuleni qualify to be admitted as a Disaster Management volunteer providing that they meet the service specific requirements of the Unit they wish to volunteer in. The Ekurhuleni Metropolitan Municipality has resolved that disaster management volunteer units be established.

18 LIST OF HAZARD SPECIFIC PLANS FINALISED

A disaster plan should contain various hazard specific response plans as well as mitigation plans. The inclusion of these documents, although required by the Municipal Systems Act, 32 of 2000, Section 26(g) would lead to the integrated development plan

document becoming cumbersome. It is therefore necessary, in order to ensure that the integrated development plan is a user-friendly document and due to confidentiality of various matters contained in individual plans, to exclude the detail. A list of hazard specific plans, which have been prepared, are provided in order for stakeholders to identify planning gaps and opportunities.

The list of hazard specific disaster plans below can and may change at short notice due to circumstances beyond the control of the Ekurhuleni Metropolitan Municipality.

Disaster Plans have been completed for the following arrangements / hazards:

- Rand Airport
- Localised floods
- Fires in Informal settlements
- Dolomite and sinkhole response
- O R Tambo International Airport (on airport)
- Eskom
- Rand Water
- Sasol gas
- Petro SA
- Transnet (Metro Rail)

Plans in process of development and / or review include:

- Municipal Contingency plans (Council Buildings)
- Environmental Management Disaster Management Plan (in process of development)
- ICT Disaster Management Plan (in process of development)
- Memoranda of understanding for cross function and boundary assistance
- Communicable diseases response plan (draft)

19 TESTING AND REVIEW

The testing of risk reduction activities and disaster response plans is vital in ensuring that systems and processes agreed to are implementable and workable. The Ekurhuleni

Metropolitan Municipality is committed to testing and reviewing its disaster management plans either as the need arises as a result of ongoing risk assessments or as a result of changing environmental and other factors. The municipality undertakes to test and review plans through a variety of tools at its disposal which include;

- Meetings
- Paper exercises
- Hazard specific exercises
- Stakeholder specific exercises
- Regional exercises
- Full scale exercises

All exercises must result in improving the disaster response and risk reduction capacity of the Ekurhuleni Metropolitan Municipality to known disasters and identify planning gaps.

20 CONCLUSION

The Disaster Management Plan of the Ekurhuleni Metropolitan Municipality is a work in progress and will always be that due to the changing nature of society and the environment in which the Municipality is required to function. The plan is geared towards reducing disaster risk through sustainable developmental programmes. The plan is further geared towards increasing capacity to disaster response and to increase the ability of manageability of disasters that occur.

21 INSPECTION OF OVERALL PLAN

All disaster management plans are available for inspection by relevant stakeholders and may be inspected at the Municipal Disaster Management Centre by appointment.

22 REFERENCES

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11 April 2011

**FINAL****MSDF 2011**

Report 2 – SDF Report

*City Development Department
Spatial Planning Directorate*

EKURHULENI METROPOLITAN SPATIAL DEVELOPMENT FRAMEWORK REVIEW 2011

THE SPATIAL DEVELOPMENT FRAMEWORK

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Cover page photo: OR Tambo International Airport, Airports Company of South Africa, Peter Hassal, 2009.

This is Report 2 of the full set of four MSDF reports.

Report 1: MSDF Status Quo Report

Report 2: The Spatial Development Framework

Report 3: MSDF Participation Report

Report 4: MSDF Executive Summary

This report must be read in conjunction with Report 1 and Report 3.

i Foreword by MMC for Corporate Affairs and City Development

The Metropolitan Spatial Development Framework (MSDF) is a key strategic framework and plan for the spatial performance and investment in the city's geographic space. The MSDF document is a key component of the IDP and should input to the Growth and Development Strategy (GDS) under review.

The MSDF incorporates the development mandates enshrined in the Constitution and secured in the legislation embodied in national and provincial strategies, policies as well as political pronouncements and statements. The review of the MSDF takes cognisance of the drive to create jobs as pronounced by the State President in his state of the nation address of 2011.

The MSDF is the culmination of participation of the community and various stakeholders and role players in the value chain. The various contributions have been invaluable in the completion of the document. We did listen and the document therefore has endeavored to reflect the vision and aspirations of the people of Ekurhuleni.

The initial MSDF of 2003 emphasized the creation of a new city with a unique identity and character, whilst transforming the fragmented and exclusionary spatial fabric reflected in the 9 fragmented towns that were amalgamated. The welfare of the marginalized in the previously disadvantaged areas (PDAs) and informal settlements has been our priority in the process. It addressed the issues of poverty, deprivation, inequality and unemployment with the intention to improve the quality of life of all residents of Ekurhuleni

It is envisaged that the MSDF will take Ekurhuleni a step closer to the unification of the city, the promotion of investment and the appreciation of the presence and location of the OR Tambo International Airport in the city, and the fact that Ekurhuleni is regarded as Africa's workshop and manufacturing hub.

I am glad to point out that since the establishment of Ekurhuleni as a metro on 5 December 2000 a great deal has been achieved to create a single city identity from an amalgamation of 9 towns that had historically developed independently and in competition with each other. A lot still has to be done to ensure that Ekurhuleni becomes a competitive unified city comparable to the best in the world.

The MSDF is a living document and should be continuously used to improve the welfare of the residents of Ekurhuleni. It should be evaluated on an ongoing basis and constantly re-evaluated. It is the residents' responses and interaction with the MSDF that will inform Council of the progress made and areas of improvements. The MSDF will remain a living document for the people of Ekurhuleni and is flexible enough to be reviewed at any given time. A strategic document of the nature of the MSDF has a long lead time, but that does not detract from service delivery on backlogs nor imply that current issues will be ignored in favor of long term goals and objectives. This is your MSDF, please use and engage with it.

Queen Duba
MMC Corporate Services & City Planning

ii. DEFINITIONS

Activity Corridor	An activity corridor is defined as a linear strip of land or area, connecting primary activity nodes, traversing urban or inter-urban areas, surrounding a major transport facility or facilities, providing an appropriate regional level of mobility and accessibility to adjacent areas, and should contain a high concentration of population and mixed land uses (job opportunities). Activity corridors normally incorporate Activity Spines, Nodes and Activity Streets to accommodate the accessibility need, without sacrificing the mobility and regional accessibility function of the higher order transportation facilities in the corridor.
Activity Nodes	Spatial concentrations of economic, social and related activities occurring in a distinct focal area.
Activity Spine	An Activity Spine refers to a major road (or roads) or railway line accommodating mixed land uses and high-density development immediately adjacent to this facility. Activity spines are major routes that are connected to one or more secondary activity nodes. Public transport should form a major feature of an Activity Spine. Activity Spines should exhibit satisfactory sub-regional mobility and accessibility and do not necessarily form part of Activity Corridors.
Activity Streets	Activity Streets are of a lower order than, but similar to "Activity Spines" where the same principles of linearity and high density mixed land use apply. The term also refers to a local road that allows for a high degree of accessibility along its length. Activity Streets are of a smaller scale than Activity Spines and do not need to connect major Activity Nodes. Public transport could occur on Activity Streets, but is not essential. Activity Streets may develop spontaneously within urban areas and do not necessarily form part of an Activity Corridor.
Agricultural Holdings/ Small Holdings	Areas intended for agricultural purposes, but much smaller than traditional farms. In the past, utilized primarily for small scale fruit & vegetable propagation and livestock farming. Nowadays, often associated with residential & recreational activities, such as restaurants, guest houses, conference facilities, etc.
Airports, airfields and railway lines	Airport and rail infrastructure, including hangars, warehouses, freight storage and distribution, passenger services and hospitality uses (such as restaurants, accommodation and conference facilities), transport services.
Amenities	Community facilities and social amenities, including sport Stadia, tertiary education and training, casinos and entertainment centres, hospitals, community centres.
CBDs	Central Business Districts – offices, retail, general business, recreation, and entertainment, light service industries, residential uses, parks and open spaces.
Comparative Advantage	Comparative advantage refers to what a firm geographic entity, such as a region (district or metropolitan area) or country is most efficient at producing or providing/delivering. In contrast with competitive advantage, in which firms and regions compare themselves with other firms and regions, comparative advantages entails an inward focus, i.e self –assessment. A region may have a different comparative advantage profile by better education and infrastructure provision and greater institutional density, and targeted government investment in infrastructure investment of development spending could also change the internal comparative advantage-profile.
Competitive	Is when a firm and region compares itself with other firm or

Advantages	<i>region. A firm that is able to sustain profits that exceed the average for its industry/sector in the production of goods and the supply of services is said to have an advantage over its competitors.</i>
Densification/ intensification/ infill development:	<i>Elements which are fundamental towards the restructuring of the South African Apartheid City as well as to the concept of a compact city which optimally utilise all existing resources within the area.</i>
Ecological/ Environmental Buffer:	<i>The edge beyond which no future or long term development should take place, from an Environmental point of view.</i>
Ecological/ hydrological systems:	<i>Areas that have significant ecological and/or hydrological value. An integrated system of parkways, natural land, and connecting spaces that form the basis of a broader open space system.</i>
Geographic Information System	<i>The information system designed to input, manage, update, analyse and present spatially related information collected and managed by the municipality.</i>
Historical Sites and Landmarks, Heritage site.	<i>Any identifiable building or part thereof, marker, milestone, gravestone, landmark or "tell older than 50 years". Buildings are among the most enduring features of human occupation, and the definition encompasses all buildings older than fifty years. Examples of modern architecture are included, as well as parts of buildings such as ruins, old fortifications, and Stone and Iron Age settlements. Other markers in the environment, such as beacons, cairns, boundary markers, signposts, milestones and gravestones are also protected, as well as landmarks. "Tell" means the evidence of human occupation which is no longer above ground, such as building foundations and the buried remains of old settlements. These can be studied and interpreted by historical archaeologists.</i>
Industrial / Commercial	<i>Light and heavy industries, service industries, warehouses and commercial uses. Noxious industries as per local town planning scheme.</i>
Infill Priority Areas	<i>Undeveloped or underdeveloped strategically located land, which should enjoy priority in terms of development. As this includes mining land cognisance should be taken of reclamation requirements.</i>
Metropolitan Open Space Systems	<i>A Metropolitan Open Space System (MOSS) is an inter-connected and managed network of open space, which supports interactions between social, economic and ecological activities, sustaining and enhancing both ecological processes and human settlements. MOSS comprises public and private spaces, human-made or delineated spaces, undeveloped spaces, disturbed 'natural' spaces, and undisturbed or pristine natural spaces.</i>
Mining	<i>Mines (underground and open cast), mine dump reclamation, quarries and related activities, including shafts, slimes dams, stone crushing; residential uses and offices subsidiary to mining activities.</i>
Mixed land uses	<i>Diverse land use combination, including residential uses and other uses compatible with residential uses, such as retail, offices, parks and open spaces, general business and entertainment.</i>
Mixed-use development:	<i>Is used to promote a more diverse combination of land uses, and to improve the economic and social viability areas of development.</i>
Mobility Spines	<i>Arterial routes along which through traffic flows with minimal interruption (Optimal mobility).</i>
Multi-Purpose Customer Care Centres	<i>Promotes the principle of optimising the use of resources and promoting the establishment of viable communities – especially in the rural environment.</i>

Public Open Space:	<i>Means any land which is owned by an organ of State, or over which an organ of State has certain real rights arising from the filing in die Deeds Office or other registration office of a general plan of a township, agricultural holding or other division of land, or any alteration, addition to or amendment of such land approved by the Surveyor-General, on which is marked the land to which the public has a common right of use; and is controlled and managed by the Council.</i>
Public Spaces	<i>Means any open or enclosed space, square, garden or park, street, road or thoroughfare which is for the use by the general public and which is owned by or vests in the ownership of municipal council or organ of state.</i>
Service Upgrading Areas	<i>Previously marginalised areas where capital expenditure and operational programmes should be focused on upgrading services and facilities to levels comparable with that of the rest of the metro.</i>
Socio-economic opportunities	<i>Activities that improve the social and economic well being of the urban poor, e.g. improved health care, housing, education, recreation, job opportunities, earning power.</i>
Spatial Development Framework (SDF)	<i>A SDF is a core component of a municipality's economic, sectoral, spatial, social, institutional, environmental vision. In other words it is a tool to achieve the desired spatial form of a municipality. (Guidelines for the Formulation of SDFs, Department Rural Development and Land Reform, 1 September 2010)</i>
Strategic Development Areas	<i>These are strategically located vacant areas designated for growth by the local government. The area is chosen due to its strategic location, the services available in the area, and/or because of local zoning regulations or comprehensive plans. These areas are used as priority funding areas and can represent both infill development and urban expansion.</i>
Sustainable Livelihoods	<i>A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for the means of living. A livelihood is sustainable when it can cope with and recover from shocks and stresses and maintain and enhance its capabilities and assets both now and in the future, whilst not under mining the natural base</i>
Transport Orientated Development	<i>A unique mix of land uses located at a high density within a set radius of a railway station or a major public transport node like a bus terminus, or a modal transfer facility.</i>
Urban	<i>Development within the Urban Edge consisting of existing residential uses, community facilities, opens spaces, business uses, etc.</i>
Urban Development Zone	<i>An area as demarcated in terms of Income Tax Act (58/1962).</i>
Urban Edge	<i>A mechanism to manage the outward sprawl of urban areas and to protect potentially vulnerable natural and ecological areas through the introduction of a spatial limit to urban development. Urban development will not be allowed outside the Urban Edge.</i>
Urban Sprawl	<i>The spread of low-density development (e.g. single dwelling units) away from the urban core areas. This occurs mostly in the form of incremental development on the periphery of existing urban areas.</i>

iii List of Abbreviations

ABP	Area Based Planning
ACSA	Airports Company South Africa
CBD	Central Business District
CDT	Core Development Triangle
CIF	Capital Investment Framework
DFA	Development Facilitation Act
EBOSS	Ekurhuleni Biodiversity and Open Space Strategy
GDP	Gross Geographic Product
GIS	Geographic Information System
GSDF	Gauteng Spatial Development Framework
IDP	Integrated Development Plan
IDZ	Industrial Development Zones
IRPTN	Integrated Rapid Public Transport Network
LSDF	Local Spatial Development Framework
MDGs	Millennium Development Goals
MFMA	Municipal Finance Management Act
MSDF	Metropolitan Spatial Development Framework
NPC	National Planning Commission
PDAs	Previously Disadvantaged Areas
Prasa	Passenger Rail Authority South Africa
ROD	Record of Decision
RSDF	Regional Spatial Development Framework
SDBIP	Service Delivery Budget Implementation Plan
SDF	Spatial Development Framework
TOD	Transit Oriented Development
UDZ	Urban Development Zone

iv. INTRODUCTION

The MSDF has been reviewed at a time when there has been a global economic meltdown. This has been a challenge for those living below the poverty line, the loss of employment and the exacerbation of the socio-economic situation of the marginalised, some of whom are indigent and destitute. It is they who are susceptible to vulnerabilities that appeal to state intervention the most. And it is in this context of globalisation that the then Minister of Finance, Trevor Manuel made the following statement in the budget speech of 11 February 2009:

“..... If demand falls in Birmingham, factories close in Beijing. If production lines in China slow, demand for commodities from Africa dries up. The vegetables shop next to the mine closes, and the drivers of the delivery vehicles are asked to work short time, on half pay, and if the driver cannot pay his mortgage, the bank forecloses on his bond and the bank writes down in his balance sheet again.”

The recession was so dire in the United States that the state intervened (because of the failure of the unfettered market) by bailing out financial institutions from the public coffers/purse. In our own country South Africa, the Independent Development Cooperation (IDC) bailed out the motor manufacturing industry in a bid to curb job losses. Yet South Africa is a developing economy finding itself integrated into the global economy.

The obvious implication of a recession is reduced revenue for the state, including Council, and therefore the inability to fund capital projects; the delivery of much needed public services; and to maintain facilities, infrastructure and resources. It is worst for a Metro like Ekurhuleni which is located in the Gauteng Province whose economy is planned to grow at 8% by 2014 so as to cater for other provinces and cities that have no potential for growth. Since the start of the millennium there has been low if not jobless economic growth, resulting in the inability of the state to develop sustainable livelihoods. According to the Minister of Finance, P Gordhan, as reported in the Sunday Times of 23/01/2011, economic growth has to be “made inclusive to reduce unemployment, poverty and inequality”. To the minister the country is expected to grow at 7% for the next 20 years. It is important to point out that the gini-coefficient that measures the ratio of poverty to wealth is as high as 0.74 making South Africa the most unequal country in the world.

There has also been a challenge with availability of socio-economic data to support and guide some of the strategies developed in the MSDF as reviewed. The last census was undertaken in 2001 and the data collected and published by Statistics South Africa was used in the MSDF since the amalgamation of the new towns.

Although the initial MSDF has been conceptual, this review endeavoured to concretise the concepts at an implementation level. Therefore, issues of climate change Agenda 21, Millennium Development Goals (MDGs), (global) economy which might be viewed to be abstract and conceptual, have been addressed with the intention to have them implemented.

It is anticipated that the MSDF as reviewed will go a long way to improve the welfare of the people of Ekurhuleni. A long-term vision (spanning a period of 25 years and beyond) and strategy is the mainstay of the MSDF, and so is the integration of the multi-disciplinary and multi-sectoral issues. The MSDF still notes the competitive and comparative advantages of the metro as being the OR Tambo International Airport and the manufacturing industry. This is in line with the proposals of the Gauteng Spatial Development Perspective 2006; the Draft Gauteng Spatial Development Framework 2010 which, emphasise areas of economic concentration rather than create new ones in the current economic climate within a city region of a developing country; and at national level, this is also in line with the position advocated in the National Spatial Development Perspective as updated in 2007.

The MSDF will give guidance in the context of the academic critique on wall-to-wall Local Spatial Development Frameworks (LSDFs) which should be discarded except for strategic local areas since Ekurhuleni is a city found within a developing economy and a developmental state. Hence the need to develop a visionary, yet implementable multi-disciplinary, multi-sectoral strategic MSDF. After the MSDF, the next level of planning which is detailed is the regional/Regional Spatial development frameworks for which six zones are recommended. There will still be a third level of plans for key strategic local areas. These might be local spatial development frameworks and/or precinct plans.

National government has established a National Planning Commission which is tasked with setting a national vision. For a developing country such vision will be a learning process and government is likely to make mistakes along the way as stated in the Green Paper as follows:

"It is not necessary to first construct a complete six lane highway before we can embark on a journey". Green Paper on the National Planning Commission, 2009.

This journey to construct a 'six lane highway' for Ekurhuleni started in 2000 up until now (2011) a lot has been achieved albeit challenges remain. An appraisal of some of the achievements in the past decade and challenges experienced is discussed below.

The first major achievement was the planning for the core development triangle linking Germiston, Kempton Park, Boksburg and Benoni which is critical for the growth of Ekurhuleni. Since the year 2000 a lot of investments have taken place in particular because of the 2010 FIFA World Cup. Such major investments include the growth of the OR Tambo International Airport and the increase passengers from 11 000 000 passengers/ year in the year 2000 to 18 000 000 passengers/ year in 2010 although 19 000 000 passengers/ year were reached in 2007. The Gautrain route to the airport was completed and was operational between the airport and Sandton even before the start of the 2010 FIFA World Cup. The area around the East Rand Mall area has also shown tremendous growth. Sanral has improved the national roadwork in the Metro, and these are the Sisulu (R21) Corridor, N12, N17, N3 including Gilloolys interchange.

Outside the core economic development area major retail and residential developments have taken place. These include Tsakane Mall, Tembisa Mall, and Chris Hani Crossing Mall in Vosloorus; A.P. Khumalo and Tsolo Neighbourhood shopping centres in Katlehong and a number of shops along MC Botha Road in Vosloorus from the Goldspot up to and including the Lesedi Centre; and the Carnival Mall north of the Carnival casino where major mall and retail developments in the metro in the past decade. Some have planning approvals but have not taken place and they include New Market in Alberton amongst others.

Major residential developments include Glen Marais, Glen Erasmia, Clayville, Serengeti, Birch Acres and Midstream Estate in Kempton Park; Bedfordview and Edenvale; Meyersdal in Alberton, Helderwyk, Van Dyk Park and Sonneveld (Brakpan) in terms of up market, luxury developments and numerous subdivisions in between throughout the metro. Affordable housing is found throughout the metro but mainly in close proximity of the previously disadvantaged areas (PDAs).

Low-cost housing has been minimal if not insignificant and is commonly referred to GAP Housing which the state nor the private sector are not ready to accommodate for Constitutional or market returns reasons respectively. However subsidy RDP housing has predominated in the past ten years. A huge number of subsidy housing units have been provided in Ekurhuleni in the past decade and it is significant to appraise the Council contribution towards meeting the Millennium Development Goals (MDGs), in particular Goal 8 Target 11 which aims at providing 100 000 000 residential units through slum clearance

globally by 2020 as well as improving sanitation, electrification, education and access to water have been achieved completely. The informal sector has also been accommodated in the metro. This is an acknowledgement of the challenges of job creation, unemployment, poverty, homelessness and landlessness.

The Spatial development challenges in the last decade have been inexplicable, given the fact that Ekurhuleni was an amalgamation of 9 spatial independent towns and 11 administrations which had not gone through the pre interim and interim phases of local government transformation as determined by the Local Government Transition Act of 1993.

Whilst the new metro was faced with the new challenges of amalgamation of the dysfunctional spatial fabric informed mainly by the apartheid influx control areas (linking a specific town to a township), informality (informal settlements and informal business) has outpaced spatial transformation. Therefore besides the need for multi-disciplinary and multi-sectoral integration, certain desired elements of the successful metro remained lacking, particularly integrated roads and public transport. The sectoral issues include lack of a public transport system; city identity (single CBD) or multi-unifying CBDs; job creation in manufacturing, commerce and industry; a public open space ; land reform ; public participation; gender mainstreaming etc. The informal sector has remained a challenge. Joblessness in the informal sector and homelessness has given rise to illegal /unauthorised businesses which include street trading, spaza shops, shebeens and informal settlements.

The other outstanding requirements of a metropolitan region include the need for a university that includes a Medical faculty and Engineering faculty. The number of FET and campuses of universities of technology are considered adequate however. The need for institution of higher learning has been made obvious with the challenges of university intake of 2010 post-matric candidates. There was also identified the potential of an iconic heritage for Ekurhuleni a unique CODESA museum and/or commemorative structure. This would assist with a unifying history.

In terms of meeting the Millennium Development Goals (MDGs), the major goal remains the need to half unemployment by 2014. The unemployment situation has been exacerbated by new entrants to the job market including high school graduates and dropouts, migrants from the rural areas of South Africa and dying towns as well as foreign economic migrants. This has resulted in the exponential growth of the informal, unregistered and undocumented business sector which includes spaza shops, street trading and trading from shipping containers as well as shebeens (illegal liquor trade). This might or might not include criminal activities.

The second goal that remains a huge challenge is the uncontrolled mushrooming of informal settlements, shacks, backyard rooms and shacks. It is the professed goal of the MDGs to build 100 000 000 units by 2020 as a slum clearance target. These slums are found in compromised locations e.g. flood line areas and dolomitic areas, contaminated and shallow undermined areas including mine dumps and rehabilitated landfill sites. These poor inhabitants are the first victims of natural disasters. Lastly climate change is a treat to all irrespective.

City Planning had adopted a hierarchy of spatial development frameworks informed by the legislative requirements of the Municipal Systems Act (2000) and the attendant regulations. These are MSDF, RSDF, and LSDF. An academic critique was sought and it recommended that a strategic planning approach to spatial planning be pursued. Such a strategic planning approach would have two objectives:

1. A strategic (long term) spatial vision of 25 years and beyond (might include or be informed by scenario planning)

2. An integrated multi-disciplinary and multi –sectoral approach. Of significance is the need integrate infrastructure, transport and environmental planning with land use planning.

In conclusion, it must be clearly stated and understood that the spatial geography of Ekurhuleni, besides being dysfunctional internally, its towns evolved and grew functionally integrated with developments in the Johannesburg CBD. The locational distance of the metro from the Johannesburg CBD makes Ekurhuleni unique. This necessitates a dynamic, rigorous and robust spatial development framework which this document is. Such development framework would not necessarily be cast in stone but would be flexible enough to accommodate the international, national and provincial city region objectives within which Ekurhuleni is expected to develop as a city (independent metro, one of six soon to be eight in South Africa) with a particular spatial form and identity.

This MSDF is reviewed in the context of:

1. the establishment of the National Planning Commission (NPC) which still has to provide a national vision and national strategic planning;
2. the delimitation of new wards from 88 to 101 for the 2011 local government elections;
3. as well as the fact that the next census will be conducted next year 2011; and
4. for the sake of comprehensiveness, public participation has been the cornerstone of the development framework and the process thereof, It is part of the 2011/2012 IDP review process.

The journey to construct a “*six lane highway*”, the 25 year vision for Ekurhuleni will for a long time remain work in progress. It should be provided the necessary resources in terms of funding and human resources without which it will remain a pipedream.

v Acknowledgement

The Ekurhuleni City Development department, Spatial Planning Directorate prepared this MSDF document 'in-house'. No consultants were utilised during this process. However, various previous planning work conducted by various consultants were utilised during this MSDF process. Such planning documents are acknowledged and referenced in the 'Reference Documents' section at the end of this report.

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- Emergency Services;
- Disaster Management;
- Roads and Stormwater
- Water Services;
- Environmental Development;
- IDP Office;
- Budget Office;
- Project Management Office;
- Housing; and
- Public Transport.

SECTION C:

THE SPATIAL DEVELOPMENT FRAMEWORK

CHAPTER 7

PLANNING APPROACH

The following is a summary of the main principles which, in combination represents an approach towards the spatial restructuring of the Ekurhuleni Metropolitan area. The approach was informed by work done for the previous MSDF as well as by further studies and planning work undertaken since. Of importance in formulation this approach is the 'Academic Critique of the Local Spatial Development Framework Modules' as compiled by the University of Witwatersrand in 2009. Said report provides a critique of the concept of LSDFs and the way the Scope of Work is constructed, as well as of specific modules. A set of recommendations arising from the critique is also developed as is more fully detailed in paragraph 11.1 of this MDSF document.

7.1 PROMOTING ECONOMIC ACTIVITY WITHIN THE CORE DEVELOPMENT TRIANGLE

The first principle for the Ekurhuleni Metro focuses on promoting economic activity within the central Metropolitan Economic Activity Area. This Core Development Triangle holds the bulk of all job opportunities within the metro and includes the current active mines, all the major industrial areas, as well as all the major central business districts and shopping centres within the metro.

This area is looked from a strategic point of view and to ensure the proper and optimal development of this area as a functional unit. The EMM should be responsible for providing the necessary infrastructure, administrative support and other incentives to the private sector and cooperatives in this area in terms of e.g. tax incentives and other schemes. The primary focus of the private sector in this area will be to conduct their do-to-day business and in the process to create jobs for the community of the broader Metro. This is the ideal area to promote the establishment of public-private partnerships.

It is also important to note that, within this Core Development Triangle, the centre of gravity in terms of accessibility, visibility and economic activity lies within the triangular area linking the Central Business Districts of Kempton Park, Boksburg, Germiston and Benoni to one another. The importance of the Edenvale-Bedfordview area should also be noted, especially in view of the high residential densities already present in the areas.

In view of current trends and the opportunities for development / redevelopment vested in the Rhodesfield area, this area represents some opportunity to become part of the future core in which the identity of the Ekurhuleni Metropolitan Municipality will be vested. Of prime importance in the Core Development Triangle is the OR Tambo International Airport which has an economic and spatial impact beyond the Core Development Triangle into the rest of Ekurhuleni and indeed into the rest of Gauteng and the country.

7.2 SPECIALISED ACTIVITY NODES WITHIN THE CORE DEVELOPMENT TRIANGLE

Having accepted the principle of promoting the Core Development Triangle, the next step in the process will be to functionally demarcate the area into smaller functional units (core areas). A number of core areas can be identified in the Ekurhuleni Core Development Triangle:

- The OR Tambo International Airport's Western Precinct, the Kempton Park CBD and Rhodesfield (Core Node);

- The Edenvale CBD – Bedfordview area;
- The Industrial areas of Isando, Spartan, Sebenza, Jet Park and Hughes;
- The East West Development Corridor (previous mining belt) which includes the CBDs of Germiston, Boksburg and Benoni;
- The industrial areas in the East West Development Corridor (previous mining belt) including Germiston West, Driehoek, Knights, Dunswart, Anderbolt, Boksburg East, Benoni South, and Apex.
- The central area of Tembisa as a developing node; and
- Two future nodes to the east and north-east of OR Tambo International

The next step is then to define the functions of each of the activity nodes in the core areas in order to determine the various specialities to be provided for, and to properly demarcate the boundaries of each of these activity nodes or areas. This would include the industrial areas, commercial areas and the central business districts.

With the system of functionally defined (and not a hierarchy) activity nodes / areas in place, the public transport system can be designed and focused around serving clearly demarcated destinations. In view of this, it would be important not to allow too many decentralised, small activity nodes outside the Central Activity Area as this will create enormous problems in terms of serving the nodes with a proper; efficient and sustainable public transport service.

7.3 OPTIMISE LINKAGES WITHIN THE CORE AREA

With the activity nodes and industrial areas within the Core Development Triangle properly demarcated and functionally defined, it will be important to next link the various activity nodes within the Core Development Triangle to the core node and to one another in order to maximise the connectivity between these nodes throughout the Core Development Triangle. There are two main desire lines in this regard; the east-west desire line between the N12 and the N17 freeways, and a north-south line linking the Tembisa, Kempton Park, Germiston, and Alberton areas with their associated economic activities to one another, but also forming a functional part of the second concentric ring of development around the Greater Joburg Metro area.

7.4 LINK DISADVANTAGED COMMUNITIES TO THE CORE AREA

As a next step it is then essential to link the communities from the four disadvantaged settlements to this Core Development Triangle. This is achieved by designing the EMM public transport system in such a way that it feeds into the Core Development Triangle (Map 12).

7.5 MIXED USE, HIGH-DENSITY DEVELOPMENT ALONG CORRIDORS AND AT NODES

In support of this, the EMM should then promote mixed use, high density development along these public transport corridors (subject to Road Access Management requirement) and in the areas in and around the activity nodes. This will ensure the optimum utilisation (and rationalisation) of public transport in the EMM area and it will support the disadvantaged communities in terms of easy access to job opportunities.

7.6 STRUCTURE THE IRPTN TO SUPPORT DEVELOPMENT CORRIDORS

As mentioned above the Integrated Rapid Public Transport System (IRPTN) should be designed around the main strategic linkages within the EMM area. It is also highlighted in

this regard that it is essential to promote Transit Orientated Development around the railway network within the EMM. As was indicated previously the railway network links all the major activity nodes to one another and it runs through large portions of strategically located vacant land in the metro. Environmentally this has linkage to green house gasses, climate change and sustainability.

7.7 EXTEND ECONOMIC ACTIVITIES INTO PDAs

Economic activities should be extended from the Core Development Triangle into the previously disadvantaged areas (PDAs) so as to support the redevelopment of the PDAs. The system of development corridors as mentioned above will then serve to provide the necessary impetus to extend economic activity into the previously disadvantaged areas. There is a natural tendency for informal trade and other related economic activities to establish at the major public transport facilities within the urban area and therefore these corridors could be utilised as the stimulus to promote the development of the informal sector within the EMM area, and specifically at the points of entrance/modal transfer facilities in the disadvantaged areas.

7.8 PROMOTE INFILL RESIDENTIAL DEVELOPMENT

Apart from the strategic linkages mentioned above, the EMM should then as a priority also promote infill residential development in all the strategically located vacant areas that are suitable for development. In this regard it is essential to properly utilise the opportunity provided by publicly owned vacant land in the area to set the trend of infill development in motion. Infill residential development should be promoted in vacant areas within the Core Development Triangle as a priority, and within the Urban Edge in general. This should take the form of strategic densification as described in the Ekurhuleni residential densification Strategy. Critical areas identified as part of EBOSS should however be excluded from infill development.

As mentioned in the literature overview, public housing is one of the strongest instruments available to a local authority to set a certain trend of development in an area, be it a corridor initiative, or the principle of infill development or a specific typology of housing to be provided. Essentially, the infill development will then evolve around the reclamation of strategically located mining land in the area (Map 12). It should be noted that infill development should not take place to the detriment of the environment. Infill development should also not take place in areas that are detrimental to the health of future inhabitants.

7.9 UPGRADING OF ENGINEERING AND SOCIAL INFRASTRUCTURE IN TOWNSHIPS

The four previously disadvantaged areas (townships) should in principle be declared as Service Upgrading Priority Areas. This implied that the authority should, as a principle, focus on upgrading the general quality and standard of engineering services within these areas, promote the development of corridors linking these areas to areas of economic activity, focus on providing sustainable, sufficient social infrastructure and services to enhance the quality of life of these communities, and ensure that the necessary administrative and legal processes are put in place to also upgrade and formalise the land used and other activities within these areas.

7.10 MAINTAIN AND UPGRADE RESIDENTIAL QUALITY IN SUBURBS

As for the other residential areas within Ekurhuleni (suburbs), the EMM should focus on maintaining the quality of life and the residential character of these areas as best as possible. With the system of activity nodes and areas properly in place, there should be no reason to allow illegal land uses which normally has a detrimental effect on a residential surrounding. As a priority the residential quality and safety and security of these areas should thus be promoted. Public transport should not be as high a priority in these areas as private car

ownership is fairly high, and this makes the utilisation and financial sustainability of an extensive public transport system to these areas economically non-viable.

7.11 FORMALISE AND PROTECT THE METROPOLITAN OPEN SPACE SYSTEM

The metropolitan open space system is conceptually based on the Gauteng Open Space Policy – Phase 2, the Ekurhuleni Environmental Management Framework and the Ekurhuleni Biodiversity and Open Space Strategy (EBOSS). EBOSS is considered the main input into the MSDF with regards to the formalisation and protection of the metropolitan open space system. The EMM Bioregional Plan is also being envisaged for completion by 2012 and will be included in a future review of the MSDF. The Gauteng Open Space Policy – Phase 3, currently being drafted, will also be included in a future review of the MSDF.

Essentially this open space system, which includes a primary and secondary open space system, is designed around the sensitive areas (i.e. the drainage systems, the ridges and the pans), parks, the sport/recreation grounds and other large open spaces (i.e. golf courses, office parks/industrial parks with large gardens, cemeteries, greening of the East West Development Corridor (previous mining belt), etc.). An important principle is that open space conservation and planning followed a “Holistic and Integrated Planning” approach. This ensures that all the environmental considerations (social, economical, ecological and institutional) are effectively integrated into all spatial and economic activity. Integrated development planning is not only limited to ecological damage, but also to ensure environmental sustainability, for example flood-attenuation.

7.12 PROMOTE ACCESS TO SERVICES THROUGH CCCs

The EMM should promote access to social and municipal services which would include amongst others clinics, pension payout points, police services, municipal service points, taxi ranks, retail activities, recreational activities and any other related activities in Customer Care Centres which are evenly distributed throughout the entire metropolitan area of jurisdiction. This principle does not only apply to the urban part of the metro but also to the outlying rural areas. If these commonly facilities and services are combined it also eases the burden in terms of the policing and safe guarding of the facilities which is a major problem within the EMM area.

7.13 IMPLEMENT A STATUTORY URBAN EDGE

Ekurhuleni Metropolitan Municipality has adopted the principle of an Urban Edge to contain urban sprawl and to protect the agricultural areas surrounding the urban complex in the metro. This will be in line with the existing Gauteng Urban Edge Policy as adopted by Ekurhuleni. Essentially the Urban Edge limits the type and extent of uses to be allowed outside the urban area and it will require extensive motivations for any exceptions in this regard.

The previous Ekurhuleni Urban Edge was approved by the Ekurhuleni Corporate Affairs and City Development Portfolio Committee in November 2009. Future amendment to the Ekurhuleni Urban Edge will be done through the system of spatial development frameworks. The latest Gauteng Urban Edge was approved by the MEC for Economic Development on 1 June 2010. Discrepancies between the two urban edges are to be addressed in Chapter 8 of this MSDF Review.

7.14 LAND REFORM

Cities of the future world, which includes the whole of Africa and therefore Ekurhuleni, face land reform challenges on numerous fronts. These include:

- Land use management reform

- Acknowledgement of the role of the so-called informal sector.
- Land redistribution to the formally disadvantaged especially in the case of South Africa, and therefore Ekurhuleni and alternative tenure options relevant to the EMM circumstances.
- Urban Renewal
- Land Audit and redistribution through disposal
- Land Tenure Reform

Awareness of the EMM land disposal should be broadened and communities should be encouraged to participate there in. EMM must ensure that state-owned land is used as a tool for the deepening of democracy and transformation of land ownership.

7.15 INFORMALITY

The informal sector enables sustainable livelihoods to be obtained by vulnerable households. New land use management schemes should acknowledge and accommodate access to opportunities to permit residential uses to be utilised for trade through appropriate design of especially low cost housing. The council has an approved street trading policy which should include public land and is supplied for implementations.

CHAPTER 8

SPATIAL OBJECTIVES

Following the status quo assessment of the spatial structure of the EMM and the resultant development opportunities and constraints, the Ekurhuleni spatial objectives are confirmed as described in this chapter.

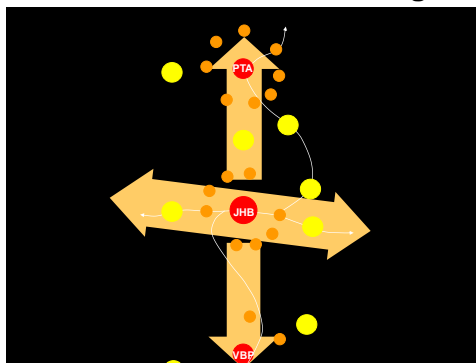
The set objectives work towards the strategic thrust as set for the City Development Department at the 17-18 March 2011 Mayoral Lekgotla.

8.1 To create a single, uniform identity for Ekurhuleni Metro

8.1.1 Determining an Ekurhuleni City Identity on a national, continental and international scale.

The African Aerotropolis and the industrial (and manufacturing) heartland of Africa best describe the Ekurhuleni unique identity on a national, continental and international scale. Spatially this emphasises the importance of the activity core of OR Tambo International Airport and the core economic activity area directly abutting the airport as well as the economic activities in Germiston and Boksburg. This Core Node is best suited to evolve into a fully fledged core for Ekurhuleni. In developing a city identity, Ekurhuleni needs to create a visual symbol, preferably on a site with a high visibility. Examples of such symbols are the Eiffel Tower in Paris, Sugar Loaf Mountain in Rio de Janeiro, Table Mountain in Cape Town, the unique high-rise buildings of Dubai, the Hillbrow Tower in Johannesburg, and the Union Buildings in Pretoria, Tshwane. The importance of OR Tambo International is not only important for Ekurhuleni and Gauteng, but also specifically for the Gauteng Global City Region and for South Africa in general

8.1.2 Core Nodes in Gauteng



A new concept in evolving the Gauteng SDF proposes a well thought through provincial development concept. Said concept emphasises the core areas of Johannesburg, Pretoria and Vereeniging. The provincial concept is built around these nodes, but further identifies existing nodes in support of this structure. The concepts then moves to proposing or predicting certain growth nodes, some of which are located in Ekurhuleni. However since the concept has not been

approved by Province yet, the EMM will follow the 2003 core triangle concept of which the EMM Spatial Concept evolved. The identity is therefore not based on a single CBD but on multiple centres which include an Aerotropolis/ Core Node (Kempton Park CBD, Rhodesfield and OR Tambo International Airport) as well as the economic activities linked to the transport network between Germiston, Boksburg, Benoni and the other Primary Nodes.

8.1.3 Focusing towards the Ekurhuleni Core Node

Developing a strong core area around OR Tambo International Airport will necessitate a focus from other areas and other nodes towards this core. This concept is further explained below in the section dealing with the development of a system of well defined nodes. A well placed system of corridors connecting all nodes is also of critical importance in this regard.

8.1.4 Creating a 'sense of place' for Ekurhuleni

Due to the size and diversity of Ekurhuleni, it is necessary for the core node to be strong enough so as to create its own 'sense of place' which can be carried through the entire Ekurhuleni. A well developed public transport system and/or interconnecting corridors can further the Ekurhuleni 'sense of place'. In support hereof, local nodes/ areas should be allowed to create its own 'sense of place' among the residents/ users of that functional area. These local 'sense of place' should then all tie into an Ekurhuleni 'sense of place'. The local sense of place should be built around the character and function of each area.

8.1.5 Strengthening transportation and other linkages in EMM

The most visible and effective linkages within the EMM is major roads and railway lines. Due to the nature and function thereof, these linkages are all ready good. Better linkage between PDAs and employment areas are needed. Also of critical importance are the linkages of the proposed main activity nodes within EMM with the Core Node at OR Tambo International Airport.

8.2 To develop a well defined system of nodes

To develop a well defined system of nodes which holds the bulk of economic activity.

8.2.1 Identify primary and secondary activity nodes to support the Core Node

Mixed-used activity nodes have the potential to be an important city structuring device. Such nodes can be identified as those points in the urban structure where access to a range of opportunities is greatest, where networks of association create diversity, and where people are able to satisfy the broadest range of their day-to-day needs.

Being points of maximum economic, social and infrastructural investment, as well as representing established patterns of settlement and accessibility, these nodes must be regarded as a primary device on which to anchor the structure of the urban system. A number of primary and secondary Activity Nodes are proposed in the Spatial Concept.

8.2.2 Protecting existing industrial areas from the potential negative effects of informal settlements located in close proximity thereof

The industrial areas of Ekurhuleni generate the bulk of employment and economic activity in Ekurhuleni. These areas should be protected from potential negative influence. One of the existing negative influences in this regard is informal settlements establishing in close proximity to industrial areas. This is leading to industries closing down or relocating to areas outside of Ekurhuleni. Informal settlements in close proximity to industrial areas should be relocated as a matter of priority. The available land should then be developed preferable as social housing or bonded housing if applicable. Focus should be on housing employees already employed in the relevant industrial area, with their families. Vacant land in close proximity industrial areas not suitable for housing development should be protected from invasion. Alternative uses should be identified for such land.

8.2.3 Determining an 'Ekurhuleni unique' niche market for each of the Primary Nodes

Due to the size and diversity of Ekurhuleni, it is necessary for each Primary Node in Ekurhuleni to full-fill its own specialised function in the Ekurhuleni context. Where possible such function should be defined as a unique function in the Ekurhuleni context. The economic nodes in Ekurhuleni, with its specialised and unique functions are reflected in the respective Regional SDFs. Each node should be marketed through a Marketing Strategy.

8.2.4 Improve and further develop existing nodes in the PDAs:

In the long run the four township areas of Kathorus, Tembisa, Daveyton-Etzwatwa and Kwatsaduza would have to be developed as sustainable development areas with a 'CBD node'.

In the medium to short term the Council approved retail implementation strategy shall be implemented. Most of the nodes in PDAs are currently fulfilling a relatively low key, localised function. Due to geographic features, access and distance from other nodes, certain of these nodes have the potential to develop into secondary and even primary nodes. These should be formalized and built upon as the main development nodes in the PDAs. This can be done by stimulating and promoting business development there and by focusing municipal capital projects in these areas. All government services provided in the PDAs should be focused into these nodes, including Ekurhuleni's Customer Care Areas. Intermodal transfer facilities should also be focused into these areas, as well as compact housing projects.

8.2.5 Combining activity nodes and public transport nodes

The public transport network should form the backbone of the system of nodes in Ekurhuleni. The growth of development nodes should be encouraged around existing stations and taxi ranks. The following nodes should be noted in this regard:

- Natalspruit Hospital node (taxi rank);
- Germiston Station (& taxi rank);
- Goldspot Node;
- Ramakanopi Node;
- Rhodesfield Gautrain and Metro Rail Stations;
- Oakmoor Station;
- Boksburg Station;
- Springs Station;
- Daveyton Station; and
- Dunswart Station.

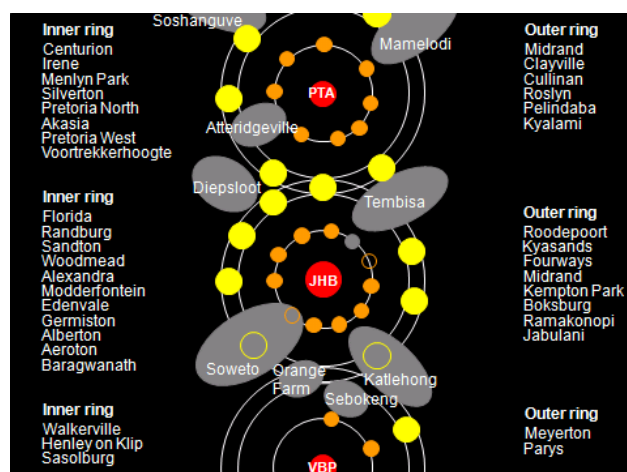
8.2.6 Linking these activity nodes to one another through activity spines

Enhance transport linkages between activity nodes mainly through providing and maintaining rail, road and public transport infrastructure. Commercial transport linkages within the industrial belt should be improved in order to consolidate the strategic purpose of industry as a unit. Linkages between Wadeville and Alrode are of priority, as is the linkages between Jet Park, Isando and Spartan. Linkage from the CBDs of Germiston, Boksburg and Benoni to the Core Node (OR Tambo International Airport - Kempton Park CBD) is of prime importance.

The identification, placement and priority of nodes and corridors within EMM must be done in co-ordination with the Concept developed for the Gauteng Spatial

Development Framework as indicated in the figure. Here the 'Inner ring' of Johannesburg already places Kempton Park CBD, Boksburg CBD and the Ramakanopi area in Kathlehong on a level above other nodes. A nodal point in Tembisa can be added to this list.

Other nodes like Edenvale CBD, Germiston CBD and Alberton CBD were identified as playing a



different provincial function from those listed above due to its locality in the Johannesburg inner Ring.

8.3 To promote the development of a sustainable compact urban structure

To promote the development of a sustainable compact urban structure which optimise the utilisation of all resources:

8.3.1 Densifying activity nodes, residential areas and transport linkages

Residential and other densification should be promoted in proposed nodal areas. Intensification of all land uses should especially be promoted in the Core Node and well as in the supporting Primary Nodes. Residential densification should also be promoted in existing residential areas at tertiary Nodes, but mindful of the locality, character, and service capacity in such areas, as well as the impacts of pollution such as noise and vehicle emissions on the residents of such areas. Residential areas in close proximity to the Primary Nodes should be the prime densification areas. Densification at transport linkages should be focused on densification at and within walking distance from all existing taxi ranks and railway stations.

8.3.2 Aligning the Urban Edge with the Gauteng Urban Edge

The Ekurhuleni Urban Edge should be aligned with the Gauteng Urban Edge where possible. Simultaneously, Gauteng should be influenced to align the provincial Urban Edge with the Ekurhuleni Urban Edge. The Ekurhuleni Urban Edge should also continuously be aligned with the edge proposed by the Johannesburg, Tshwane and Sedibeng Municipalities.

8.3.3 Directing growth to the Ekurhuleni Core Node and to Johannesburg

Although this objective might sound self contradictory, it can be implemented as part of the concept. Directing growth towards the EMM Core Node relates to directing growth from Primary Nodes and Secondary Nodes towards the area of OR Tambo and the Kempton Park CBD. The Ekurhuleni Core Node forms part of larger economic development areas on a provincial scale, i.e. the Gauteng economic triangle formed by Pretoria CBD, OR Tambo International Airport (including Boksburg and Germiston), and Johannesburg CBD. Due to the proximity of the Johannesburg CBD to Ekurhuleni, it makes economic sense to also direct growth from the Germiston and Alberton areas to the Johannesburg area; but also benefit from economic growth directed from Johannesburg.

8.3.4 Identifying developable land for infill development mindful of strategic location, socio-economic value and soil conditions

All vacant land and under developed land within or close to the Core Node must be evaluated for intensification. The most optimum land use proposals should be identified for all such portions of land. Even smaller parcels of land that is strategically located should be evaluated. Land further from the Core Node, but within the Urban Edge should also be evaluated for infill development, mindful of the open space structure.

8.4 To create a sustainable and functional open space network

To create a sustainable and functional open space network that is accessible to the public:

8.4.1 Optimizing the unique characteristics of Ekurhuleni

The proposed Meyersdal Nature Area, Natalspruit (and Wetlands), Swartspruit and Blesbokspruit and various dams and pans, together with selected grasslands present

the back bone of the Ekurhuleni open space network. All other natural, recreational and open space areas are identified for various levels of protection in EBOSS. Applicable development should be allowed next to such areas as to promote public accessibility thereof. Establishing and protecting linkages from the Meyersdal Nature Area to the Klipriviersberg ridges are also important.

8.4.2 Incorporating the open space system into the urban fabric

Development bordering on to natural/ open space areas should be directed towards supporting these natural areas. Surrounding development should not isolate open space areas, but should endeavor to promote the conservation and use of such areas.

8.4.3 Optimizing unutilized open space in the urban fabric

All unutilised open space in Ekurhuleni can be developed as part of an open space system promoting Biodiversity protection. EBOSS provides all the required guidelines in the regard. It should be noted that 80% of the areas that needs to be retained as open space is privately owned. Through effective planning and development management, Ekurhuleni has to steer these land owners to protect the land.

8.5 To optimise the job creation capacity of the formal economy

8.5.1 Promoting specialization in manufacturing, transport, finance, retail, and institutional uses

These major and growth sectors of the Gauteng economy are currently already well established in Ekurhuleni and represent the most effective job creation sectors. The existing industrial areas of Spartan, Isando, Jet Park, Olifantsfontein, Wadeville, Alrode and Dunswart contain the bulk of the manufacturing and transport industries in Ekurhuleni and should thus be protected and promoted for these purposes. The Pomona area to the north of OR Tambo is fast developing as a transport/ freight logistics hub of note. The CBDs of Kempton Park, Boksburg, Benoni and Germiston contain the bulk of the finance and local retail sector and should thus be protected and promoted for these purposes. The retail sector should also be promoted in Tembisa, Kathorus Daveyton Etwatwa and Kwatsaduza where the bulk of the untapped market is.

8.5.2 Developing sector-specific growth strategies

Develop growth strategies in support of the Ekurhuleni Growth and Development Strategy for the manufacturing, transport, finance, retail and institutional sectors in the Ekurhuleni. Job creation and human resource development should be the main focus of these strategies.

8.5.3 Protecting existing industrial areas from the negative effects of informal settlement located in close proximity thereof

Negative effects associated with informal settlements lead to a decline in industrial areas located in close proximity thereof. Such informal settlements should be relocated or upgraded as a matter of priority. Strategies should be devised as to minimize such negative effects over the medium term. This might include involving industries in the upgrading of informal settlements, awareness campaigns, policing, education & training, aesthetic upgrading, better maintenance, subsidization, etc.

8.5.4 Urban regeneration in industrial areas and CBDs

Regeneration should focus on visible projects in the worst affected areas in the CBDs (especially Kempton Park, Germiston and Boksburg) as well as in the industrial areas. Urban regeneration should focus on enhanced maintenance, especially regarding cleansing, painting of road markings, repair of potholes, storm-water covers, street lights, etc., as well as the safety and security of the area.

8.5.5 Providing infrastructural linkages for globally orientated growth

As to optimise the locality of Ekurhuleni in the Gauteng context it is important to ensure that all infrastructure required for economic growth in the formal sector is in place, including municipal services, human resource development, marketing and communication linkages, inter governmental linkages, etc. An important transport link to be provided is the link between the M2 and the R21. This link will allow for improved access to and from OR Tambo International Airport. The proposed express way along the east of the R21 is also important. Over the long term, the proposed K86 from OR Tambo to Daveyton Etwatwa is also important. Arguably the most important corridor to maximise short term global orientation is the R21 / Albertina Sisulu Corridor which is already open opportunities for large scale job creation to the north of OR Tambo international.

The East-West Corridor Development Initiative by the City of Johannesburg began to fulfil a multidimensional function i.e. an entity that generates synergy between spatial efficiency, economies of scale, investment and employment creation. The eastern boundary of the study area is aligned with the N17 and N12 highways. The corridor will cross the municipal boundary of Johannesburg to flow into the Ekurhuleni Metropolitan Area.

The R59 Development Corridor as promoted by Sedibeng District Municipality should be provided for in the Ekurhuleni area. The Corridor is however not of major importance in the Ekurhuleni context and is seen as a long term potential which is currently to be provided for in planning, but is not to be pursued actively over the short term.

8.5.6 Promoting SMME Development and Growth

The SMME sector should be encouraged to grow, especially at nodes in the PDAs and in other demarcated nodes. The EMM Street Trading Policy should be implemented in order to structure and promote growth in this sector. Economic linkages should be created between the informal and formal sectors of the economy. Job creation opportunities in the PDAs should be organised at the existing and identified PDA nodes and through the roll-out of the Retail Implementation Strategy.

8.6 To integrate the disadvantaged communities into the urban fabric

8.6.1 Infill development on vacant land located close to CBDs, industrial areas, bus and taxi routes and railway stations

Social housing should be provided on developable vacant land close to the CBDs of Germiston, Boksburg, Brakpan and Springs. Development close to industrial areas should be handled with extreme caution so as not to negatively influence the industrial area. Housing projects should also be initiated and promoted within the CBDs either by converting existing buildings or by erecting new ones for this purpose. Emphasis should additionally be on providing housing for people already employed in the specific industrial area. This will enhance a sense of place and will allow for sustainability. Low income projects for unemployed people should not be provided in close proximity to industrial areas. Care should also be taken to protect residents of these developed residential areas from the negative effects, e.g. pollution, of industrial areas.

Existing bus and taxi routes, especially close to taxi ranks, should also be focus areas for social housing. Additional to this, priority stations as identified in the ITP should be focus areas for social housing. Emphasis at all of these nodes should be on the areas within walking distance from, e.g. the station or taxi rank. Social housing should be managed as to not cause urban decay.

8.6.2 Promoting economic development along the main linkages between these communities and the major concentrations of job opportunities

Land adjoining main linkages (roads), e.g. from Kathorus to Alrode, Alrode south and Wadeville should be promoted as areas where small scale business, service industries and industrial uses can be accommodated. Optimal use should be made of the visibility and accessibility offered by these routes. Likewise linkages from Tembisa to Isando, Spartan and Jet Park should be developed to promote small scale business development.

8.6.3 Directing growth of the PDAs to the Ekurhuleni Core Node

Outward sprawl of the PDAs should be stopped as this is mostly leading to the further polarisation of the disadvantaged community. Growth of Kathorus should be directed to the north, with limited and controlled growth to the west and east. Growth of Kwatsaduza should be directed to the north. Growth of Daveyton Etwatwa should be directed to the west. However in the long term these PDAs must develop into sustainable 'CBD' neighborhood nodes in their own right.

8.7 To actively promote sustainable public transport

8.7.1 Providing public transport along all main corridors

Main desire lines should be demarcated as development corridors. These will primarily be the desire lines between nodes. Public transport (rail, bus, and taxi) should be provided and promoted along such corridors. The rail network should be extended to kick start a circular rail system around the Core Node and towards the east. Such system should provide for the movement of commuters within Ekurhuleni and from Ekurhuleni towards Johannesburg and Tshwane.

8.7.2 Effective management of Taxi ranks

Existing taxi ranks should be managed effectively in order to prevent urban decay and in order to make the facilities more user friendly for commuters. A complete upgrade of the system to become part of a Strategic Public transport network is crucial.

8.7.3 Promoting mixed use, high density development along suitably corridors and at suitable nodes

Land use development should be aimed at supporting the existing public transport system. Identified stations are thus a priority for the development of medium to high density residential development. Detail on the density and housing type to be provided for at each station should be addressed in the RSDF for each such area in line with the criteria laid down in this MSDF. Mixed use development optimising the visibility and accessibility offered by corridors should also be encouraged. Detail on the type of development to be provided for along each corridor should be addressed in the RSDF for each such area.

8.7.4 Promoting Transit Oriented Development along the main railway infrastructure

Identified stations are thus a priority for the development of medium to high density residential development. Additional to high density residential development, land uses supportive of the rail pedestrian function should be encouraged at stations, e.g. taxi ranks, retail trade (aimed at passers by – e.g. food, clothing, beverages, daily groceries, cigarettes, news papers, magazines), services (e.g. aimed at passers by – hairdressers, heel-bars, telephones, postal services), etc.

8.7.5 Promoting pedestrianisation

All existing and proposed nodes, high or medium density development, transport orientated development, retail developments, transport nodes, social service nodes and other developments frequented by pedestrians should promote pedestrianisation

by providing pedestrian facilities. This should include providing for the disabled. Provision of pedestrian path ways, side walks, road crossings, benches, mountable curbs, pedestrian gates, pedestrian 'road signs' should be enforced with new developments and should be enhanced at existing developments. Upgrading of safety and security measures (e.g. lighting pedestrian areas, pedestrianising roads in CBDs) should receive priority. Pedestrian zones should be demarcated in all three CBDs. In such zones, pedestrians should have right-of-way. The approved Ekurhuleni Bicycle Strategy should be implemented.

8.7.6 'Tightening' and enforcing the Urban Edge

The MSDF determines a more accurate and better defined urban edge so as to exclude as much land as possible. A tighter urban edge increases development pressure on land within the edge, thus speeding the process of infill development and optimal utilisation of resources. The urban edge should be enforced more vigorously than it has been to date, thus not allowing for exceptions or extensions. Infill development and the resultant densification will increase the chances of achieving a viable, sustainable public transport system.

Concerns were raised by the Ekurhuleni Housing Department (memorandum dated 2 December 2010) regarding the availability of land within the urban edge to accommodate the housing backlog of approximately 180 000 housing units within the urban edge. The Ekurhuleni 'Infrastructure and Community Services Backlog Study 2009 – 2025', however estimated that there is sufficient land within the urban edge for housing development until 2019-2020. The study further found that "land outside the urban edge largely carries a development cost premium due to the dolomitic nature thereof..." (Executive Summary, Page M). As stated by the Ekurhuleni Housing Department in the 2 December 2010 memorandum, the fixed housing subsidy system currently prohibits densification required to implement the MSDF. As such, the responsible national government department must be approached so as to amend the subsidy system to allow for high density, 'brown-fields', subsidized housing.

8.7.7 Initiating a "Road to Rail Program" for passengers and cargo

The EMM should initiate such a program with Johannesburg and Tshwane Municipalities as to align the provincial government, Prasa, and the private sector to this objective. Rail service should be extended and/or further developed as follows according to the Prasa National Rail Plan.

8.8 To promote access to social and municipal services through CCCs.

The Council adopted a service delivery model resulting in 20 Customer Care Areas (CCAs formerly CCCs). These CCAs are ward based which encourages ward based Area Based Planning (ABP). Spatial development implementation in the metro shall be done through the model.

This proposal puts forward a concept which will allow for national, provincial and local governments to join their efforts in providing services at grass roots level, by means of the establishment of Multi Purpose Community Development Centres. These centres will allow for the provision of a combination of essential community services by the relevant tiers of government, according to their roles and responsibilities, at a central location accessible to the community. These services will be mutually supportive and will ensure co-ordination of services, rather than duplication or deprivation.

The development of these Multi Purpose Community Support Centres can furthermore act as economic injection, by means of initiating public investment into previously marginalised areas, and lowering the perceived risk to private sector development. These centres can also focus on community projects aimed at economic development and it can also serve as

places where different stakeholders can interact with one another and with government. The appropriate design of these Centres can also achieve the realisation of the principle of stimulating diverse and complex urban areas, as opposed to dormant township and rural villages. The Multi Purpose Community Development Centres will be developed with the provision of national, provincial and local government services to the public in mind. It will therefore focus on basic services required by the public on a frequent basis, such as registration of births and deaths, application for identification documents, health and welfare services, libraries, emergency services, information services, etc.

These services are typical services provided by national, provincial and local government, but are primarily located in established urban areas, inaccessible to a large section of the population. It relies on the pooling of service provision, as well as resources, to provide a more efficient and accessible service. There are a number of institutions involved in service delivery, which should play a primary role in the establishment of these Centres, such as National Departments, Provincial Departments, Local Authorities, and Non-Government Organisations and Community Based Organisations.

The Multi Purpose Community Support Centre will therefore comprise of, inter alia, the following functions:

- Pension Pay-Out Point;
- Emergency Services Dispatch Centre;
- Metropolitan Police Office;
- Post Office;
- Health Care Clinic;
- Local Authority Offices (payment of accounts, account and service queries, reporting of problems);
- Licensing Office (licensing of vehicles);
- Developmental Welfare Service Office including a space and a workshop area for meetings as well as the housing of projects and programmes, e.g. arts and crafts projects for the disabled or the poor;
- A place of safety for battered and abandoned women, children in need of welfare services and street children as well as temporary social relief;
- The place of safety should be seen as a transit facility, where persons in distress can be housed overnight, before being referred to an institution that can help them in the longer term. This place of safety can also serve to assist people who lost their homes due to fire or flooding on a temporary basis and should include facilities for a soup kitchen.
- Office space for a Referral Network. There are various groups which can provide assistance to communities in distress, but do not have access to the necessary infrastructure, which could benefit from this clustering of facilities;
- Youth development offices. Seen in light of the establishment of Youth Councils and Youth Development Groups, the allocation of a small amount of office space would benefit this cause and allow these groups access to infrastructure;
- Local Economic Development Office. This office can share workshop space with the Developmental Welfare Offices and Community Development Offices to undertake community skills training projects;
- Modal Transfer Points;
- Informal Sector;
- Library;
- Home Affairs Office, including birth and deaths registration, application for identity documents and passports;
- Community Hall (operated by local authority);
- Sport and recreational facilities (operated by the local authority);

- Information Centre providing a variety of information, such as tourist information, unemployment registration, business directory (operated by the local authority);
- ATM Services.

The Centre would essentially be a “One Stop Centre” for information and services, at a central and easily accessible point. The combination of these services will ensure that optimum use is made of resources in order to allow for the development to be mutually beneficial and more affordable to all these government departments. It is also in line with national directives of the establishment of partnerships in service delivery, and in this regard will give effect to a Public-Public Partnership.

8.9 To identify the impacts of Climate Change on EMM

- Identify EMM's vulnerability to Climate Change impacts and stresses;
- Identify and reduce the risks associated with Climate Change within EMM;
- Introduce effective mitigation or adaption strategies in EMM; and
- Effective management of resources:
 - energy efficiency, green house gas reduction;
 - water resources; and
 - reduction of waste.

8.10 Promote sustainable livelihoods development

Promote sustainable livelihoods development in the townships particularly by:

- Encouraging retail development as kick start strategy; and
- Develop townships into model self sustaining neighbourhood development areas.

8.11 Promote sustainable development

Promote sustainable development by focusing on the following aspects:

- Disaster Risk Reduction Strategies
- Impacts of Climate Change (assess vulnerability, identify key risk areas, plan to mitigate these or adapt to the risks and impacts of Climate Change);
- Dolomite;
- Storm-water Plans in relation to floods;
- EBOSS in relation to land use applications; and
- Water resource management; and
- Food Security.

8.12 Optimise the comparative and competitive advantages of EMM

Optimise the comparative and competitive advantages of EMM with specific reference to:

- OR Tambo International Airport;
- Manufacturing;
- Transport infrastructure; and
- Locality.

CHAPTER 9

SPATIAL CONCEPT

With the spatial background information and spatial objectives in mind, it is now appropriate to look at the Ekurhuleni Metropolitan area in terms of a spatial concept around which it should structure its future development. The Ekurhuleni Spatial Concept aims to spatially reflect and expand on the set development objectives.

The Ekurhuleni Spatial Concept described is spatially indicated on Map 11. This concept is used to guide the drafting of the remaining chapter of the Metropolitan Spatial Development Framework. This section must be read with the Map 11.

9.1 Core Development Triangle

The Core Development Triangle area, presents an opportunity for Ekurhuleni to achieve a variety of development and restructuring objectives at once within one functional area. This includes:

- to stimulate economic development in the broad sense by promoting
 - corridor development, especially the development of the R21 corridor which could eventually extend up to Tembisa in the north;
 - a variety of economic activities associated with OR Tambo International Airport;
- promoting sustainable development (development which does not impact negatively on the receiving environment);
- the gradual upgrading and renewal of the CBDs of Ekurhuleni;
- to introduce modern industrial concepts like high tech industries, industrial parks, export processing zones etc in Ekurhuleni to enhance the tradition of Ekurhuleni being the industrial heartland of South Africa;
- the development of corporate office parks near OR Tambo International Airport which could establish Ekurhuleni as an office destination (something it severely lacks at present);
- to promote residential infill development and densification within the urban fabric, whilst reserving open space needed for social, recreational and ecological purposes;
- the establishment of Transit Orientated Development on mining land in close proximity to the Ekurhuleni railway system that could lead to large scale infill development in the remainder of Ekurhuleni;
- the promotion of public transport, and specifically rail transport as the backbone to the public transport system of Ekurhuleni;
- to unlock development potential of certain areas by way of the provision of strategic transport linkages;
- to optimise the potential benefits to be derived from national and provincial initiatives in the area surrounding OR Tambo International Airport;
- to enhance the tourism potential of Ekurhuleni;
- the development of a core identity for Ekurhuleni – not an extension of the identity of one of the former nine towns of Ekurhuleni, but the creation of a brand new identity which reflects the diversity of what and who Ekurhuleni represents.

The idea is not that development of this area should be promoted at the cost of the remainder of the EMM. It is, however, clear that this area has the best combination of existing infrastructure, strategic land uses and resources in the form of vacant land/land developed at low intensity in the entire metropolitan area to serve as pilot area around which to commence with the restructuring and consolidation of the Ekurhuleni urban structure. Geographically it also represents the most central part (point of gravity) of Ekurhuleni. Market interest is very

high in the area which is a major benefit, and in addition to the above there is also large public sector spending (Blue IQ initiatives) in the area to which value can be added.

The EMM should thus utilise the high development potential of this area to set certain development trends in motion which could benefit the entire metropolitan community in the following ways:

- increased revenue to the municipality resulting from development in the area which could be used to support and enhance the economic potential of other parts of Ekurhuleni that are not as well located, or as accessible;
- more job opportunities which will serve the entire metropolitan community;
- the spill-over effect where the successful implementation of a concept leads to the concept being extended into adjoining areas. A good example in this regard is the Centurion area which is now benefiting from the Midrand-strip concept which was initiated some 15 years ago.

The Core Economic triangle should thus be seen as the first phase (the starting area) of a broader initiative towards developing the EMM Area in line with the principles as contained in the Development Facilitation Act. All other initiatives aimed at enhancing specific parts of the metro outside the Core Development Triangle area will continue parallel to the Core Development Triangle initiative as described in the Capital Investment Framework.

9.2 Activity Nodes

Map 11 indicates all Primary and Secondary Activity Nodes for Ekurhuleni. In this regard, the 'Burgess' planning theory as applied in the Gauteng 2055 SDF is also being applied in the Ekurhuleni Spatial Concept. Map 11 indicates application of the theory around the Ekurhuleni Core Node and throughout the rest of Ekurhuleni.

The theory as applied indicates the role of other (primary and secondary) nodes relative the Core Node. On Map 11 the 10km radius around the Core Node indicates the position of the Edenvale, Germiston, Boksburg and Benoni Primary Activity Nodes. The 10km radius also shows the need for future Primary Nodes in Tembisa, along the Albertina Sisulu Corridor (R21) and in the area linking OR Tambo International to Daveyton –Etwatwa.

The applied theory also indicates the role of other nodes like Springs CBD, Brakpan CBD, Alberton CBD and Nigel SBD relative to the 20km to 25km radius for the Core Node. The need for stimulate the development of strong nodes in Etwatwa, Tsakane, Vosloorus, and Kathlehong/Tokoza is also indicated.

A strong nodal network is promoted within the Ekurhuleni Metro. The types of nodes are to be delineated and defined in greater detail in the section dealing with the RSDFs to be drafted. As far as retail is concerned, the 9 Primary Activity Nodes (Central Business Districts) which currently exist in the Ekurhuleni Metro are being maintained and strengthened. These areas are highly accessible by car and (in most cases) by rail and therefore caters for the entire EMM community. Billions of rand of transportation infrastructure, engineering services and buildings have been created in these areas, and the Metro cannot afford to neglect these areas or to allow these to decay. As and where there is a need/opportunity for the development of larger regional shopping malls, these should be located within the functional area of one of the CBDs in order to prevent these Malls from becoming competing entities for the CBDs. If correctly developed, a shopping mall can actually contribute towards the improvement of a CBD. As a principle, however, a decentralised regional shopping mall should not be supported by the EMM. Local and neighbourhood centres can, however, be, allowed at decentralised locations as and where the need arises.

The implementation of City Improvement Districts (CIDs) is proposed as a strategy to improve safety, security and overall environmental improvement in the CBDs. This could serve to counteract deterioration and urban decay, which are the result of land uses moving from central business districts to suburbs and regional malls. The implementation of the CIDs could protect existing public and private investment in the central business districts and counteract further decentralisation.

9.3 Development Corridors (Redevelopment Areas)

There are two metropolitan level corridors identified in the Ekurhuleni Study for the Development of Corridors, 2004. These are depicted on Map 11 and described below.

The Tembisa - Kathorus Corridor: "The future role of the corridor is largely seen as being an development corridor that will create a vital north-south development link in the Ekurhuleni Metropolitan area, where higher density development and concentration of economic activity will contribute to a more favourable and market-driven investment environment for businesses and local communities. This corridor will create opportunity for economic development on land currently underutilised (without damaging the environmental sensitive areas) and the more efficient use of available infrastructure. Envisaged land uses include mixed development, residential, industrial, aviation and transport orientated development and tourism."¹

The Germiston - Daveyton Corridor extends from Germiston traversing the Boksburg and Benoni areas as far east as Daveyton and Etwatwa. "The main mobility spine of this Corridor is the N12 highway and the railway line that runs parallel to it. The length of the Corridor is approximately 35 kilometres from Germiston to Etwatwa. Despite of the fact of being located at long distances from the Corridor, it constitutes an important link between the major residential areas of the city. This fact is due to the important linkage of this Corridor to the main labour and economic pools of the city and to the Johannesburg CBD. Residents in areas such as Kathlehong, Vosloorus and Tsakane are functionally linked to the Daveyton / Germiston Corridor, as this is where an important amount of the job opportunities are located. The N17 runs from Alberton in the west to Springs in the east. Although it falls outside the primary corridor, it is an important mobility spine serving the corridor and the main link between Springs, Boksburg, Germiston and the southern areas of Johannesburg. The traffic of this freeway is much lower than the traffic volume of the N12 and is to a large degree underutilised. The fact that this is a toll road may contribute to this under-utilisation."²

More detailed corridors are indicated on the Spatial Concept map (Map 11). These corridors were identified based on the proposed Ekurhuleni Integrated Rapid Public Transport Network (IRPTN). The proposed IRPTN network was then aligned to the theory of the 'Burgess' model so as to link and support the proposed activity nodes.

9.4 Municipal Open Space

The hydrological system in Ekurhuleni provides a strong and distinct natural backbone to open spaces. The hydrologic systems is vital when it comes to the biological and hydrological functioning of the area, therefore it must remain intact and disallow any further development.

The hydrological systems and the remaining high quality vegetation areas provide important spatial nodes which contain high potential for the conservation of biodiversity. Topographical feature such as ridges are scars in Ekurhuleni and when they occur in natural state, they

¹ Ekurhuleni Study for the Development of Corridors, 2004; page 127

² Ekurhuleni Study for the Development of Corridors, 2004; page 150

match up with the occurrence of primary vegetation. Thus, it was agreed that topographical features should be used as an integrated element in the classification of open spaces.

The remaining natural open spaces were reassessed in terms of quality and were classified into the following categories:

- Hydrology, which indicates areas that are clearly discernable such as rivers, streams, pans, dams and wetlands.
- High, which means areas are not in a good natural state and normally consists of primary vegetation and in a few instances of high quality secondary vegetation where such vegetation, despite previous disturbance, is recognised as a typical condition of the particular vegetation type especially where it occurs in combination with significant areas of primary vegetation.
- Medium, which consists almost entirely secondary vegetation, where the present state of such vegetation is still good enough to support open space connectors and links, despite reduced species diversity
- Low, which consists of secondary vegetation that has been heavily degraded and/or fragmented that are not in itself, without rehabilitation, suitable to serve as a natural open space, connector or link between natural open spaces.

Classification of open space:

- Metropolitan open space node: open spaces areas that have a distinct character that area meant for the use or enjoyment of all persons in the metropolitan area and even beyond.
- Local open space nodes: “open space areas that have a distinct character that are meant primarily for the use or enjoyment of specific communities.”
- Corridors: “open spaces that form part of the hydrological system, are natural areas that are shallowly undermined or areas with high quality natural vegetation that links different nodes with each other.”

More detailed information and mapping is available in the Ekurhuleni Biodiversity and Open Space Strategy documents.

9.5 Urban Edge

The Ekurhuleni Urban Edge as depicted on Map 13 and Map 14 reflects the official Ekurhuleni Urban Edge. With this 2010/11 MSDF Review, a number of amendments are being made to the previous Ekurhuleni Urban Edge as approved by the Corporate Services and City Development Portfolio Committee in November 2009. The purpose of the latest amendments is to further align the Ekurhuleni Urban Edge and the Gauteng Urban Edge and to accommodate new development proposal outside the 2009 Ekurhuleni Urban Edge where desirable.

Due to recent changes to the Urban Edge, certain land owners who's land was previously within the Urban Edge have now been excluded. In some cases these land owners might have bought the land for development purposes based on previous Ekurhuleni SDFs/ previous Urban Edge demarcations. In order to act fairly towards such land owners/ developers, land development application submitted within two years of the approval of this MSDF may be evaluated in terms of the SDF/ Urban Edge that was in place when the land was acquired by the applying land owner.

For ease of reference, Urban Edge map numbers as used in previous urban edge amendments are referred to. The specific maps are however not included in this MSDF document as the proposed changes are all reflected on Map 13 and Map 14 of this MSDF

document. During this 2011 MSDF Review, the Ekurhuleni Urban Edge was considered for amendment in the areas described below.

9.5.1 Benoni AH, Rynfield & Mayfield area

Urban Dynamics was appointed to prepare a Local SDF for the Daveyton and surrounding area. The study brief included the refinement of the Urban Edge in the study area. The Draft Daveyton LSDF proposes a 2010 and 2015 Urban Edge for the LSDF study which excludes land previously included in the MSDF Urban Edge. The proposed 2015 line is to be implemented up to 2020. Given the 25 year planning horizon of the MSDF (2010 to 2035), it is recommended that the MSDF Urban Edge for this area be retained as it was in the November 2009 PC resolution, save for a small extension of the Urban Edge to the north to allow for much needed industrial development. The proposed amended Urban Edge is indicated on Map 11. Phasing of development over the short to medium term (up to 2015) must however be done according to the proposals of the Etwatwa LSDF.

9.5.2 Etwatwa East

Description of the amendment to the Ekurhuleni Urban Edge (2009) - Map 4A:

Move the Ekurhuleni Urban Edge inwards (westwards) to align with the Gauteng Urban Edge on Modder Road to exclude Holdings 4, 5, 8 & 9 Breswol from the Ekurhuleni urban Edge (2009 Urban Edge Map 4).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 13.68ha.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

Following the 2009 Urban Edge approval, Plan Associates was appointed to prepare a Local SDF for the Daveyton and surrounding area. The study brief included the refinement of the Urban Edge in the study area. The proposal of the LSDF is that development in the Etwatwa area should rather focus on extension and growth to the Mayfield area, closer to job opportunities. Extension to the east should thus be discouraged.

The following Provincial criteria were used in motivating this change:

- The existing border of urban activity (e.g. residential towns and other urban features). The Agricultural Holdings (rural residential uses) to be in principle excluded from the urban area. The proposed Urban Edge was drawn on the border of the existing border of urban activity (existing Etwatwa townships).
- Municipal boundaries. In this regard co-ordination with the adjoining municipalities is of extreme importance. The exclusion area is border by the Delmas Municipality (Mpumalanga). The Ekurhuleni Urban Edge is moved off the municipal boundary so as to improve the management of development in surrounding areas.
- Functional boundaries such as major roads, strategic development areas etc. Modder Road forms a functional boundary and is primarily used as the Urban Edge.
- The availability / lack of bulk infrastructure, as well as the functional service areas e.g. sewer catchment areas, water tower service areas etc. There is no or limited bulk infrastructure available in the exclusion area.

Description of the amendment to the Ekurhuleni Urban Edge (2009) - Map 4B:

Move the Ekurhuleni Urban Edge outwards (northwards) to include developable land to the north of Etwatwa Ext 18 into the Ekurhuleni Urban Edge (2009 Urban Edge Map 4).

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

Following the 2009 Urban Edge approval, Plan Associates was appointed to prepare a Local SDF for the Daveyton and surrounding area. The study brief included the refinement of the Urban Edge in the study area. The proposal of the LSDF is that development of the Steve Biko informal settlement, to the north of Etwatwa Ext 18 should, be allowed up to the railway line. The railway line forms a logical physical barrier for further development. The land in question belongs to EMM (housing Department). The natural wetland in the area will be excluded from development.

9.5.3 N17 Mining Land

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge to align cadastrally with the 2010 Gauteng Urban Edge (2009 Urban Edge Map 7).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 535.05ha.
- Size of land now to be included into the Ekurhuleni Urban Edge: 109.69ha.
- Properties now to be excluded from the Ekurhuleni Urban Edge:
 - o Portions Re/1, 115, 117, 127, 131 (partly), 132, Re/151, 152 of the Farm Daggafontein 125-IR;
 - o Portion 33 of the Farm Daggafontein 124-IR;
 - o Portion 33 of the farm Grootvaly 123-IR; and
 - o Holdings 23, 24(partly), 25(partly) 32, 33, and 34 Grootvaly AH.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

The Ekurhuleni Urban Edge (2009) and Gauteng Urban Edge (2010) essentially follow the same alignment. The Gauteng Urban Edge however follows cadastral boundaries, whereas the Ekurhuleni Urban Edge followed a non-cadastral, environmental line. The amendment is made so as to use the same cadastral boundaries as used for the Gauteng Urban Edge (2010).

9.5.4 Daggafontein - ERGO

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge inwards (westwards) to exclude Ergo land east of Daggafontein to align with the 2010 Gauteng Urban Edge (2009 Urban Edge Map 9).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 34.6ha
- Properties now to be excluded from the Ekurhuleni Urban Edge:
 - Remainder of Portion 1 of the Farm Daggafontein 125-I.R. (partly).

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

The existing land use of the proposed exclusion area is mining. Part of the proposed exclusion area is covered by a mine dump. The remainder of the proposed exclusion area is covered by evaporation ponds and other mining infrastructure. According to the GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010), development in this exclusion area "...will negatively affect the existing RAMSAR site neighbouring..." the area.

9.5.5 Dunnottar

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge inwards (westwards) to exclude undevelopable land south east of Dunnottar and to exclude undevelopable land north east of Prosperita (2009 Urban Edge Map 11).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 319.94ha
- Properties now to be excluded from the Ekurhuleni Urban Edge: Portions 30, Remainder of Portion 43, Remainder of Portion 44 (partly), 76 (partly) and the Remainder (partly) of the Farm Grootfontein 165-IR.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

The existing land use of the proposed exclusion area south east of Dunnottar is predominantly mining. Part of the proposed exclusion area is also affected by a wetland. The proposed exclusion area north east of Prosperita is also affected by the same wetland. According to the GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010), development in this exclusion area "...will negatively affect the existing RAMSAR site neighbouring..." and must thus be excluded from the Urban Edge.

9.5.6 Marievale

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Align the Ekurhuleni Urban Edge with the Gauteng Urban Edge so as to exclude the Marievale Army Base from the Ekurhuleni Urban Edge (2009 Urban Edge Map 11).

- Size of land now to be excluded from the Ekurhuleni Urban Edge (2009): 211.25ha
- Properties now to be excluded from the Ekurhuleni Urban Edge (2009):
 - o Remainder and Portion 9 of the Farm Vlakfontein 281-IR (partly); and
 - o Remainder and Portion 2 the Farm Draaikraal 166-IR.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

The GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010) states that "Although some development exists in the form of the old Marievale Army Base the proposal is located in the buffer of the Marievale Nature Reserve and within a slimes dam buffer which excludes residential development. The existing development is at such a low density that it equates to rural development that can be accompanied outside of the Gauteng Urban Edge".

9.5.7 Vorsterkroon - Alrapark

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Align the Ekurhuleni Urban Edge with the Gauteng Urban Edge so as to exclude agricultural land east of Vorsterkroon from the Ekurhuleni Urban Edge (2009 Urban Edge Map 13) but include the part of Laverburg .

- Size of land now to be excluded from the Ekurhuleni Urban Edge (2009): 432.34.9ha
- Properties now to be excluded from the Ekurhuleni Urban Edge (2009):
 - o A portion of Remainder of the Farm Bultfontein 192 I.R.
 - o Remainder of Portion 70 of the Farm Bultfontein 192 I.R.
 - o Remainder of Portion 69 of the Farm Bultfontein 192 I.R.
 - o Portion of Remainder of portion 28 of the Farm Varkensfontein 169 I.R

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

The GDED Evaluation of Proposals Submitted by Municipalities to amend the Gauteng Urban Edge (15 April 2010) states that "The GSDP indicate this area as high provincial marginalisation with the lowest potential access to economic activity and also province one is along cadastral boundary".

9.5.8 Nigel Prison

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge to align with the 2010 Gauteng Urban Edge (2009 Urban Edge Map 17).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 20.25ha.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

According to the GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010) the area west of Nigel prison now to

be excluded from the Ekurhuleni Urban Edge (2009) "...is affected by an irreplaceable site, SANBI grassland and primary vegetation."

9.5.9 Nigel – Duduza

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge inwards to partly align with the 2010 Gauteng Urban Edge (2009 Urban Edge Map 18).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 165,76ha.
- Properties now to be excluded from the Ekurhuleni Urban Edge (2009): Portions 6 (partly), 33, Remainder of Portion 42 (partly), Remainder of Portion 65, and Remainder of portion 169 (partly) of the Farm Varkensfontein 169 I.R.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

According to the GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010) "The area is dominated by mine dumps and slimes dams, wetlands rivers and viable fragments of Tsakane Clay grassland is also to be found in the proposal area. This extreme environmental sensitivity prohibits the development of this area." The proposed amendments are made to exclude the most affected mining and environmental areas. Areas such as the Nigel dam, the wetland and parts of the golf course are now excluded from the Ekurhuleni Urban Edge.

9.5.10 Bluegum View south

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge westwards to partly align with the 2010 Gauteng Urban Edge (2009 Urban Edge Map 20).

- Size of land now to be excluded from the Ekurhuleni Urban Edge: 41.69ha.
- Properties now to be excluded from the Ekurhuleni Urban Edge (2009): The Remainder of Portion 29 of the Farm Spaarwater 171 I.R.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

According to the GDED Evaluation of Proposals Submitted by Municipalities to Amend the Gauteng Urban Edge (15 April 2010) "95% of the area is designated as irreplaceable. The area has red listed birds and confirmed red listed plants. The bulk of the area is composed of primary vegetation. This environmental sensitivity makes the proposal not viable."

9.5.11 Private Sector Submission: Remainder of Portion 44 of the Farm Waterval 150IR

Description of the amendment to the Ekurhuleni Urban Edge (2009):

Move the Ekurhuleni Urban Edge partly outwards (southwards) to include land at the R550 & K91 intersection (2009 Urban Edge Map 27).

- Size of land now to be included into the Ekurhuleni Urban Edge: 174.7ha
- Properties now to be included into the Ekurhuleni Urban Edge: Portion 2 (partly) of the Farm Rietspruit 152-IR.

Motivation for the amendment to the Ekurhuleni Urban Edge (2009):

A submission was received from VBH Town Planners on 10 December 2010. Said submission formed part of the Waterval Land Development application on the remainder of Portion 44 of the Farm Waterval 150 IR and the remainder of Portion 2 of the Farm Rietspruit 152 IR as submitted to the Gauteng Development Tribunal by the same company. This amendment to the Urban Edge is made so as to accommodate the proposed development.

During the 2009 Ekurhuleni Urban Edge review, a portion of land at the R550 and K91 intersection was excluded from the Urban Edge for environmental reasons. Said portion is now being included into the Urban Edge given that a Record of Decision (RoD) was already issued by GDARD allowing the development.

It will be the responsibility of the EMM to provide the bulk water infrastructure for this area. The extension of the Waterval Waste Water Care Works (WWCW's) of ERWAT will also have to be extended to accommodate the development proposal.

9.5.12 Private Sector Submission: Remainder of Portion 37 of the Farm Tamboekiesfontein 173 JR

This submission was received from VBH Town Planning on 17 June 2010. The submission was referred to all relevant internal departments and the Boksburg CCC office. Based on the merit of the submission it is recommended that the application for the extension of the Urban Edge be supported, on condition that the land to be included into the urban edge be utilised only for the purpose of an inland port (freight hub). No residential development will be allowed in the area now included into the urban edge.

The extension of the urban edge does not exempt the developers from due planning and environmental processes. It must specifically be noted that the Ekurhuleni Environmental Development Department raised concerns with regard to the extension of the urban edge and the proposed development here, as reflected below:

- The reason for placing the urban edge along the hydrological feature was that it creates a natural barrier for development;
- It is noted with concern that neither the approved Ekurhuleni EMF or EBOSS was consulted in the Environmental Study;
- It is indicated in the application that there is insufficient spare capacity in the existing outfall sewer line, therefore the issue of sewer line should be addressed;
- According to EBOSS, the property falls within "metropolitan open space node", meaning an open space areas that have a distinct character that are meant for the use or enjoyment of all persons in the metropolitan area and even beyond;
- Though the application indicates that there is enough bulk services (water and electricity) in the area to accommodate the proposed project, confirmation from relevant Departments of the EMM must be obtained;
- a much more convincing argument in terms of "the greater good" of the proposed development for the environment in general is needed (Will the creation of such a transportation hub have so much environmental benefits/ positive spin off in terms of reduction of fuel usages, air pollution etc and the reduction of climate change impacts for the country in general, that it will be worthwhile to sacrifice this portion of still reasonable intact environmentally sensitive land?).

Should the due environmental development application processes indicate that the proposed development is not possible from an environmental perspective, this extension of the Urban Edge will be withdrawn.

With regards to the provision of bulk infrastructure services, it is indicated in the report that engineering investigations have been done on the availability of the bulk services or infrastructure with the exception of the proposed sewer line that will be dedicated for the development through to Waterval waste water treatment plant. It should be considered that the cost of providing the necessary infrastructure is significant. The development will impact on the current infrastructure that is provided for a specific land use.

A capacity study / master plan for water and sewer will have to be done at the cost of the developer/s. This investigation needs to be conducted as to oversee the possibility of the current capacities in the EMM bulk and reticulation networks including the reservoirs as to whether they will be able to complement the needs for the current development. The capacity of ERWAT's plant at Waterval will also have to be considered and will undoubtedly have to be increased against huge cost. Should the development be approved, funding for bulk infrastructure will have to come from the developer/s. Additional comment received from the Water Services Division on 24 February 2011 inter alia stated the following:

- "Council will have to provide and commit itself toward the bulk services required in the area due to these not being available". This will have to be done in an additional item to Council as this MSDF does not commit the Council in this regard.
- "Council will have to consider to financially assist ERWAT in expanding the already hydraulically overloaded Waterval waste water treatment plant".
- "Council will have to consider increasing the Water Services Division's operating and maintenance budgets to accommodate the additional assets."
- The statement being made by the applicant in the motivating memorandum "...regarding the availability of capacity at the Waterval waste water treatment plant is not correct. Actual flow measurement during the time of the compilation of the consultant's report (May 2010) indicated that no capacity is available".

9.5.13 Private Sector Submission: Portion 47 of the Farm Witpoortjie 117 IR

This submission was received from Welwyn Town Planners on 11 October 2010. Due to the fact that the application is incomplete, the City Development Department returned the application to the applicant, requesting more information as required per the Gauteng Urban Edge Policy. This submission will be ruled on in a next MSDF Review or during the drafting of the applicable RSDF.

9.5.14 Private Sector Submission: Remainder of Portion 1 Witfontein 16 IR

A submission was received from Izwelisha Town Planners on 7 December 2010 requesting the inclusion of said portion into the urban edge. The submission was referred to the Environmental Development Department and well as the Electricity, Infrastructure Services Department (Roads, Water Services & Public Transport) and the Kempton Park and Benoni CCCs for their comment.

The Electricity Department indicated that "The Township Owner is, according to the Policy on contributions for electrical main services within Ekurhuleni Metropolitan Municipality, required to pay contributions as prescribed on document marked Item A-IS (07-2008). This shall apply to all Township Owners unless otherwise resolved by Council Committee on documentation.

"Bulletin 8 "Bulk Services Infrastructure" sub-section 9.1 "Electricity" (referring to the applicant's submission) will not be the true reflection of the agreement between the Energy Department and the Township Owner until such a deviation from the EMM Policy is acknowledged by the Council Committee and documented as a resolution for this particular township. Without indicating any detail or without reference to strategic principles." This comment indicate that the submission for an extension of the urban edge will require a deviation from council policy.

The Water Services Directorate stated that "there are a number of issues regarding the provision of water and sewer services.

- Development in the area in general is highly dependent on the construction of a new sewer outfall from Pomona pump station all the way to the new Serengeti pump station
- A new Reservoir (Bredell Reservoir) is required to serve the area
- A new Rand Water connection is required with a new bulk water main from the connection point up to the proposed Bredell reservoir
- A new main line is required from the reservoir to the Serengeti and surrounding areas which might include Portion 1 Farm Witfontein.
- A number of other Witfontein and Glen Erasmia proposed townships are also in the waiting for these new bulk services.
- Last but not least capacity at the ERWAT Hartebeestfontein Works can not be provided over the short term.”

“It is therefore clear that this new application places even further pressure on the council to provide the entire required infrastructure or commit to provide such. Water Services are not totally comfortable to commit council as we have experienced a long delay in implementing some of these bulk services, even with the possible assistance from developers. (Mainly due to financial budgetary constraints.) Whether or not to include this Portion 1 Farm Witfontein is not really our call but we do foresee difficulties.” The same Directorate further indicated that “A definite concern is that whilst, currently, applications outside the urban edge are not supported and the developer has to fund all costs, the expansion of the urban edge might change this approach and Council will become committed to provide bulk at its cost. Bulk contributions will not make up for the actual cost to provide the bulk”.

The Kempton Park City Development CCC Office commented that “...the inclusion of Re of Portion 1 of the farm Witfontein 16 IR into the urban edge cannot be supported.

“The envisaged township establishment application is mainly residential, but with densities higher than the adjoining Serengeti and Dunnblane (Bredell Ext 11) which are low in densities and more desirable in the area as well as creating an ideal transition. It should be noted that high density developments are not supported in the Bredell Agricultural Holdings which is directly south of the subject property mainly due to trying to preserve the rural character of the area and create a soft transitional zone between the urban area and rural area. The development is in contrast with the local spatial development framework for the area.”

The Ekurhuleni Environmental Impact and Planning Directorate do not support this application for the following reasons:

- “The proposed density is up to ten times higher than the proposed four units per hectare as per the ROD issued. The new proposed density will have a negative impact within the surrounding environment.
- Serengeti has established an environmental protection zone which links with the proposed public open space, how will this linkage be dealt with?
- In terms of the R21 Corridor Local Spatial Development Framework the proposed site has been identified as being an Environmental Precinct and land uses such as urban development and any activity that will have a significant or destructive impact on the vegetation or hydrological functioning of the area may not be supported.
- The impact that the development would have on the Ekurhuleni’s desired Urban Form and the objectives of the Ekurhuleni’s Urban Development Boundary is not clearly indicated in the application.
- Currently the city sewer service is not available and there is no clear indication in the application when the proposed new package plant purification works will be

built to cater for the proposed development. It has been indicated in the application that EMM will take over the sewer reticulation after construction, should this include the package plant it is cause for worry as these plants are usually situated at the lowest gravitational point which is inevitably in a hydrological point. At present the Water and Sewer Department has a problem in maintaining the current pump stations which experiences spillage which leads to contravention with National Environmental Management Act and National Water Act resulting in heavy fines. Due to lack of funding, it is not known when full sewer system will be linked and therefore environmental risks are very big.

- The attached Civil Services Report compiled by Luleka Consulting Engineers has indicated that the proposed development falls within the urban edges as defined by the Gauteng Province, the statement is false because the proposed site falls outside the Gauteng Provincial Urban Edge.
- The proposal is in essence "leap frog" development and will cause a fundamentally unbalanced relationship within the surrounding areas".

In view of the above negative comment, the submission for the extension of the Urban Edge is not supported.

9.5.15 Private Sector Submission: A portion of Re/1 Modder East 72 IR

A letter from Izwelisha Town Planners, was received on 22 October 2010 indicating that the land owner intend to apply for inclusion of this land into the urban edge. The submission includes land between the Holfontein access road into Etwatwa on the west, the Blesbokspruit wetlands on the north and the east, and the N12 freeway on the south.

A comprehensive submission from the applicant is awaited to be ruled on in a next MSDF Review or during the drafting of the applicable RSDF.

9.5.16 Private Sector Submission: Portion Re/1, 111 and 115 Daggafontein 125 IR

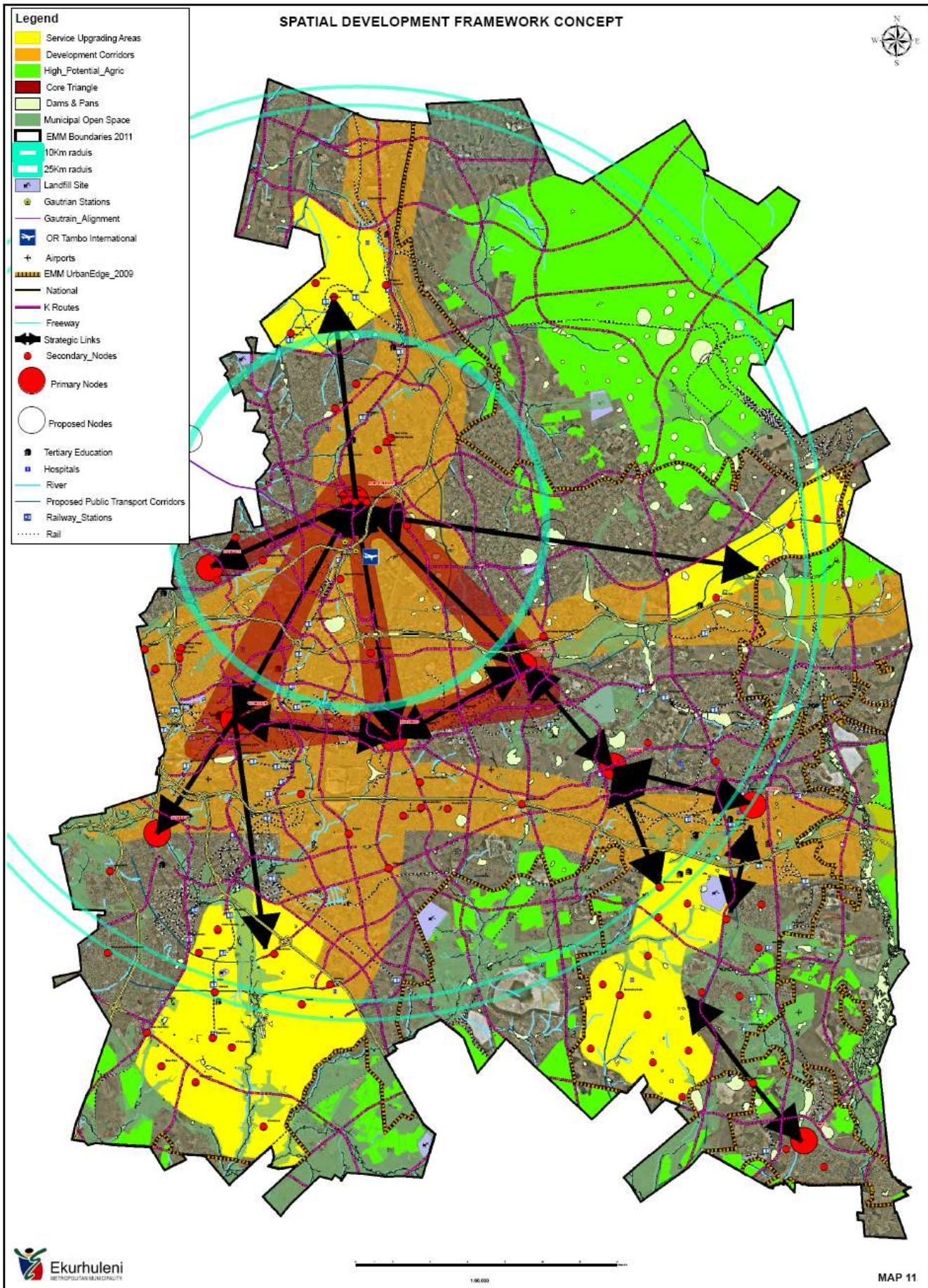
This submission was received from Urban Consult Town Planners on 11 November 2010. The submission is to restore the Ekurhuleni Urban Edge to what it was in 2007 for the subject area. The applicant's client purchased the land based on the 2007 Ekurhuleni Urban Edge as indicated in the 2007 Eastern RSDF. Based on the 2007 Eastern RSDF, the land owner prepared the necessary town planning and environmental applications and initiated required soil studies and engineering reports to enable the development of the land. All of these studies indicate that the land can be developed after rehabilitation of the land. The land owner subsequently also spent a large amount of money on rehabilitation the land. The 2007 urban Edge was amended in this area in 2009 by excluding the subject land from the Ekurhuleni urban Edge. At the time, this was done due to the fact that this land was considered to be derelict mining land. Since the land owner has now rehabilitated the land, the motivation used in 2009 is no longer applicable.

The submission was referred to the Environmental Development Department as well as the Infrastructure Services Department (Roads, Water Services & Public Transport) and the Springs CCC for their comment. Comment received from the Springs CCC is in favour of the extension of the urban edge on condition that it not includes any industrial development. The Environmental Development Department does not have an objection to the submission to include the above-mentioned properties within the municipal urban edge. In supporting the submission, the Department considered that:

- The proposed properties do not fall within an environmentally sensitive area.

- The proposed properties do not fall within open space nodes as identified by the EBOSS which needs to be conserved due to their environmental sensitivity status.
- The submitted draft Environmental Impact Assessment Report will assess the environmental issues of the proposed properties further, and propose mitigation measures and also develop environmental management programme for the said development to ensure that the receiving environment is not adversely impacted on.

Based on the above information and the motivation contained in the submission, the extension of the urban edge is supported.



CHAPTER 10

LAND USE PROPOSALS

The COGTA Local Government Turnaround Strategy of November 2009 on page 21 states that “Through the municipal Spatial Development Framework, each municipality is aware of and is able to guide land use acidity on every square meter and kilometre in its area of jurisdiction”. The Ekurhuleni approach is based on a Metropolitan SDF, supported by Zone (Regional) SDF and, where required Precinct Plans. The land use proposals of the Ekurhuleni Spatial Development Framework are based on the broad objectives and principles as stated in the previous chapters. The structuring elements and land use proposals of the MSDF are described in more detail below. The description should be read in conjunction with the proposals as depicted on Map 12.

10.1 ACTIVITY NODES

10.1.1 The Core Triangle

The following table summarises the airport related land uses and functional areas in the Core Development Triangle (Core Node/ Aerotropolis) and where these could be accommodated as a priority.

		Rhodesfield	Bartlett/ Bardene/ Hughes	Beyers Park	Impala Park	IDZ	Bonaero Park*	Park Haven	Pomona/ R21	Brentwood Park	Kempton Park AH	OR Tambo
1	Hotels	X							X			X
2	Conference Facilities	X							X			X
3	Recreation	X							X			
4	Exhibition Centres	X							X			
5	Tourism Administration	X										
6	Retail/Business	X	X						X		X	X
7	Industrial		X			X			X			
8	Commercial/Warehousing		X						X		X	X
9	Hi-tech industries		X			X						
10	Research and Technology		X			X						
11	Office	X	X						X			X
12	Accommodation (Permanent)	X		X	X		X	X		X		
13	Medical Transfer	X										X
14	Council Facilities	X										

* Note: Certain portions of Bonaero Park should be investigated for mixed land uses due to the proximity of the area to the airport and due to possible noise impact. This should be done with the drafting of the applicable RSDF and mindful of the ACSA Master Plan for OR Tambo International.

In view of the political and strategic need for an Ekurhuleni city identity, the role of Kempton Park and the R21 (Sisulu) Corridor must be considered. These are ideally located from a planning perspective. Geographically the location for this Aerotropolis area has the ideal city identity to use OR Tambo International as our national asset to our advantage, also in linking to the adjoining Johannesburg and Tshwane Metros.

10.1.2 Primary Activity Nodes [Red]

The Primary Activity Nodes are generally the CBDs of the former towns that now comprise Ekurhuleni. Each of these CBDs has a distinct history that, over more than 100 years, has developed into large centres of economic importance. Most of the CBDs grew as the surrounding towns grew and this was largely based on the importance of retail within these areas. The CBDs have long been challenged by perceived levels of crime, poor parking facilities and outdated facilities. Coupled with this, retail has evolved into new forms such as Hypermarkets, shopping malls, value malls, big-box retail, etc. The development of these facilities has resulted in CBDs with vacant buildings, informal street trading and general urban decay. The overall result is that approximately 50.8% of all retail is now located outside of the CBD areas of Ekurhuleni. This average is skewed since in Boksburg 81,1% of retail facilities are located outside of the CBD, whilst in Springs only 9% is located outside of the Springs CBD.

The continued function of the CBDs for retail purposes is largely due to the linkages between the former previously disadvantaged areas and the CBDs, which are generally well serviced by public transport links. The CBDs have therefore increasingly catered for these markets since there are very limited retail facilities located within these areas. In the 2004 Regional Retail Investigation it was found that the supply-demand does not correlate to the situation that has developed with respect to retail facilities. This means that based on population numbers, income and spending power many of the former towns appear to be oversupplied with retail facilities, however, the former previously disadvantaged areas are so undersupplied that it is obvious that people from these areas spend at facilities outside of their local area.

The same study proposes that there is a need for retail facilities in excess of 100 000m² GLA within each of the previously disadvantaged areas by 2014. This must take place, but in this context further development at the decentralised nodes (such as the East Rand Mall, Carnival City) must be managed to ensure that no oversupply is created in the long term should demand decrease due to new facilities within the previously disadvantaged areas. The CBDs too are likely to once again be affected by alterations in retail habits, and probably more so since transport costs will encourage people to shop within their local areas, particularly if quality and appropriate facilities are developed.

The overall growth prospects over the short to medium term imply that Ekurhuleni's retail market and associated floor area will grow significantly throughout the metro. The 2004 Regional Retail Investigation study states that whilst there is significant investment potential in the metro, it is critical that any future development in the first economy areas is judiciously managed and that the challenge will be to properly catalyse much needed retail development in the second economy areas. This will mean that the CBDs will have to be carefully managed to ensure that further urban decay does not take place. It is important that office facilities are encouraged to remain within the CBD areas rather than the trend to develop offices along major corridors in residential areas. The metro and other government departments and facilities are key to the survival of the CBD areas as they are in effect the anchor tenants of the area and must thus be encouraged to stay within these areas.

Owing to an oversupply of offices (usually located above shop fronts) within the CBD the redevelopment of appropriate buildings into residential facilities should be encouraged since this will lead to regeneration of the area and a better use of the existing infrastructure. Other uses that are typically found within these areas: motor trade, general business, recreation, entertainment, light service industries, parks and

open space. Table below identifies specific land uses to be allowed and promoted in each of the 9 Primary Activity Nodes.

Node	Specialised function	Niche function
Edenvale CBD	Regional retail (medium & low income), offices, entertainment, service industries, transport mode interface, high density residential; service industries.	Linear corridor accommodating private sector offices, motor trade businesses, craft, antique shops, prime high density developments, places of refreshment and entertainment etc.
Kempton Park CBD	Regional retail (medium & low income), offices, entertainment, service industries, transport modal interface, high density residential.	Airport related development. Serve the retail needs of the middle to lower income groups especially from Tembisa. Provides for packet shoppers. Provides accommodation in terms of guest houses and motels. Government offices & services.
Germiston CBD	Regional retail (medium & low income), offices, entertainment, service industries, transport mode interface, high density residential; service industries.	EMM HQ (All Departments), Central & provincial government regional offices, EMM Institutional hub. Service function to Industrial Sector. 'African Tourism Shopping Destination'.
Boksburg CBD	Regional retail (medium & low income), offices, entertainment, service industries, transport modal interface, high density residential (need stimulation)	Serve the retail needs of the middle to lower income groups especially Reigerpark & Vosloorus. Provides for packet shoppers. Taxi rank. Government offices: SARS & Ekurhuleni (Boksburg CCC)
Alberton CBD	Regional retail (medium & high income), offices, entertainment, service industries, high density residential	High income retail, services, entertainment, offices
Springs CBD	Regional retail (medium & low income), offices, entertainment, service industries, motor trade and related uses, high density residential; service industries.	Motor trade and related uses, Mining; Engineering and Mechanical workshop; Tourism (Guest Houses).
Brakpan CBD	Local retail (medium & low income), limited offices, service industries, motor related uses, high density residential.	Motor trade and related uses, service industries and light engineering workshops, high density residential. Good location for a Tertiary Educational facility.
Benoni CBD	Regional retail (medium & high income), offices, entertainment, service industries, high density residential.	High income retail, entertainment related uses, services, high density residential (Flats); regional Sport & recreational Function
Nigel CBD	Regional retail (medium & low income), offices, service industries, medium density residential.	Service and agricultural oriented uses, light engineering and mechanical workshops, residential.

Focus should be on operational maintenance in these areas, i.e. refuse removal, road maintenance, law enforcement, building maintenance, etc. Residential densities should be directed to support activity and transport nodes in the area. Detailed land use proposals are to be formulated in the RSDF proposals for the areas. Urban renewal initiatives identified in the Urban Renewal Strategy should be implemented as a matter of priority. Specific attention should in this regard be given to the CBDs of Brakpan, Springs, Germiston and Boksburg.

The following EMM Development Policies are relevant to these areas and must be applied in the drafting of RSDFs: Home Office Policy; Tavern Policy; Spaza Policy;

Street Trading Policy; Container Policy; Accommodation Establishment Policy; and Density Policy.

The 2004 Ekurhuleni Regional Retail Investigation has become outdated. This policy will thus be rescinded by each of the new RSDFs, and the updated research will thus form part of each of these documents. In the future RSDFs it may be imperative to reclassify some of the major secondary nodes, particularly the East Rand Mall and East Gate, as Primary Nodes since they have become more significant than some of the CBD areas and are likely to remain areas of high demand for future development.

10.1.3 Secondary Activity Nodes [RED DOTS]

The locality of Secondary Activity Nodes is indicated schematically on Map 12. The 'footprint' of each Secondary Activity node is to be determined in the RSDFs to be drafted. The table below identifies specific land uses to be allowed and promoted in each of the identified secondary nodes.

Functions of Secondary Activity Nodes

Nr	Node	Specialised function	Niche function*
1	Tshongweni	Local retail (low income), service industries, healthcare, education, transport modal interface	Local retail (3500m ² - 10000m ²)
2	Admin Triangle	Local retail (low income), service industries, healthcare, education, administration	Municipal services
3	Goldspot	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Local retail requirements of Vosloorus (3500m ² - 10000m ²)
4	Ramakanopi	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Regional Police Station. Retail (3500m ² - 10000m ²)
5	Palm Ridge	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Retail (3500m ² - 10000m ²) and legal (Court)
6	Meyersdal	Local retail (high income; existing), healthcare.	Residential (high income). Cultural and eco-tourism.
7	Natalspruit	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Hospital and retail (3500m ² - 10000m ²).
8	Sunward Park	Local retail (high income), healthcare	Local retail (high income; 20 000m ²), healthcare
9	Spruitview	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	High income retail (3500m ² - 10000m ²) and services for higher income areas in Kathorus
10	Pilot Station	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Local Retail (3500m ² - 10000m ²)
11	A P Khumalo	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Local Retail (3500m ² - 10000m ²)
12	Zonkizizwe	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Local Retail (3500m ² - 10000m ²)
13	Klippoortjie	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	High income retail and services for higher income areas in Kathorus
14	Lesedi	Local retail (low income), service industries, healthcare, education, administration, transport modal interface	Local retail requirements of Vosloorus (3500m ² - 10000m ²)
15	Elsburg	Local retail (high income), healthcare	Local retail (high income; existing), healthcare

16	Eden Park	Local retail (middle income), community facilities	Local retail (middle income, (3500m ² - 10000m ²))
17	Eden Park x5	Local retail, healthcare	Community retail (low - middle income, 20 000m ²), healthcare
18	Brackenhurst/ Brackendowns	Local retail (high income)	Local retail (high income; 6000-8000m ²)
19	Parkdene/ Park Rand	Local retail (high income)	Local retail (high income; 6000-8000m ²)
20	Elspark/ Freeway park	Local retail (high income)	Local retail (high income; 6000-8000m ²)
21	Carnival Node	Limited regional retail (high, medium & low income), offices, entertainment, service industries, motor trade and related uses, high density residential; service industries.	Entertainment, building industry, motor trade.
22	Tsakane community centre.	Local retail (low income), service industries, healthcare, education, administration, transport modal interface.	Retail and municipal services for Kwatsaduza.
23	Daveyton community centre.	Local retail (low income), service industries, healthcare, education, administration, transport modal interface.	Retail and municipal services for Daveyton.
24	Springsgate	Local retail (middle income), service industries, transport modal interface.	Retail and service industries.
25	Geduld	Local retail (low/middle income), service industries, healthcare, education, administration, transport modal interface.	Retail, motor and service industries.
26	Birch Acres Mall – Tembi Plaza		
26	Primrose	Local retail (low/middle income), service industries, healthcare, education.	Retail and service industries.
27	Bedfordview CBD	Limited retail (high income), offices, entertainment, health care.	Offices and entertainment.
28	Emperors Palace	Entertainment uses and supporting retail and related uses.	As described the RSDFs to be drafted.
29	East Gate Node	Regional Retail, office, and related uses.	As described the RSDFs to be drafted.
30	East Rand Mall Node	Regional Retail, office, and related uses.	As described the RSDFs to be drafted.

R
etail apportionments based on the EMM Retail Study, 2004.

Focus should be on operational maintenance in these areas, i.e. refuse removal, road maintenance, law enforcement, building maintenance, etc. Residential densities should be directed to support activity and transport nodes in the area. Detailed land use proposals are to be formulated in the RSDFs for these nodes. The 'foot print' of each secondary node will be determined in the RSDFs. Urban Renewal initiatives identified in the Urban Renewal Strategy should be implemented as a matter of priority. Municipal spending should be focused at these nodes. New retail development should be focused into these nodes.

The following EMM Development Policies are relevant to these areas and are specifically to be interpreted during the drafting of RSDFs: Home Office Policy; Tavern Policy; Spaza Policy; Container Policy; Street Trading Policy; Accommodation Establishment Policy; and Density Policy.

The Council has approved a Retail Strategy for the PDAs in 2008. This strategy for each of the nodes identified in these areas details a number of key action to be undertaken to facilitate the implementation of retail facilities. The elements typically found in Secondary Activity Nodes are further subdivided into specific type of facilities and addressed according to whether it is public or private sector related.

Types of Facilities

Public Sector	Private Sector
<ul style="list-style-type: none"> • Social housing • Community Centre/hall • Clinic • Library • Pension Pay Point • Police station • Post office • Local Business Support Centre • Business hive • Taxi Ranks 	<ul style="list-style-type: none"> • Convenience retail • Restaurants and taverns • Personal services • Financial services • Service industries • Internet café • Traders market

Each of these facilities requires a minimum threshold in order to be sustainable. The minimum thresholds for the building blocks or urban cores are indicated by the following development parameters.

Minimum Threshold Parameters

Activity	Parameter
Retail	0.2m ² /capita
Offices	0.1m ² /capita
Community facilities <ul style="list-style-type: none"> • Clinic • Library • Community centre • Post office • Police station 	<ul style="list-style-type: none"> • 5000 people (20 min walking distance) • 10 000 people (30 min walking distance) • 22 000 people (30 min walking distance) • 11 000 people (40 min walking distance) • 25 000 people (30 min walking distance)
Residential	750 units per annum (7 500 units over next 10 years)

The public sector activities should be developed first, including the inter-modal facility, followed by a range of community facilities. It is imperative to ensure that public investment is phased carefully in order to ensure that the required thresholds are available to sustain the facilities. A concerted, incremental approach of private/public investment should be followed. Ideally, it should include the provision of social housing, followed by a range of economic activities, commencing with the retail and recreational / leisure component, supported by personal services and financial services.

10.1.4 Tertiary Activity Nodes

Tertiary Activity Nodes and their respective functions are to be indicated in the RSDFs to be drafted.

10.1.5 Neighbourhood Nodes

Neighbourhood Nodes and their respective functions are to be indicated in the RSDFs to be drafted.

10.1.6 Rural Services Node

Rural Service Nodes are limited nodes outside the Urban Edge which provides essential services to the surrounding rural areas. The expansion of the existing uses within the node would not be permitted unless the availability of bulk services and dolomite stability has been established. All proposed land uses establishing within the node would also have to motivate regarding the service that they provide to the surrounding agricultural community and how the use will enhance and sustain the agricultural environment. Two Rural Services Nodes are proposed, namely, Bapsfontein and Petit (the intersection of Birch and Pretoria Road).

10.2 RESIDENTIAL [YELLOW]

Existing and future urban residential areas, including supportive uses such as community facilities, local business, parks and open space, recreation and entertainment.

10.2.1 Townships [YELLOW]

In low income areas focus should be on the provision of social and municipal infrastructure, as well as the aesthetic upgrading of the area. Residential densities should be directed to support secondary and tertiary activity nodes and corridors without over-utilising existing service infrastructure. Detailed land use proposals are to be formulated in RSDFs for these areas.

The following EMM Development Policies are relevant to low income residential areas and are specifically to be interpreted during the drafting of RSDFs: Tavern Policy; Spaza Shop Policy; Accommodation Establishment Policy; Home Enterprise Policy; Street and Township Naming Policy; Container Policy; Street Trading Policy; Density Policy.

10.2.2 Suburbs [YELLOW]

In medium and high income areas, focus should be on the maintenance of infrastructure in these areas. Residential densities should be directed to support secondary and tertiary activity nodes and corridors without over-utilising existing service infrastructure. Detailed land use proposals are to be formulated in RSDFs for these areas.

The following EMM Development Policies are relevant to medium and high income areas and are specifically to be interpreted during the drafting of RSDFs: Home Office Policy; Second Dwelling Policy; Accommodation Establishment Policy; Home Enterprise Policy; Street and Township Naming Policy; Density Policy.

10.2.3 Informal Areas Upgrading [YELLOW]

Informal areas (squatter areas) are to be upgraded, formalised, or relocated as per the plans and strategies of the Ekurhuleni Housing Department. The 'Housing Migration Plan is to be updated in the RSDFs so as to support the MASDF proposals.

10.2.4 Rural Residential Areas [YELLOW & GREEN HATCHED]

Low density residential development, mostly associated with agricultural use, or other forms of low density residential development as allowed in terms of the Gauteng Urban Edge Policy.

10.2.5 Densification Areas [BLACK HATCHED]

Densification is very often perceived as an exercise where homogeneous residential units are produced, aimed at providing for limited income groups (often associated with low-income groups). Ekurhuleni is currently striving for a unified identity across the City, whereby all citizens can feel included. Densification should not occur randomly but in an organised strategic manner. Densification must be implemented with the knowledge and understanding of the following issues of social infrastructure, environmentally sensitive areas, transportation, protection of low density areas, correcting spatial imbalances of the past, demand vs. supply, and land as a resource, as prescribed in details in the EMM residential densification strategy. Densification should definitely be encouraged around transportation centres/stations, where it safe from a geotechnical perspective. These areas should be designed in such a manner that the integration of land uses and transport modes are supportive of and supported by higher residential development. Clustering of activities is therefore necessary and

densities should be highest at these 'nodal' cores, descending gradually from the core area, but remaining relatively high adjacent to the public transport routes, whether rail or road.

Residential densification is supported around Nodes, Transport Oriented Development (corridors/movement system) and Residential Areas, where certain degrees of densification can be accommodated. This include in and around nodes and modal transfer points and around public open spaces.

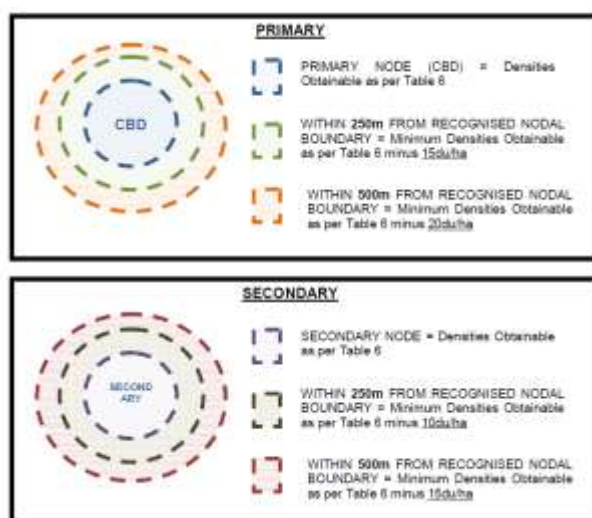
Nodes: A density of 100 units per hectare is deemed to be most effective for public transport, but densities should be considered in finer detail and through extensive public participation as part of the RSDFs and/or Precinct Plans.

Proposed densities per type of node

Nodal Type	Density targets 2025	
	Minimum	Maximum
Primary	110	*
Secondary	100	160
Tertiary	90	140

Source: EMM Residential Densification Strategy, 2008

The following illustrations and accompanying notes illustrate the densities which are targeted around these areas of economic concentration measured from the recognised nodal boundary. As far as residential infill development, densification and



mixed use is concerned, it should be noted that current housing typologies for subsidised housing do not support multiple level housing, mixed uses or high density residential development along main transportation corridors. Current typologies are based on large scale, single residential stands. Current institutional housing projects certainly work against the ideal of a compact city, infill development of small pockets of land, the urban edge, and public transport orientated corridor development.

Mixed land uses at a fine grain and design supporting walking distances are promoted in residential areas. This policy permits the introduction of low-scale, non-intrusive, non-residential areas uses in residential areas, particularly neighbourhood shopping centres, home offices and home industries. The appropriate location for these should however be determined in accordance with detailed Precinct Plans and the Land Use Management System.

The principle applied to densification and mixed land uses should be that the quality of residential areas as well as public and private investment should be protected. Ekurhuleni hosts vast established residential areas of high quality and amenity. In these areas maintenance of infrastructure and public investment (also parks, sidewalks, etc.) is essential to protect residential quality. Residential quality in the disadvantaged areas should be improved through upgrading of infrastructure,

development of parks, public spaces and community facilities as well as ongoing maintenance of these and specifically improving safety.

Transport Oriented Development: Densification should also be encouraged along public transportation routes and in areas of extensive public investment in road and transportation infrastructure. The transportation network is based on the various transportation modes used in Ekurhuleni, namely rail (stations) and roads.

Rail: Railways stations act as the areas in which rail users enter and exit trains and these must be conveniently located and pedestrian friendly. However, to make stations more viable, modal transport facilities should be implemented. These should have some of the following characteristics:

- High density residential uses (a variety of housing typologies should be used)
- Modal interchanges should be present (between rail and vehicles)
- Mixed use developments should be present (presenting economic opportunities for some of the immediate area's residents)
- Limited private vehicle parking should be provided (forces the public to make use of other public transport modes).

The following is the list of railway stations within Ekurhuleni that are earmarked for densification as indicated on Map 12.

Station	Passenger volumes weekday	per	Prasa Classification	Suitable for future densification
Alberton	994		C	Yes
Alliance	3 905		C	Yes
Angelo	8 510		C	No
Anzac	12		C	Yes
Benoni	8 093		C	Yes
Birchleigh	13 207		C	Yes
Boksburg	5 683		C	Yes
Boksburg East	4 953		C	Yes
Brakpan	12 965		C	Yes
Daveyton	27 088		C	Yes
Delmore	2 488		C	No
Driehoek	4 635		C	No
Dunswart	25 947		B	Yes
East Rand	9 663		N/A	Yes
Elandsfontein	32 051		B	No
Elsburg	4 143		C	Yes
Geldenhuys	3 174		C	Yes
Germiston	93 670		A	Yes
India	224		C	No
Isando	26 239		B	No
Kaalfontein	7 248		C	Yes
Katlehong	3 944		C	Yes
Kempton Park	40 899		A	Yes
Knights	4 916		C	No
Kutalo	883		C	No
Kwesine	7 434		C	No
Leralla	28 073		B	Yes
Limindlela	20 079		B	Yes
New Era	8 677		C	Yes
New Kleinfontein	1 819		C	No
Northmead	7 601		C	No
Oakmoor	25 011		B	Yes
Olifantsfontein	4 750		C	Yes
Pilot	7 913		C	No
Pollak Park	6 525		C	No

President	13 388	C	Yes
Ravensklip	3 303	C	No
Refinery	323	C	Yes
Schapensrust	3 114	C	Yes
Springs	9 298	C	Yes
Tembisa	22 997	C	Yes
Van Rhyu	2 941	C	Yes
Van Riebeeckpark	10 096	C	Yes
Wadeville	5 193	C	No

Densification should be encouraged around railway stations, however, design guidelines must be strictly adhered to due to noise pollution and as a safety precaution. The highest densities should be concentrated around points of modal transfer and adjacent to existing stations, which are currently used by commuters. Through the investment in these identified areas, broader social, economic and environmental impacts can be expected. These expected positive impacts include:

- Economic investment, opportunity and convenience for users of the facility, by the community and broader region
- Minimising/reducing commuter distances
- Minimising/reducing vehicle emissions
- Increasing the threshold of public infrastructure/transportation investments and maximising the usage of such investments

The following density targets are proposed around railway stations listed above:

Distance	2025 (u/ha)
Proposed density up to 500m from the station	110 – 200
Density targets between 500m & 1000m from the station (Dwelling units per hectare (minimum – maximum))	90 – 160

Source: EMM Residential Densification Strategy, 2008

The busiest station in the Ekurhuleni Metropolitan area is Germiston Station and it is recommended in the ITP that densification projects be developed and implemented in the Germiston area, as this is where the major rail infrastructure is centered in the EMM. The municipality is currently busy with the Urban Renewal Programme for Germiston area and densification is part of the objectives in implementing this programme. Germiston is but not the only busy station in Ekurhuleni. Some of the busiest stations include Kempton Park, Leralla, Daveyton, Isando, Dunswart, Oakmoor, Tembisa, Limindlela and this is based on station inflow and outflow volumes with more than 20 000 passengers. Higher density residential developments may also be incorporated into mixed-use developments (refer to Category 2) around stations. In the case of residential units on the ground floor, these units must be designed as live-work units to assist in economic upliftment in these respective areas as well.

In addition to normal rail stations there is also Gautrain stations in Ekurhuleni. There is OR Tambo International Station which services the airport as well as Rhodesfield station located in Rhodesfield. The OR Tambo station does not have a direct impact on residential densification. The Rhodesfield station on the other hand will serve the residential communities of Ekurhuleni. Residential densification should therefore be encouraged at this station to levels similar to those in Primary Activity Nodes. The Rhodesfield area has been earmarked for redevelopment due to the location of the Gautrain Station and also its close proximity to the airport. The area surrounding the station has been set aside for mixed use development, including offices, high density

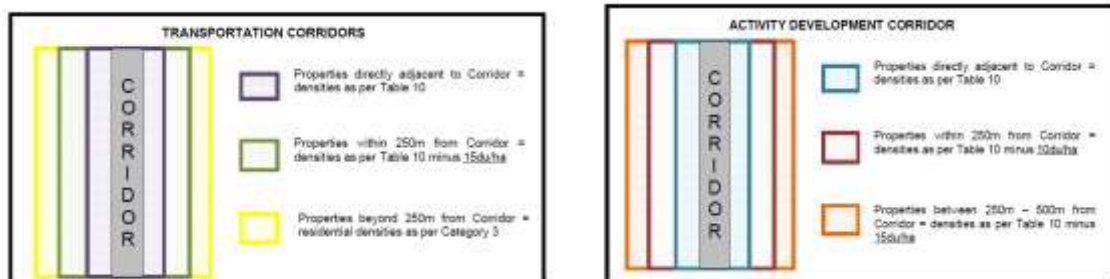
residential development with which Ekurhuleni hopes to provide professionals and companies with a business address in the metro area.

Road: The EMM has identified a road classification system which is simplified into a Freeway Network and a Second Order Road Network as well as a proposed Third Order Road Network. Due to the high mobility and limited access of freeway traffic, increased densification would not be suitable on at interchanges on this road network. Second order road network is most conducive to higher residential densities as these roads link residential areas to nodes and other areas of economic activities and other residential areas. EMM has proposed various density targets on the roads classified as transportation corridors as well as activity development corridors.

The densities for different types of corridors are as follows (Retail Densification Strategy, 2008):

Road Classification	List of Corridors	Land Use	Density targets 2025 Units per hectare (Minimum–Maximum)
Transportation corridors	Albertina Corridor; Sisulu Corridor; Germiston Daveyton Corridor	- Mixed land uses at identified intersection nodal points. - Higher density residential	60 – 80
Activity Corridors	To be listed in RSDFs; mainly K-routes linking Primary Nodes	- Local nodal development - Higher density residential	110 – 130
Activity Spine	To be listed in RSDFs; mainly municipal roads linking Secondary Nodes	- Residential - Business - Retail - All uses to be of a local and fine grain nature	40 – 60

The following illustrations illustrate the densities which are targeted abutting the identified corridors. The above-mentioned density targets are applicable to even directly adjacent to the identified nodes and corridors.



NB: 'Table 10' on the diagram refers to the table above indicating densities for different types of corridors. 'Category 3' refers to the residential areas section below.

Residential Areas: The proposed densities for the residential category are listed as below and the densities have been categorised according to Residential zoning categories as contained in the Town Planning Schemes, namely Residential 1, 2, 3, 4 and 5. It is important to note that these targets are guidelines for residential areas and must be adjusted to local conditions.

Residential density targets

Residential zoning categories	Units/ Ha
Residential 1	25 – 30du/ha
Residential 2	30 – 65du/ha

Residential 3	65– 85du/ha
Residential 4	>85du/ha
Residential 5	20 – 40du/ha

Core Development Triangle: The Core Development Triangle is also identified as most suitable for higher density residential developments. It will contribute to the efficient use of infrastructure in the area and it will contribute to the sustainability of public transport investment and use. It will also bring people's homes closer to employment opportunities. This area will therefore have increased densities in terms of nodal development and transit oriented development and the same incentives would apply in the meeting of any special conditions. However, additional incentives may be granted due to the location of the higher residential developments in the demarcated area of the Core Development Triangle.

The following are the proposed densities for the Core Development Triangle.

Nodal Type	Density targets: 2025	
	Minimum	Maximum
Primary	120 units/ha	*
Secondary	110 units/ha	170 units/ha
Railway Stations (up to 500m)	120 – 210 (minimum –maximum)	
Railway Stations (500m-1000m)	100 – 170 (minimum –maximum)	
Transportation Corridors	100 – 120 (minimum –maximum)	
Activity Development Corridors	120 – 140 (minimum –maximum)	

10.3 INDUSTRIAL [PURPLE]

Light and heavy industries, service industries, warehouses and commercial uses. Noxious industries as per local town planning scheme. The table below indicates the type of industrial uses to be promoted per industrial area.

An Industrial Strategy is to be prepared which will help to devise an understanding of the key niche roles of each area. This may assist with investment in the area, and with the type of infrastructure required to support these activities. Statistics South Africa (StatsSA) have devised a list of Standard Industrial Classifications (SIC) and it is important that each industrial township is analysed in terms of this list to ensure that comparisons can be easily made to other areas. A summary list has been compiled as reflected in the table below. The tables below will be used to guide proposals on industrial development in the RSDFs.

Standard Industrial Classification: Albertina Sisulu Corridor

	Olifantsfontein	Clayville	Witfontein	Pomona	Eastleigh	Isando	Spartan	Jet Park	Hughes	Elandsfontein	Sebenza
Industrial Townships											
1 : AGRICULTURE, HUNTING, FORESTRY AND FISHING											
Agriculture, hunting and related services				X							
Forestry, logging and related services											
Fishing, operation of fish hatcheries and fish farms											
2 : MINING AND QUARRYING											
Mining of coal and lignite											
Extraction of crude petroleum and natural gas											
Mining of gold and uranium ore											
Mining of metal ores, except gold and uranium											
Other mining and quarrying		X									
Services activities incidental to mining of minerals											
3 : MANUFACTURING		X		X		X	X				
Manufacture of food products, beverages and tobacco products	X			X	X	X	X	X			X
Manufacture of textiles, clothing and leather goods				X		X	X	X	X		
Manufacture of wood and of products of wood and cork, except furniture		X			X	X	X	X	X		X
Manufacture of coke, refined petroleum products and nuclear fuel; manufacture of chemicals and chemical products; manufacture of rubber and plastic products		X				X	X	X	X		X
Manufacture of other non-metallic mineral products				X		X	X				X
Manufacture of basic metals, fabricated metal products, machinery and equipment and of office, accounting and computing machinery				X	X	X	X	X	X		X
Manufacture of other electrical equipment n.e.c.				X	X	X	X	X	X		X
Manufacture of radio, television and communication equipment and apparatus and of medical, precision and optical instruments, watches and clocks				X	X	X	X	X	X		X
Manufacture of transport equipment		X		X	X	X	X	X	X		X
Manufacture of furniture; manufacturing n.e.c.; recycling				X	X	X	X	X	X		X
4 : ELECTRICITY, GAS AND WATER SUPPLY											
Electricity, gas, steam and hot water supply							X				X
Collection, purification and distribution of water				X							
5 : CONSTRUCTION											
Construction			X	X	X	X	X	X	X		X
6 : WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, ETC											
Wholesale and commission trade, except of motor vehicles and motor cycles				X	X	X	X		X		X
Retail trade, except of motor vehicles and motor cycles; repair of personal household goods				X	X	X	X		X		X
Sale, maintenance and repair of motor vehicles and motor cycles; retail trade in automotive fuel				X	X	X	X	X	X		X
Hotels and restaurants				X	X	X	X				X
7 : TRANSPORT, STORAGE AND COMMUNICATION											
Land transport; transport via pipelines	X	X	X		X	X	X	X	X		X
Water transport											
Air transport				X	X						X
Supporting and auxiliary transport activities; activities of travel agencies	X		X	X	X	X	X	X	X		X
Post and telecommunications		X		X	X	X	X				X
8 : FINANCIAL INTERMEDIATION AND BUSINESS SERVICES											
Financial intermediation, except insurance and pension funding											
Insurance and pension funding, except compulsory social security											
Activities auxiliary to financial intermediation											
Real estate activities					X						X
Renting of machinery and equipment, without operator, and of personal and household goods				X	X	X	X	X	X		X
Computer and related activities				X	X	X	X		X		X
Research and development	X			X							
Other business activities				X	X	X	X		X		X
9 : COMMUNITY, SOCIAL AND PERSONAL SERVICES											
Public administration and defence activities						X	X				
Education					X						X
Health and social work					X						X
Other community, social and personal service activities					X						X
Activities of membership organisations n.e.c.											
Recreational, cultural and sporting activities					X						X
Other service activities					X						X

Standard Industrial Classification: Central Activity Belt

	Industries West	Industries East	Knights	Anderbolt	Dunswart	Boksburg East	Benoni South	Apex	Morehill	N12 Freeway Park	Puifontein
Industrial Townships											
1 : AGRICULTURE, HUNTING, FORESTRY AND FISHING											
Agriculture, hunting and related services											X
Forestry, logging and related services											
Fishing, operation of fish hatcheries and fish farms											
2 : MINING AND QUARRYING											
Mining of coal and lignite											
Extraction of crude petroleum and natural gas											
Mining of gold and uranium ore									X		
Mining of metal ores, except gold and uranium											
Other mining and quarrying								X	X		
Services activities incidental to mining of minerals							X				
3 : MANUFACTURING											X
Manufacture of food products, beverages and tobacco products							X	X	X		
Manufacture of textiles, clothing and leather goods							X	X			
Manufacture of wood and of products of wood and cork, except furniture				X	X	X	X	X	X		
Manufacture of coke, refined petroleum products and nuclear fuel; manufacture of chemicals and chemical products; manufacture of rubber and plastic products				X	X	X	X	X			
Manufacture of other non-metallic mineral products							X	X			
Manufacture of basic metals, fabricated metal products, machinery and equipment and of office, accounting and computing machinery				X	X	X	X	X	X		
Manufacture of other electrical equipment n.e.c.				X	X	X	X	X	X		
Manufacture of radio, television and communication equipment and apparatus and of medical, precision and optical instruments, watches and clocks				X	X	X	X	X			
Manufacture of transport equipment				X	X	X	X				
Manufacture of furniture; manufacturing n.e.c.; recycling				X	X	X	X	X	X		
4 : ELECTRICITY, GAS AND WATER SUPPLY											
Electricity, gas, steam and hot water supply											
Collection, purification and distribution of water											
5 : CONSTRUCTION											
Construction				X	X	X					X
6 : WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, ETC											
Wholesale and commission trade, except of motor vehicles and motor cycles				X			X	X			
Retail trade, except of motor vehicles and motor cycles; repair of personal household goods				X			X	X			X
Sale, maintenance and repair of motor vehicles and motor cycles; retail trade in automotive fuel				X	X	X	X	X			X
Hotels and restaurants							X	X			X
7 : TRANSPORT, STORAGE AND COMMUNICATION											
Land transport; transport via pipelines				X	X	X			X		X
Water transport											
Air transport											
Supporting and auxiliary transport activities; activities of travel agencies				X	X	X					
Post and telecommunications							X	X			
8 : FINANCIAL INTERMEDIATION AND BUSINESS SERVICES											
Financial intermediation, except insurance and pension funding											
Insurance and pension funding, except compulsory social security											
Activities auxiliary to financial intermediation											
Real estate activities											
Renting of machinery and equipment, without operator, and of personal and household goods				X	X	X	X	X	X		X
Computer and related activities							X	X	X		X
Research and development											
Other business activities				X	X						
9 : COMMUNITY, SOCIAL AND PERSONAL SERVICES											
Public administration and defence activities											
Education											X
Health and social work											
Other community, social and personal service activities											
Activities of membership organisations n.e.c.											
Recreational, cultural and sporting activities											
Other service activities											

Standard Industrial Classification: Wadeville Alrode Corridor

	Wadeville	Roodekop	Junction Hill	Alberton North	Alrode	Alrode South	Mapleton
Industrial Townships							
1 : AGRICULTURE, HUNTING, FORESTRY AND FISHING							
Agriculture, hunting and related services							
Forestry, logging and related services							
Fishing, operation of fish hatcheries and fish farms							
2 : MINING AND QUARRYING							
Mining of coal and lignite							
Extraction of crude petroleum and natural gas							
Mining of gold and uranium ore							
Mining of metal ores, except gold and uranium							
Other mining and quarrying							
Services activities incidental to mining of minerals	X						
3 : MANUFACTURING							
Manufacture of food products, beverages and tobacco products	X				X		
Manufacture of textiles, clothing and leather goods	X			X	X		
Manufacture of wood and of products of wood and cork, except furniture	X	X		X	X	X	
Manufacture of coke, refined petroleum products and nuclear fuel; manufacture of chemicals and chemical products; manufacture of rubber and plastic products	X	X		X	X		
Manufacture of other non-metallic mineral products					X		
Manufacture of basic metals, fabricated metal products, machinery and equipment and of office, accounting and computing machinery	X	X	X		X	X	
Manufacture of other electrical equipment n.e.c.				X	X	X	
Manufacture of radio, television and communication equipment and apparatus and of medical, precision and optical instruments, watches and clocks					X	X	
Manufacture of transport equipment	X	X		X	X	X	
Manufacture of furniture; manufacturing n.e.c.; recycling		X		X	X	X	
4 : ELECTRICITY, GAS AND WATER SUPPLY							
Electricity, gas, steam and hot water supply	X	X	X				
Collection, purification and distribution of water							
5 : CONSTRUCTION							
Construction	X			X	X	X	
6 : WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, ETC							
Wholesale and commission trade, except of motor vehicles and motor cycles	X	X	X		X		
Retail trade, except of motor vehicles and motor cycles; repair of personal household goods	X				X		
Sale, maintenance and repair of motor vehicles and motor cycles; retail trade in automotive fuel	X	X		X	X		
Hotels and restaurants				X			
7 : TRANSPORT, STORAGE AND COMMUNICATION	X	X	X				
Land transport; transport via pipelines					X	X	
Water transport							
Air transport							
Supporting and auxiliary transport activities; activities of travel agencies				X		X	
Post and telecommunications							
8 : FINANCIAL INTERMEDIATION AND BUSINESS SERVICES							
Financial intermediation, except insurance and pension funding							
Insurance and pension funding, except compulsory social security							
Activities auxiliary to financial intermediation							
Real estate activities							
Renting of machinery and equipment, without operator, and of personal and household goods	X	X	X	X	X	X	
Computer and related activities					X	X	
Research and development							
Other business activities				X	X		
9 : COMMUNITY, SOCIAL AND PERSONAL SERVICES							
Public administration and defence activities					X		
Education					X		
Health and social work							
Other community, social and personal service activities							
Activities of membership organisations n.e.c.							
Recreational, cultural and sporting activities							
Other service activities							

Standard Industrial Classification: Far East Industries

	Vulcania	Witpoort	Fulcrum	Labore	New Era	Enstra	Nuffield	Vorstskroon	Pretoriusstad	Prosperita
Industrial Townships										
1 : AGRICULTURE, HUNTING, FORESTRY AND FISHING										
Agriculture, hunting and related services										
Forestry, logging and related services										
Fishing, operation of fish hatcheries and fish farms										
2 : MINING AND QUARRYING										
Mining of coal and lignite										
Extraction of crude petroleum and natural gas										
Mining of gold and uranium ore	X									
Mining of metal ores, except gold and uranium										
Other mining and quarrying	X									
Services activities incidental to mining of minerals	X	X		X				X	X	
3 : MANUFACTURING										
Manufacture of food products, beverages and tobacco products			X		X		X	X	X	X
Manufacture of textiles, clothing and leather goods					X		X	X		
Manufacture of wood and of products of wood and cork, except furniture		X		X			X	X		
Manufacture of coke, refined petroleum products and nuclear fuel; manufacture of chemicals and chemical products; manufacture of rubber and plastic products	X							X	X	
Manufacture of other non-metallic mineral products			X	X	X	X	X	X		
Manufacture of basic metals, fabricated metal products, machinery and equipment and of office, accounting and computing machinery	X			X				X	X	
Manufacture of other electrical equipment n.e.c.	X					X				
Manufacture of radio, television and communication equipment and apparatus and of medical, precision and optical instruments, watches and clocks						X		X		
Manufacture of transport equipment		X		X		X		X	X	
Manufacture of furniture; manufacturing n.e.c.; recycling			X	X	X	X	X	X	X	
4 : ELECTRICITY, GAS AND WATER SUPPLY										
Electricity, gas, steam and hot water supply			X							
Collection, purification and distribution of water										
5 : CONSTRUCTION										
Construction	X	X		X				X	X	
6 : WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, ETC										
Wholesale and commission trade, except of motor vehicles and motor cycles			X		X	X	X	X	X	
Retail trade, except of motor vehicles and motor cycles; repair of personal household goods			X		X	X	X	X		
Sale, maintenance and repair of motor vehicles and motor cycles; retail trade in automotive fuel	X		X	X				X		
Hotels and restaurants										
7 : TRANSPORT, STORAGE AND COMMUNICATION										
Land transport; transport via pipelines	X	X			X			X	X	X
Water transport										
Air transport										
Supporting and auxiliary transport activities; activities of travel agencies	X	X								
Post and telecommunications										
8 : FINANCIAL INTERMEDIATION AND BUSINESS SERVICES										
Financial intermediation, except insurance and pension funding										
Insurance and pension funding, except compulsory social security										
Activities auxiliary to financial intermediation										
Real estate activities										
Renting of machinery and equipment, without operator, and of personal and household goods		X			X			X		
Computer and related activities										
Research and development										
Other business activities								X		
9 : COMMUNITY, SOCIAL AND PERSONAL SERVICES										
Public administration and defence activities								X		
Education										
Health and social work										
Other community, social and personal service activities								X		
Activities of membership organisations n.e.c.										
Recreational, cultural and sporting activities										
Other service activities										

Some areas consist either of pure commercial uses or of a mix of commercial and light industries. Currently there are no distinct commercial (warehouse/ distribution) nodes in Ekurhuleni, but several could be developed in future. These include:

- Along the R21 to the north of OR Tambo International Airport in the Pomona area;
- west of the OR Tambo Airport in the Isando-Jet Park area;
- selected areas along the N3 and R59;
- small areas in Benoni and Brakpan serving as infill development; and
- south of the N17 between Springs and Nigel and north of the Nigel CBD serving as infill development.

Focus should be on operational maintenance in these areas, i.e. refuse removal, road maintenance, law enforcement, building maintenance, etc. Detailed land use proposals are to be formulated in the RSDFs for these areas. Urban Renewal initiatives identified in the Urban Renewal Strategy should be implemented as a matter of priority. Municipal spending should be focused on these areas as the industrial areas contains the bulk of all job opportunities and form the backbone of the EMM economy. EMM Health by-laws must be strictly applied in industrial areas, with focus on reduction of air and water pollution.

The following EMM Development Policies are relevant to these areas and are specifically to be interpreted during the drafting of RSDFs: Tavern Policy; Spaza Policy; Container Policy; and Street Trading Policy.

10.4 MIXED LAND USE [PINK]

Mixed Land Use A (Airport Related): Airport related uses, warehousing, commercial including related retail trade, offices, hotels, guesthouses, conference facilities, and places of refreshment, light industrial/high tech industrial.

Mixed Land Use B (Business Related): Business, Offices, hotels, high density residential, places of refreshment, retail motor trade and related uses (only on designated areas), service industries, clean industries, conference facilities & commercial.

Mixed Land Use C (SMME): A combination of predominantly commercial land uses including SMME development and job creation. More areas for Mixed Land Use C must be identified in the RSDF, specifically in proximity to the previously disadvantaged areas, so as to stimulate economic development and job creation in these areas.

Mixed Land Use D (Residential): A combination of predominantly residential land uses to be determined pending soil conditions or further investigations. Land not suitable for residential development is to be optimally utilised mindful of exposure to the proposed PWV and other major routes.

Mixed Land Use E (Commercial): A combination of predominantly commercial land uses focussed on the transportation and finance sectors and aimed to optimal utilisation of the exposure to the corridors identified in this report (to be determined pending soil conditions).

Mixed Land Use F (Airport - Passenger): Passenger terminal, hotels, conference facilities, offices, public transport, passenger related retail, parking and airport other related uses.

Mixed Land Use G (Airport – Cargo & Technical): Aircraft maintenance, airline support, airline support offices, cargo, catering, airport support, ATC, and related uses.

Mixed land Use H (Casino): Casino, hotels, places of refreshment, entertainment and other casino related uses.

Mixed Land Use I (Offices): Offices and related development which may include restaurants, coffee shops, personal service industries, limited retail, social facilities and residential development.

10.5 MUNICIPAL OPEN SPACE

The natural open system indicated in the EBOSS includes highly stressed sensitive natural environments such as wetlands, rivers, streams and remnant patches of representative indigenous fauna and flora that are necessary to maintain bio-diversity and forms the primary open space network in Ekurhuleni and must be addressed as “no go” areas of development.

The Metropolitan nodes, local nodes and corridors form the primary open space network, which is considered as development “no go areas” where recreation, educational (environmental), tourism related uses and facilities are permitted, subject to environmental authorisation, may be developed with the open space network. Neighbourhood parks or “Public open space” zoned land and various servitudes classify the secondary open space system and must be linked, where possible, to the primary open space network in the RSDF.

The primary and secondary open space network must linked, where possible to facilitate a range of continuous recreational opportunities and act as channels for indigenous species, potentially facilitating the movement of pollinators and the dispersal of seed from one space to another. The land uses around primary and secondary open spaces should be carefully considered as the integrity of the primary open spaces network must be protected and it must also secure access for the general public to the primary open space network.

10.6 AGRICULTURE

Some areas outside the Urban Edge are earmarked for agriculture. These areas are the more remote parts of the Ekurhuleni Metro which are furthest removed from the urban activity.

The Gauteng policy on the protection of high potential agricultural land (2006) defines high potential agricultural land as “Having the soil and terrain quality, growing season and available moisture supply needed to produce sustained high yields of crops economically when treated and managed according to best possible farming practices”. Applying this definition, a land capability mapping study was completed during 2006 for Gauteng Province with the objective to identify and protect areas of high agricultural potential. The result of this study was subsequently classified and grouped into the following 5 classes:

- **Agricultural hubs:** High potential agricultural land that resides outside the urban edge. Seven hubs have been identified in the Gauteng Province.
- **Important agricultural sites:** All land identified as high agricultural potential land and located outside the urban edge but not within an identified Agricultural hub. A complete agricultural specialist study is required for any proposed development on these areas.
- **Incorporated within the urban edge:** All land identified and classified as high potential agricultural land but incorporated completely within the boundaries of the urban edge will not be regarded as viable land for future agricultural development.
- **Overlapping the urban edge:** High potential agricultural land that is located in close proximity and /or overlapping the urban edge boundary is regarded as agricultural

land that could be utilized for agricultural production purposes. A complete agricultural specialist study is required for any proposed development on these areas.

- **Protected area:** High potential agricultural land within protected areas will not be used for agricultural purposes.

Where a provincial department decides to approve an application (e.g. Housing) which does not comply with the criteria, then that department has to write a memorandum and draft recommendation and submit this for comment to all relevant provincial departments and the EMM before making a final decision. These parties must, again, be informed in writing of the final decision.

10.7 MINES & QUARRIES

Mines (underground and open cast), mine dump reclamation, quarries and related activities, including shafts, slimes dams, stone crushing, residential uses and offices subsidiary to mining activities.

The mining and quarrying operations involve place bound resources within the Ekurhuleni area and need to be recognised as an important part of the local economy which also contribute to social development and environmental rehabilitation. Mining activities, which includes underground and surface operations as well as mine dump reclamation, are important for releasing the mineral resources and contributing to local economic growth and development. In addition, the reclamation of mine dumps and the rehabilitation of polluted mining land are in line with the Hloekisa Project (Mainly national and provincial responsibility). Due to the nature of the work and associated cost implications, this is a long term and ongoing part of mining operations.

The quarry and aggregate operations are important as an essential source of high quality building and construction material that is mined, extracted and processed as a contribution to the economic growth and development of the metropolitan area and also providing employment opportunities. These operations are also an important contribution to the reclamation and rehabilitation of mining land for future development.

Due to the potential risks and environmental impacts of mining and quarry operations, there are strictly enforced management and control requirements. These are undertaken in terms of an approved Environmental Management Plan (EMP) required in terms of Section 39 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) (MPRDA) which superseded the Minerals Act, (Act 50 of 1991). The implementation of the approved EMP is monitored and assessed by the Minister and the Department of Mineral Resources in terms of the Act and its Regulations. In terms of the approved EMP, certain environmental impacts with mitigation and management measures regarding development are identified. These include, exclusion and safety zones that are defined regarding the relative proximity of the mining and quarry operations and surrounding current and future development;

The erection or construction of any buildings, roads, railways, or any structure within a horizontal distance of 100 metres from the workings of a mine or quarry shall comply with all the requirements and obligations of the Mine Health and Safety Act (Act 29 of 1996) and the associated Mine Health and Safety regulations. The precise impact of mining and quarrying activities on the environment is, however, critical information required for land use planning and the development of the adjacent and surrounding areas. Existing and proposed development adjacent to the boundaries of the mining and quarrying operations are obliged to take into account the associated exclusion and safety zones as noted above as well as the risks associated with the operations. Focus should also be similarly placed be on protecting

un-mined areas to protect the possible future mining and quarrying operations against development which may restrict and inhibit such operations and on the rehabilitation of mines and quarries after the closure of the operations.

While mining and quarrying operations have already ceased in many areas, the reclamation and rehabilitation of the affected land is a very time consuming process. Operational mining and quarrying activities are also envisaged to continue for the considerable future, in many areas this could be for more than 50 years.

However, where reclamation of mining or quarrying land has taken place and the land made available for development, appropriate studies and investigations regarding the potential development of the land and suitable uses should be undertaken. These studies and investigations will indicate the required measures to ensure the land can be suitably developed and used for a mix of land uses. Some of the vestiges of past mining activities in the area include surface mining areas, shallowly undermined land, slimes dams, mine dumps and residential villages. The findings of detailed investigations conducted into the future use of mining areas, indicate that the chances of meaningful use of these areas for other purposes in the short term are restricted. The development of rehabilitated mining land has however moved on and there are advances in technology and interventions to address any problems. In addition different types of land uses are also used to address particular issues. (Source: Adapted from comment by Andrew Barker, by email on 21 October 2010).

Additional to the above, the impact of past mining activities on the environment and responsibilities in this regard needs to be addressed. An example in this regard is the acid mine water issue and its impact on existing and future development. The environmental legacy of mining must not be ignored.

10.8 MUNICIPAL INFRASTRUCTURE

Map 12 indicates current and planned above ground bulk municipal infrastructure. Current below ground bulk infrastructure is captured on the Ekurhuleni GIS. Planned below ground bulk infrastructure are not mapped but is described in the MSDF Implementation Plan. The following types of above ground municipal infrastructure are indicated on Map 12:

- water reservoirs;
- waste water care works (WWCW's) – excluding private package plants;
- electricity main sub-stations; and
- land-fill sites.

In the case of current infrastructure, the land footprint of the facility is indicated. In the case of planned infrastructure, a symbol is used to indicate the approximate locality of the planned infrastructure. The amenities reflected on Map 12 with regards to Rand Water should not be misconstrued to assume that potable water is readily available.

10.9 SOCIAL INFRASTRUCTURE

Map 12 indicates current and planned bulk social infrastructure. Detail on current bulk social infrastructure is captured in the Ekurhuleni GIS. Detail on planned bulk social infrastructure will be address in the MSDF Implementation Plan as applicable. The following types of above ground municipal infrastructure are indicated on Map 12:

- hospitals (level 1, 2 and 3 hospitals);
- prisons;
- tertiary education;

- major sport & recreational facilities; and
- cemeteries.

In the case of current infrastructure, the land footprint of the facility is indicated. In the case of planned infrastructure, a symbol is used to indicate the approximate locality of the planned infrastructure.

In identifying and planning for these facilities, reference was made to the Executive Summary of the “Master Plan for Sport and Recreation, Arts, Culture & Heritage, Environment & Libraries and Information Services in the Ekurhuleni Metropolitan Municipality” (Maluleke, Luthuli & Associates, 2002, page 12).

10.10 TRANSPORT INFRASTRUCTURE

The land uses proposed in the SDF description above must be supported by transport infrastructure in order to materialise. This section gives a summary of the main transport infrastructure required. Only bulk transport infrastructure with a land use impact is indicated on Map 12.

10.10.1 Prasa Rail

The commuter rail services are operated mainly on railway lines owned by the Passenger Rail Authority of SA (Prasa). In addition, commuter rail services extend to some sections of the Spoornet owned railway network. Depending on the predominant use thereof, some stations (commuter stations) are owned by Prasa, whilst some stations on Spoornet lines are owned by Spoornet (Spoornet is a business unit of Transnet Ltd). Metrorail, a business unit of Prasa, operates the commuter services in Gauteng. This is done in terms of a negotiated concession agreement. Germiston Station located in Ekurhuleni is one of the largest commuter rail stations in Gauteng and also serves main line passengers as well as freight. All railway services in Ekurhuleni from the north run through Germiston Station. Information on planned commuter rail extensions and new stations that are planned by the Prasa in Ekurhuleni were obtained from the Prasa Physical Planning Department.

Stations are classified by the Prasa in three different groups based on the following main criteria:

A (Flagship): 40 000+ commuters per day; manned fully during hours of operation. In Ekurhuleni, this category consists of Germiston Station and Kempton Park Station.

B (Home Station): 15 000 to 40 000 commuters per day; manned fully during peak times and ad-hoc off-peak depending on operational needs. These Ekurhuleni Stations are indicated in bold in the table below.

C (Work Station / Halts): 0 to 15 000 commuters per day; manned on ad-hoc basis depending on needs. (Source: Concession Agreement)

The rail system in Ekurhuleni comprises 69 existing commuter rail stations or halts. These stations / halts are listed in the table below in alphabetical order, together with the number of passengers embarking and disembarking per weekday, its classification, owner, and its operational function (staging of rolling stock, maintenance and fault service).

Station Facilities and Functions

Station or Halt	Passenger Volumes Weekday	Prasa Classification	Owner
Alberton	994	C	Prasa
Alliance	3 905	C	Prasa

Station or Halt	Passenger Volumes Weekday	Prasa Classification	Owner
Angelo	8 510	C	Prasa
Angus	12 129	C	Transnet
Anzac	12	C	Prasa
Benoni	8 093	C	Prasa
Birchleigh	13 207	C	Prasa
Boksburg	5 683	C	Prasa
Boksburg East	4 953	C	Prasa
Brakpan	12 965	C	Prasa
Daggafontein	714	C	Transnet
Dallas	352	C	Transnet
Daveyton	27 088	B	Prasa
Delmore	2 488	C	Prasa
Driehoek	4 635	C	Prasa
Dunnottar	332	C	Transnet
Dunswart	25 947	B	Prasa
East Rand	9 663	NA	Prasa
Elandsfontein	32 051	B	Prasa
Elsburg	4 143	C	Prasa
Geldenhuis	3 174	C	Prasa
Germiston	93 670	A	Prasa
Germiston East	184	C	Transnet
Germiston Lake	467	C	Transnet
Germiston South	677	C	Transnet
Germiston West	971	C	Transnet
Gosforth Park	205	C	Transnet
Hillview	416	C	Transnet
India	224	C	Prasa
Isando	26 239	B	Prasa
Jupiter	168	C	Transnet
Kaalfontein	7 248	C	Prasa
Katlehong	3 944	C	Prasa
Kempton Park	40 899	A	Prasa
Klipriver	4 875	C	Transnet
Knights	4 916	C	Prasa
Kutalo	883	C	Prasa
Kwesine	7 434	C	Prasa
Leralla	28 073	B	Prasa
Limindlela	20 079	B	Prasa
Lindella	5 630	C	Prasa
Mpiliswini	3 472	C	Transnet
Natalspruit	7 135	C	Transnet
New Era	8 677	C	Prasa
New Kleinfontein	1 819	C	Prasa
Nigel	2 818	C	Transnet
Northmead	7 601	C	Prasa
Oakmoor	25 011	B	Prasa
Olifantsfontein	4 750	C	Prasa
Parkhill	2 134	C	Transnet
Pilot	7 913	C	Prasa
Pollak Park	6 525	C	Prasa

Station or Halt	Passenger Volumes Weekday	Prasa Classification	Owner
President	13 388	C	Prasa
Randwater	Not counted	NA	Transnet
Ravensklip	3 303	C	Prasa
Refinery	323	C	Prasa
Roadbend	413	C	Transnet
Schapensrust	3 114	C	Prasa
Selpark	442	C	Transnet
Servaas	1 111	C	Transnet
Simpan	Not counted	N/A	Transnet
Springs	9 298	C	Prasa
Struisbult	515	C	Transnet
Tembisa	22 997	B	Prasa
Union	2 956	C	Transnet
Van Rhyu	2 941	C	Prasa
Van Riebeeckpark	10 096	C	Prasa
Wadeville	5 193	C	Prasa
Wattles	1 437	C	Transnet
Webber	546	C	Transnet

(Prasa did not classify all Transnet stations)

With regards to the **extension of the passenger rail network**, a number of extensions are proposed:

- Tembisa to Ivory Park;
- Daveyton to Etwatwa;
- Etwatwa to Mayfield;
- Kwatsaduza (north-south);
- Kwatsaduza (east-west);
- Kathlehong to Eden Park; and
- Kathlehong to Vosloorus.

Prasa's top priorities for Ekurhuleni are Daveyton to Etwatwa; and Tembisa to Ivory Park rail extensions, but then these are again weighed against the national priorities. The planning for the Daveyton to Etwatwa corridor was done in the '90s and Prasa will do an economic feasibility study for this rail corridor in the next financial year (starting April 2011). Prasa will also embark on a National Strategic Master Plan in which all municipalities will be invited to participate. (source: email from Prasa, 10 February 2011).

With regard to the proposed Kwatsaduza extensions, Prasa will not develop the rail lines and stations until it is satisfied that people will use the facilities concerned in adequate values.

The EMM 2008 ITP identified Boksburg, Daveyton, Dunswart, Isando, Kempton Park, Rhodesfield, Springs, and Oakmoor as stations at which Mode Transfer Facilities should be developed. In line with this MSDF Concept Kempton Park, Rhodesfield, Boksburg and Isando Stations should received priority as it functions on the 'Inner Ring' of the proposed public transport system linking the core node and surrounding primary activity nodes.

The public transport modal split in Ekurhuleni is 73.7% for taxi, 19.3% for rail transport, and 7% bus transport. As in the rest of the country, the private vehicle utilization is very high – more than 50% of the total trips in Ekurhuleni. The Integrated Transport Plan (ITP) identified nine commuter movements between the disadvantaged areas and the areas of economic activity:

- Thokoza – Alberton
- Katlehong- Germiston
- Vosloorus- Boksburg
- Staking-Brakpan
- Kwa-thema- Springs
- Duduza- Nigel
- Daveyton- Benoni
- Tembisa- Kempton Park

From Germiston there are commuter railway lines in all four directions. This railway network links the disadvantaged communities of Tembisa, Katorus and Daveyton-Etawatwa to all four the core areas of economic activity identified. In addition to the normal commuter rail, the GSPTN also includes the Gautrain linking Sandton to the OR Tambo International Airport (ORTIA) with a commuter station in Rhodesfield. The Strategic Integrated Transport Plan (ITP) and the Metropolitan spatial development framework (MSDF) of Ekurhuleni confirmed that rail forms the backbone of the public transport system, although it is considered not to be optimized.

10.10.2 Bus services

Problems facing bus services are numerous. The biggest being the fact that bus industry is continuously losing market share to the taxi industry, with noticeable drops in passenger volume year to year. Other challenges facing the bus industry is that the current municipal service does not serve the EMM community as a whole, but only the area of Brakpan, Germiston and Boksburg.

In 2007 a study conducted by the Ekurhuleni Metropolitan Municipality suggested that the Metro needs to expand the bus services. The expansion can be dealt with in phases, the first being the expansion of services in areas currently being served (Germiston, Brakpan and Boksburg). This will fit this MSDF Concept if services are operated on the corridors as suggested on Map 12, with specific focus on the 'Inner Ring'. Phase two will see services introduced from existing areas to destinations in neighboring Metro areas then, lastly, introducing the bus services within the EMM area with the aim of linking EMM towns with each other. The last phase of implementation will thus focus on the 'Outer Ring' as proposed in the MSDF Concept.

10.10.3 Taxi services

Taxi mode is used by the highest number of people in Ekurhuleni. There are over 11000 mini bus taxis in the city, moving approximately 335 000 passengers per day. The highest taxi volumes occur in Germiston, Boksburg, Kempton Park, Benoni and Springs. More than 50% of all routes in the EMM area are over supplied.

The following are the routes along the main corridors:

- Daveyton to Benoni
- Kwethema to Springs
- Tsakane to Brakpan
- Duduza to Nigel
- Tembisa to Kempton Park
- Vosloorus to Boksburg
- Katlehong to Germiston
- Tokoza to Alberton
- Daveyton to Dunswart Station

Routes must be aligned to the routes as indicated on Map 12 of this MSDF, with focus on both the 'Inner Ring' and the 'Outer Ring'.

10.10.4 Integrated Rapid Public Transport Network (IRPTN)

The National Department of Transport's (DoT) Public Transport Strategy maps out a first phase to fast-track implementation programmes that target the initial development of a high quality, Integrated Rapid Public Transport Network (IRPTN) in at least 12 South African cities including Ekurhuleni Metropolitan Municipality (EMM).

The key focus is on initiating implementation in a speedy and highly visible manner with maximum impact. It is expected that successful implementation over the first two phases will see the improvement in public transport services for more than 50% of the inhabitants of the EMM. In this regard, the aim is to upgrade commuter rail services, bus and minibus taxi services to a Rapid Rail and a Bus Rapid Transit level of quality. Ultimately these services must be fully integrated to form a single system, regardless of mode. The basic aim is to improve the quality of public transport services throughout the EMM and would ideally comprise an integrated package of Rapid Rail, Bus Rapid Transit (BRT), bus, minibus taxi and metered taxi priority networks.

Through the approved EMM Modal Integration Strategy and Action Plan developed in 2008 the Integrated Rapid Public Transport Network (IRPTN) was identified. The IRPTN comprises of grid-based corridors along mobility spines linking main residential and economic nodes in line with the Metropolitan Special Development Framework. From a public transport point of view, the IRPTN is the most significant intervention to improve and promote the use of public transport in Ekurhuleni. The priority or so-called section for implementation is a North-South corridor from Tembisa to Kathorus.

The IRPTN will enable road-based public transport to operate quicker, safer and more reliably with focussed law enforcement, branding, maps and timetables and passenger interchange facilities along the routes. Increasingly, over time, minibus taxi and bus route-based operating licences will be shifted onto the IRPTN, as well as the Provincially- and City-subsidised bus services. It will provide a new, attractive and permanent, legible grid of road-based public transport services for the EMM.

Infrastructure provision between the nodes will comprise priority lanes and associated infrastructure reserved for the use of public transport vehicles only. Nodal infrastructure will involve development of ranks and minor stopping facilities. It is the intention that the IRPTN's will comprise metropolitan-wide controlled networks of rapid public transport corridors together with a feeder system of buses, minibus taxis, bicycles, pedestrian access, as well as park-and-ride facilities. The IRPTN developments will prioritize public transport and non-motorized transport over private car travel and must, on a pilot project basis, dedicate road space to these modes.

The components of the network are as follows:

- 85% of all residents within 1 km of the Integrated Rapid Public Transport Network by 2020;
- Upgraded fleet and infrastructure;
- 16-24 Hour per day operations;
- Peak frequencies (5–10 min), Off peak frequencies (10–30 min);
- Full accessibility to the system for physically challenged/disabled;
- Safe and secure operations monitored by control centre;
- Electronic fare integration; and
- Integrated feeder services including metered taxis and intercity services.

The development of the full integrated network is envisaged to take place over a series of phases, in order to match the available resources for planning, finance, and construction. The following phases are recommended:

- Phase 1: From Ivory Park and Tembisa in the north to Germiston and from Katlehong in the South to Germiston via Alberton.
- Phase 2: From its origin in Kempton Park at its junction with the Phase 1 Route, through Kempton Park to OR Tambo International Airport and thence to Benoni via Boksburg North and finally southwards through Boksburg towards Vosloorus.
- Phase 3: From OR Tambo International Airport to Germiston.
- Phase 4: From Kempton Park to Kwatsaduza via Benoni and Brakpan with a southerly spur to Germiston, intersection with the Phases 1 and 2 routes.
- Phase 5: From Daveyton to KwaThema

The focus point of the EMM IRTPN covers the entire area of EMM jurisdiction. The economic nucleus is the area between Kempton Park Germiston and Boksburg which includes OR Tambo International Airport. This is the area known as the Core Development Triangle. It is highly accessible because of the convergence of road and rail lines but it does not have a well coordinated or integrated internal public transport system. This Development Triangle together with the Tembisa residential area in the north of EMM will be the nucleus of the Phase 1 IRPTN for Ekurhuleni. The development of EMM focus areas will require the support of a visible, high quality public transport network connected to all the longer distance public transport services and local feeders. The Proposed road based public transport links are indicated on Map12.

Phasing of the IRPTN implementation needs to be aligned with this MSDF Concept of a Core Node, Core Development Triangle, 'Inner Ring' and 'Outer Ring'.

10.10.5 Modal Transfer Facilities

During the GSPTN exercise the possible location of strategic modal transfer stations were identified. These included both existing facilities as well as possible locations for future facilities. These locations were then ranked according to a number of criteria. Those modal transfer stations located in Ekurhuleni that were identified in the GSPTN are listed in the table below.

Strategic Modal Transfer Stations (Existing and Future)

DESCRIPTION OF FACILITY	PRIORITY
Intersection of rail and rapid rail Gautrain. Close to Rhodesfield Station	High
OR Tambo International Airport. Close to OR Tambo International Airport Station (Gautrain)	High
Intersection of rail and rail. Close to Germiston Station.	High
Intersection of rail and rail. Close to Dunswart Station and intersection of K106 and K155.	High
Daveyton Station.	Medium
Tembisa Station	Medium
Mpliswini Station (Tokoza/Natalspruit hospital)	Medium
Kempton Park Station Close to intersection of K105 and K68.	Medium
Intersection of K132 and rail. Close to Springs Station and intersection of K132 and K175.	Medium
Intersection of rail and rail. Close to Driehoek Station, President Stations and intersection of PWV14 and rail	Medium
Intersection of K60 and rail. Close to Leralla Station	Medium
Intersection of K85 (K146) and rail. Close to Angus Station.	Medium
Vosloorus transfer. Close to K155.	Low
Intersection of K60 and rail. Close to Kaalfontein Station and intersection of K60 and K105	Low

Intersection of PWV16 and rail. Close to Natalspruit Station and intersection of PWV16 and K89.	Low
Intersection of K155 and rail (Pilot Station).	Low
Intersection of rail and rail. Close to Delmore Station and intersection of K127 and PWV14.	Low
Benoni Station	Low
Brakpan Station. Close to K163.	Low
Intersection of K173 and rail.	Low
Intersection of K133 and rail. Close to intersection of K133 and K126.	Low
Intersection of K27 and rail.	Low
Intersection of K132 and K133	Low
Intersection of K155 and K133	Low
Intersection of K132 and K155. Close to intersection of PWV15 and K132 and intersection of PWV15 and K155.	Low
Intersection of K132 and K109.	Low
Intersection of K161 and K132.	Low
Intersection of K109 and K110 (New Kleinfontein Station).	Low
Intersection of K106 and K161.	Low
Intersection of K150 and rail. Close to Nigel Station.	Low

The prioritisation of the modal transfer facilities listed above needs to be reviewed to support the implementation of the proposed 'Inner Ring' and 'Outer Ring' as proposed on Map 12.

10.10.6 Freight Infrastructure

10.10.6.1 Road freight routes

In this study existing roads carrying large volumes of heavy vehicles were identified. Using this information and the future PWV road network to be constructed before 2025, road freight routes were identified. Using these routes, road freight transport can be structured to reduce congestion on other routes, increase the efficiency and competitiveness of freight transport, improve safety and inform EMM's road improvement programme.

In practice operators select the route according to their preferences which could include the shortest distance, the least travel time etc. and there will be many other roads that also carry freight traffic. There is also a network of distribution roads such as the access roads to and the internal roads inside an industrial area. However, once the freight routes have been identified, they could be promoted to encourage freight hauliers to use these routes instead of others where heavy vehicles are undesirable such as some commuter routes, e.g. the Ben Schoeman Highway and roads in residential areas. At least some of the freight routes will be identified for the transport of hazardous materials and abnormal loads.

The following criteria were used in selecting freight routes:

- the roads should be of a higher geometric standard such as freeways or K-routes and it should be possible to improve the road to such a degree that it would be attractive to freight operators and drivers;
- the route should have a substantial length and a significant end destinations; and
- many of the routes could carry traffic en route through the EMM area.

The existing roads were identified based on analysis of different vehicle categories as recorded at different traffic counting points in Ekurhuleni. From the data available it was possible to disaggregate the AADTT into the three HGV sub-categories mentioned above. Other routes, where counts were not available, were also identified based on the location of industrial areas in relation to the main road network. In principle however, freight should be

carried on the rail network instead of building more roads for freight. The freight rail network is discussed below.

10.10.6.2 Main Freight Rail Lines

Germiston to Beitbridge: This line runs from Germiston via Pretoria and Polokwane to Beitbridge and serves the Gauteng and Limpopo Provinces and carries international traffic to countries north of South Africa. In the metropolitan areas it is also used for commuter trains and it serves the industries adjacent to the railway line. Some through freight trains use this route but the majority is routed through the Sentra Rand marshalling yard.

Apex to Witbank: This line runs from Apex via Welgedacht and Ogies to Witbank and is mainly used for coal transport originating in Mpumalanga and directed to destinations in Gauteng and other provinces. A significant portion of the coal traffic is diverted at Welgedacht to freight bypass lines and Sentra Rand, to avoid the busy Metro area.

Krugersdorp to Springs: This route starts in Krugersdorp and goes via Johannesburg, Germiston, Springs, Dunswart, Alliance, Range View and Welgedacht to Springs. The route is part of the Metro suburban area but many intra-state freight trains use portions of these lines to serve local customers and industrial areas, such as Germiston East and South, Boksburg East, Vulcania and New Era. There are important marshalling yards at Germiston and Springs.

Springs to Secunda: The Springs, Bethal, Breyten line to Secunda is a single track line. This line serves the Mpumalanga highveld agricultural areas and the synfuels plant at Secunda. It also serves the forestry industry of eastern Mpumalanga and transports pulpwood to the large Enstra paper mill at Geduld.

Germiston to Volksrust: The Line from Germiston via India and Union to Volksrust links Gauteng with the east coast ports of Durban and Richards Bay and is the busiest freight line in South Africa. Traffic to Kaserne and City Deep is routed via Union and India while the traffic to Germiston is routed via Union. The line handles about 10 million tons of import-export and domestic traffic per year. It is used by container and bulk traffic from Gauteng and other provinces to countries north of South Africa.

Union to Cape Town: The Union, Vereeniging, Bloemfontein, Cape Town line is the through route for traffic to and from East London, Port Elizabeth and a significant portion of the Cape Town traffic. The Ekurhuleni section serves major industrial areas with inter-state and intra-state bulk traffic both received and generated at stations such as Union. To avoid the busy Metro area, many freight trains use the bypass route from Skansdam (north of Henley-on-Klip) towards Springs and Sentra Rand.

Rand Mineral Line: This line stretches from Langlaagte and New Canada via Kaserne, Germiston, India Junction, and Germiston South to Elsburg. This line serves container traffic from the east in and out of City Deep Container Terminal and other industrial areas. The Kaserne Marshalling Yard serves the City Deep and the Kaserne goods sheds.

Springs to Kaydale: This line, originally intended to serve the gold mines between Springs and Nigel which are now closed, serves the industrial areas which developed on the old mine locations. It also provided an alternative route for agricultural traffic from the eastern Free State to the east Rand. It is also used by Metro suburban trains.

Springs to Rooikop: This line was designed as a bypass route for heavy coal traffic from the Witbank area to the heavy industries in the Vaal Triangle area. It has been partly superseded by the Sentra Rand – Skansdam bypass line.

Sentra Rand lines: There is a line that runs from Sentra Rand to the north, connecting to various lines that serve the northern regions of the country and beyond. Another line runs from Oakmoor (on the Germiston – Pretoria line) to Sentra Rand.

Other Freight Lines: A connecting line runs to Welgedacht for the traffic from the Witbank coalfields. Another line runs past Springs to connect with the Union – Durban mainline and the Germiston – Vereeniging mainline.

Despite the extensive rail infrastructure already present in EMM, large portions of this valuable resource are under- or unutilised. It would be unrealistic to promote all the areas in EMM for rail-based industry, but the following areas stand out as those with an existing rail

client base which could be promoted and marketed as such. Six potential areas have been identified:

- Isando / Spartan (including the Kelvin power station);
- Germiston South and South East;
- Alrode / Wadeville / Roodekop;
- Boksburg East;
- Vulcania / New Era; and
- Vorsterkroon.

A commitment should be obtained from Transnet Freight Rail to support an improvement in levels of service to these areas, and a joint marketing initiative should be developed to promote them as rail served industrial areas. As part of investigating freight rail lines for Gauteng, Transnet commissioned the 'Gauteng Basin Plan – Options Report' in 2007. "The plan reviews the practicalities of providing an orbital 'Freight Ring' around the Basin (Gauteng) area, making possible the following enhancements:

- Through services can bypass the busy SARCC routes;
- Additional track capacity becomes available;
- Alternative diverse train paths become available;
- Congestion at key junctions is reduced; and
- The haulage distance for certain trains are reduced." (Source: Transnet, 'Gauteng Basin Plan – Options Report', page viii).

More detail regarding freight rail operations and planning is available from the Transnet Gauteng Basin Plan – Options Report, and from other Transnet reports.

10.10.6.3 Inland Ports/ Logistics Hubs

Transnet commissioned the 'Sentrarand Pre Feasibility Study'. According to the December 2007 Report, "This Sentrarand study has provided an overview of the proposed development of the existing Sentrarand site in east Gauteng to support national intermodal traffic movements for the future. The objective of this development is primarily to enable support of the desired increase in rail-carried intermodal transport into the future and also to enable significant market share of freight transportation to be achieved by Transnet.

"In order to capture the desired market share for intermodal freight movement, it is imperative that rail can compete with road transportation. This requires that optimally sited, appropriately equipped and efficiently operated intermodal terminal facilities are provided to enable time and cost effective transition between rail and road, road and road & rail and rail. One such option is to site a terminal close to the major supply and distribution areas, which, for South Africa are typically Gauteng and the areas surrounding the major Ports. To reduce storage space requirements at the Port, it is preferred to move commodities as quickly as possible to the destination(s). Therefore, the option of citing an intermodal terminal in Gauteng, capable of accommodating the intermodal traffic entering the Province and its capture area will provide a positive solution to reduce volumes in already congested areas.

"One potential location for construction of such a terminal was identified as the Sentrarand site in the east of Gauteng. This site covers an extensive area of land (circa 5,600 hectares) that is currently owned by Transnet and is the location of an existing large marshalling yard. The site was originally obtained in the 1970s with the intent to construct 4 such yards, however only one was built and the remaining land remains undeveloped with significant rail access infrastructure and existing rail links to major destinations, which are currently operational and in good condition. Current traffic at the Sentrarand yard is in the region of circa 25 trains a day for marshalling.

“Within the Gauteng Area, estimated future demand data, combined with desired rail freight transportation market share aspirations indicate that the market for intermodal transport is likely to increase such as to require facilities to accommodate circa 100 (50 wagon) container trains and 20 (50 wagon) automotive trains a day in Gauteng by 2036. It is estimated that approximately 40 (50 wagon) break bulk trains are also likely to enter Gauteng in 2036.” (Source: Transnet, Sentraraand Pre Feasibility Study, page 97).

The Gauteng MEC for Economic Development, Qedani Mahlangu, said the province supported the establishing, as early as next year (2012), of an inland port in Ekurhuleni that has the potential to create permanent and sustainable jobs. The Tambo Springs Inland Port, near townships such as Vosloorus, Magagula Heights and Katlehong, would focus on manufacturing, transport and logistics. It will create a competitive working environment attracting foreign direct investment and creating about 50 000 new decent full-time jobs for the surrounding community. The port would link Gauteng with the other ports in KwaZulu-Natal, Western Cape and Eastern Cape and serve existing industrial areas. (Gauteng online, February 2011)

The proposed Tambo Springs Inland Port is further described in the section dealing with the extension of the Urban Edge (par 9.5.12).

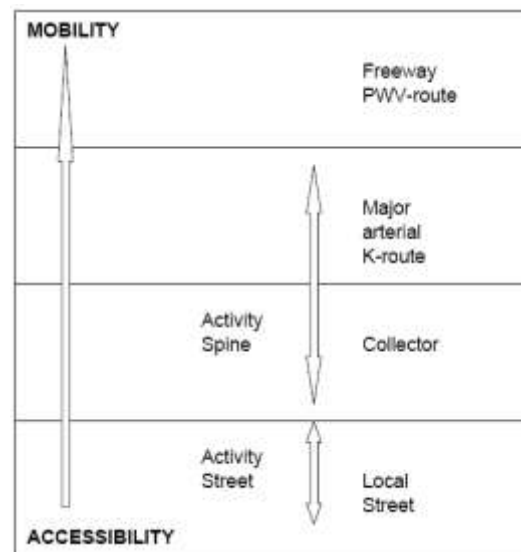
10.10.7 Roads

The following table from the Ekurhuleni Corridor Study (page23) indicates the relationship between the road and corridor hierarchy in terms of various levels of accessibility and mobility.

10.10.7.1 Class 1 Roads: Freeway Network

The freeway network in Ekurhuleni ensures good regional accessibility for the EMM area, and links it to all major centres in a Southern African context. The current freeway network is, however, mainly radially orientated towards Greater Joburg. The priority expansion of the freeway network in Ekurhuleni revolves around:

- PWV 15 which will unlock the development opportunities to the east of OR Tambo International Airport;
- PWV 13 which will directly link OR Tambo International Airport with the N3 and which will improve accessibility of the Core Development Area; and
- PWV 14 which will link Germiston and the Central Activity Belt to OR Tambo International Airport and the R21 and N12 freeways.



The impact of the tolling of many of the current freeways in Ekurhuleni need to be investigated, especially with regard to potential ‘rat running’ on lower order provincial and municipal roads.

10.10.7.2 Class 2 Roads: Second Order Road Network

The main objective of this second order road network is to serve the metropolitan area in north-south and east-west directions of movement and to link residential areas to one another and to the core areas of economic activity. This network also link areas of economic activity to one another and promote mixed use and high density developments adjacent to

these routes (subject to road access management requirements). The network promotes public transport along these routes as a priority.

Six main north-south desire lines have been identified and are described below:

- Route K117/K127/K123. This route runs from Tembisa past Spartan and Isando, past Germiston CBD and through Wadeville, linking Spruitview (Vosloorus). The route then loops back through Kathlehong and Thokoza to Alberton.
- Route K105/K90/K131. This route links Tembisa, Kempton Park CBD, Isando and Spartan, Jet Park, OR Tambo International Airport, Boksburg CBD, Sunward Park and Vosloorus.
- K155 which is the extension of the PWV15, and then passes through Anderbolt, Van Dykpark and Vosloorus. The route then loops back through Kathlehong and Thokoza to Alberton.
- K109 which links the northern suburbs of Benoni to the Benoni CBD and Benoni South Industrial area, from where it stretches southwards past Tsakane and eventually link up with the N3 freeway.
- K161/K154 which serves Daveyton-Etswatwa from where it passes southwards towards the Springs CBD, New Era industrial area, then past Kwatsdusa and Nigel up to where it links to the N3.
- K175 which links Etswatwa to Springs CBD and then beyond to Nigel.

In an east-west direction there are three priority areas:

- K68 which is to link the Daveyton-Etswatwa complex to the OR Tambo International Airport area.
- K106 which links the Daveyton-Etswatwa complex to the Central Activity Belt including Benoni, Boksburg and Germiston.
- K132/K163/K116 which links Springs to Brakpan CBD (Far East Activity Belt) and then to Boksburg (Central Activity Belt).

The prioritisation of the above listed routes must be reviewed in the RSDFs to support the implementation of the proposed Core Development Triangle ('Inner Ring' and 'Outer Ring') as proposed on Map 12.

The following routes are deemed to be very important strategic linkages required to optimise the development potential of the Ekurhuleni Metropolitan Municipality:

- **PWV14** from Germiston to OR Tambo International Airport;
- **PWV13** to extend southwards from R21/N12 Witbank systems interchange to N3 just past N3/K155 services interchange in Vosloorus, to provide as a central mobility spine for this north-south strip of development in Ekurhuleni;
- **K60** to link Tembisa-Kempton Park to Midrand;
- **PWV15** between the N12 Witbank and R21 north, to unlock development potential to the east of OR Tambo International Airport; and
- **K86** to link Daveyton to OR Tambo International Airport and to unlock development potential of area north of the N12.

The upgrading or construction of the above mentioned classes 1 and 2 road are important mobility routes. These routes are however National (SANRAL) & Provincial responsibilities. The developments planned by the EMM will have to be in line with that of the above authorities. EMM has no control as to when these facilities will be constructed or upgraded.

10.10.8 The Gautrain

The Gautrain will be important in regard to airport access only in respect of OR Tambo International Airport. Otherwise, the planned Gautrain will be a valuable public transport asset in the EMM area generally. It will provide quick and safe access from Johannesburg

CBD via Marlboro and Sandton to OR Tambo International Airport. It will also provide access from Tshwane to OR Tambo International Airport although this is less direct in that the routing would be via Sandton. The present planning for the Gautrain provides for access to OR Tambo International Airport's Western Precinct only. However, it would appear that it would be relatively easy to extend it to the Southern Midfield Terminal area. Further extensions of the Gautrain could include a direct link from OR Tambo International Airport to Tshwane along the R21 corridor and services to some of EMM's CBDs.

Together with the Gautrain, extensive parking facilities are available at the various stations, especially Sandton, which will be designed to encourage airline passengers to park away from the airport. It is presently envisaged that check-in facilities for passengers could also be provided at Sandton Station.

10.10.9 OR Tambo International Airport

Through the Airports Company of South Africa (ACSA), OR Tambo International Airport has a highly organised planning strategy and a team of dedicated personnel to keep the plan updated. Draft proposals for the foreseeable future and development to an ultimate capacity of 55 million annual passengers were provided to the ITP planning team. Such anticipated growth and developments, as well as the positive influence on Rhodesfield and surrounding areas has given rise to the Aerotropolis concept. The main points are summarised below.

The passenger projections are currently running about two years ahead of previous predictions. The projected 2006 volume was reached in 2004 and the current annual throughput is about 16 million passengers per year. The OR Tambo International Airport team estimates the current capacity of the Western Precinct to be reached in about 2012 when the passenger throughput could reach 24 million per year. The team also estimates that the Cargo Area will reach saturation by the year 209. This means that development of the midfield area and its attendant access arrangements will have to start relatively soon. This has considerable impact on the road planning in the area.

In addition, it is estimated that the capacity of the present runway system will be exceeded once the annual passenger throughput reaches 30 million. This will require additional runways to be added with their attendant environmental problems. Suffice it to say that ACSA's OR Tambo International Airport team is addressing all of these issues in consultation with the affected National, Provincial and Local Authorities. Nonetheless, it is noted that there will be considerable problems to be overcome in terms of environmental impact, land acquisition and, above all, land access. The proposed double parallel runway configuration and southern midfield terminal arrangements can be achieved as far as the airfield itself is concerned. However, access will be complex and will require considerable expansion of the road system as well as extension of the Gautrain rail line to serve the southern midfield terminal area.

It has been pointed out by the OR Tambo International Airport team that the airport itself adds only of the order of 10 percent to the traffic volumes presently encountered on the existing road system. Nevertheless, provision of access to the airport complicates the road system considerably by requiring additional ramps with sub-standard weaving lengths. In addition, to provide for road capacity and flexibility of routing to the airport, additional roads will need to be provided as a matter of urgency. These roads include the PWV15 (especially between N12 and R21), PWV14, PWV13, K86 and K88. In addition, other measures such as the Gautrain and extensions of it as well as High Occupancy Vehicles on dedicated lanes may be considered to alleviate the pressure on the road system.

It is noted that OR Tambo International Airport is now located in an expanding urban area such that traffic volumes generated by other urban developments are growing rapidly. These could become a limiting factor in OR Tambo International Airport being able to reach

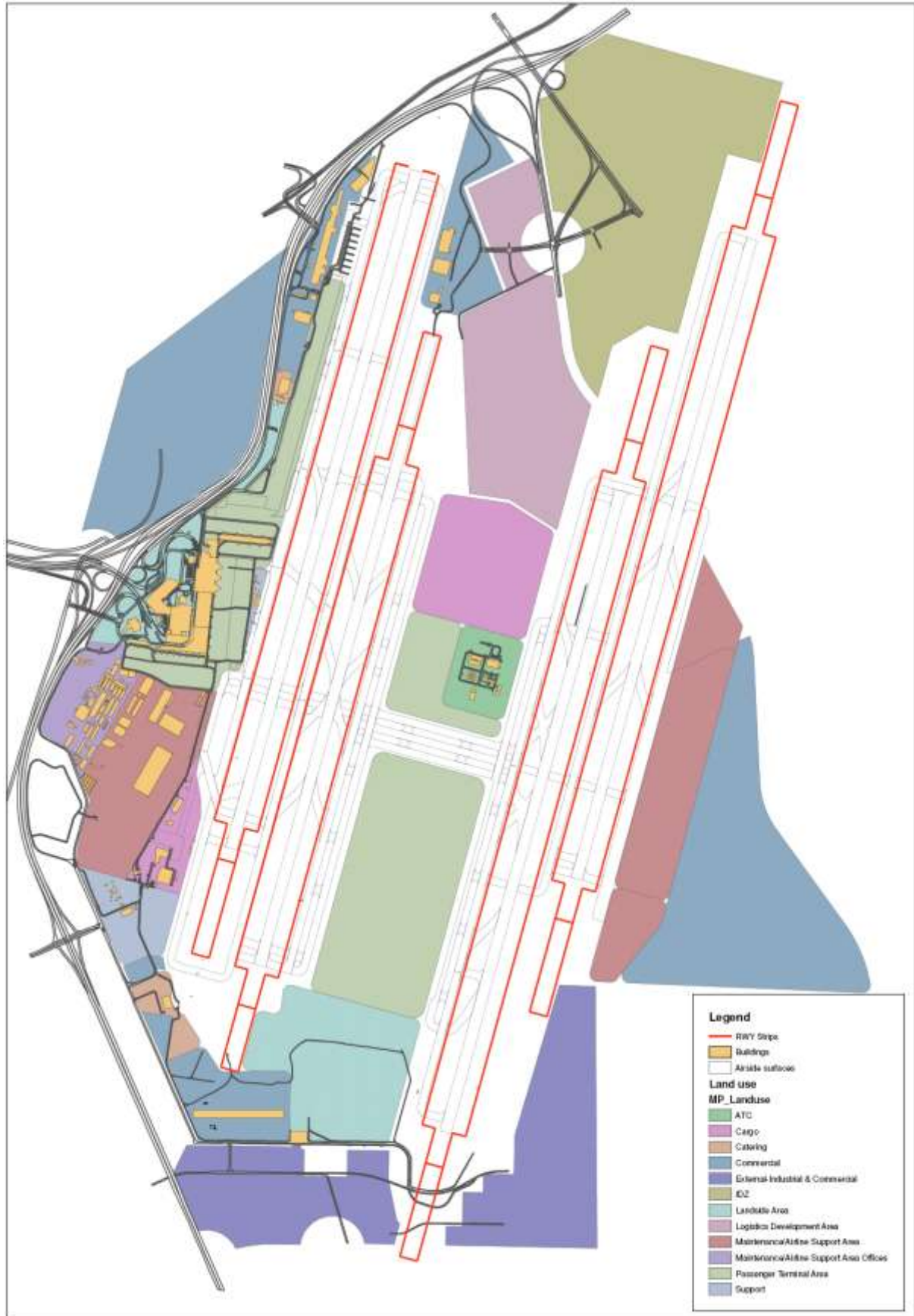
its full projected capacity. This could have the knock-on effect of requiring another site for a second major international airport to be found at an early date. It is clear that the traffic aspects of access to OR Tambo International Airport as well as changes to land use in the area need an in-depth study to determine if the projected traffic can indeed be accommodated even with the additional roads and other measures mentioned above and discussed later. At the same time it is suggested that a study should be launched at an early stage to identify alternative sites and to reserve the land for another future major international airport for Gauteng.

Airport Expansion: Based on January 2011 input received from ACSA, all figures and estimates on the capacity of the airport as mentioned above will need to be reviewed based on new technology and new developments. Inter alia, the successful implementation of Gautrain is alleviating past problems in providing effective passenger access to the Western Precinct, providing to possibility of increased capacities for the Western Precinct. Additionally, new technologies in air traffic management may lead to an increase in the number of aircraft that can be accommodated per runway. Irrespective of such changes, it is still envisaged by ACSA that the proposed Midfield Terminal will, over the long term, outgrow the existing Western Terminal, with respective estimated capacities of 30 million and 40 million passengers per annum. According to ACSA (email January 2011) the first phase of the Midfield terminal should be operational in 2017-19.

With regard to surrounding land uses, ACSA indicated that the land use proposals contained in the MSDF, supports the long term development of OR Tambo International. Alternative proposed land uses for the Bonaero Park area should however be investigated during the drafting of the applicable RSDF, mindful of the development of the Midfield Cargo Terminal and the proposed Industrial Development Zone. A number of operational restrictions e.g. height limitations apply to areas surrounding the airport.

The above proposals for expansion to OR Tambo International are all provided for in ACSA's OR Tambo International Airport Master Plan. The Master Plan is reflected in the figure below.

OR Tambo International Airport Master Plan (source ACSA, 2011)



The immediate implications of the phenomenal growth being experienced at OR Tambo International Airport and assuming that the present trend continues are that there are and will be further knock-on effects for other airfields in terms of taking up the overflow traffic. This knock-on effect cascades down through the various airfields as will be outlined below. The first of these knock-on effects will probably be the relocation of all non-scheduled and low-cost airline traffic probably to Lanseria on the West Rand which is the airport in the next level of hierarchy. Lanseria is followed in the hierarchy below that by Wonderboom in Tshwane, Grand Central in Midrand and Rand Airport in Germiston.

10.10.10 Other Airports

10.10.10.1 Rand Airport

Rand Airport is privately owned. It is situated in Germiston in the north-east quadrant of the junction of the N3 and N17 highways. Discussions were held with the Airport's manager to ascertain plans for the future development of the airport. Suffice it to say that these plans are very ambitious. Physical characteristics of the airport are as follows:

- It has a 1760 metre main runway which is planned to be extended by 440 metres making it suitable for small to medium sized jet aircraft. Strangely, the orientation of this runway is at right angles to the prevailing orientation at all other airfields in the area. The main runway is currently only 15 metres wide but can easily be widened.
- It has a shorter secondary runway at the normal orientation but this cannot be extended.
- It has a permanently manned control tower which constitutes one of the main operating costs.
- It has a well equipped terminal building with offices, restaurant and briefing rooms.
- It currently serves as the base for many flying clubs, charter companies and other general aviation activities.
- Aircraft operations are restricted to an altitude 7000 ft so as not to interfere with operations into ORTIA. Advice received from the CAA is that this is not a major problem and can be accommodated within the operating procedures for the airfield;
- The airport handles about 6000 landings per month.

The airport's owners are planning to sell off surplus ground as subdivided erven for the development of airport related activities such as warehousing and cold storage facilities to accommodate perishable cargoes. In addition to the airport's own land, there are a further 50 hectares of developable land adjacent to the airport which is zoned for warehousing type uses. In the light of this and its proximity to City Deep freight terminal, the airport sees itself as becoming a regional freight and passenger hub. Traffic expansion is expected with the land development, but, like Wonderboom, the major success of these plans will depend largely on being able to get a SADC Regional Operating licence with a reintroduction of customs and immigration facilities.

One problem that the airport management complains about is the restricted road access. This is relative and despite its proximity to the regional freeway network, access from the network is only indirect. There is direct access from the north via the N3 to the airport but the return link is not available and has to be made by way of the N17 or central Germiston. Also, to take advantage of its proximity to City Deep, it would need improved road access across the N3. There is good freeway connection from close to Rand Airport to ORTIA and this would be improved further with the construction of the PWV13 and PWV14.

It is interesting to note that noise complaints from neighbouring residential areas are not a major issue despite the fact that there is a residential area located at the eastern end of the main runway. Residents of areas on the western approach to the main runway across the freeway system do occasionally complain. This position could change if the main runway is extended and widened thereby catering for larger aircraft. All planned land uses on the airfield and to the north of it would not be noise sensitive. Major highways are located to the

south and west. It is inevitable that, if these development plans come to fruition, the flying clubs and small general aviation operators will be forced away because of the cost of operating from this airport.

10.10.10.2 Brakpan Airfield

“Brakpan Airfield is owned by the EMM and is leased to the Brakpan Flying Club on a 9 year renewable lease basis but there are plans for the club to buy the facility from EMM. The physical characteristics of the airfield are as follows:

- It has a 1830 metre long surfaced main runway including two stopways. This is adequate for existing operations and envisaged future operations.
- It has a shorter secondary grass runway for use when there is a strong cross wind for the main runway.
- It has a control tower which is not manned and there is no intention of manning it.
- The airfield has 146 hectares of land
- The airfield is home to 70 aircraft at present and the only restriction on expanding this is the lack of security of tenure for the many applicants for hangar space. Currently 35 applications are on hold awaiting approval by EMM.
- Due to ORTIA air space restrictions, there is a height limitation of 7600 ft for operations at Brakpan Airfield. The CAA and local operators advise that this is not a problem for operations out of this field.
- There is convenient though indirect access from the N17 and local main road network for the relatively small volumes of traffic involved.
- The airfield is the one used by clients arriving by air at the Carnival City Casino.
- There are some users related to the Ekurhuleni East College.
- The northern end of the field is classified as mined ground which is acceptable for airfield use including hangars but not for some other urban land uses including housing.

“Discussions with the Committee of the Flying Club has revealed that they are expecting to be able to take advantage of the overflow from the other larger airfields and could accommodate nearly 300 more permanent users if such clients find it too expensive to remain at the larger airports. Plans have already been drawn up to cater for additional hangars along the western side of the field and a residential aeropark on the eastern side. However, developments at the airfield are currently being restricted because of the inability of prospective clients to get plans approved. The Committee sees the future of the airfield as accommodating corporate users, general aviation, local tourism operators, training operations and maintenance facilities displaced from elsewhere.”

“On the noise issue, it should be noted that the airfield is situated with residential areas to the east and south. Complaints about noise are received and these are dealt with on an *ad-hoc* basis. The Committee advised that the main cost of operating the airfield would be the provision of a permanent air traffic controller. However, this would not be necessary until movements exceed 100 per day.”

(Source: Ekurhuleni Draft ITP, 2008, page 295)

The future use of the airfield must be investigated in the RSDF.

10.10.10.3 Springs Airfield

“Springs Airfield is owned by the EMM which leases the land to the East Rand Flying Club on a 20 year lease basis, which period may be extended. Although reluctant to continue the lease, EMM maintains the fixed infrastructure comprising the main runway. The Flying Club cuts the grass and maintains the land and other facilities on the field. Discussions were held with the Committee of the Flying Club and the following general data were obtained:

- It has a 1600 metre long by 15 metre wide surfaced main runway. The main runway is lit for night landings. It also has a parallel grass runway for microlight operations.
- It has a shorter secondary grass runway.
- The airfield accommodates about 50 landings per day.
- There are three factory chimneys protruding into the airfield's airspace. Although these are not on the direct flight paths, they do nevertheless constitute designated hazards.
- The airfield occupies 80 hectares of land.
- It has hangars for 37 users at present. Land has been laid out to expand this and construction of some new hangars is starting.
- Road access is either from the N17 or the N12, both of which are conveniently reached using the local main road system comprising essentially Route R51.
- The airfield is situated close to the Far East Rand Hospital, Springs Town Centre as well as the PAM Brink Athletics Stadium.
- The airfield is situated outside the OR Tambo International Airport Controlled Airspace area in ORTIA's Buffer Zone. This means that aircraft operations are less restricted in terms of height compared with Rand and Brakpan Airfields.

"The committee advised that there are improvement plans of a minor nature including physical improvements such as runway turning circles, surfacing of taxiways and parking apron, construction of a clubhouse and restaurant. Together with these latter developments, it will be necessary to provide a connection to the municipal sewage system. If movements grow sufficiently, a control tower with air traffic controller will be needed. Presently, the airfield is gaining users because of the lack of security of tenure at Brakpan and has six applications for hangars currently being processed. However, apart from making provision for these additional small users, the Committee has no real plans for expanding operations. In fact, they would prefer the airfield to continue to cater for private recreational users and are discouraging the commercial operations including charters in contrast to Brakpan. The disadvantage of Springs is that it is located right on the outer fringe of the East Rand and thus is considered by some to be "too far away". One major disadvantage that Springs Airfield is starting to face is vandalism and theft from squatters living on the airfield's boundary. The vandalism is not very serious at the moment and comprises mainly theft of fencing materials and minor infrastructure components. However, if this in the future becomes more serious leading to problems such as animal intrusion, it could become a safety issue for operations at the airfield.

"The Committee of the Flying Club has had complaints about noise in the past but these have largely been solved by the establishment of a community liaison forum at which these matters are discussed and any problems resolved on an *ad hoc* and ongoing basis."

(Source: Ekurhuleni Draft ITP, 2008, page 296)

The future use of the airfield must be investigated in the RSDF.

10.10.10.4 Smaller Airfields

Consultation with the Civil Aviation Authority (CAA) and the study of the OR Tambo International Airport Terminal Management Area (TMA) map published by Jeppesen Sanderson Inc identified all airfields in the EMM area. These are, in approximate degrees of importance:

- Petit Airfield at Putfontein just north of Benoni and Daveyton
- Bapsfontein Airfield (two fields – one normal and a separate one for microlights)
- Fly Inn Airpark near Bapsfontein
- Fincham Airfield at Nigel
- Daveyton Airfield (now closed)
- Dunnottar Airfield (no longer in use)
- Microland Flight Park near Bapsfontein

These airfields are not indicated on Map 12 due to the scale thereof.

In addition to the fields situated inside the Municipal Area Grand Central Airport in Midrand, and Heidelberg Airfield are located just outside the Ekurhuleni Area, but may impact the Ekurhuleni area.

CHAPTER 11

POLICIES AND STRATEGIES

The land use proposals of the Ekurhuleni Spatial Development Framework require the implementation of a range of policies and strategies in order to re-create a smart, creative and developmental city. The policies and strategies so required are described in this chapter. Spatial transformation will be addressed in all these strategies

11.1 ENVIRONMENTAL POLICIES

11.1.1 SDFs as the main implementation instrument of EBOSS

EBOSS must be used in defining the future submissions for changes to the “Urban Edge” and must be included as a Sectoral Strategy into MSDF and IDP. Conflicts between EBOSS and Spatial Development Frameworks and revise spatial development frameworks must be identified where necessary.

11.1.2 Integrating Natural Open Space into the Urban Context

Protection of Open Space: The primary open space network, as identified and classified in EBOSS represents the minimum open space areas that needs to be retained from a biodiversity and ecological services perspective. The primary open space system must be included in the Ekurhuleni Spatial Development Framework as well as the detailed Local Spatial Development Frameworks. The primary open space network can in certain areas provide a natural barrier to contain urban development and can be used as a planning tool in determining the Urban Edge, especially in the Northern and Southern areas of Ekurhuleni. Further, the primary open space network further assists urban development in providing areas which are able to protect developed areas, by offering natural buffer zones for problems associated with natural disasters e.g. flooding.

Meeting human needs for open space: Open spaces not only have an ecological function, but also fulfill in a variety of socio-economic community needs. The needs for different user groups are diverse and dynamic and need to be accommodated in the urban context. These needs must be addressed with the compilation of spatial development frameworks and it is proposed that as a basic minimum for these plans to be compiled with the “standards” as provided for in the Guidelines for Human Settlement and Design” (“Red Book”) be consulted.

11.1.3 Development of Land Surrounding the Open Space System

- Protect the integrity of the primary open space network through spatial planning;
- Implement appropriate buffer zones to protect the integrity of the primary open space network;
- Prevent the fragmentation of the primary open space network; and
- Ensure access for the public to the primary open space network.

11.1.4 Existing Agricultural Practices in the Open Space System

- Formalise Primary Open Space Network;
- Identify environmentally suitable land to be set aside in the RSDFs for sustainable Urban Agricultural Purposes; and
- Prevent the fragmentation of the primary open space network and ensure access to the primary open space network.

11.1.5 Integrated Water Resource Management Planning (IWRMP)

“Pollution, from various sources, be it illegal dumping or lack of adequate solid waste collection services, is a serious threat to the sustainability of the vibrant ecosystem of the natural resources in the Metro. Some of the resultant impacts on the natural water courses are:

- Lakes pollution;
- Wetland vital ecosystem integrity degradation; and
- River pollution.

“There is thus a definite strain and deterioration of wellness and proper functioning of the ecosystem in most of the water courses within the Metro. There is thus an urgent need for a collective, particularly within the structures of Ekurhuleni, to address this unfortunate set of circumstances”. (source: IWRMP, Draft Report October 2010, page 3).

The completion of the IWRMP is of importance for the successful implementation of the MSDF.

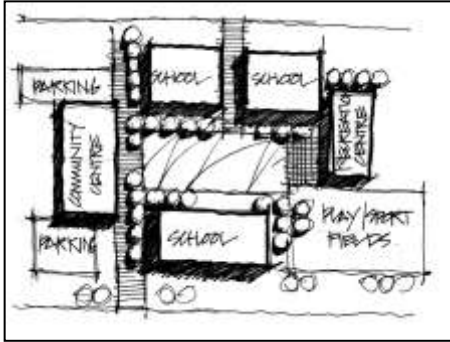
11.1.6 CLIMATE CHANGE

The following principles need to be applied with regards to Climate Change:

- Identify and reduce impacts to climate change:
 - identify those sectors that may be vulnerable to the impacts of climate change e.g. energy intense industries, agriculture, human settlements;
 - evaluate the risks associated with vulnerable sectors;
 - ensure that the risk are minimized by enhancing disaster management programmes and effective mitigation and adaptation strategies for those sectors; and
 - reduce risk to flash flooding by improving storm water management systems and rehabilitating/maintaining open areas to attenuate flood water.
- Reduce greenhouse gas emissions through:
 - the promotion of green technologies in the industry;
 - reduction of methane from landfill sites and agricultural sector;
 - the promotion of green building;
 - the promotion of public transport; and
 - the promotion of alternative energy production i.e. solar, wind, etc.
- Improve energy efficiency through:
 - the promotion of green technologies in the industry;
 - the promotion of green building, solar technologies and alternative energy; and
 - the promotion of public transport.
- Improve water efficiency through:
 - the promotion of green building, rainwater collection of flood attenuation on-site;
 - the better control of storm-water systems; and
 - the promotion of water recycling technologies.
- Reduce waste:
 - Promotion of reduce, reuse and recycling methods in order to reduce waste at landfill sites; and
 - promotion of waste exchange programme between industries, manufactures and businesses.

11.2 SOCIAL FACILITIES

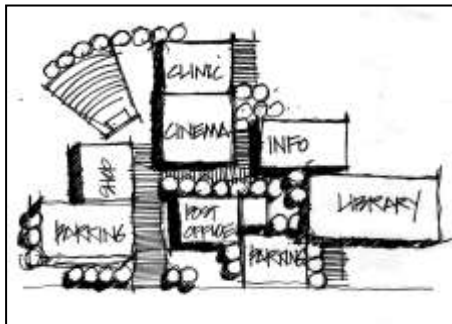
There are a wide variety of facility standards promoted by a wide range of institutions. These standards should however be viewed with caution. Although standards do provide a measure as to how many facilities are to be provided, it must not be interpreted as forming exclusive catchment areas. The placement and distribution of facilities are highly distorted by level of accessibility.



These standards, specifically with regards to size of facilities are generally very high and can easily be reduced by effective use of space and by sharing of for example playing fields or parking areas. The reduction of space standards would lead to an increase in gross density, which is pursued to achieve sustainable development. The fact that social facilities are listed separately from commercial and other land uses should not create the impression that they form exclusive enclaves. When appropriate, social facilities should be integrated with other land uses, such as commercial.

Public facilities should be clustered as far as possible. This has the advantages of:

- Convenience, as many services can be accessed in one trip.
- Reduction of costs, through the sharing of land, resources and equipment.
- Encouragement of use, as facilities are more likely to be used when clustered than when isolated.
- Greater safety, as facilities are likely to be used over a longer period.
- Larger catchment area, less susceptible to localised demographic changes.
- Integration of different communities, through the shared use of facilities.



Clustering can take the form of multi-purpose facility clusters, with a range of services and activities under one roof, or functional clusters, grouping together facilities that are related such as education whereby different schools can share sports and library facilities for instance.

As far as the location of different facilities is concerned, the following generic locational criteria should be taken into account:

- Public facilities, from which *emergency vehicles are distributed*, should be located on higher-order multifunctional routes that intersect with regional and primary distributors.
- Public facilities that need to be *visible and accessible* to the greatest number of people, but located in a safe, quiet environment such as clinics, hospitals and libraries, require easy access to public transport stops and interchanges, but should be located a block or two back from intense activity routes.
- Public facilities that need to be *accessible to pedestrians* and that need safe and quiet surroundings such as primary schools, should be located within the residential area within walking distance of the residents homes.
- Public facilities that need to be as visible and as accessible to pedestrians as possible, such as post offices should be located within walking distance of the user household on busier road intersections.

Public facilities can be divided into educational, health, social/cultural and public service or administration facilities. The tables below reflect standards in South Africa as stated in Behrens and Watson (1996), CSIR guidelines (2000) and Cato Manor Development Trust (1994) as well as international standards in Lynch and Hack (1985).

11.2.1 EDUCATIONAL FACILITIES

The provision of facilities at schools is often problematic because of a lack of funding. Schools in low income areas tend to be building located on a large site with no sportsfields, libraries or halls. In order to reduce the financial burden placed on the provision of schools shared sportsfields and the platoon system (where more than one school share the same facilities at different times of the day) can be implemented. School facilities should be used for a broad range of education and training functions besides school education. Sites should therefore be accessible to the general public and safety of access routes at night should be considered

Facility	Location	Access	Size and dimensions of site	Use capacity and thresholds	Cluster with
Crèche/ nursery school/ pre-primary school	<ul style="list-style-type: none"> - Walking distance of households - Away from undesirable land uses such as liquor outlets and taxi ranks 	<ul style="list-style-type: none"> - Pedestrian pathway without having to cross major streets - Maximum 10-20 minutes travel time by any mode - Maximum walking distance: 750-1000m 	<ul style="list-style-type: none"> - Minimum size: 130m² up to 1 600-2 200m² - 50m²/45 children - Minimum area per playlot: 20-30m² - 1/3 used for circulation, administration and ancillary uses 	<ul style="list-style-type: none"> - Minimum population: 5 000 - Minimum dwelling units: 900 - 1 per primary school 	<ul style="list-style-type: none"> - pre-primary schools, primary schools, community centres
Primary school	<ul style="list-style-type: none"> - Within easy walking reach of every dwelling - Close to public transport route - Away from undesirable land uses such as liquor outlets and taxi ranks - On relatively flat land, especially where sportsfields are provided - Avoid major routes as schools generate traffic congestion at certain times 	<ul style="list-style-type: none"> - Accessible by foot, bicycle and vehicle - Maximum 20–30 minutes travel time by any mode - Maximum walking distance: 1-1,5km 	<ul style="list-style-type: none"> - ³Minimum size: 2,4ha (Buildings: 1,4ha; Outside space: 1ha) - Dimensions: 45-65m - 40 pupils/classroom and 50m² per classroom - Number of class rooms: 16 - 1/3 used for circulation, administration and ancillary uses - where a community sports facility is available, the site can 	<ul style="list-style-type: none"> - Minimum population: 3000-4 000 - residential sites: >400m²:1/650 du 250-400m²:550 du <250m²: 1/500 du - Recommended enrolment: 650 pupils 	<ul style="list-style-type: none"> - high school, nursery schools, community hall, playground, park - 1 sportsfield with mini soccer field, 4 courts and changerooms per 3 primary schools (1.25-1.62ha). Located between schools but not adjacent to library. - 1 community learning centre/library consisting of children's library, study and activity spaces per 3 primary schools (0.1ha) Within walking distance of schools.

³ South African standards for schools are high when compared to international standards. When sports facilities etc can be shared the size of a primary school can be as small as 0.3ha and a secondary school 0.4-0.5ha.

Facility	Location	Access	Size and dimensions of site	Use capacity and thresholds	Cluster with
			be reduced to 1,4ha		
Secondary school ⁴	<ul style="list-style-type: none"> - Major transport route with public transport stops - Away from undesirable land uses such as liquor outlets and taxi ranks - On relatively flat land, especially where sportsfields are provided - Avoid major routes as schools generate traffic congestion at times 	<ul style="list-style-type: none"> - Maximum 30 minutes travel time by any mode - Maximum walking distance: ideally 2,25km, but can go up to 5km 	<ul style="list-style-type: none"> - Minimum size: 4,6ha (Buildings: 2,6ha; Outside space: 2ha) - 40 pupils/classroom and 50m² per classroom - 1/3 used for circulation, administration and ancillary uses - where a community sports facility is available, site can be reduced to 2,6ha 	<ul style="list-style-type: none"> - Minimum population: 6 000-10 000 - residential sites: >400m²: 1/1 300 du 250-400m²: 1/1 375 du <250m²: 1/1 500 du 	<ul style="list-style-type: none"> - 1 Community centre/library/hall including a resources centre, adult library, community offices and a performance/presentation hall per 4 schools (0.35-0.4ha) - Location accessible by public transport and close to shops - 1 Sports complex including athletics track, 2 full size sportsfields, 6 courts, swimming pool and changerooms per 2 schools

11.2.2 Health Facilities

Health facilities form a hierarchical system, with lower order services acting as referral points. Higher order facilities can also accommodate lower order facilities. Some locational criteria are:

- Sites should be located on public transport routes and must be located on routes that link the different referral centres
- Day clinics are used primarily by mothers and for convenience should be located close to shops and services.
- Potential disaster areas such as flood plains, should be avoided as health services operate at full capacity during emergencies.
- Should not be located near disturbance factors such as liquor outlets and crèches.
- Sites should allow for the entire complex to be single storey because of the extent of pram, wheelchair and trolley use as well as the limited mobility of many users.

Types	Facilities	Access	Size and Dimensions	Use Capacity and Thresholds
Mobile clinic		<ul style="list-style-type: none"> - Accessible on foot - Maximum walking distance: 1km - Maximum travel time: 20 min 		- Minimum population: 5 000
Clinic	<ul style="list-style-type: none"> - Basic clinic for primary health care and health education (day clinic) - Second level to include emergency 	<ul style="list-style-type: none"> - Maximum walking distance: 2km - Maximum travel time: 30 minutes - 5 minutes walking time from public 	Size should vary according to people served: <ul style="list-style-type: none"> - 0.1ha/5000 people - 0,2ha/10000 - 0.5/20000 	- Minimum population: 5 000

Types	Facilities	Access	Size and Dimensions	Use Capacity and Thresholds
	ward - third level to include maternity ward (community health centre) - AIDS clinic to deal with sexually transmitted diseases as well as education in prevention	transport	- 1ha/40000 - 1.5ha/60-80000	
Day hospital		Maximum travel distance: 3km Maximum travel time: 40min	0.5ha	- Minimum population: 10 000
Community hospital		Maximum travel distance: 5km	1.5ha	- Minimum population: 14 500

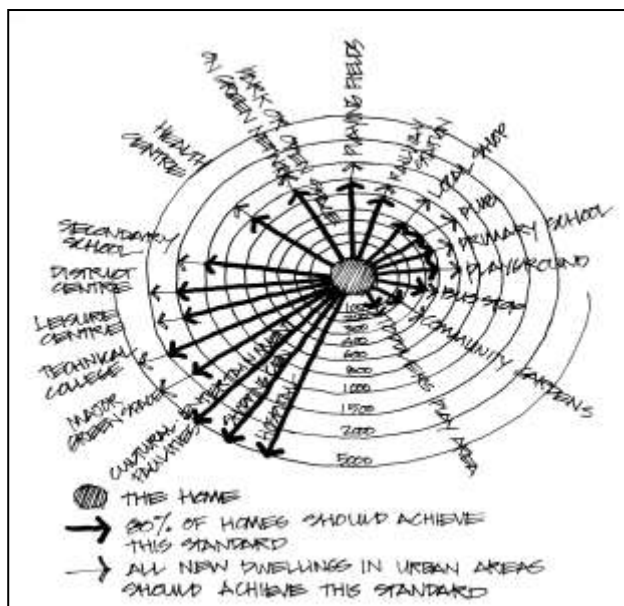
11.2.3 Social/ Cultural Facilities

Level	Functions	Threshold	Size	Location
Neighbourhood library and community learning centre	This facility is aimed at providing library services for schools in the neighbourhood. It should include a children's library, a study hall to accommodate those whose home environments are not conducive to study, and an activity room for meetings, workshops, demonstrations, arts and cultural activities. These facilities should be seen as supplementary facilities which fill the gaps between community centres.	1/20 280 residents	0.1ha	- highly visible position central to the community it serves - Not more than 2km from primary school
Community centre, library and hall	Adult library, offices for non-civic community organisations, a hall with audio-visual facilities that could be used for gatherings, social occasions, film shows, performances and presentations, by the general public and schools in the area Parking area	- 1/22 400 residents - 1/4 secondary schools and 6 primary schools	0.35-0.4ha	On or near public transport route

For individual facilities, the following standards apply:

Facility	Location	Access	Size and dimensions	Use capacity and thresholds
Library	- Main thoroughfare - Combine with school, community centre etc	- Walking distance: 1.5-2.25km - 5 minutes walking distance from public transport stop - Maximum travel time: 20-30 min	- Minimum 2 books/capita - Minimum size: 130m ²	- Minimum population: 10 000
Community centre	- Main thoroughfare - Close proximity to public transport stops	- Walking distance: 1.5-2.25km - 5 minutes distance from public transport - Maximum travel time: 20-30min	- Minimum: 5000m ² - Varies according to sharing with parks, libraries, playgrounds, and schools	- Minimum population: 10 000 – 20 000
Religious centres/ Places of	- Cluster with playgrounds, community	- Walking distance: 1.5km Maximum travel time: 20 – 30 minutes	- Depends on facilities and size of congregation	- Minimum population: 1 500 - 2 000

Facility	Location	Access	Size and dimensions	Use capacity and thresholds
public worship	centres, halls - Should not be placed within proximity of one another - Can be used as landmarks		- 1 500 for just a temple/church/mosque - 3 500m ² including parking and community centre	
Mobile facilities		- Walking distance: 1km - Travel time: 20 min		- Minimum population: 2 000



11.2.4 Safety & Security

Street closures are becoming increasingly popular to improve security in residential areas. This concept is managed and implemented through the Rationalisation of Local Government Affairs Act, Act No. 10 of 1998. The Gauteng Provincial Department of Development Planning and Local Government are also currently working on a standardised approach to this aspect. Once this has been completed, the Ekurhuleni Metro should adopt its own policy on this matter. Street closures should however not be implemented in a manner that would limit access for the wider community to public open spaces and community facilities or hamper the flow of public transport. The design of new residential areas should consider safety measures in accordance with the principle of “eyes on street” pertaining to public areas, rather than creating secluded and deserted areas.

11.2.5 Emergency Services

Based on the above standards, the EMM Emergency Services Department identified the need for eight new Fire Stations in Ekurhuleni. These are required to serve the areas of Bapsfontein; Pomona; Norkem Park; Elandsfontein/ Tuney; Carnival City; Kwa-Thema; Dunottar; and Zonkizize. Specific sites for these fire stations need to be identified in collaboration with the Emergency Services Department during the drafting of the RSDFs. These sites should be located on higher-order multifunctional routes that intersect with regional and primary distributors.

11.3 TRANSPORT

The following policies and strategies are proposed in support of the nodal and movement network as depicted on Map 12.

11.3.1 Transit Orientated Development (TOD)

The implementation of this concept is proposed to be promoted around railway stations in existing and proposed future residential areas. This concept has implications on the residential densities and mix of land uses proposed around stations. The implementation of the concept would specifically apply to development around stations within the mining belt of Ekurhuleni. It is recommended that Germiston and Kempton Park be earmarked as pilot projects, as their respective CBDs have already been identified as Urban Development Zones (UDZs) qualifying for tax incentives. This will promote urban renewal programmes and can be implemented at other stations in a phased approach.

11.3.2 A hierarchy of roads in the movement network is proposed in terms of the following classification

Transportation Corridor: A transportation corridor constitutes a strip of land generally with more than one transport facility in reasonably close proximity in order to support each other, intended to move vehicles, people and goods from one place to another. The emphasis is on providing mobility rather than accessibility. Access points or interchanges in the case of roads are positioned at well spaced intervals to provide access to adjoining transportation systems. The Albertina Sisulu Corridor and the 'Germiston-Daveyton Corridor' are the two main transportation corridors in Ekurhuleni.

Activity Corridor: An activity corridor is defined as a linear strip of land or area, connecting primary activity nodes, traversing urban or inter-urban areas, surrounding a major transport facility or facilities, providing an appropriate regional level of mobility and accessibility to adjacent areas, and should contain a high concentration of population and mixed land uses (job opportunities). Activity corridors normally incorporate Activity Spines, Nodes and Activity Streets to accommodate the accessibility need, without sacrificing the mobility and regional accessibility function of the higher order transportation facilities in the corridor. The promotion of Activity corridors which also accommodate the bulk of public transport services and facilities is proposed to connect disadvantaged communities to areas of opportunity. The Activity corridors should channel economic activity into disadvantaged areas and link emerging nodes in these areas to the rest of the nodal network. These corridors broadly comprise the following:

- Route **K123** linking from Alberton and Katlehong in the south, northwards past Wadeville and Germiston where it links to **K127** and then further north along **K117** towards Tembisa.
- Route **K155** linking Alberton, Tokoza, Kathlehong and Vosloorus to Boksburg and Benoni and up to the N12 freeway.
- Route **K131** linking Vosloorus northwards to Boksburg from where it extends further north as **K90** up to the OR Tambo International Airport.
- Route **K116** which serves the area between Boksburg and Brakpan.
- Route **K106** which serves as the central link in the mining belt which links Germiston, Boksburg and Benoni to one another.
- Route **K161** which links Daveyton to Springs from the north, and Kwatsaduzu to Springs from the south.
- Route **K175** which links Daveyton-Etswatwa to Springs.
- The link between Duduza and Nigel as indicated.

- Route **K68** to link Daveyton to OR Tambo International Airport.
- Route **K105** which links Tembisa to OR Tambo International Airport.

Activity Spine: An Activity Spine refers to a major road (or roads) or railway line accommodating mixed land uses and high-density development immediately adjacent to this facility. Activity spines are major routes that are connected to one or more secondary activity nodes. Public transport should form a major feature of an Activity Spine. Activity Spines should exhibit satisfactory sub-regional mobility and accessibility and do not necessarily form part of Activity Corridors. The refinement of the classification of routes in the EMM area is currently conducted by the Department Roads, Transport and Civil Works. Once this classification is completed the refinement in terms of distinguishing between Mobility and Activity Spines and Streets can be done as part of the RSDF processes.

Activity Street: Activity Streets are of a lower order than, but similar to “Activity Spines” where the same principles of linearity and high density mixed land use apply. The term also refers to a local road that allows for a high degree of accessibility along its length. Activity Streets are of a smaller scale than Activity Spines and do not need to connect major Activity Nodes. Public transport could occur on Activity Streets, but is not essential. Activity Streets may develop spontaneously within urban areas and do not necessarily form part of an Activity Corridor. The nature and design of the Activity Street promotes accessibility and pedestrian movement. Activity streets will feature in the respective Precinct Plans for the Ekurhuleni Metro. Monument Road in Kempton park is an example of an activity street.

11.3.3 Modal Transfer Points

The development of nodes around modal transfer points, particularly in disadvantaged areas, is promoted. Informal trade is currently naturally occurring in these areas and through the provision of infrastructure the level of economic activities could be raised.

11.3.4 Movement Network and Connectivity

Mobility and connectivity is one of the many policy guidelines to support the EMM current and future transportation needs. A more comprehensive Integrated Transport Plan is being formulated in order to consider a much broader spectrum of transportation issues. The connection of nodes through a movement network is essential to establish connectivity and enable city efficiency. Public transport is promoted in the first instance to connect disadvantaged communities to nodes and urban opportunities. Public transport required adequate residential densities throughout a metropolitan area. The highest residential densities in Ekurhuleni are currently situated on the outskirts of the urban area, implying that densification and infill is required in the core of the urban area to promote public transport.

The promotion of mobility is essential to connect nodes at a metropolitan level and establish linkages in Ekurhuleni. In this regard, the creation of north-south linkages across the mining belt is promoted. Mobility along these linkages should therefore be protected. Optimal access is however required to connect a node to the movement network. A hierarchy of roads is therefore proposed to balance mobility and access within the movement network.

It is recommended that a mobility policy be formulated to ensure proper integration between road, rail and air transport as well as between private and public transport options. This policy should guide how the feeder system servicing nodes and stations (especially Transit Oriented Development) can be developed. It is essential that his

exercise be client based in order to increase options between different transport modes.

11.3.5 Modal Integration

The vision for modal integration was formulated; an integrated public transport system, consisting of various modes of transport (Gautrain, Metrorail, BRT, Bus, Minibus taxi and even Monorail and Light Rail), that enables a person to move easily from any place in Ekurhuleni to any other place, with seamless transfers.

Strategic transport integration is one of the components of modal integration. The importance of aligning land use density and mix with the different modes of public transport in order to maximize public ridership to improve feasibility and ensure sustainability was addressed. The stations and major public transport interchanges are the most important element of an integrated public transport network. Promotion of efficient transport networks need to aim to reduce green house gas emissions.

It was proposed that the network integration action plan consists of the following:

- Obtaining inputs and having consultations with interested and affected parties on the proposed IPTN
- Identification of phases (most probably per road-based trunk corridor/s for the implementation of the proposed IPTN, based on volumes and other criteria and considerations)
- Identification of most appropriate mode/technologies and infrastructure to be implemented and developed in the first phase corridor for implementation of the IPTN (trunk and feeder operations)
- Completion of Phase 1 IPTN Scoping Report, to enable EMM to have funds released from the DoT for further operational planning
- Identification of major public transport nodes, stations and interchanges within the Phase 1 corridor, which needs an investment in terms of physical integration
- Commencement of operational planning and
- Securing funds for implementation

Physical integration action plan includes generic aspects such as:

Short-term (1-3 years):

- Demarcation /formalization of taxi rank;
- Upgrading of bus facility;
- Information integration between taxi and rail
- Building of paved and covered walkway between stations and adjacent commercial uses;
- Making provision for bicycles and other non-motorized-transport (NMT) at stations;
- Upgrading roads to accommodate the RPT system

Medium-term (3-5 years):

- Constructing the stations on the IPTN;
- Extend NMT routes to cover wider areas; and
- Provide maintenance facilities for bicycles at stations

On long-term (5-10 years):

- Multi-project upgrading of stations as an Intermodal facility and as a more attractive stations; and
- Densification of vacant land around stations with mixed land uses such as retail, offices and high-density residential development.

11.3.6 Proposed Freight Strategy for Ekurhuleni

The proposed road freight routes provide the envisaged corridors for road freight transport within the Metro, as well as linkages to adjacent and remote freight nodes. It is recommended that these routes be promoted as the freight corridors for EMM and the supportive interventions should be considered for implementation.

In addition, it is strongly recommended that these routes should also form the network of preferred routes for the transport of dangerous goods in the Metro. Hauliers should be required to stay on these routes as far as possible, only diverting to the local street network as close to their destination as possible. This will enable Emergency Services to focus their support for dealing with toxic or dangerous substances on a limited network.

It is further recommended that EMM engages Transnet Freight Rail in a joint exercise to identify the industrial areas discussed in Section 2 which should be promoted as rail-served industrial areas. A coordinated promotion strategy should be developed in cooperation with the Local Economic Development Department to actively strive to attract industries to those areas which are appropriate for rail transport, and this effort should be supported by a significantly improved service from Spoornet.

The development master plan for OR Tambo International Airport includes plans to relocate the air cargo terminal to the North midfield precinct and to increase its capacity to handle approximately 1 million tons per annum. This initiative should be supported, and the envisaged capacity should be adequate for the foreseeable future. Proposals to develop Rand Airport as a hub for domestic air cargo could be supported, subject to adequate service level provision and industry support.

The proposed Freight Strategy must investigate and resolve on the following:

- Freight volumes and expected growth;
- Proposed Inland Ports/ logistics Hubs;
- Airports;
- Road and Rail transports;
- Preferred freight routes;
- Design and infrastructure changes required in industrial areas;
- Industrial clustering;
- Supply chain systems in industrial areas;
- Disaster Management and emergence Services;
- Economic Development; and
- Spatial restructuring.

11.3.7 Rail

The reserves next to rail lines are badly maintained and look very bad. These areas should receive attention in terms of maintenance.

11.4 MUNICIPAL INFRASTRUCTURE

The policy put forward in respect of Municipal Infrastructure Services is to ensure the protection and optimal use of existing infrastructure, while providing services in a cost-effective, efficient and sustainable manner. In the long run the ongoing maintenance and / or upgrading of existing services remains a more cost effective option than replacement or provision of new services. Land use development and infrastructure services in the core activity area of Ekurhuleni should be coordinated to achieve optimal use of infrastructure, without over-utilising of existing ageing infrastructure. This implies that current problems

particularly pertaining to electricity disruptions should be addressed, as part of the strategy promoting industrial extension and intensification. Funding should be provided for the specific development of the core node and that this funding should be derived as per departmental budget.

Currently bulk capacity within the Urban Edge for water and sanitation is sufficient, while the upgrading of bulk water at a high cost would be required to unlock development potential in the northern areas and southern rural areas. This supports the policy directive promoting residential infill as well as land use intensification within the core activity area. The implications of waste generation and waste collection should be considered from the outset in land use applications. This is particularly relevant to land use changes in peripheral areas, where limited waste collection exists and illegal dumping often occurs. Solid waste management and storm water management strategies needs to be closely integrated with environmental management and environmental health strategies, to ensure sustainable development. A growth management strategy is a critical element in the provision of infrastructure in the city in the light of scarcity of financial recourses.

11.5 HOUSING

The Gauteng Provincial Department of Housing is conducting the formulation of Municipal Housing Frameworks parallel to the Spatial Development Framework of Ekurhuleni. While there is a specific housing policy and strategy for the provision of subsidised housing in Ekurhuleni, it was considered that this should only be incorporated, once finalised through the provincial process. These will include, but are not limited to:

- Integrating previously disadvantaged areas into the urban fabric, eradicating informal settlements and working towards residential densification in Expansion Areas.
- Spatial Planning for the Informal Sector, including informal traders, informal service providers and informal housing.
- Review of the EMM Housing Department's 'Migration Plan' so as to support the Spatial Concept of nodes and corridors and to prevent urban sprawl. Such review must be an integral part of the RSDFs to be prepared. A principle to be applied in this regard is the minimisation of the migration of people both in terms of numbers and in terms of distance. Where it is necessary to relocate people, it should be done as close as possible to their existing area of stay.

As stated by the premier in her February 2011 State of the Province Address, Gauteng will "...continue to invest in 14 mixed housing development projects in all regions of the Province." Two of these are in Ekurhuleni, namely:

- Chief Albert Luthuli, which accommodates Daveyton and surrounding informal settlements; and
- Clayville, that will accommodate Winnie Mandela Park, Tembisa and Strydom Land for Madelakufa and other parts of Tembisa.

Linked to the above, the Provincial Government developed the "...Master Plan for Tembisa, which we will initiate this year. The plan includes a housing development, road construction, storm water drainage, beautification and development of commercial and public precincts. The Tembisa project will be linked to the development of the OR Tambo IDZ. The relocation of Madelakufa to "Strydom Land" is part of the Tembisa renewal project. This project will produce 1 416 serviced stands and the construction of the first 500 houses will start in April 2011." (February 2011 State of the Province Address).

11.6 ECONOMIC DEVELOPMENT

The information on economic development was taken from the “Local Economic Development Strategy”.

To realise the economic strategy and to ensure sustainable development a number of key interventions are needed. These strategic interventions aimed at contributing to the growth of all the economic sectors and are noted in the sections below. The main focus of all the interventions are to create jobs in small and micro enterprises and in cooperatives; to diversify the economy by providing for local needs and also to attempt to increase export revenue, as well as to provide for ownership opportunities for black people and women and the poor. The core components of the economic strategy are discussed below.

11.6.1 Administered Pricing and Tariffs

This refers to the charges levied for services by the municipality. It should be noted that overall inflation targets make recovery from tariffs vulnerable. Standards on levels of services also affect the setting of tariffs as delivery to under-services areas increases the initial costs. Affordability of service levies would, therefore, be the key to ensuring an increased level payment. The redistributive mechanism of established areas subsidising under-services areas is one way of ensuring that service levies are not prohibitive in under-services areas as these areas are also economically deprived.

In this respect a sliding scale to accommodate the economically deprived areas would need to be considered, alongside a breakdown of the cost to maintenance and upgrade where needed. In addition, the quality of product or service would need to be factored into the cost determination. Tariffs need to be on a sliding scale based on the following:

- Domestic use in an under-services area;
- Domestic use in an established area; (designated township)
- Small business use;
- Large industry and commercial use;
- Government and service delivery use.

With respect to refuel and electricity a link to waste recycling and reusable energy would assist to ensure that the basic quality of life for all is set and that all citizens fall within a basic social security net of affordable services.

Property rates are the key source of revenue for local authorities. It is vital that all properties be rated. The no rating exclusion should be based on subsistence living, farm working, subsistence plots and shack dwellings, and people in casual jobs and those unemployed. There should be a sliding scale on the value of property:

i.	Shack and subsistence plots	free
ii.	Under-services Township	2.5%
iii.	Established Suburb	5%
iv.	CBD	10%
v.	Industry	15%
vi.	Government	10%

11.6.2 Sectoral Ring fencing of revenue

The streams of revenue from electricity, water, sewage and refuse removal need to be ring fenced to ensure that surpluses thereof are used to improve the reach and range of each of the specific services. This tool is not currently applied in Ekurhuleni and requires further financial investigation.

11.6.3 Developing and sustaining economic sectors - Agriculture

To ensure economic growth and stability a spread of all economic sectors in the regional economy is essential, with the primary sector of agriculture being firmly in place to build food security. Strategic Interventions on agriculture are backed up by an agricultural strategy adopted by the council.

- Wealth creation projects and increasing agricultural exports: Two areas of developing agricultural exports (flower growing and medicinal herbs) are being piloted. This fits in with the provincial strategy to make the best possible use of the richest agricultural soil in Gauteng as well as exploit the facilities of the Rand Airport, "City-Deep" and the OR Tambo International Airport. A process to link into the agricultural development programmes steering committee set up by the LED Department is also a part of this intervention.
- Restructuring of local state assets for greater efficiencies and black economic empowerment to be realised: The marketing of agricultural products in South Africa was regulated until 1994 through commodity boards. Currently marketing services are deregulated and in the hands of the private sector. The Springs Fresh Produce Market belongs to Ekurhuleni Metropolitan Municipality and provides a marketing service to the agricultural sector. The restructuring of the Springs Fresh Produce Market will cover employment equity, the broadening of the base of agents and suppliers, increasing access to economic opportunities for local people, and restructuring the ownership of the market to ensure that the Municipality derives revenue from the investment in the property as well as, encouraging the agricultural sector in the region to play a decisive role in the operation of the market are key points linked to this intervention. A task team to oversee this process has been set up.

11.6.4 The Aerotropolis

Ekurhuleni presides over some of Africa's greatest transport, industry and commercial assets and can offer the world OR Tambo International Airport, two Gautrain stations, Prasa Rail, highways and large industrial areas. In this, EMM can develop an Aerotropolis, an example of which can be found in Amsterdam's Schiphol Airport. Planning the shortest commercial timelines by ensuring proximity of various components of the industrial value chain is a logical modern approach that can be applied in an Aerotropolis. For such planning, global expertise may need to be relied on. The Core Node of the Aerotropolis should establish in the area of Kempton Park CBD, Rhodesfield (and Ext 1) and the airport's Western and Southern Precincts. (Source: email comment from Vitaliterre – 15 December 2010)

11.6.5 Industrial Strategy

Ekurhuleni was, for more than a century, the world's largest producer of gold and Africa's most important industrial agglomeration. The location of the industrial areas within the region was primarily as a result of gold mining and the associated development of road and rail infrastructure that could facilitate export trade and deliver supplies to other areas of the country. The transportation routes have also had a significant influence in the spatial layout of the towns within the metro. (Roberts, p144)

During the 1980s and 1990s the strength of the area's manufacturing base was eroded by the decline of the mining industry and decreasing global demand for metal. The Ekurhuleni area was therefore left with large amounts of underutilised and vacant industrial land. The decline resulted in a drop in employment rates within the manufacturing sector and an overall decline in the heavy industrial base previously associated with the area. The result of this was that there has been a rise in service-

oriented activities as well as wholesaling, warehousing and light industrial activities, particularly in the vicinity of the OR Tambo International Airport. (Roberts, p146)

Whilst manufacturing continues to be a major employer within the region, policies need to be put in place to ensure that a better understanding of the overall industrial situation within the metro within the context of the post-Apartheid era. It is incomprehensible that so little is known of the dynamics within the major industrial areas. To this end the metro must develop an Industrial Strategy followed by programmes and projects to ensure the survival and growth of this sector. It is a lack of investment within the built environment of the old industrial areas that has meant that these old spaces of manufacturing are no longer suited to the production and process requirements of modern or growth sectors of industry (Rogerson, 2000). New industrial areas offer opportunities for the relocation of some of these companies into more modern and convenient premises. The SDF provides for further expansion to suit modern and technologically advanced industries. The SDF further promotes the infill and intensification of the existing areas and this should be done in accordance with the proposed Industrial Strategy.

The strategy should also consider the value added processes that can be developed in conjunction with the heavy industrial companies to try to add value prior to export. This sector has been relatively successful but more should be done to ensure global competitiveness. In particular it is the development of black SMMEs that will aid this process and an Industrial Strategy should help to guide future investment and empowerment of these SMMEs.

There are a variety of National Government incentives for industrial retention and growth and the beneficiaries of these should be part of the Strategy process to ensure that major players within the sector are able to give input. As many studies have proven, shock incentives and the desire to be globally competitive have resulted in job losses, and this must be carefully managed within the region.

The provincial government did recognise the OR Tambo International Airport as it has two Blue IQ projects, namely the OR Tambo International Airport Cargo Area and the Industrial Development Zone (IDZ) to promote primarily airport related manufacturing, warehousing and distribution industries. The purpose of the IDZ project is to provide an efficient import and export duty free zone for high value-added, light manufactured goods which are exported via air freight. It will provide a marketing platform for South African goods and the location for light export-oriented manufacture industries, together with the avionics and aerospace cluster. The creation of an industrial development zone adjacent to the OR Tambo International Airport will contribute to the competitiveness and growth of the manufacturing sector in Gauteng by lowering the input costs and improving the supply chain efficiencies for firms in the IDZ. (GPG Blue IQ). As per the February 2011 announcement of the Gauteng MEC for Economic Development, Qedani Mahlangu, the IDZ will initially consist of a 135000m² manufacturing space at OR Tambo International Airport where local and foreign jewelry manufacturers can produce high-end gold, diamond, platinum and other semi-precious metals for export markets. The investment initiative would attract between R150 million and R300 million in investment. (Gauteng Online, February 2011).

The industrial areas in Ekurhuleni include the full range of industrial activities ranging from heavy and toxic industries to light industrial, commercial and warehousing activities. Within the context of the five main industrial areas identified, some planning now needs to be done towards the functional specialisation of these

industrial areas – both in terms of local and regional context. The strategy worked out for the Far East Activity Belt could serve as an example in this regard.

As stated by the Premier in her February 2011 state of the Province address, government plan to “...transform the Gauteng economy into a diversified and modern economy. We will emphasise the implementation of our industrial policy, including in the sectors of metals and minerals beneficiation; clothing and textiles; leather and footwear; tooling and foundries; business process outsourcing; transport; capital equipment; tourism; the green economy and alternative energy.”

11.6.6 Township Business

As announced by the Premier in her February 2011 State of the Province Address, the Gauteng “Township business programmes will be enhanced to support the informal business sector by creating automotive repair hubs, enterprise hubs with car washes, hair salons and internet cafes, as well as light industrial hubs focusing on metalwork, carpentry and others.” According to the premier, the program will be implemented in, Katlehong and Tokoza, and will be linked to the our inner city regeneration programme in Germiston.

11.6.7 Other

- The role of OR Tambo International Airport in relation to the Core Development Triangle, Ekurhuleni, Gauteng and South Africa. The spatial impact of the airport should be unpacked, considering both the tourism (passenger) related land uses, and the industrial (freight) related land uses.
- An Industrial Development Strategy focussing on Ekurhuleni’s competitive and comparative advantages. Industry retention, job creation and formalisation of the informal sector will be core focus components of this Strategy, with specific emphasis on the spatial manifestation thereof.
- EMM needs an Economic Strategy which ought to guide and justify the development of the regional economy.
- Different sectors/functions involved with economic development should talk to each other.
- Ekurhuleni must create new industrial parks as the current ones are old.
- All CBDs need to be redefined and regenerated as they are decaying.
- Townships as economic nodes need to be revamped. (source: August 2010 input from the Ekurhuleni Economic Development Department)

11.7 RETAIL DEVELOPMENT STRATEGIES

(Source: Ekurhuleni Regional Retail Sector Investigation, Demacon, 2004)

These are various concentrations of retail, businesses and services in EMM. Those that are too small scale is not indicated on the Spatial Development Framework. The following classification of centres is put forward as policy directive.

BUSINESS CENTRE CLASSIFICATION

Type of Centre	Size of Centre (m ²)	Trade Area	Access Requirements	No of house holds	Populati on	Socio-economic groups	Radi us	Travel time (minutes)
Filling Station Stores	<250	Only at filling stations	Together with filling station	-	-	All		
Spaza	<50	At houses in suburbs	Suburban Streets			Low and Middle Low		
Small free-standing	500-1 000	Part of suburbs	Suburban Streets	<2 000	<7 000	Mainly middle,	1	<2

centre						middle low and low		
Local convenience stores/centres	1 000- 5 000	One suburb or parts of suburb(s)	Minor collector road – traffic study may be required	700-3 600	2 500-12 520	All	1,5	3
Neighbourhood centre	5 000-12 000	Suburb(s)	Major collector roads – traffic impact study required	2 400-5 700	8 300-20 000	All	2,0	4
Community centre	12 000-25 000	Group of suburbs	Main road – traffic impact study	8 500-17 800	30 000-62 500	All	3,0	6
Small regional	25 000-50 000	Specific sub-region in city	Main road – traffic impact study	17 800-35 700	62 500-125 000	All	5,0	10
Regional centre	50 000-100 000	Large region in city/or whole city	Main road and perhaps national road – traffic impact study Main	28 600-57 150	100 000-200 000	Mainly above average	8,0	16
Super regional centre	100 000+	Large region in city and surrounding areas	Main and national routes, traffic impact study	57 150-114 300	200 000-400 000	Above average	10+	20
Specialist/theme centre	Vary from 2 000 to 30 000	Depend on type of store or centre – mostly on regional level	Mostly main roads – traffic impact study	5 700-85 700	20 000-300 000	Mainly above average	5-10	10-30
Value centre	5 000 – 25 000	Next to regional centre or on main road/highway	Main roads – traffic impact study	4 800-23 800	26 700-83 300	Middle to above average	6,0	10
Hyper centres	15 000 – 35 000	Strong correlation with a regional centre	Main roads	21 400-50 000	75 000-175 000	Middle to above average	8,0	15

The Ekurhuleni Regional Retail Sector Investigation, 2004 described a number of Retail Development Management guidelines and recommendations. This section outlines the strategies to be implemented in terms of retail activities.

11.7.1 Management strategies

Individual applications still need to be subjected to micro level (i.e. site specific) market potential analysis in order to cater for local idiosyncrasies. It is, nevertheless, possible to formulate broad strategies as guidelines for retail development in certain areas. Four types of strategies are proposed to assist the Ekurhuleni Metropolitan Municipality to manage the retail sector, namely:

- (i) **Revival Strategy:** This strategy must be applied to older Nodes; CBDs where the majority of buildings are subject to functional obsolescence and do not cater for modern consumer demand. Over and above the implementation of UDZ Tax Incentive Schemes and building conversion programmes, there is a need to develop nodal repositioning strategies (Refine the role and function of CBDs, identify niche markets).
- (ii) **Growth Management Strategy:** Development is fuelled by market forces which, if left unbridled, may cause the market to overheat in certain areas which, in turn, may be to the detriment of other less attractive nodes, giving rise to increasing vacancy rates, reduced rental income, eventual deferred maintenance and loss of rates and taxes – not only in the retail segment of the market. Furthermore, retail development often serves as catalyst for other types of commercial development, e.g. office sector development and automotive parks, which is not always factored into forecasts that inform spatial plans.

Focus areas must include the primary urban cores of higher order retail activities, e.g. East Gate Mall, East Rand Mall and Lakeside Mall and secondary urban cores such as the emerging Carnival City node.

(iii) Maintenance Strategy: This must be applied to stable nodes, with signs of decay. Focused intervention is required to protect investments and hence, the city's rates base. Examples include the Springs CBD and Bedfordview CBD. The processes must be coupled with the implementation framework to facilitate implementation of the UDZ tax incentive scheme as well as the programmes around building conversion.

(iv) Kick-start Strategy: This strategy should be targeted at previously disenfranchised communities. The need is also to encourage clustering of public amenities to create agglomeration advantages for private sector development. Retail development requires feed and the grouping of public facilities is an imperative to kick start development in these areas (the new retails centre in Galeshewe, Sol Plaatjie, is a good example to this effect).

11.7.2 Functional levels of the retail sector in Ekurhuleni

In the context of the above, it is recommended that the most appropriate vehicle through which future retail development should be managed and facilitated, should have as its most basic point of departure a distinction between the following for functional levels:

- CBDs (including the Core Development Triangle)
- Primary urban cores
- Secondary urban cores
- Neighbourhood nodes

An urban core can then broadly be described as activity nodes of metropolitan significance, aimed at providing economic, social and residential opportunities in an integrated, vibrant, high-intensity, mix-use and pedestrian friendly environment, linked with inter-modal public transport facilities at the highest level of accessibility. The focus on a selected number of urban cores will enable the Ekurhuleni Metropolitan Municipality to make these urban cores more attractive and economically viable for new development by private sector; and to improve liveability, vitality, urban performance, pedestrian access, convenience and sense of performance permanence and structural integration.

Within the context of the above, the table below synthesis the proposed strategic thrust for selected nodes in Ekurhuleni, based on the above classification.

SPATIAL MANIFESTATION OF RETAIL FLOOR SPACE

Name	Status	Consumer market	Strategy
CBD			
Benoni CBD	<ul style="list-style-type: none"> • National retailers reinvesting on CBD edge • Limited recapitalisation of existing CBD assets • Weak market performance due to proximity to East Rand Mall 	Local labour force Daveyton/Etswatwa	Revival Strategy
Brakpan CBD	<ul style="list-style-type: none"> • National retailers poised to disinvest • Limited recapitalisation of existing CBD assets • Gradually rising vacancy 	Local labour force Kwatsaduza	Revival Strategy
Springs CBD	<ul style="list-style-type: none"> • National retailers still represented in CBD 	Local labour force Kwatsaduza	Maintenance Strategy

Name	Status	Consumer market	Strategy
	<ul style="list-style-type: none"> • Early signs of decay 		
Nigel CBD	<ul style="list-style-type: none"> • National retailers still represented in CBD • Early signs of decay 	Local labour force Kwatsaduza	Maintenance Strategy
Germiston CBD	<ul style="list-style-type: none"> • Declining number of national retailers • Visible sign of urban decay • Limited recapitalisation of existing CBD assets 	Local labour force Kathorus	Revival Strategy
Alberton CBD	<ul style="list-style-type: none"> • National retailers represented in CBD • CBD attractiveness augmented by Alberton City • Reinvestment trends in CBD 	Surrounding suburbs Kathorus	Growth management strategy
Boksburg CBD	<ul style="list-style-type: none"> • National retailers reinvesting in decentralised nodes • Limited recapitalisation of existing CBD assets • Weak market performance due to proximity to East Rand Mall 	Local labour force Kathorus	Revival Strategy
Kempton Park CBD	<ul style="list-style-type: none"> • National retailers poised to disinvest • Limited recapitalisation of existing CBD assets • Visible sign of urban decay 	<ul style="list-style-type: none"> • Local labour force • Tembisa 	Revival Strategy
Edenvale CBD	<ul style="list-style-type: none"> • National retailers represented in CBD, but some have relocated • Limited recapitalisation of existing CBD assets, although isolated instances of private sector reinvestment are visible • Limited market size 	<ul style="list-style-type: none"> • Local labour force • Surrounding neighbourhoods 	Revival Strategy
Bedfordview	<ul style="list-style-type: none"> • New investments visible • Good performance in spite of small market size • Low vacancy (below 5%) 	<ul style="list-style-type: none"> • Local labour force • Local residents of surrounding suburbs 	Maintenance Strategy
Primary Urban Core			
Lakeside Mall, Benoni	<ul style="list-style-type: none"> • National retailers reinvesting on CBD edge • Limited reinvestment spill-over effect • Weak market performance due to proximity to East Rand Mall 	<ul style="list-style-type: none"> • Benoni residents • Daveyton/Etswatwa 	Revival Strategy (as part of CBD)
East Rand Mall node	<ul style="list-style-type: none"> • Super-regional node • Good performance and strong growth due to significant agglomeration advantages and urban concentration economies • Inherent growth momentum 	<ul style="list-style-type: none"> • Ekurhuleni • Parts of Mpumalanga Province 	Growth Management Strategy
Eastgate	<ul style="list-style-type: none"> • Regional node • Good performance • Inherent growth potential 	<ul style="list-style-type: none"> • Western parts of Ekurhuleni • Eastern suburbs of Johannesburg 	Growth Management Strategy
Secondary Urban Core			
Carnival City Node, Brakpan	<ul style="list-style-type: none"> • An emerging urban core • Market pressure for new development • Overlap with Benoni CBD, Brakpan CBD, Springs CBD and Lakeside Mall trade areas 	<ul style="list-style-type: none"> • Local residents • Surrounding towns 	Growth Management Strategy
Other (Mainly previously disadvantaged areas and most likely to have retail components of between 3			

Name	Status	Consumer market	Strategy
500m² up to 15 000m² GLA)			
Daveyton/ Etwatwa	<ul style="list-style-type: none"> Existing retail centre Limited nodal development 	<ul style="list-style-type: none"> Daveyton/ Etwatwa residents 	Kick start strategy
Kwatsaduza (Kwa Thema)	<ul style="list-style-type: none"> Limited formal retail development Latent development potential 	<ul style="list-style-type: none"> Kwatsaduza 	Kick start strategy
Kathorus (Thokoza, Natalspruit Node)	<ul style="list-style-type: none"> Limited formal retail development Latent development potential 	<ul style="list-style-type: none"> Kathorus 	Kick start strategy
Kathorus (Thokoza, Yende Node)	<ul style="list-style-type: none"> Limited formal retail development Latent development potential 	<ul style="list-style-type: none"> Kathorus 	Kick start strategy
Kathorus (Katlehong, Zonkizizwe)	<ul style="list-style-type: none"> Limited formal retail development Latent development potential 	<ul style="list-style-type: none"> Kathorus 	Kick start strategy
Kathorus (Vosloorus, Ramakonopi Node)	<ul style="list-style-type: none"> Limited formal retail development Latent development potential 	<ul style="list-style-type: none"> Kathorus 	Kick start strategy

11.7.3 Nodal Leverage Mechanisms

To fast track urban core development, local government may consider the following at its disposal:

Tax Incentives: Local authorities in the United States frequently use reduced rates as an incentive to encourage investment in commerce and industry. South African local authorities are currently prevented from utilising these types of concessions.

Infrastructure: Infrastructure concessions often involve the provision of serviced industrial and commercial sites or special efforts to develop infrastructure and services in selected commercial areas in response to the needs of prospective investors. The implications of these infrastructure concessions are that the investor will be attracted, if the local authority is flexible and sensitive in amending its development/delivery schedule to accommodate the investors' needs.

Land and Buildings: An incentive package of this type may involve the sale, transfer or rental of land, buildings or other facilities owned by the local authority on concessionary terms in order to attract investment. This further implied assistance by the local authority in order to obtain premises. However, if the local authorities intends making some of its own assets available, they must ensure that they are in compliance MFMA and ATR which apply to the disposal of public assets.

Regulatory Reform: These concessions involve special efforts by the local authority to reduce constraining regulation and zoning that may stand in the way of potential business development. This aspect implies an accurate and speedy system to supply information relating to, and the approval of potential investment.

Finance: Some international cities provide financial assistance in the form of special grants access to start-up capital, bridging finance and credit, loan guarantees or the underwriting of risks. However, South African local authorities are currently prohibited from undertaking in these activities.

Approval Process: One of the most basic incentives involved facilitating prompt decisions such as the approval of building plans and rezoning applications. Prospective investors will lose interest if local authorities take too long to approve plans and applications. The establishment of a one-stop centre could facilitate this process more efficiently.

Synthesis: Perhaps the most important notion communicated in the preceding section on retail, has been the fact that public sector investment shapes the course of development. This is particularly true for the second economy areas in Ekurhuleni where special measures will be required to entice the private sector to develop. Whether it is in a first economy or second economy area, development of a healthy, sustainable and balanced retail sector will hinge on the public sector forging a strong alliance with the private sector. It is in this approach that lies the key to establishing harmony between consumer demand and demand.

11.8 MINES & QUARRIES

Requirements with regard to development applications, consents and clauses for conditions of approval and title deeds:

Planning and development frameworks should incorporate a requirement for all development located in the vicinity of the mining and quarrying operations to include the following consents and clauses in the conditions of approval and title deeds of any development applications:

- That the development applicant obtains the written consent of the holder of any rights granted in terms of the Mineral and Petroleum Resources Development Act (MPRDA – Act 28 of 2002) over the site or in the vicinity of the development and which may have an impact on that development;
- Any urban development taking place in the vicinity of any quarrying, prospecting or mining related activities and operations is to comply with the approved Environmental Impact Assessment/Environmental Management Plan (EIA/EMP) for the operation and take cognizance of the mining operational plan as contained in the EMP and associated mitigation and management measures;
- The erection or construction of any buildings, roads, railways or any structure within a horizontal distance of 500 m from the workings of the mine or quarry shall comply with all the requirements and obligations of the Mine Health and Safety Act (Act 29 1996) and the associated Mine Health and Safety regulations;
- The following "shock cause" has been accepted by the Department of Mineral Resources and should be included in the conditions of approval and relevant title deeds relating to the development:

"The following clause is to be incorporated in every deed of transfer/certificate of registered title prepared for registration at the relevant deeds registry relating to the land concerned:

As this Erf (stand, land etc) forms part of land which is or may be undermined and which may be liable to subsidence, settlement, shock and cracking due to quarrying, prospecting or mining related activities and operations past or present or future, the owner thereof accepts all liability for any damage thereto or any structure thereon which may result from such subsidence, settlement, shock or cracking".

All lease and sale agreements should include the following clauses. The lessee / purchaser of the property hereby acknowledges and accepts that:

- Any mining and quarrying operations are conducted in terms of the Minerals Act 1991 and the Mines Health and Safety Act 1996 ("the Acts"). In terms of these Acts

entrance to any mining lease area and property is strictly controlled and no unauthorised persons may enter upon the mine property for any reason;

- Mining and quarrying operations are authorised to be conducted on a 24 hour basis and that certain operations resulting in noise, vibrations, dust and other types of manufacturing disturbances may cause the lessee / purchaser inconvenience;
- In order to conduct mining and quarry operations blasting operations occur on a regular basis resulting in noise, vibrations and dust and other types of disturbances which may cause the lessee / purchaser inconvenience and shall have no claim against the lessor / seller nor mining or quarry operator arising from such operations.
- The lessee / purchaser undertakes not to cede the lease / sublet / sell the property unless it is a term of the cession / sub-lease / sale that the cessionary / sub-lessee / purchaser furnishes an acknowledgement and undertaking as herein set out. (Source: Adapted from comment by Andrew Barker, by email on 21 October 2010).

The mining sector although in decline, can be stimulated to make a contribution to the economy, with promoting the expansion of artisanal and small-scale mining.

Strategic Intervention on Mining is facilitated through the establishment of a Mining Forum.

The Gauteng Department of Agriculture and Rural Development (GDARD) has initiated a specialist project to investigate the reclamation of mine residue areas for development purposes. This includes the preparation of a strategy and implementation plan to evaluate the suitability of land from the mine residue areas to be used for other productive uses in line with government priorities. Furthermore it is to provide a strategy and implementation plan for mitigation of environmental impacts and prioritised reclamation of mine residue areas.

Recommendations from the report on "Mine Water Management in the Witwatersrand Gold Fields with Special Emphasis on Acid Mine Drainage" December 2010, must be implemented as applicable.

11.9 LAND REFORM

The Council faces a challenge of bringing the low income people closer to the core development area because of land costs. Yet it disposes of its own land without taking incognisance of the need for land redistribution and the principle of compacting the city. In terms of the provisions of the MFMA and the Asset Transfer Regulations (ATR) the Council may only dispose of its land to the highest bidder. However, the President alluded to the need to lease government (Council /State) land so as to achieve equity.

In terms of the MFMA and ATR land may only be retained by the Council if it is intended for the purposes of providing the minimum level of service. Housing provision by the state is considered to be such a basic minimum level of service and is a basic human right.

Inclusive Housing Policy: Council owned land closer to job opportunity areas can be used to achieve the inclusionary housing policy objectives. In this regard, public-private partnerships could be entered into, by the Council. Other housing policy objectives can be achieved without the Council having to alienate or dispose of the land outright. Council owns land that has existing residential rights. The Council shall use the land to achieve the objectives of the inclusive housing policy. In particular the land should be used for people in the housing "gap market". These are those employed people who do not qualify for subsidy RDP housing and who are ignored by the banks, mostly newly employed civil servants like teachers and policemen.

Public Open Areas: The alienation of unserviceable public open areas should be reviewed. In particular in the previously disadvantaged areas which where development as dormitory suburbs, without complimentary services and facilities. The strategy is to have these desired services and facilities especially of the economic nature to be provided. The retail strategy was approved and should be implemented in these areas accordingly. In this regard the provisions of the MFMA and ATR would apply but Council might have to be considerate in terms other factors other than price.

Land audit database: A credible and up to date database has to be created on Council owned land. This will assist Council to understand and know what land it owns and plan to use it strategically.

Cities of the future world, which includes the whole of Africa and therefore Ekurhuleni, face land reform challenges on numerous fronts. These include:

1. Land use management reform
2. Acknowledgement of the role of the so-called informal sector.
3. Land redistribution to the formally disadvantaged especially in the case of South Africa, and therefore Ekurhuleni and alternative tenure options relevant to the EMM circumstances.
4. Urban Renewal
5. Land Audit and redistribution through disposal
6. Land Tenure Reform

The above issues are addressed in detail below in accordance with the Area Based Planning (ABP) approach of the Department of Land Affairs. ABP would have focus areas that are defined geographically and they relate to package it into land reform products. The land sector aspect of planning is aimed at facilitating forward planning and pro-active land acquisition and all key stakeholders are offered the opportunity to participate in a process that will define how land reform occurs in the local area.

11.9.1 Land Use Management Reform.

Land use management as a requirement of the Spatial Development Framework in terms of statutory provision is dealt with in detail in the text chapter. In this section the issue pertains to the inclusion and accommodation of the “Informality” or the informal sector issues include:

- Informal housing and informal settlements and site and services schemes.
- Informal business- Spaza shops, taverns, shipping containers.
- Other land uses
- That might be considered illegal or unauthorised.
- The current town planning procedures and processes exclude majority of the people who happen to be the majority of voters in EMM.

11.9.2 Sustainable Livelihoods Development

The majority of the residents are excluded from the formal activities that are permitted by the current town planning process and procedures. These residents are found in the previously disadvantaged settlements of EMM, being Thokoza, Katlehong and Vosloorus colloquially referred to as Kathorus; Daveyton-Etswatwa; Tsakane, Duduza and Kwathema colloquially as Kwatsaduza; and Tembisa. In these formally disadvantaged areas reside 70% of the residents of the Metro.

With the unemployment rate as high as 30%, most of the residents including these in informal settlements in the city survive on relatives, hand outs, and Government grants. Most of these residents are on the margins of poverty and destitute. These are

the residents who engage in informal sector enterprise which is not accommodated by the commercial business sector or the banks and these include:

- RDP housing developments, stokvel, cooperatives, street trading and other informal business, which is un-bankable for reasons which include the lack of collateral.
- Sustainable livelihoods are therefore the ability of the poor to earn a living under abject conditions and near destitution.

Households in abject poverty battle to attain sustainable livelihoods in terms of acquiring assets and have access to entitlements, which are above minimums which they struggle to obtain and sustain. Consequently the households and individuals within them are vulnerable. This might be because of discrimination because of gender, race, disability, religion, geographic location etc. These include woman, children and intergenerational poverty in terms of employment opportunities.

According to Toukin (2008), assets to which the poor and marginalised are susceptible to are categorised (in theory) as:

- Natural Capital- which include land
- Physical- which includes access to basic infrastructure services, housing, and means of production
- Human Capital- mainly skills to produce and sell.
- Social Capital- which enables people to access capital through networks and institutions
- Financial Capital-which enables access to suppliers of credit.

11.9.3 Land Redistribution

Land distribution in the context of urban areas has played second fiddle if at all in the light of Government emphasises on agrarian reform and rural land redistribution. These are three aspects to land reform in terms of Government policy and they are: restitution, redistribution and tenure reform.

Land Restitution has not been possible for urban areas like EMM for the reason that land use rights might have been upgraded or changed. Most of the forcibly removed, displaced people opted for financial rewards rather than relocate back to the places where they had been removed. However certain persons were awarded their land in Bakerton in Springs and Brakpan 'Old Location' in Brakpan.

Redistribution is when the state makes land procumbent to achieve Broad Based Black Economic Empowerment (BBBEE). What is significant to note is that most of these locations where people were forcibly removed were well located along the gold reef which follows the Germiston – Springs railway line. The locations include Dukathole, Stirtonville, Wattville/eTwatha/Actonville, Edenvale, Old Albertyon. There where mine hostels as well which located on the mine premises some of which exist to this day. In the absence of land restitution, land redistribution of State /Government and of the formally marginalised is the only option. This can only happen within tenure limitations of course. Such land for redistribution may include strategically located land. However its ownership might have to be varied accordingly to preferable tenure options. This would include empowered options which individuals who have the capital muscle.

The current land claim in Brakpan at the 'Old Location' needs to be addressed in terms of land redistribution needs.

11.9.4 Urban Renewal

Land reform for developed cities mainly concerns urban revitalisation of rundown city centres. It entails the rejuvenation of rundown areas which are neglected and/or absentee landlords. The buildings lack upkeep from neglect. Leasers or sub leasers do not show interest in the maintenance of the buildings they occupy.

An urban renewal strategy is in place. Germiston and Kempton Park CBD's were selected as the first, two Urban Development Zones (UDZs). For the development in the context of urban renewal strategy. The UDZ was a national treasury program which has since been extended.

For the previously disadvantaged African townships a national program developed by the national treasury in National Development in Partnership Grant (NDPG). This together with the urban renewal strategy is unfolding as programs for urban management and should be supported through the process, land.

11.9.5 Land Audit and Alienation

Land alienation should take place in the context of the countries reform land policy. This land audit study and strategic for development. These are three essential elements to:

- Land Restituted;
- Land Audit; and
- Land redistribution through disposal of Council land.

11.9.6 Land Tenure Reform

As a result of peoples vulnerability to attain "sustainable livelihoods" it is essential that land tenure be reformed. The strategy is to accept the graduation of land tenure within a consortium from informal tenure to freeholds. This would include the availability of public and road reserves for trading and small enterprise developments. The different tenure options include:

- Freehold (Ownership)
- Leasehold
- Cooperative
- Commercial
- Sectional title, commercial property association

Land tenure is closely limited and intertwined with land use. In poverty stricken areas, informally of use is the norm.

11.9.7 Informality

The informal sector enables sustainable livelihoods to be obtained by vulnerable households. New land use management schemes should acknowledge and accommodate access to opportunities to permit residential uses to be utilised for trade through appropriate design of especially low cost housing. The council has an approved street trading policy which should include public land and is supplied for implementations.

11.10 URBAN EDGE POLICY

The Gauteng Urban Edge Policy, 2007 recommended as follows:

"i) The Urban Edge Policy be maintained in Gauteng Province, but that municipalities be given the opportunity to comment on the current Gauteng Urban Edge (see Figure 1), and to

motivate the amendments required. The Department of Economic Development will then have the responsibility to follow through on the implementation phases (amendment and alignment) of the Urban Edge Policy, as outlined in the next section of this document.

The comments of municipalities on the current Gauteng Urban Edge and motivation of amendments required should be done as part of the annual IDP (and by implication SDF) Review process of municipalities. Having received all the comments and recommended amendments, the Gauteng Department of Economic Development should then aim to have the amended Gauteng Urban Edge approved by the Provincial Executive Council.. From then on there should be a single Urban Edge for the province which is acknowledged by all stakeholders.

ii) Municipalities (and provincial departments) be encouraged to develop comprehensive Growth Management Strategies as part of their Spatial Development Frameworks in their Integrated Development Plans. In these Growth Management Strategies the Urban Edge should be one of a range of Growth Management Tools/Instruments used to guide/influence land use development patterns/trends.

It is suggested that municipalities be requested to amend their existing Spatial Development Frameworks to include a section on a Growth Management Strategy for the municipality. This could be done as part of the 2008/09 IDP Review process and should thus be completed by 31 March 2008.

This initiative can be guided and facilitated by way of a Gauteng Province Growth Management Strategy which could be formulated in tandem with the local processes.”

The Gauteng Urban Edge Policy, 2007 laid down demarcation objectives and demarcation criteria to be applied when demarcating or amending an urban Edge. The provincial demarcation objectives and criteria are herewith incorporated in the MSDF for application in Ekurhuleni as indicated below:

11.10.1 Demarcation Objectives

The following objectives of the Urban Edge remain important and should be applied in the demarcation of the Urban Edge of municipalities:

- Conservation of Environmental Resources – specifically conservation areas, heritage sites, open space and sensitive areas;
- Optimum utilisation of engineering services and community facilities. These services are not only expensive to install but specifically expensive to operate and maintain. The high capital and *maintenance* costs of development in peripheral areas thus need to be considered carefully.
- Optimisation of public transport systems with resultant reduction in pollution (air, water, noise etc) and travelling time and cost;
- Prevention of urban decay. By drawing a boundary around the existing urban area development is focused inward, resulting in all opportunities being explored, especially the regeneration of decaying areas;
- Promotion of opportunities for redevelopment, infill development and densification. The conservative approach to expansion also results in opportunities for infill development being explored. As well-located land is often more expensive, or vacant land in the urban area often has high levels constraints, higher densities are considered as these result in a higher yield.
- Creating affordable cities for residents - shorter travelling distances (costs) and efficient use of infrastructure. The long term cost to end-users in terms of

commuting costs and obtaining goods and services not available in peripheral areas often outweigh the short term cost of cheap land;

- Upgrading/re-use of infrastructure rather than expansion. Proper maintenance and upgrading of existing infrastructure is more cost-efficient than expanding and creating more maintenance costs;
- Restructuring of the Apartheid city – growing Gauteng into a global city region which is internally coherent and externally competitive;
- Improving economy of scale - more people/km² imply more business opportunities and efficient use of community facilities.
- Develop a sustainable urban region through promoting equitable access to basic services, the protection of natural and cultural resources, and an urban form that supports greater efficiencies in land use and service provision as contemplated in the Gauteng Spatial Development Perspective.

11.10.2 Demarcation Criteria

Within the context of the guidelines contained in the above section, it is suggested that municipalities consider the following generic criteria in the demarcation of the Urban Edge for their respective areas of jurisdiction:

- i) The existing border of urban activity (e.g. residential towns and other urban features). Agricultural holdings (rural residential uses) to be in principle excluded from the urban area.
- ii) Existing, approved development rights.
- iii) Natural features such as rivers and mountains and other conservation areas. In this regard the environmental management tools developed by the Ekurhuleni Environmental Development Department will be used, such as the SoE report, EMF, and EBOSS. Watersheds and catchment areas may also be used as these are determining factors in bulk service provision.
- iv) Municipal boundaries. In this regard co-ordination with the adjoining municipalities is of extreme importance.
- v) Functional boundaries such as major roads, strategic development areas etc. In the case of roads development should be permitted on both sides of the road to at least one cadastral boundary depth.
- vi) The availability / lack of bulk infrastructure, as well as the functional service areas e.g. sewer catchment areas, water tower service areas etc.

11.10.3 Land Uses Outside the Urban Edge

Land uses to be allowed outside the urban edge will be identified for specific areas during the drafting of RSDFs and/or LSDFs for the applicable areas. The following land uses will be evaluated for specific areas outside the urban edge during the drafting of RSDFs:

- a) Extensive agriculture;
- b) Conservation Areas/Nature Reserves including associated tourism facilities (accommodation, restaurants);
- c) Tourism and related activities e.g. curio markets, resorts;
- d) Recreational Facilities e.g. hiking trails/ hotels/ game lodges with associated tourism facilities;
- e) Farm stalls and home industries;
- f) Rural residential uses/ Agricultural Holdings in specific areas; and
- g) Any other related development/service provided that the proposed development/service:
 - i. services primarily the local market; and/or
 - ii. is resource based (needs to be located near a specific natural resource, e.g. sand quarries, mines, etc.); and/or
 - iii. is located at a defined and approved service delivery centre.

Developments/services not complying with the criteria set in (a)–(f) may thus only be allowed if it complies with criteria (i)–(iii)

With regards to the evaluation of the applications the following procedures are being proposed:

- Application Outside the Urban Edge Areas must comply with the Criteria:
In cases where applications fall outside the urban edge, but comply with the criteria for land uses in the rural areas as listed above, the same principle applies as with an application within the urban edge area as listed above. The Ekurhuleni Metro approves/disapproves the application based on its Spatial Development Framework, Precinct Plans and Land Use Management Plan, and subject to other relevant legislation e.g. environmental requirements (EIAs), etc.
- Application Outside the Urban Edge Areas not complying with the Criteria:
In the case where an application falling outside the urban edge area does not comply with the criteria stipulated above, the Ekurhuleni Metro will conduct the following procedure:
Request for an additional motivation from the applicant which clarifies the following matters:
 - The reason for the specific location of the proposed development.
 - Indicate who will provide the bulk services and where it will come from (i.e. in terms of water, sanitation, electricity, roads, storm water provision). Although bulk services may already be available in an area the appropriateness of location and capacity would need to be assessed.
 - Indicate what the impact of the development on the urban edge would be (i.e. how the development will integrate with the existing urban fabric and what impact it will have on urban sprawl).
 - Indicate what the impact of the development will be on the environment negatively affect any endangered animal or red data plant species?);
 - Indicate what the effect on the existing transportation infrastructure and public transport provision will be in general.
 - Prove that there is not a property inside the urban edge suitable for the proposed development.

The EMM will then submit the application and additional motivation, with an accompanying memorandum and draft recommendation from the EMM itself to each of the relevant provincial departments for their comments. The following line function departments will at least be consulted: Environment and Tourism; Roads and Transportation; Development Planning; Housing and Economic Development.

The relevant Gauteng Provincial Department should assess these applications in terms of the Decision Support System linked to the Gauteng Vacant Land Audit and comment in this context on the suitability of the development. The applications must also be referred to GDARD for their comments. The EMM will then make a final decision on the application based on all the facts and comments received during the two phases listed above. The EMM will then inform the relevant provincial departments in writing of its final decision.

11.11 DISASTER MANAGEMENT

The Ekurhuleni Disaster Management Framework (DMF) and Disaster Management Plan (DMP) coordinate all Disaster Management activities in Ekurhuleni. The MSDF and RSDFs must record spatial implications for disaster management and the impact of spatial

considerations on disaster management its financial cost and human lives. Effective disaster management can inter alia reduce vulnerability to climate change by ensuring a reduce risk to flash flooding by improving storm water management systems and rehabilitating/maintaining to open areas to attenuate flood water.

The MSDF supports other planning, environmental, engineering and health policies, laws, guidelines and procedures in contributing to disaster management. Based on the purpose of the MSDF, this support is focussed on the spatial components of disaster management, and can be summarised as follows:

- **Flooding:** No new development is to be allowed in the 1:100 year flood line. Flood line determination must be required with all development application if such development is deemed to have an impact on upstream or downstream areas. Where required EMM should determine 1:100 year flood lines for problem areas as identified through the EMM Storm Water Management Policy.
- **Sinkholes and collapsing soils:** No new development is to be allowed on areas affected by undermining, dolomite or other adverse soil conditions. Geotechnical investigations must be required with all new development applications if such development is deemed to be on unsuitable land. Where required EMM must implement mitigating measures as per the EMM Dolomite Risk Management Strategy.
- **Pollution:** No unsuitable development is to be allowed in areas demarcated as buffer/controlled areas around mine dumps, landfill sites, major hazardous installations, sewer treatment plants and airports.
- **Climate Change:** Land development should inter alia be evaluated based on its impact on climate change. Special reference should be made to wise water use, food security, reduction of carbon emission, enhancement of public transport, wise electricity use.
- **Acid Mine Drainage:** This risk is to be further investigated. Areas at risk are to be identified and mapped in the RSDFs.
- **Vulnerable areas:** These include OR Tambo International Airport, all highways, the Apollo Distribution Centre, mine dumps (slimes dams), acid mine drainage areas, industries such as AECL, informal settlements, unsafe buildings, etc. Specific areas are to be identified and mapped in the RSDFs.
- **Land demarcated for use in disaster situations:** EMM must identify facilities and land to be utilised in disaster situations. Examples of such disasters include the emergency relocation of people in the 2009 xenophobic attacks, land required for the 2010/11 emergency relocation of the Bapsfontein squatters, etc. Where possible, existing facilities such as community halls, schools, churches, sport stadiums, government facilities, etc can be used for short term (days or weeks), immediate accommodation of people in case of disaster. For medium term (weeks or months) accommodation, vacant land must be prepared and kept in a state of readiness. Due to the possibility of land invasion (squatting), the locality of the identified vacant land cannot be made public. Such land will be identified during the RSDF processes.
- **Spatial Information:** Applicable spatial information related to disaster management is captured on the Ekurhuleni GIS for use by all EMM Departments and other authorities involved in disaster management.

Here-under are the disaster risks identified in the Ekurhuleni formal risk and vulnerability assessment conducted during 2008. This section describes the risk profile of the municipality. The preliminary risk and vulnerability assessment performed with the aid of a questionnaire to all Councilors and Ward Councilors indicated the risks and vulnerabilities below.

These risks were confirmed in part through a formal risk assessment in the Southern Service Delivery Region:

Risk formula:

$$\text{RISK} = \frac{\text{HAZARD} \times \text{VULNERABILITY}}{\text{CAPACITY}}$$

Risks

- Natural Hazards - Lightning strikes causing fires and/ or damage to:
 - Power lines
 - Residential, commercial and industrial buildings
 - Veld fires
- Informal settlements
 - Floods - especially close to or affecting informal settlements
 - Heat wave
 - Extreme cold
 - Fires in informal settlements
 - Subsidence in dolomite areas
 - Strong winds and tornadoes
 - Earthquakes
 - Thunderstorms
 - Health related disasters
- Technological Hazards
 - Hazardous material spills and accidents (roads, rail and air)
 - Mine tremors
 - Major accidents (especially along the N1, N3, N12, N17, R24 and R21)
 - Aircraft crashes (Johannesburg International Airport and Rand Airport)
 - Explosion – e.g. (AEL) African Explosives (LTD)
 - Sasol Gas pipeline leaks and explosions
 - Petronet pipelines
 - Rail accidents and derailments

Vulnerabilities

- Residents living in unsafe areas (dolomite, mine dumps, along major road and rail corridors, etc).
- Residents in informal settlements close to hazards, i.e. gas and fuel pipelines, high tension electrical/ overhead wires.
- Residents not trained in disaster risk reduction actions and preparedness.
- Lack of awareness of disaster risks.

Manageability and Capacity

Manageability means: Capable of being managed or controlled.

Capacity means: A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.” (<http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm> Accessed: 1 December 2005).

Drivers of risk and vulnerability: poverty, lack of formal housing and secure tenure, urban growth and densification, (source: Disaster Risk Management, Lecture by Will Faling, University of Pretoria, 24 March 2011).

SECTION D

IMPLEMENTATION PLAN

CHAPTER 12

DEVELOPMENT PLANNING AND URBAN MANAGEMENT FRAMEWORK

12.0 PREVAILING MANDATES FOR LOCAL GOVERNMENT TO PERFORM

There are prescriptive mandates within which local government has to perform in South Africa. These mandates dictate the manner in which service delivery has to be implemented at the local sphere of government.

The Constitutional mandate for local government in the Republic of South Africa is enshrined in Chapter 7 of the Constitution Act 108 of 1996. The objects of local government are contained in Section 152 (1) and they include provision for democratic and accountable government; sustainable provision of services to communities as well as the promotion of social and economic development amongst others. Of significance is Section 153 (a) of the Constitution Act which stipulates that a municipality should “structure and manage its administration, budgeting and planning processes to give priority to the basic needs of the community and promote the social and economic development of the people”, further that (b) “participate in national and provincial development programmes”.

Section 51 of the Municipal Systems Act explicitly prescribes that “A municipality must, within its administrative and financial capacity, establish and organize its administration in a manner that would enable the municipality to inter alia :

(g) perform its functions-

- i) through operationally effective and appropriate administrative units and mechanisms, including departments and other functional and business units; and
- ii) when necessary, on a decentralized basis;

(h) assign clear responsibilities for the management and co-ordination of these administrative units and mechanisms; and

(i) hold the municipal manager accountable for the overall performance of the administration.

Having cited the constitutional and legislative framework within which the local authority has to perform its duties and functions, it is significant to point out at this early stage that Ekurhuleni did not develop organically but was a creation of statute through the Municipal Demarcation Board (MDB), nor did the nine (9) towns that were amalgamated into Ekurhuleni develop organically. The pre-1994 democratic election towns were deliberately manipulated by the apartheid forebearers within a framework of the exclusion of the marginalized Black (mainly African) population which found itself located at the periphery of the city. The mandated framework within which the post apartheid city has to develop is therefore provided in the statutes provided above and other relevant statutes, as well as national policies and strategies (including the White Paper on Local Government and the National Spatial Development Framework (NSDP)); provincial legislation, strategies and frameworks (including Gauteng City Region; Gauteng Spatial Development Framework; Gauteng Employment, Growth and Development Strategy amongst others). The responsibility to ensure proper governance and administration of the city is put squarely on the shoulders of the municipal manager in terms of Section 51 (i) of the Systems Act as quoted above.

To contextualize the position of Ekurhuleni in terms of governance, the report of the Department of Cooperative Governance and Traditional Affairs titled “State of Local Government in South Africa” Working Documents, COGTA 2009 sums up the situation on pages 7 – 8) as follows:

“However the distinct differences in the capacities and institutional context within the 283 municipalities means they have not all been able to pass through the phases establishment, consolidation and sustainability at the same rate or within an even playing field. All municipalities are categorized in recognition of a degree of difference – but how difference is understood – with its fiscal, spatial, functional and governance implications, is only now emerging as unique challenge within the efficacy of the state”.

In the context of the above, it is important for Ekurhuleni to determine through introspection where it is in terms of the establishment, consolidation and sustainability phases of local government development. If none of the metros were found to be in the sustainability mode according to the study (page 8), and the fact that Ekurhuleni did not develop with a single dominant city centre, it can be concluded in the same logic that Ekurhuleni is still at the establishment phase, arguably, after the disestablishment of the nine towns. At its establishment in 2000, Ekurhuleni had three administrative regions. Later in about 2006 the regions were abandoned and customer care areas (CCAs) were created, 20 in all, but they were for customer complaints and customer relations management rather than urban planning and urban management, and by implication, the abandoning of the regions created a vacuum for planning and urban management. In the absence of a clearly articulated urban planning framework, 103 local spatial development framework areas were created for urban planning purposes. These areas were over and above the 88 wards of Council. Instead of integrating the city, the LSDFs fragmented the city further beyond the 9 towns that had been amalgamated. In the confusion, it is for this reason that the academic critique commissioned by Council into the way planning and urban management was being approached by Ekurhuleni was sought. The University of the Witwatersrand was appointed to provide guidance in this regard.

12.1 GUIDANCE FROM THE WITS ACADEMIC CRITIQUE TO THE DEVELOPMENT PLANNING APPROACH ADOPTED BY EKURHULENI

Whilst the ‘Academic Critique of the Local Spatial Development Framework Modules’ was meant to concentrate on the way detailed local plans were to be or being formulated by Ekurhuleni, the critique completed by the University of Witwatersrand in 2009 went beyond local based planning into strategic planning. Therefore the final report(s) provides a critique of the concept of the LSDF and the way the Scope of Work and specific modules were constructed, but more importantly the critique was informed by the team’s assessment of international case studies from the first phase, by interviews and engagement with officials in Ekurhuleni, and by team discussion and analysis of the Scope of Work document. A set of recommendations arising from the critique was then developed.

The academic critique report gave a brief background description of the LSDFs and the Scope of Work document, and then moves to a general critique of the concept of the LSDF and how it is structured. The individual modules are then examined. It concludes by bringing together the main points from the findings, and then develops a set of recommendations which arise from these findings. The recommendations are indicated below:

“

1. The strongest recommendation that emerges from this report is to move away from the idea of detailed comprehensive plans for some 103 areas in the municipality.
2. In order to move beyond the rather broad regional plans, a less detailed LSDF covering fewer but larger areas, and linked to the way the municipality is organised institutionally, could make sense. This was the approach that was adopted previously in Ekurhuleni with its ‘nine towns’. However, Ekurhuleni is specifically moving away from this

approach, and a recommendation of this sort is unlikely to be acceptable. Planning for a small number of areas (of the order of 7-12) would in any event be relatively broadly based, and would still require more detailed planning in specific areas.

3. Instead of the 103 areas, it is argued that more detailed (but still meso-level) local planning should focus on:
 - a. Areas of strategic importance within the municipality as defined at metropolitan or regional level. These might include for example major nodes or corridors.
 - b. Areas where there is significant development pressure as evidenced for example by several development applications for changes in land use, or areas where significant growth is expected.
 - c. Areas where major changes are expected, and there is a need for planning to respond to major impacts, such as stations for the Gautrain and expansion of the airport.
 - d. Areas where the municipality wishes to undertake major development intervention, or to enable development, for example to upgrade living conditions or promote economic development in poorer areas within the municipality.
4. The type of planning that is undertaken – namely the specific sectors that are included in the planning process – should be guided by the concerns and issues to be addressed in the area. Thus planning at a local scale should not necessarily be comprehensive, covering all sectors or even all aspects currently included in the Scope of Work Modules. The Scope of Work Modules nevertheless provide a checklist of issues which could be considered if appropriate.
5. The purpose of planning in a particular context should be clearly defined.
6. Planning of this sort should:
 - a. Begin with a strong contextual analysis, including economic and demographic trends as appropriate, development pressures, problems and issues to be addressed;
 - b. Possibly use scenario planning to assess possible development trajectories, where the future of the area is uncertain;
 - c. Develop a set of visions, development objectives and principles for future development.
 - d. Develop a spatial plan for the area, as well as other linked sectoral plans as is appropriate to the problems and issues to be addressed.
7. Planners within the municipality need to play a key role in deciding on areas of focus and in defining what planning needs to occur, although an interactive process with consultants may be needed. This is likely to require further expenditure on increasing the number of well qualified, skilled and experienced municipal planning staff as opposed to relying largely on consultants to address standardised briefs.
8. It is also apparent from the study that planning capacity is a problem that needs to be addressed in the municipality.
9. The costing of the planning suggested in recommendation 3 above should not be standardised, but should be based on what needs to be done.
10. An important concern within the municipality is how planning can help to improve conditions in poorer areas. Local area planning that is focused on development, and with a strong emphasis on implementation, could be helpful here. There is considerable experience now in South Africa with this type of area based planning – in government's urban renewal programme, and in other area based planning across the country (for instance in eThekweni's area based management programme, in its old Warwick Avenue

and Cato Manor projects etc). There are also various institutional models for this sort of planning, and a significant literature on the topic. The municipality could give consideration to undertaking area based planning and development of this sort in selected areas. The approach suggested in recommendation 6 above of undertaking an analysis, developing objectives and visions, and formulating a spatial framework would be useful, but would also need to be strongly participatory, bringing in the main stakeholders in an area, and would need to include a strong emphasis on development strategies and the formulation of action plans for implementation. Planning of this sort would be more about promoting and facilitating development than providing guidance for land use change. In addition, it is concerned as much about ongoing operational management and 'soft' projects as about capital works. In several contexts, a small multi-sectoral team tasked with working through the planning for the area, and implementing it has been helpful to these processes, and provides a way of creating integrated planning and service delivery.

11. In addition, the municipality should give consideration to the way in which its 'normal' planning can help to carry through the planning principles embodied in national legislation and in the IDP and the EMM and regional spatial frameworks. For instance, in giving permission to shopping malls, it might be important to ensure that they accommodate taxis, link to public transport, and provide for pedestrians to make them accessible to all communities, and to prevent negative local impacts. Where policies do not exist on issues that are commonly addressed by land use planners making decisions on planning applications, and that would benefit from a common policy position, it may be useful to develop such policies.
12. In areas where single development applications are put in for developments that are contrary to the current planning schemes, applicants can be expected to provide a motivation that takes into account the broader context of the site. The municipality may also wish to undertake its own assessment: this could include elements of some of the modules, but would be undertaken on a more localised and far more focused basis. Although a LSDF might in theory be helpful for making decisions of this sort, they will often still be too broad, and other investigations would be required. The time involved to do this sort of planning and the level of planning required also seems out of proportion. Instead, the assessments suggested here could be undertaken much more quickly, in a focused way, and at much less cost.
13. The municipality could also give consideration to developmental issue based planning in certain contexts. For instance, if safety and security is a major concern in particular areas, there are well developed methodologies for conducting safety audits in a highly participatory way (including a various groups of people), and in developing solutions spanning across intervention in the built environment and design and the management of areas.
14. The municipality has a well developed set of policies and plans at EMM level, ranging from IDPs and SDFs to various environmental management plans to densification and retail strategies, amongst others. It could however give consideration to the development of a growth management strategy, such as was outlined in the first report, under the case study of the City of Johannesburg. Internationally, growth management strategies are being used to guide and manage the location of growth, to shape it in ways that are more sustainable and consistent with the planning, and to link planning, development and infrastructure.
15. EMM is part of the broader Gauteng City-Region: a large, complex and interrelated area. While there is communication between the metropolitan municipalities in the region, and some links are being forged, it is worth considering extending these links to enable

greater interchange between municipalities on the strategies and approaches they are adopting, and to begin to consider common approaches. All three metropolitan municipalities are using different approaches to go beyond initially broadly based metro level planning, and much could be learnt by comparing the experiences and considering whether any kind of common approach would be useful. For instance, should a common growth management approach be extended across the region? Importantly as well, it needs to be stressed that planning must take into account the fact that the municipality is within a city region, and consideration needs to be given to 'cross-border' planning issues and impacts, and to strategic developments for the region.

16. Finally, the study has highlighted the need for better links and communication between departments within the municipality, with more cooperation between sections and greater knowledge and understanding of each others' concerns, policies and intentions. This is critical since planning cannot happen in isolation. The LSDFs clearly were intended to provide a means of coordination, but as indicated in previous sections, coordination is importantly an institutional issue, requiring stronger structures and mechanisms to enable this process and better capacity to make it possible".

In conclusion, it is obvious that although the critique was based on the way modules for local spatial development frameworks had been formulated for the scope of works, for an un-established city like Ekurhuleni, a city finding itself within a developing country, with all the challenges encapsulated in the Millennium Development Goals (MDGs); and the lack of capacity and resources, the route that should be pursued is one of strategic planning which is more robust, rigorous and inclusionary in approach. In the ultimate end, the critique recommends an order of 7 – 12 regional planning and urban management areas which was in line with (sort of) best practice and benchmarking with other metros in South Africa. The demarcation of 103 local planning areas also went against the logic of disestablishing the nine towns and instead reinforced it, and the move towards the regions would ensure that interested parties, roleplayers and stakeholders would start associating with Ekurhuleni regions rather than associating with entrenched value systems of the discriminatory past.

The recommendations of the academic critique were adopted by the Corporate Affairs and City Planning Portfolio on 10 November 2010 under item C-CORP (231-2010) titled "Metropolitan Spatial Development Framework (MSDF): Review and Approval of the Recommendations of the Wits Academic Critique on the System of Local Spatial Development Frameworks for Ekurhuleni Metropolitan Municipality. It should be hastened to state that although the academic critique recommended in the region of 7 – 12 regions, it has been agreed at the highest level of the Administration that six (six) regions for planning and urban management purposes are adequate and should suffice. And in line with the Wits critique, the regions so created are to be aligned to institutional regime of Council and in particular the Institutional Review approved by the Council on 25 November 2010, under item A-CORP (117-2010) titled "Finalisation of the Institutional Review Process" in terms of which it was resolved inter alia as follows:

"8 That the development of the Demarcation Framework for Development Planning and Urban Management BE APPROVED"

Further, in line with the institutional regime provided for by the ward delimitations for the 2011 local government elections, the new 101 wards delimited will form the backbone of the regions, and were necessary, with limited ward splits.

It is important to set principles and criteria used for the determination of the regions for urban planning and urban management purposes having taken regard of the historical context within which Ekurhuleni pre- and post its establishment on 5 December 2000 and other prevailing circumstances.

12.2 PRINCIPLES AND CRITERIA FOR THE DETERMINATION OF URBAN PLANNING AND URBAN MANAGEMENT REGIONS

The other metros in this country use a system of regions for planning and urban management purposes. Although there are various criteria that are used to determine the planning and urban management regions, it is the functionality of the regions and the prevailing circumstances that is used by the metros in the main. The number of regions per metro is as follows:

- Tshwane: 7 planning and urban management regions (5 regions for CRM – customer relations)
- eThekweni: 5 regions [2 of which are termed rural and they incorporate INK (Inanda-Ntuzuma-KwaMashu) and also Umlazi]
- Cape Town: 8 regions (proposed in the draft MSDP for comment)
- Johannesburg: 7 regions (it had 12 in 2000 and before that it was one metro and four substructures – the regions change at every local government election time)

The prescribed mandates and criteria provided at the beginning of the chapter and the recommendations outlined in the academic critique lay the foundation for the other principles and criteria for the determination of the six regions for Ekurhuleni.

The criteria considered for the regions are the following:

- (a) that such regions follow the institutional arrangements of the organisation for which the new ward boundaries have been utilised as far as possible, with minimal ward splits.
- (b) And in the main the functionality of the area in geographic location, proximity and contiguity has been utilised.
- (c) The desire to dismantle apartheid linkages between the nine towns and their historical relationships with certain previously disadvantaged areas;
- (d) Cognisance taken of the DFA principles
- (e) Desire to transform and restructure the exclusive spatial fabric
- (f) Create a unicity identity from nine towns that historically developed independently and in competition with each other
- (g) Anchor sustainable livelihoods development on economic growth
- (h) Need to promote social and economic development in previously disadvantaged areas (PDAs) into (model) neighbourhoods
- (i) Capitalise on the comparative and competitive advantages of the city as expressed in planning frameworks of provincial and national spheres of government.
- (j) Taking advantage of decentralization of the administration for effective and efficient as concretised in the urban planning and urban management concept and philosophy.

It should be pointed out that there are two principles that do not necessarily mitigate against decentralisation which encourages centralization and corporatization of resources and these are:

- i) Optimise economic growth built on the principle of redistributive equity and centralisation and corporatisation of financial resources.
- ii) The fact that not all regions might have a developed office infrastructure, and therefore by implication that these would have to be provided. The principle of using depots and other specialist offices in centrally located areas would have to be considered.

It is an envisaged objective to provide a development theme and logic for each of the regions, however the historical development and evolution of the towns militate against such logic as the nine towns developed along the mining belt without unique identities. Consequently the one town became a duplication of the other and they ultimately developed independently and in competition with each other. The key determining factor the regions is the integration of the four PDAs, being Tembisa, Daveyton-Etswatwa, Kwatsaduza and Kathorus into the urban fabric. The demarcation of the regions take cognizance of this fact.

12.3 PROPOSED PLANNING AND URBAN MANAGEMENT REGIONS

In order to more effectively provide for the various functional areas of Ekurhuleni, the Metropolitan SDF provides for six urban planning and urban management regions. These are sometimes alternatively referred to as zones or areas. The six regions are indicated on Map 13.

For the purposes of planning at the strategic level, development planning and urban management regions are not necessarily administrative regions although it is desirable that they coincide with the regions. There is a need to dismantle apartheid boundaries and integrate the city. The moot question is what are the prevailing circumstances for EMM for integration and development? Infrastructure Planning is a critical function that informs the developmental needs for the municipality and integrated planning.

This chapter provides a description of each planning region and the logic behind each regional demarcation.

12.3.1 REGION A

The region is informed by the first goal of the Ekurhuleni Growth and Development Strategy of creating “clear city identity” from nine disestablished towns which had historically worked against each other over and above all they followed deliberately designed labour influx control determinants set by the previous regime. For the purposes of creating a unified city approach, and in pursuance of the pronounced goal of National Spatial Development Perspective (NSDP) and the Gauteng Employment, Growth and Development Strategy, the comparative economic advantages of Ekurhuleni are in aviation since the OR Tambo International Airport is located in the municipality and as well as its competitive advantage in manufacturing. The comparative and competitive advantages are not exclusive and solely in the location of the OR Tambo International Airport and manufacturing since there are other growth sectors in the city which include tourism, transport and logistics, finance and construction that should not be ignored in development planning and urban management. The airport is one of the biggest in Africa and is of national significance. Secondly the nine towns of the metro together form the biggest industrial hub for manufacturing in the area. Having taken regard of the growth of the airport and the manufacturing dominance of the metro, a core economic development triangle has been adopted. The airport is located on the upper northern portion of the core economic development triangle. This upper portion entails

aviation and related uses and activities referred to as airport city or aerotropolis activities. It is the core of the aviation economy linked to the airport and related activities. The airport city area includes the East Rand Mall area and the Route 24 bounded by the Sisulu corridor to the north, the N12 to the south and the R21 to the east inclusive of the airport up to and including Atlas road, Kempton Park and Rhodesfield.

The lower part of the economic development area is still part of the airport activities but entails extensive manufacturing. The industrial activities take place in townships which includes Sebenza, Isando, Jet Park, Lilianton, Germiston and Rand airport, Dunswart, Boksburg North and the towns of Kempton Park, Germiston, Boksburg and Benoni. The region stretches to the N17 and includes Bedfordview in the west.

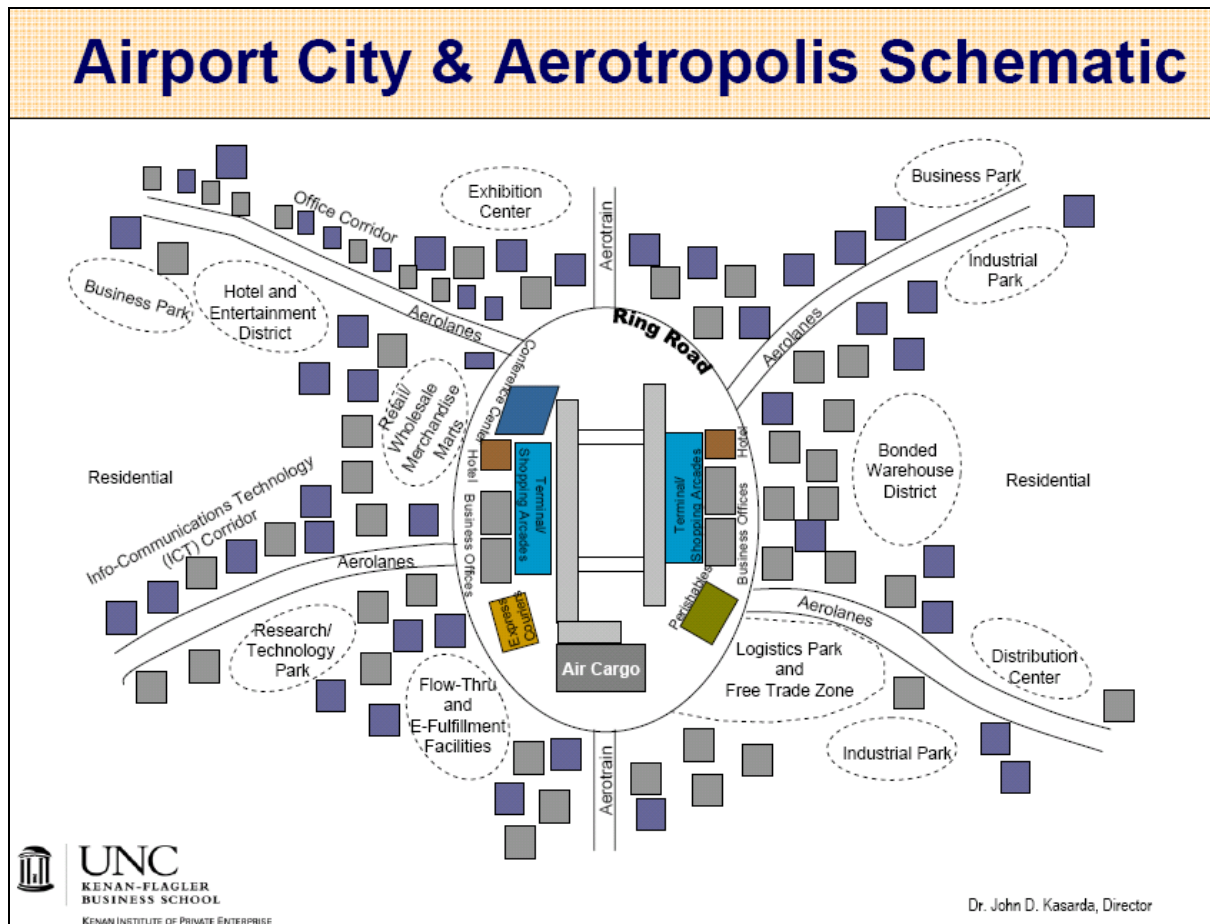
The region will be built on the strength of the airport and the manufacturing industry reinforced through aviation activities, the development of the Industrial Development Zone (IDZ), business tourism and aviation logistics with the aerotropolis concept forming the basis for the economic growth of the whole city for the benefit of redistribution of financial resources throughout the city. Freight and logistics given the strength of the road network and railway linkages will be leveraged in the region. Steel industry is also strong in the region.

The region has been identified as an area of residential densification and development intensification, urban renewal and brownfields redevelopment. Cognisance is taken of shallow undermining along the mining belt and radiation caused by mine dumps and acid mine drainage related to mining. This is the area for which poor people's residential areas as well as social housing should be concentrated and take place. What is important to note is that the sphere of influence of the aerotropolis goes beyond 25 kilometers and therefore covers the whole of Ekurhuleni. However the airport city as against the airport city region is more localized in proximity of the airport. Both concepts can be advanced and implemented without harm to Ekurhuleni or the Gauteng global city region. All and sundry should benefit from the comparative advantage of the location of the airport in Ekurhuleni regardless of historical linkages and distance from the airport.

Region A is a region for development intensification. It has been identified as an area of residential infill in the MSDF and should be utilized for residential densification.

In the core economic development triangle aerotropolis also referred to as the airport city region comprising the following wards: 17, 20, 21, 22, 23, 28, 32, 33, 34, 35, 92 and 93, parts of wards 17, 36 and 42.

The concept of the Aerotropolis which need to be the basis of such development is reflected in the figure below (source: Vitaliterre Airport City Presentation Johann Larney 2010, adopted from UNC Kenan-Flagler Business School 2010).



12.3.2 REGION B

This is the north –west region and it comprises the area which was part of the Khayalami metro. The region is the only area that went through the first and second phases of local government transition and if well supported should develop critical mass on the basis of the economy of the region. This critical mass can be attained and built on the backbone of the industrial developments in Clayville, the proposals for the development of Sisulu (R21) Corridor, as well as the high income areas of Midstream, Serengeti and Edenvale town as well as the northern areas of Kempton Park. The critical mass should assist in the planning and urban management proposed for focus in Tembisa in terms of the Tembisa Masterplan as pronounced by the Premier in the Gauteng State of the Province address of 2011. The residents of this region also benefit from the developments taking place in the adjoining metros of Johannesburg and Tshwane and alignment is very important.

The wards that form part of the region are: 1;2; 3;4;5;6;7;8;9;10;11;12;13;14;18;19;91;89;and part of wards 16, 17 and 100.

12.3.3 REGION C

This is the north-east zone comprising most of the area north of the N12, and east of the OR Tambo International Airport starting from Atlas road. These areas include Bapsfontein, Boksburg North, Northmead, Rynfield, Morehill, Chief Luthuli, Crystal Park, Mayfield, Etwatwa and Daveyton . the strength of the area lies in the desirability to link the low income areas of Daveyton and Etwatwa to the OR Tambo International Airport through the newly proposed growth area in Benoni North.

Residential growth is planned to the west of Daveyton –Etwatwa linking directly to the OR Tambo International Airport. Economic development shall be directly linked to airport and by implication, infrastructure, in particular roads have to be provided.

The region is comprised of the following wards: 25; 26; 27; 65; 66; 67; 68; 69; 70 and parts of wards 71 and 100.

12.3.4 REGION D

This is the central eastern region located mainly by between the N17 and N12 in the north, east of the Benoni CBD. The region includes the CBDs of Springs and Brakpan, Lindelani, Kingsway, Modderbee, Apex and mining areas in the east. The strategy would be to consolidate the area as part of the developments at the economic centre. The wards that form the zone are: 29; 30; 72; 73; 75; 97 and parts of wards 31; 71, 74; 76 and 78.

12.3.5 REGION E

This is the south-eastern region comprising land south of the N17. The region is distanced from the core economic area and it includes Kwatsaduza, Marievale, Nigel, Selection Park, Carnival Casino, Geluksdal, Witfontein and Sonneveld areas. Heavy industrial development should be encouraged in the region to revitalise the economic development of the area in particular Nigel industrial area. The region is removed from the core developments of the city and planning intervention were possible should assist in influencing the invigoration of the economy of the area.

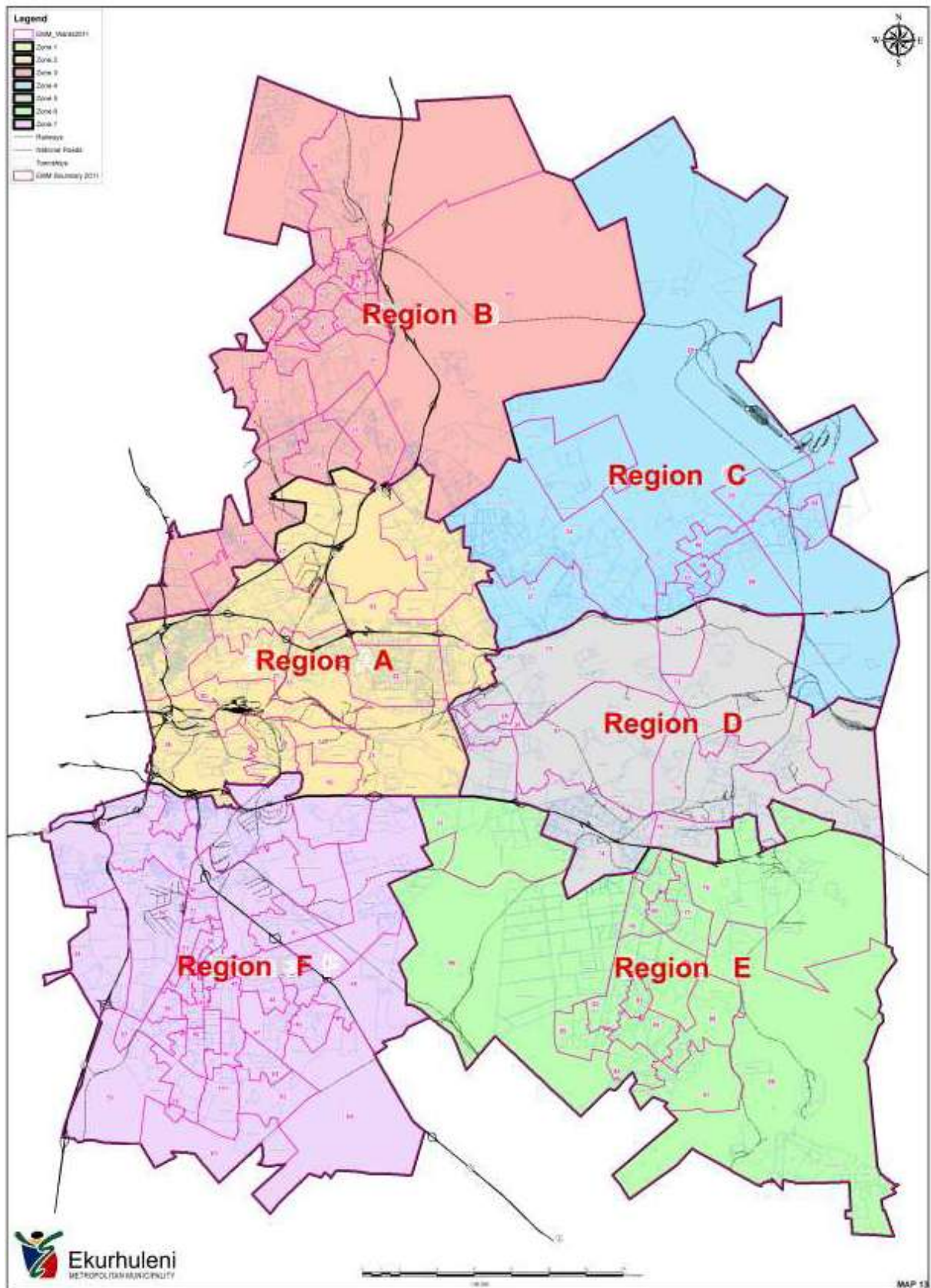
The wards included in the region are: 77; 79; 80; 81; 82; 83; 84; 85; 86; 87; 88; 89 and part of wards 74; 76; 78

12.3.6 REGION F

The last region is formed south of the N17 and west of the superdump. The area includes the better parts of Leeupoort, Windmill Park, Sunward Park, Elspark, Wadeville, Alrode, Alberton, Meyersdal, Brackendowns and Brackenhurst, Kathorus, Edenpark, Palm Ridge and Green Village. The strength of the region is the industrial areas of Wadeville and Alrode. Leeupoort is a major development area in this zone. The industrial areas of Wadeville and Alrode remain the backbone of the economy of the region and should be sustained. The region has strong economic and social linkages with the city of Joburg. There is also a new pull factor towards Midvaal in the south because of the location of Heineken which has become an instant pull factor along the R59 corridor.

The region is comprised of the following wards : 37; 38; 40; 41; 43; 44; 45; 46; 47; 48; 49; 50; 51; 52; 53; 54; 55 ; 56; 57; 58; 59; 60; 61; 62; 63; 64; 94; 95; 101 and parts of wards 36; 39 and 42.

The six regions are depicted on the map that follows.



12.5 CONCLUSION

The demarcation of the six regions does not exclude any part of Ekurhuleni in whatever region to participate in the social and economic activities of the metro at the global scale. It is noted that during participation discussions, local issues dominate and the community loses touch of the global phenomenon.

Regional Spatial Development Frameworks (Regional SDFs) will be prepared for each of the six areas so as to replace the previous three Regional SDFs as approved by Ekurhuleni in 2007 for detail development planning. The current approved Local Spatial Development Frameworks (LSDFs) will, where applicable, be incorporated into the six Regional SDFs. Secondly, the process of formulating the Regional SDFs will be utilised to identify areas of strategic importance for the formulation of area specific frameworks including precinct plans and urban design frameworks. On approval of the six new Regional SDFs there will thus no longer be LSDFs in use for detailed planning except where explicitly indicated. This will significantly simplify the Ekurhuleni hierarchy of planning. Urban management will take place in these regions as identified.

The process of demarcating development planning and urban management areas should not detract from customer relations management covered by a separate model of service delivery and customer relations management. The two models should not necessarily be exclusive for ultimately they all try to attain positive customer and community relations.

It should be emphasized that since the towns of Ekurhuleni developed along the mining belt without differentiation and unique identities. On the periphery of towns are found the previously disadvantaged areas which are also not unique in character as they were developed as labour reserviors. It is on this basis that no explicit theme or logic could be developed for each region but that they all depend on the critical mass that is expected to emanate from the development of the aerotropolis and the industrial and manufacturing areas found in the core economic development triangle.

CHAPTER 13

SYSTEM OF PLANS

The Ekurhuleni system of plans is guided by applicable current legislation, including the Municipal Systems Act, the Municipal Planning and Performance Management Regulations, the Development Facilitation Act, etc. All applicable legislation is summarised in the MSDF Status Quo Report (Report 1).

This chapter describes the relationship between all policies, plans, strategies and frameworks applicable to land development applications.

13.1 SPATIAL DEVELOPMENT FRAMEWORKS (SDFs)

Over the last number of years, Ekurhuleni pursued a system of wall-to-wall Local Spatial Development Frameworks (LSDFs). Due to the size of Ekurhuleni and the subsequent number of LSDFs required, the City Development Department saw the need to rethink the LSDF approach. An academic critique on the system of wall-to-wall LSDFs was subsequently obtained from the University of the Witwatersrand. Forthcoming from said critique, the SDF approach of Ekurhuleni was revised whereby the metro will now develop an MSDF supported by six RSDFs. Where required at the local level, there will be precinct plans in development areas of strategic importance.

The following Spatial Development Frameworks are replaced by this MSDF:

- All previous versions of the Ekurhuleni MSDF;
- Eastern Spatial Development Framework, 2007;
- Northern Spatial Development Framework, 2007; and
- Southern Spatial Development Framework, 2007.

13.1.1 Metropolitan Spatial Development Framework

The Metropolitan Spatial Development Framework represents the first of three levels of plans to be established in the Ekurhuleni Metro. The three levels of plans are as follows:

- Metropolitan Spatial Development Framework (MSDF);
- Regional Spatial Development Framework (RSDFs); and
- Precinct Plans (where required)

The MSDF is a visual representation of the 'development vision' and 'interventions' required to achieve the development objectives of the Growth and Development Strategy (GDS) and Integrated Development Plan (IDP) of the Ekurhuleni Metropolitan Municipality. Further to providing the objectives reflecting the desired urban form of Ekurhuleni, the Spatial Development Framework also puts forward policies and strategies for achieving these objectives. It is of utmost importance that Ekurhuleni pursues an approach to development and build a city around a development area that takes cognisance of the four disadvantaged township areas on the peripheries of the metro. In this regard the two alternatives in terms of creating a city identity are considered non-exclusive (Aerotropolis and multi-nodal). This approach ensures that whilst the areas of economic development that developed along the mining belt benefit from economies of scale in terms of location, the townships (PDAs) also develop their own economies in terms of retail development and industrial and commercial activities in order to address the huge social agenda of the state and the Millennium Development Goals (MDGs).

This plan should, however, not be interpreted as a blueprint or master plan aimed at controlling physical development, but rather as a framework giving strategic guidance in

respect of the location and nature of development in the municipality. Desired patterns of land use are indicated in terms of the Spatial Development Framework, although room for interpretation and further refinement still exists. The SDF is development orientated, but flexible to allow for growth and changing circumstances.

The guidelines provided in this document will also service as points of departure / basic principles for the Land Use Management System to be implemented for the Ekurhuleni Metropolitan Area. The Land Use Management Plan should assist in providing the foundation for the drafting of the land use management scheme. The land use management schemes would address detailed land uses (erf level) to be permitted / not permitted, densities, floor areas, height restrictions, etc.

The MSDF is a framework giving strategic guidance in respect of the location and nature of development in the municipality. Desired patterns of land use are indicated in terms of the SDF, although room for interpretation and further refinement still exists. The MSDF is development orientated, to allow for growth and changing circumstances. The MSDF indicates broad, desirable land use patterns and is therefore not a mechanism intended to evaluate or motivate individual land development applications. However, the MSDF may be used to evaluate or motivate individual land development applications in areas where there is no LSDF, only until such time as an applicable RSDF has been completed.

This Metropolitan Spatial Development Framework is reviewed in accordance with the provisions of the Municipal Systems Act 32 of 2000. All aspects from the legislation listed in the Status Quo Report (Report 1) were adhered to in preparing the MSDF.

This MSDF contains a greater level of detail compared to the previous Ekurhuleni MSDF. In this review, input and proposals from the 2007 Regional SDFs were incorporated into the MSDF. For this reason the three Regional SDFs as approved in 2007 can be rescinded with the approval of the MSDF.

13.1.2 Regional Spatial Development Frameworks (RSDFs)

The next very important level in the hierarchy of plans is the Regional Spatial Development Framework. In accordance with the Wits critique and best practice, a strategic Regional Spatial development framework (as developed by the City of Joburg and eThekweni, and as conceived in the draft City of Cape Town MSDF) is pursued. A Regional Spatial Development Framework (RSDF) will be prepared for each of the proposed Planning & Urban management Zones so as to replace and refine the previous three Regional SDFs as approved by Ekurhuleni in 2007. Local Spatial Development Frameworks (LSDFs) will, where applicable, be incorporated into the six RSDFs. On approval of the six RSDFs there will thus no longer be individual LSDFs in use. This will significantly simplify the Ekurhuleni hierarchy of plans.

The RSDFs will be formulated in terms of the Municipal Systems Act, the Municipal Planning and Performance Management Regulations, the Development Facilitation Act and the National Environmental Management Act (NEMA). The RSDFs must be attached as annexures to future MSDF Reviews for approval by the EMM Council as an integral component of the IDP in terms of the Municipal Systems Act. A similar submission must be made to the MEC responsible for Development Planning for approval in terms of the Development Facilitation Act.

The MSDF should be interpreted in the drafting of RSDFs so as to achieve detailed land use proposals within the RSDFs. This would ensure that the overall spatial objectives for the Metro are followed through to Zone level, while providing an adequate level of detail to assess land development applications. All spatial policies formulated must be refined and be incorporated into the RSDFs. The incorporation should look at the relevance of the policy in

the specific area, but within the parameters of the EMM spatial vision, planning principles and objectives. RSDFs will contain planning detail for the development of strategically located land.

The RSDFs will include detailed land use proposals and is therefore a mechanism intended to evaluate or motivate individual land development applications in areas where a precinct plan is not available. However, this MSDF may be used to evaluate or motivate individual land development applications in areas where there is no LSDF, only until such time as an applicable RSDF has been completed. Until new RSDFs have been approved, existing LSDFs are to be used to evaluate applications.

13.2 PRECINCT PLANS

Precinct Plans will be developed for strategic development areas of the metro. Where the need for a fine level of detail with proposals up to individual erf level persists, or where specific trends and tendencies require an overall policy approach, Precinct Plans and policies are used as mechanisms to guide decision making. Such areas will be identified and demarcated in the RSDFs to be drafted.

Existing approved LSDFs that are consistent with this MSDF will be retained for inclusion into the RSDFs. In cases where these LSDFs are not consistent with the MSDF, these LSDFs will have to be amended, updated or revised.

Where available, a Precinct Plan and/or approved policy (seer par 13.6) is thus to be used for the consideration of all application types, (e.g. rezoning, township establishment, consent use, removal of restrictions, DFA applications, etc.). Where available, a Precinct Plan and/or approved policy (seer par 13.6) is to be used by all decision making bodies, i.e. Ekurhuleni Development Planning Portfolio Committee, Ekurhuleni Development Tribunal, DFA Tribunal, Provincial Townships Board, Gauteng Department of Agriculture and Rural Development (GDARD), and all Ekurhuleni officials with delegated authority.

The term Urban Development Framework (UDF) is uses as a synonym for a Precinct Plan.

13.3 LAND USE POLICIES

Implementation of the following land use policies are supported in implementing the MSDF:

- Policy on Security Townships (new developments), 2003;
- Streets and Township Naming Policy, 2003;
- Policy on Home Enterprise, 2003;
- Rezoning on Farm Land Policy, 2003;
- Spaza Shop Policy, 2003;
- Tavern Policy, 2003;
- Policy on Second Dwelling Units, 2003;
- Accommodation Establishment Policy, 2003;
- Crèches / Nursery Schools Policy, 2003
- Mobile telecommunications Infrastructure Policy; 2005
- Uniform Policy on the placement of Shipping Containers on properties within the Ekurhuleni Metropolitan Area, 2003
- Open Space contributions Policy, 2010; and
- Limited Payout Machines Policy, 2010

The above listed policies are to be referred to in considering land development applications as these policies address specific detailed matters not addressed in the MSDF.

13.4 SECTORAL STRATEGIC PLANS

The GDS, IDP and MSDF amalgamate the objectives, strategies and implementation plans of the various development sectors in Ekurhuleni. Many of the Departments in Ekurhuleni embarked on the formulation of Sectoral Strategic Plans, in accordance with legal requirements or their own Key Performance Areas, prior to or during the formulation and revision of the IDP and MSDF. This sectoral input was fed into the MSDF to form a synergistic perspective of development in the metropolitan area. The MSDF makes the influence of various sectoral development aspects on each other and the Metro as a whole clear.

The spatial elements of following specific approved sectoral plans are incorporated into this MSDF:

- The Ekurhuleni Biodiversity Study (EBOSS).
- The Disaster Management Framework (DMF) and Disaster Management Plan (DMP), recording spatial implications for disaster management and the impact of spatial considerations on disaster management its financial cost and human lives.
- Infrastructure and Community Services Backlog Study, 2009-2025.

The following City Development approved sectoral plans are fully incorporated into the MSDF and are no longer to be referred to individually in considering land development applications.

- Ekurhuleni Regional Retail Sector Investigation, 2004;
- Ekurhuleni Residential Densification Strategy, 2008
- Ekurhuleni Development Corridor Study, 2004; and
- Strategy for the Ekurhuleni Core Development Triangle, 2005.

The following specific sectoral plans are to be updated, amended or improved after approval of this MSDF and based on the proposals of this MSDF:

- Sports, Recreation, Arts and Culture. The Status Quo Analysis Phase of this sectoral plan has been completed. The Strategy Phase should consider the MSDF, while the MSDF revision should in future incorporate strategies forthcoming from this sectoral plan.
- Engineering Services: Master Plans for the various aspects forming part of engineering services are currently underway and should be aligned to the MSDF;
- Stormwater Management Plan;
- Integrated Transport Plan: This plan should also be aligned with the SDF, especially with regard to the alignment of the proposed IRPTN routes;
- The IMQS Backlog Study should be updated to reflect the MSDF's densification approach vs. the sprawl approach used in the current Backlog Study; and
- Infrastructure Delivery Plan which must support housing delivery.

13.5 LAND USE MANAGEMENT SCHEMES

A land use management scheme (LUMS) is more detailed than a SDF (erf/site specific level) and fulfils a different legal function from a SDF. The new Ekurhuleni LUMS currently being drafted is informed by the MSDF so as to provide for implementation of the MSDF. This specifically relates to definitions used in the MSDF and LUMS and to the implementation of densities as proposed in the MSDF. In the absence of appropriate and relevant land use legislation, the LUMS should be promulgated in terms of the Townships and Town Planning Ordinance 1986 as an interim scheme so that the interpretation of terminology in line with the MSDF is the same throughout the metropolitan area.

The provision for Special Development Areas (SDAs) in the new Ekurhuleni Scheme Clauses will be an important spatial tool in implementing SDF proposals.

13.6 CONSIDERING LAND DEVELOPMENT APPLICATIONS

This Section reflects the official position of the Ekurhuleni Metropolitan Municipality regarding the use of Spatial Development Frameworks and Policies when considering land development applications. 'Land development application' refers to all application types: rezoning, township establishment, consent use, Removal of Restrictions, sub-division, division of land, DFA applications, etc. This Section is to be used by all decision making bodies, i.e. Ekurhuleni Development Planning Portfolio Committee, Ekurhuleni Development Tribunal, DFA Tribunal, Provincial Townships Board, Gauteng Department of Agriculture and Rural Development (GDARD), and all Ekurhuleni officials with delegated authority.

In commenting on land development applications, the following standard text is to be used by all Area Planners as a base for Spatial Planning comment:

Linkages to the IDP

The approved Metropolitan Spatial Development Framework (MSDF) forms the spatial component of the IDP. The MSDF incorporates and spatially interprets all principles, objectives, etc set in the DFA, NEMA, the EMM Integrated Development Plan (IDP) and the EMM Growth and Development Strategy (EGDS).

MSDF & RSDF

The MSDF indicates broad, desirable land use patterns and is therefore not a mechanism intended to evaluate individual land development applications. A Regional Spatial Development Framework (RSDF), Precinct Plan or approved Land Use Policy is thus to be used for the evaluation of all application types. However, this MSDF may be used to evaluate or motivate individual land development applications in areas where there is no LSDF, only until such time as an applicable RSDF has been completed.

*The *MSDF/ RSDF/ Precinct Plan indicates the application site for purposes, including the rights applied for. The application is in line with the *MSDF/ RSDF/ Precinct Plan and is **supported**.*

OR

*The *MSDF/ RSDF/ Precinct Plan indicates the application site for purposes, not including the rights applied for. The application is not in line with the *MSDF/ RSDF/ Precinct Plan, but is **supported** based on the merits of the application due to the following reasons:*

OR

*The *MSDF/ RSDF/ Precinct Plan indicates the application site for purposes, excluding the rights applied for. The application is not in line with the *MSDF/ RSDF/ Precinct Plan and is **not supported**.*

* MSDF/ RSDF/ Precinct Plan: remove the two names not applicable

AND

Land Use Policies

*The following land use policy is applicable to this application:**

- *Policy on Security Townships (new developments), 2003;*
- *Streets and Township Naming Policy, 2003;*
- *Policy on Home Enterprise, 2003;*
- *Rezoning on Farm Land Policy, 2003;*

- *Spaza Shop Policy, 2003;*
- *Tavern Policy, 2003;*
- *Policy on Second Dwelling Units, 2003;*
- *Accommodation Establishment Policy, 2003;*
- *Crèches / Nursery Schools Policy, 2003*
- *Mobile telecommunications Infrastructure Policy; 2005*
- *Uniform Policy on the placement of Shipping Containers on properties within the Ekurhuleni Metropolitan Area, 2003*
- *Open Space contributions Policy, 2010; and*
- *Limited Payout Machines Policy, 2010*

*The application is in line with the policy/ not in line** with the policy. The application is **supported/ not supported****.*

** Remove the policies not applicable*

*** Remove what is not applicable*

CHAPTER 14

GROWTH MANAGEMENT STRATEGY

According to the Gauteng Urban Edge Policy, 2007 (page 49) a Growth Management Strategy should form an integral part of the Municipal Spatial Development Frameworks in Gauteng Province. In essence the Growth Management Strategy is an implementation strategy for the Spatial Development Framework. A Growth Management Strategy entails the application/utilisation of a number of Growth Management Tools in combination with one another with a view to achieve the desired spatial outcome as reflected in the Spatial Development Framework (the Map). It thus focuses on ways and means (how) to achieve the proposals contained in the Spatial Development Framework.

There are several Growth Management Tools available to guide and influence public and private development processes, and in the Growth Management Strategy an authority indicates which of these instruments it intends using and what it wants to achieve with these. As stated earlier in this document the Urban Edge is one such Growth Management Tool, but its efficiency is significantly enhanced only when used in combination with some of the other instruments.

Internationally, a variety of growth management tools are being used for the purpose of urban growth management additional to the Urban Edge. The nature and application of these measures vary from country to country and even from region to region. This Chapter elaborates further on some of the most prominent Growth Management Tools that can be used to guide, direct and influence development patterns and trends in Ekurhuleni:

14.1 COMPREHENSIVE PLAN

The Comprehensive Plan is a document composed of written goals and policies as well as maps used to guide the type, location, and quantity of development in a community over a 10 or 20- year period based on existing conditions and future hopes. This plan is strategic in nature and should include goals for economic growth and how it can be contained within existing areas or areas designated for growth. Such plans can be compiled at regional (metropolitan) level as well as at local (precinct) level.

In the Ekurhuleni context this refers to the Ekurhuleni GDS, this Metropolitan Spatial Development Framework (which is part of its Integrated Development Plan), RSDFs (including LSDFs) and Precinct Plans.

14.2 THRESHOLD PUBLIC SERVICE STANDARDS

These guidance standards are incorporated into a community's comprehensive plan specifying the level of public services that must be provided for different types of development. Service levels can be set for schools, water, sewer, roads, transport, libraries, and parks. Proposed development that will result in non-maintenance of these service levels can be denied approval.

In the case of Ekurhuleni, these standards are set in the 'Customer Service Standards, 1st Edition, 2009'. Service levels are also described in the various sectoral plans as prepared by the various Ekurhuleni Departments. Where spatially applicable these standards are also repeated in the MSDF document.

14.3 FISCAL IMPACT ANALYSIS

This refers to a municipality conducting a study of the projected short and long-term costs and revenues associated with new development in a community. It can be used to evaluate the most appropriate time and place for development to occur based on using existing utilities and rate of development. In essence this is thus a Cost-Benefit Model which supports a cost effective, incremental approach towards urban expansion.

This is yet to be conducted for Ekurhuleni for selected priority development areas. In broad terms however, the Capital Investment Framework accepts that the greatest cost benefit will be achieved through development in nodes and corridors as indicated on the CIF map.

14.4 LAND USE AND INFRASTRUCTURE COORDINATION

This strategy requires development to occur in areas already served by existing bulk service networks or areas planned to be served by such networks in order to prevent leapfrog development and continuous demands for service extensions. For Ekurhuleni, this coordination is generally encouraged through the IDP and is specifically mapped in the MSDF's Capital Investment Framework (CIF).

14.5 REDEVELOPMENT AREAS (BROWNFIELDS)

These are programmes at the provincial, metropolitan and local levels to promote economic development and/or redevelopment in needy and rundown areas with the use of tax incentives, regulatory waivers, infrastructure improvements, and urban revitalisation.

In the Ekurhuleni context these could include the Central Business Districts of Kempton Park and Germiston which has been demarcated as Urban Development Zones (UDZs) in terms of the Urban Renewal Tax Incentive implemented by National Treasury. Additionally, the establishment of City Improvement Districts (CIDs) in selected Ekurhuleni CBDs, eg Edenvale CBD, is a good example of how this tool can be utilised to promote upgrading in decaying areas.

14.6 STRATEGIC DEVELOPMENT AREAS

These are strategically located vacant areas designated for growth by the local government. The area is chosen due to its strategic location, the services available in the area, and/or because of local zoning regulations or comprehensive plans. These areas are used as priority funding areas and can represent both infill development and urban expansion. The MSDF identified future nodes and corridors, notably to the east and north east of the Core Node as such strategic development areas. The mining belt and Leeuwpoot areas are also included here, as is the Albertina Sisulu (R21) Development Corridor.

14.7 FOCUSED ECONOMIC DEVELOPMENT IN GROWTH AREAS

As expansion of the urban area is an inevitable outcome of a growing society, it becomes important to encourage economic growth to occur in focused areas. Rapid development is financially draining to all spheres of government. Unchecked and uncoordinated economic growth can lead to increased congestion, pollution, overcrowding, loss of open space, as well as poorly planned community spaces. The objective should thus be to direct economic growth towards areas specifically designated for this purpose (activity nodes) and then to properly provide the infrastructure required to maintain these areas. This approach also supports the implementation of proper public transportation as these nodes represent clear destinations around which to design a public transport system. For Ekurhuleni, a system of Primary, Secondary and Tertiary nodes is proposed. These nodes are arranged, based on

planning theory, around the proposed core node and is aimed at providing infrastructure so as to provide for economic growth and residential densification in these nodes.

14.8 ZONING

Zoning ordinances specify written requirements and standards for permitted uses of buildings, the height and size of buildings, the size of yards, parking and signs and fences, among others. The purpose is to separate land uses that are seen as incompatible. The separation of uses aids growth management by separating uses such as agricultural and rural from residential and industrial. Ekurhuleni is currently in the process of compiling a consolidated Land Use Management Scheme which will be implemented for the entire Ekurhuleni area in due course.

14.9 BULK SERVICE CONTRIBUTIONS

Bulk Service Contributions are a cost assessment imposed against new development in order to generate revenue to fund or recover the costs of reasonable service improvements necessitated by the development. This tool must be imposed carefully to balance the competing demands presented when dealing with the pros and cons of new development. Obligations imposed during development applications, generally require developers to fund, build, and dedicate for public use, basic facilities required by future residents of the new developments.

In Ekurhuleni, the bulk services contributions are through service contribution policies as per the table below.

Ekurhuleni Service Contribution Policies

Service	Policy Name	Approval Date
Municipal Roads	Roads and Stormwater Bulk Engineering Services Contributions Policy for the Ekurhuleni Metropolitan Municipality	EMM Item A-IS (012009) CM, 25 June 2009
Stormwater	Roads and Stormwater Bulk Engineering Services Contributions Policy for the Ekurhuleni Metropolitan Municipality	EMM Item A-IS (012009) CM, 25 June 2009
Water	Policy on Bulk Services Contributions for Water and Waste Water, EMM; as amended.	Item A-IS (8a2008) CM, 29 January 2009*
Sewer	Policy on Bulk Services Contributions for Water and Waste Water, EMM; as amended.	Item A-IS (8a2008) CM, 29 January 2009*
Electricity	Policy on Contributions Required for Bulk (External) Electricity Services for Private Development within Ekurhuleni Metropolitan Municipality	EMM Item A-IS (072008) CM, 27 November 2008*
Open Space	Payment of Open Space Contributions in the Ekurhuleni Metropolitan Municipal Area, EMM	Item A-CORP (622010) CM, 22 July 2001

* As amended by Council resolution A-CORP(39-2010) on 27 May 2010.

In order to promote development in priority geographic areas as proposed in the MSDF, the relevant Ekurhuleni Bulk Service Contribution Policies will be linked to the Capital Investment Framework. This will be done in terms of rebates on bulk service contributions in geographic priority areas as indicated on Map 14 and as described in the chapter dealing with the Capital Investment Framework. Qualifying developments must comply with the land use proposals as indicated on Map 12.

The table below reflects the outline of proposed bulk service contributions in terms of the above listed policies. 'Priority Areas' and the 'CIF Period' as referred to in the table are indicated on the CIF Map (Map 14) and are described in chapter dealing with the Capital Investment Framework. Ekurhuleni Metropolitan Municipality reserves the right to amend this table at any time as it deems fit.

Percentage Rebate on Bulk Service Contributions

Application Type	Application NOT Submitted in CIF Period.	Application Submitted in CIF Period.
Application NOT in Priority Area	0%	0%
Application in Priority Area, but not in line with RSDF (Precinct Plan if available) proposal.	0%	0%
Application in Priority Area, and partly in line with RSDF (Precinct Plan if available) proposal.	% to be determined	% to be determined
Application in Priority Area, and fully in line with RSDF (Precinct Plan if available) proposal.	% to be determined	% to be determined

The exact rebate % may have a serious financial implication for EMM and may affect future capital budgets. For this reason, exact percentages are to be determined jointly between the Finance, City Development, and Infrastructure Services departments during the review of the Ekurhuleni GDS. It may be necessary to differentiate between different types of development, e.g. income generating development vs. non-income generating development.

The investigation into the % rebates need to be concluded urgently. During 2009 and 2010 a sharp reduction in the number of land development (township establishment, rezoning and consent use) applications were noted. This is partly due to the down turn in the economy, but based on comment received for land developers and planning consultants, this reduction in the number of applications is also due to the high service contributions being charged. In many cases developers are simply abandoning their developments or are conducting their land uses illegally in order to avail die high service contributions. In both such scenarios, EMM is currently not generating income from service contributions which would otherwise have been generated. Giving rebates in priority geographic areas will allow development and will activate the income stream from these contributions.

14.10 PURCHASE OF DEVELOPMENT RIGHTS (PDR)

This programme is an effective tool to channel economic development towards certain areas and to deflect growth pressures from others. With a PDR program a local authority is allowed to create certain districts where the land is reserved for conservation, open space or agricultural production. These districts allow the municipality implementing the program to impose special assessment rates on these districts that are beneficial to the community, and which promotes the utilisation of these areas for conservation, open space, recreational or agricultural purposes. In essence the community in such a district is thus compensated (by way of special assessment rates) to maintain and enhance the existing character in an area instead of urbanising the area. In European countries the huge agricultural subsidies paid to farmers by the respective governments allow agriculture to compete financially with urbanisation i.e. it is more profitable for the landowner to maintain farming activities than to establish townships on the land.

This tool is currently not utilized in Ekurhuleni and requires further investigation.

14.11 INCENTIVES

The creation of incentives and concession packages is one of the most important methods used by municipalities to attract new investment, which can be efficiently and innovatively applied to initiate development in focus areas. Municipalities should, however, ensure that incentive packages be linked with the local economic development objectives of the specific area. Incentive and concession packages that are offered by municipalities in South Africa are listed below.

14.11.1 Rates and Taxes Incentives

Although the existence of the Tax Holiday Scheme of the National Government was cancelled at the end of September 1999, it is possible for municipalities to provide incentives to new investors in terms of a redemption on rates and taxes, service charge reduction on electricity consumption, water consumption, etc. The recently initiated Urban Renewal Tax Incentive for certain CBD areas in South Africa is another example of this mechanism and is implemented in Ekurhuleni as described above.

14.11.2 Infrastructure

These concessions often involve the provision of serviced industrial and commercial sites or special efforts to develop infrastructure and services in selected areas in accordance with the needs of potential investors. The Blue IQ initiative in Gauteng Province is based on the provision and/or improvement of infrastructure in certain areas in the province in order to stimulate economic development. The proposed Industrial Development Zone (IDZ) to the north-east of OR Tambo International Airport is such an example that is being pursued by Ekurhuleni.

14.11.3 Land and buildings

This incentive package may involve the sale, transfer or rental of land, buildings and other facilities owned by the municipality. This option requires further investigation for Ekurhuleni.

14.11.4 Regulatory reform

These concessions involve efforts by the municipality to reduce constraining regulation and zoning that may limit potential development. This also involves facilitating prompt decision-making procedures, such as the approval of building plans, rezoning applications, etc. This tool requires further investigation for Ekurhuleni.

14.11.5 Finance

These incentives may take on the form of special grants, access to start-up capital, bridging finance, loan guarantees and the underwriting of risks. This tool requires further investigation for Ekurhuleni.

14.12 TAX INCREMENT FINANCING

Tax Increment Financing (TIF) basically entails the use of increased (incremental) property tax by private sector developers to finance engineering services over an agreed period. The developers provide and fund the required infrastructure pro-actively, which stimulates development and results in increased income from rates and taxes. In terms of prior agreement, the developer(s) are then allowed to use the increased income from taxes for a set period to finance the loans or debt incurred for the infrastructure. Local Government receives the same tax income from the area as before, is released from the responsibility to provide infrastructure, benefits from high economic growth and job creation, and eventually receives the full higher tax income. The implementation of TIF requires the declaration of a TIF District. Obviously the inverse of the above measures could also be applied as disincentives to development e.g. non-provision of infrastructure, grants, rates and taxes rebates, higher bulk service contributions etc.

The TIF concept looks like a possible solution to the challenges posed by the MFMA regarding loans to private developers with regard to the cost of bulk services to be paid back to developers. The TIF may be a good tool to promote development as per the land use proposals of the MSDF (Map 12) without the need for EMM to spend capital in such areas.

This may be applied to all areas of EMM. This tool requires further investigation for Ekurhuleni as part of the GDS review process.

14.13 RINGFENCING

This mechanism allows for income or part of income generated by one area through rates and taxes to be reinvested in that same area by way of a dedicated fund. This provides for the upgrading of roads and infrastructure in order to optimise the development potential of a specific area. This is usually only a temporary measure until certain predetermined objectives for an area have been met. This tool requires further investigation for Ekurhuleni.

14.14 TRANSIT ORIENTATED DEVELOPMENT

Transport Orientated Development (TOD) is defined as a unique mix of land uses located at a high density within a set radius of a railway station or a major public transport node like a bus terminus, or a modal transfer facility. TODs are purposely designed to facilitate access to the transit stations/nodes and so increase the use of the public transportation systems. TODs are therefore designed to achieve land use and transportation integration within corridors. Among their goals, TOD programmes seek to create high-quality living and working environments and improve station access. For transit agencies, TOD programmes offer the possibility of enhanced ridership. In inner-city transit areas, TOD programmes attract private investment, improve the quality of the environment and provide new or expanded employment opportunities. For developers, TOD programmes offer opportunities to build near transit stations and take advantage of supportive land use regulations as well as favourable business demographics.

TODs form an important component of the Ekurhuleni MSDF as it provides the basis for the development of the system of nodes. The MSDF identified a number of rail stations and road based public transport routes which also forms the basis for residential densification.

14.15 ANNEXATION PLANS

These plans are usually compiled to assess future public land needs, and to guide the municipality by way of a strategy to obtain such land in accordance with a predetermined programme. Such land needs are to be determined in the drafting of the RSDFs.

Chapter 15

Capital Investment Framework (CIF)

This chapter describes the Ekurhuleni Capital Investment Framework (CIF) as required in terms of Section 4(e) of the Municipal Planning and Performance Management Regulations, 2001 (as promulgated in terms of the Municipal Systems Act) and as required in terms of the White Paper on Spatial Planning and Land Use Management, 2001. Although not defined in legislation, the CIF must show where the Municipality intends spending its capital budget and must map the projects included in the budget.

The Ekurhuleni CIF is described in terms of the following:

- Services Backlog;
- Geography of EMM income;
- Priority Geographic Areas;
- Budget Policies;
- Capital Prioritisation Model;
- Priority Strategic projects;
- Major Investment or Development Projects; and
- Major Capital Projects.

15.1 SERVICES BACKLOG

The EMM Infrastructure and Community Backlog Study, 2010 (compiled by IMQS) provides essential information in terms of outlining statistics for services backlogs, economic spending, household figures and a projected population growth scenario in determining future infrastructure needs for the Metro. The Study guides the MSDF in identifying areas with capacity backlogs in relation to capital expenditure and investment required throughout Ekurhuleni to address areas of upgrading, renewal and maintenance of services. This provides guidance in determining priority geographic areas in relation to a projected capital expenditure scenario (see proposed CIF table). The growth scenario also gives the MSDF insight in terms of its CIF for future growth trends in Ekurhuleni, which lends itself to determining future capital expenditure as per its priority geographic areas.

It is suggested that the MSDF be used as the preferred growth scenario document in any future review of the EMM Infrastructure and Community Backlog Study as it provides more expenditure detail in relation to the Metro's priority geographic areas as determined.

15.2 GEOGRAPHY OF EMM INCOME

Budget priority spending should also be determined in relation to the metro's major rates and services levied. The EMM top account holders have been listed (see table below) and are identified as needing to protect investors as contributing to the economic growth and viability of the metro. As part of the CIF completion, these will be mapped. The most investors are located in the Germiston, Kempton Park, Boksburg and Springs areas.

The main contributing sectors have been identified as retail, entertainment, aviation, property development, mining and manufacturing (food and beverage, packaging, chemicals, metal, services, and other manufacturing services).

Top EMM Account Holders

Company	AVERAGE BILLING	TOWN CODE
NCP CHLORCHEM	20,065,450	Edenvale
CONSOL	16,367,277	Germiston
ACSA	14,480,604	Kempton Park
NAMPAK	9,812,943	Germiston
MONDI	8,730,845	Springs
SAB GROUP	8,044,382	Alberton
8 MILE INVESTMENTS	7,774,666	Germiston
METBOARD PROPERTIES	7,680,665	Germiston
UNILEVER SOUTH AFRICA	5,962,603	Boksburg
LIBERTY GROUP	5,674,220	Germiston
PEERMONT GLOBAL	5,259,860	Kempton Park
P F F G	5,200,721	Springs
RAND WATER BOARD	4,988,131	Boksburg
SAINT-GOBAIN	4,849,536	Alberton
GROWTHPOINT PROPERTIES	4,532,711	Springs
ELEMENTSIX PRODUCTION	3,990,601	Springs
DANONE SOUTH AFRICA	3,956,116	Boksburg
AIR LIQUIDE (FEDGAS)	3,881,546	Alberton
SOUTH AFRICAN AIRWAYS	3,880,946	Kempton Park
DISTELL	3,793,240	Germiston
PG BISON	3,758,949	Boksburg
PLASDIE INJECTION MOULDING	3,646,740	Germiston
DENEL	3,526,029	Kempton Park
SANLAM	3,419,033	Boksburg
USUTU RIVER PROPERTIES	3,393,003	Germiston
EARLYBIRD FARM	3,364,316	Kempton Park
KNIGHTS GOLD MINING	3,232,096	Germiston
APEXHI PROP	3,191,078	Kempton Park
ACUCAP INVESTMENT	3,141,935	Kempton Park
JOHNSON MATTHEY	3,141,607	Germiston

As companies reflected on the list of top account holders need to be involved in future revisions of the CIF, those companies will be involved at the opportune time after the approval of this MSDF.

15.3 PRIORITY GEOGRAPHIC AREAS

The Capital Investment Framework must focus capital spending in Ekurhuleni into the indicated priority geographic areas as indicated on Map 14. The priority geographic areas were identified based on the following form giving spatial elements from the MSDF Spatial Concept (Map 11) and Land Use Proposals (Map 12):

- Previous MSDF priority areas (service upgrading, infill, expansion);
- Densification areas (core triangle, nodes, corridors);
- Geography of EMM income; and
- Major Housing Projects.

15.3.1 Service Upgrading Areas

There are four major Service Upgrading Areas in the Metro, being the four complexes of disadvantaged communities namely: Tembisa, Kathorus, Kwatsaduza and Daveyton/ Etwatwa.

As a principle the EMM will focus on development of these townships as model neighbourhoods with activity nodes in their own right in the long term. In the short to medium term retail development should be allowed in terms of the approved retail implementation strategy as well as its capital expenditure and operational programmes towards upgrading the services and facilities in these areas to levels comparable with that of the rest of the Metro. The different function of Tembisa in terms of the 'central place' model, relative to the other PDAs, should be noted.

Service Upgrading Areas are redefined in the concept so as to promote development and provision of services in nodes and corridors within the previous Service Upgrading Areas. Such nodes and corridors are to be prioritised as part of the CIF.

15.3.2 Infill Areas

There are three main areas which are a priority in terms of infill development. All three these pockets of land are strategically located within the core areas of the EMM and some detailed work have already been done on the suitability for the development of these areas. The priority areas are:

- Priority 1: The areas previously occupied by mining activities in the vicinity of Germiston and around the central part of Boksburg. Infill development here will focus on Main Reef Rd and will effectively link the Germiston and Boksburg Primary Activity Nodes.
- Priority 2: Vacant and previous mining land to the south-east of Benoni CBD
- Priority 3: Land to the northwest of the Springs CBD.

Infill development in the mining belt is subject to the policies regarding mining land. It should be noted that infill development should not take place to the detriment of the environment.

Infill Areas are redefined in the concept so as to promote development and provision of services in nodes and corridors within the previous Infill Areas. Such nodes and corridors are to be prioritised as part of the CIF.

15.3.3 Expansion Areas

As far as future development expansion is concerned, three priority expansion areas were identified. The highest priority Expansion Area represents the **Albertina Sisulu Corridor** including the Witfontein and Serengeti areas. The land is strategically located in a triangle between Tembisa to the north, the residential areas of Kempton Park to the west, and the proposed Albertina Sisulu Corridor to the east. It also forms part of the Tembisa – OR Tambo International Airport component of the Ekurhuleni North-South Corridor.

The second highest priority Expansion Area is the **OR Tambo International Airport–Daveyton Link** area. This includes the area to the northeast of the OR Tambo International Airport up to and including the Mayfield area to the north of Daveyton.

The development pressures evident in this area stem from both close proximity of the OR Tambo International Airport, as well as the northward residential expansion pressure from Benoni. On a metropolitan level, this area is not an expansion area in the pure sense of the word, but can also be described as an infill development as it represents an inward direction of growth for the Daveyton-Etawatwa complex towards the OR Tambo International Airport area. Several subsidised housing projects and bonded housing projects are already underway in this area.

The **Leeuwpoot** area to the south of Sunward Park is the third highest priority Expansion Area. The Ekurhuleni Leeuwpoot housing development initiative is of importance here.

Expansion Areas are redefined in the concept so as to promote development and provision of services in nodes and corridors within the previous Expansion Areas. Such nodes and corridors are to be prioritised as part of the CIF.

15.3.4 Densification areas

Densification areas as indicated on Map 12 were used as the backbone of the CIF. These areas are focused on nodes and corridors as proposed on Map 12, with special emphasis on the Core Development Triangle and 'Inner Ring' as indicated on the Spatial Concept (Map 11). The main focus of these areas is to support public transport and urban sustainability.

The above mentioned Service Upgrading, Infill and Expansion Areas are layered onto the proposed densification areas.

15.3.5 Geography of EMM income

Also mapped on the CIF is the location of all existing and proposed industrial areas. These are considered a priority in the capital budget based on the important economic role of these areas in terms of job creation and in terms of the important role of these areas in terms of ensuring a stable income for EMM.

15.3.6 Major Housing Projects

Major current and planned Housing Projects are included in the CIF as these require major investment by a number of service departments. These projects are critical in the eradication of the housing backlog and will have a major impact on the urban form in future. Alignment of future housing projects with the principles of densification is critical.

15.4 PHASING THE CIF

Implementation of the MSDF must be understood as a long term process, covering the 25 year planning horizon of the MDSF, and beyond. In order to quantify the phasing of the CIF, five phases of five financial years each are proposed. The identified Priority Geographic Areas are classified in to indicate the relative strategic spatial importance of one area against another. In the classification, seven main criteria are used as described below. The priority areas per phase are indicated on Map 14.

IRPTN Corridor: Identify the part of the IRPTN that is to be developed/ receive more funding during each phase. Implementation of the Corridor in the CIF is indicated as per the IRPTN phases as described by the Ekurhuleni Public Transport Directorate.

Rail Stations: Identify which Rail Stations are to be developed/ receive more funding during each phase. Rail Stations within Primary Activity Nodes are considered as the highest

priority. Rail Stations on the Prasa A Corridor are considered the following most important stations, followed by those on the Prasa B Corridor and Prasa C Corridor respectively.

Primary Nodes: Identify which Primary Nodes are to be developed/ receive more funding during each phase. The Germiston and Kempton Park Primary Nodes are considered as the highest priority, followed by Primary Activity Nodes on the Inner Ring (Core Development triangle) and then the remaining Primary Nodes.

Secondary Nodes: Identify which Secondary Nodes are to be developed/ receive more funding during each phase. Secondary Nodes on Phase 1 of the IRPTN are considered as the highest priority, followed by Secondary Activity Nodes on Phase 2 of the IRPTN and so on.

Major Housing Projects: Identify which major Housing projects as implemented by the Ekurhuleni Housing Department need to be developed/ receive more funding during each phase. Prioritisation of these projects is done based on the development objectives of the Ekurhuleni Housing Department.

Industrial Areas: Identify which new industrial areas need to be developed and which existing industrial areas needs to be upgraded during each phase. Phasing is done based on the IRPNT priorities, mindful of the need to create job opportunities in close proximity to Previously Disadvantaged Areas, and then the remaining industrial areas.

Major Investment and Development Projects: Identify which major investment and development projects as listed in Paragraph 15.7 need to be developed/ receive more funding during each phase. Prioritisation is done based on the locality of the project. Where possible these projects are to be linked to the implementation of the IRPTN. Continuous re-prioritisation of these projects must however be done based on planning progress made to date, with specific relevance to input from the private sector.

Poverty Eradication Areas: Prioritize the identified poverty eradication areas as listed in paragraph 15.10. Where possible these areas are to be linked to the implementation of the IRPTN.

The table below summarise the Priority Geographic Areas per Phase.

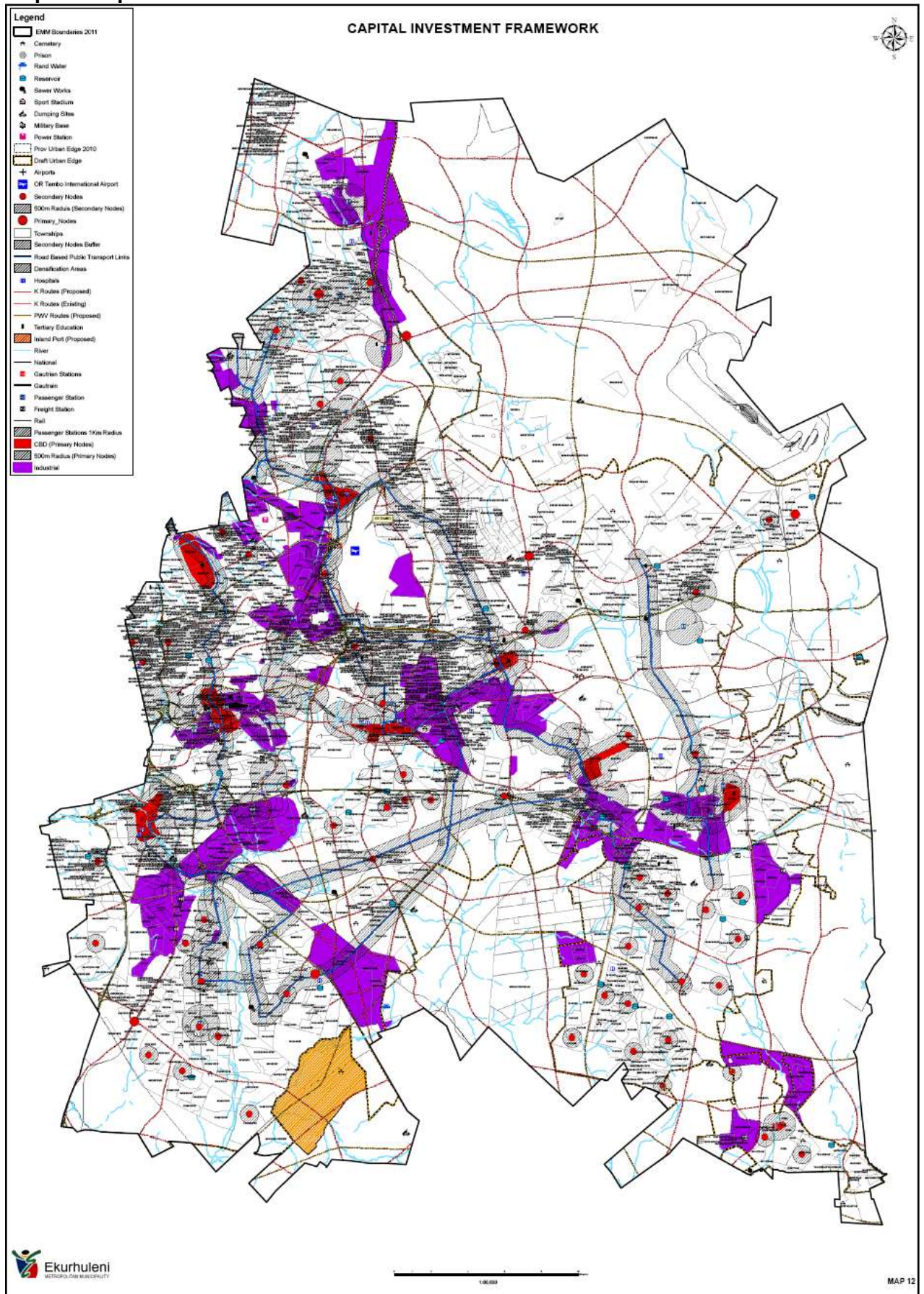
Criteria	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
IRPTN Corridor	Tembisa (Clayville) to Vosloorus (Chris Hani Crossing); Boksburg to Kwatsaduza	Kempton Park to Benoni and to Etwatwa; Germiston to Kathorus	Etwatwa to Kwatsaduza; Kathorus to Kwatsaduza; Kathorus to Alberton to Germiston; Tembisa to Daveyton	Kempton Park to Edenvale to Bedfordview to Germiston; Kwatsaduza to Nigel	Complete all Feeder routes
Rail Stations	Stations on Germiston to Daveyton line and Germiston to Joburg line	Stations on Germiston to Tembisa (and Pretoria) line	Stations on Dunswart to Springs line	Stations on Springs to Nigel line and on Germiston to Kwesini line	Proposed stations on rail extensions
Primary Nodes	Kempton Park; Germiston; Tsakane; Tembisa; Boksburg; Goldspot,	Benoni; Edenvale; Etwatwa; Glen Gory	Springs; Eden Park; Alberton; Brakpan; Witfontein	Nigel	
Secondary Nodes	Swazi inn, Oakmoor, Emperors Palace,	Admin Triangle, Ramakanopi, Natalspruit,	Sunward Park, Elsburg, Parkdene,	Primrose, Bedfordview CBD, East	All tertiary Nodes

	East Rand Mall, Boksburg North, Carnival Node, Klippoortjie, Tsakane community centre	Spruitview, Pilot Station, AP Khumalo, Daveyton community centre	Freeway park, Springsgate, Geduld	Gate Node, Sharon Park, Dunnottar, Brackenhurst, Meyersdal, Lesedi, Norkem Park, Birchleigh North, Glen Marais, Parkrand, Selcourt, Elspark, Eden Glen, Isandovala,	
Major Housing Projects	Projects on IRPTN corridor Phase 1	Projects on IRPTN corridor Phase 2	Projects on IRPTN corridor Phase 3	Projects on IRPTN corridor Phase 4	Projects on IRPTN corridor Phase 5
Industrial Areas (Existing)	Olifantsfontein, Clayville, Chloorkop, Isando, Spartan, Jet Park, Hughes, Anderbolt, Dunswart, Boksburg East, Benoni South, Apex, Vulcania, Morehill, Witpoort, Mapleton	Wadeville, Roodekop, Junction Hill, Alberton North, Alrode, Alrode South, Industries West, Industries East, Knights, Pomona, N12 Freeway Park	Fulcrum, New Era, Nuffield, Labore Putfontein, Enstra, Witfontein	Sebenza, Eastleigh, Elandsfontein, Vorsterkroon, Pretoriusstad, Prosperita	
Major Investment and Development Projects	Leeuwpoort, OR Tambo International Airport, Nyoni Park Precinct, Keditseane Cultural Area, Rhodesfield Project, Aerotropolis, World Trade Centre, Badenhorst land,	Glen Gory, IDZ, Rand Airport Development, Germiston Cultural Precinct, Tambo Springs Inland Port, Waterval, Kathorus CBD, Toyota Development	Container Buildings Concept, Strawberry Farm, Steel Investment, Blue Square Project		
Poverty Eradication Areas	Winnie Mandela Park, Ehlanzeni, Wattville, Kwatsaduza	Daveyton, Etwatwa, Greenfield, Kathlehong			

The Geographic Priority Areas as listed above and indicated on Map 14 each require specific interventions, specific focus on different service sectors and detailed service plans. The applicable sector(s) per identified area will be identified in the applicable RSDF and/ or Precinct Plan. This will support the EGDS which states that, "... resource allocation must support the GDS focus areas". The GDS further states that "... there must be a balance between investment in new infrastructure and maintenance of existing assets. Operating expenditure must be limited to income that can be realistically collected. Furthermore, the allocation of funds for the capital budget must be allocated between physical services (municipal infrastructure), social services, city development services and corporate services in an equitable manner to ensure that a balanced environment is created." (EGDS, page 64). Budget growth of the EMM departments should be aligned with the ability to meet the demand of making provision for the physical growth of new infrastructure and the upgrading of the Metro's existing infrastructure. In addition, capital expenditure needs to be aligned with operating expenditure as an essential means to maintain and therefore sustain the proposed capital projects for the EMM.

As per the EGDS (page 41), the upgrading of services is critically important. “As far as the upgrading of services is concerned, the focus will be on ensuring equity – the township areas and informal settlements will receive the bulk of the capital budget until this goal has been achieved.” Where certain services departments of the EMM are not able to support the upgrading of services in a particular area due to insufficient budget, the budgeting process needs to be changed so as to provide for such alignment of provision of bulk services within a particular financial year.

Map 14: Capital Investment Framework DRAFT – TO BE UPDATED



15.5 LINKING THE CIF TO THE CAPITAL PRIOROTISATION MODEL

The EMM Long Term Financial Plan has informed the MSDF by determining a projected expenditure forecast for the metro, which has helped in formulating a comprehensive CIF for the MSDF. The EMM Rates Policy makes specific mention of “Special Rating Areas”, which lends itself to making provision for incentives to make the development of UDZ and IDZ areas more functional and beneficial to future investors.

The CIF is the spatial plan of the Ekurhuleni Capital Prioritisation Model to be drafted as part of the Ekurhuleni Growth and Development Strategy (GDS) review. In drafting the Capital Prioritisation Model, the CIF will be integrated with various budget guidelines as well as strategic objectives from the GDS.

15.5.1 Budget Guidelines

The CIF and Capital Prioritization Model must reflect the Budget Guidelines of the Finance Department (3 November 2009). The seven guidelines provided are:

1. Contextualization of the current financial situation of the Metro;
2. Revenue Enhancement;
3. Re-prioritization of the 2009/10 budget and January 2010 adjustment budget;
4. Budget guidelines indicating priority areas for the budget compilation;
5. Information on budget regulations and budget steering committee to be established;
6. Budget compilation timelines; and
7. Practical arrangements regarding budget submission – operating budget and capital budget.

Of specific reference is point 4 above. The budget priorities for 2010 and 2011 are set in terms of the Millennium Goals, the Growth and Development Strategy, National, Provincial and Local Policy Statements as follows:

1. Revenue generating projects (with the aim of generating revenue to provide services) – Water & Electricity meters + protective structures;
2. Projects to reduce cost (fuel management system, telephone management system, consumption management system – indigent excess consumption);
3. Refurbishment of infrastructure resulting from the maintenance backlog:
 - a. If no current refurbishment underway at present, it must be replaced within 2-3 years at a higher cost
 - b. Maintenance costs that are exceptionally high
 - c. Pro-active refurbishments, which is to include road resurfacing
4. Creation of sustainable human settlements in terms of infrastructure services (integrated township planning –i.e. housing development reduced but other services also delivered as part of the housing roll out programme):
 - a. Eradication of access backlogs (e.g. Townships that have been proclaimed, but are not sustainable in terms of having access to required services).
 - i. Essential Services: Water and sanitation, electricity, and roads and storm-water
 - ii. Social Infrastructure: Health facilities, emergency facilities, prevention of crime, libraries (education), and other community and sports facilities
 - b. Formalisation of informal settlements into sustainable human settlements.
 - i. Essential Services: Water and sanitation, electricity, and roads and storm-water
 - ii. Social Infrastructure: Health facilities, emergency facilities, prevention of crime, libraries (education), and other community and sports facilities

15.5.2 Planning and Approval of Capital Projects Policy

Additionally the Planning and Approval of Capital Projects Policy, 27 May 2010 must be adhered to in the Capital Prioritisation Model. “The policy will be effective as from 1 July 2010. This policy is an interim policy that will be amended once the Project Monitoring Unit is fully operational. It is the intention that Ekurhuleni Metropolitan Municipality will have a functional Program Monitoring Office by June 2010 to assist in the formal evaluations of all proposed projects. A detailed policy will be developed during the 2010/11 financial year for implementation as from 1 July 2011. The objectives of the policy is to “ensure that capital projects are only budgeted for if feasibility has been proven”; and to “ensure the optimum allocation of resources to projects that can be implemented within the timeframes budgeted for.”

“The three year capital budget provides departments the opportunity to plan their capital spending activities in advance, allowing for a more strategic approach. The typical project cycle consist of at least the following phases:

- Feasibility Study
- Basic Planning
- Environmental Impact Assessment
- Detail Planning and Design
- Implementation

Policy Statement: “That all projects be evaluated in terms of a project plan (time line) as well as a cash flow linked to the project plan, to determine the practicality to implement the project within the proposed budget and time frame (multi year projects). That all proposed budgets for projects be approved only if the evaluation is positive.”

15.5.3 Urban Settlements Development Grant (USDG)

The National Department of Human Settlements has the national mandate to achieve the outcome “Sustainable Human Settlements and Improve the Quality of Household Life”. The Minister of Human Settlements has concluded Delivery Agreements with the Provincial MEC’s to implement the outputs to achieve the mandated outcome. There has also been sign-off on the accreditation compliance framework for the current metropolitan municipalities and four district and local municipalities.

Key matters identified which need to be addressed to ensure that the mandate and outcomes are achieved include:

- IGR alignment
- Appropriate funding models
- Non-financial resource mobilization
- Legislative and policy reform
- Capacity Building

A number of steps are being taken to address the matters identified. As part of the “transition” to ensuring an appropriate funding model for human settlement development is the creation of the Urban Settlements Development Grant (USDG). The USDG will achieve what “we all speak about, want, know and agree human settlements must be....” The policy foundation for the USDG is the national human settlements policy framework, which will undergo constant review and revision. It seeks to realize the positive impacts of urbanisation by addressing cities’ performance constraints; aims to encourage cities to be proactive developers of urban infrastructure by mobilising domestic capital; recognizes that migration is one of the most effective coping strategies for the rural poor; and predicates policies on the growth of cities and peri-urban areas to avoid the next generation of slums.

The USDG forms part of the family of human settlements funding streams, which includes the Integrated Human Settlements Development Grant (IHSDG). The establishment of the grant compels greater, better and the improvement of human settlements development planning between national, provincial and local spheres of government. More specifically it compels greater, better and improved coordination of planning, funding and implementation of human settlements at the provincial and local spheres of government. (Source: adopted from: City Budget Forum, 21 January 2011, Presentation by the Department Human Settlements).

The USDG Grant requires the preparation and submission of 'built environment performance plans'. From a National Treasury presentation, these plans must comply with the following criteria:

- Demonstration of proper processes and management plan:
- Profiling of backlogs in new infrastructure, maintenance and refurbishment and replacement
- The vision for the future that shows spatial integration across sectors:-
 - Housing (informal settlement eradication, inclusionary housing, redressing the imbalances of the past etc.)
 - Infrastructure (backlogs, links with housing, increasing the rates base, bulk etc.)
 - Public transport plans links with human settlements development
- Costing of infrastructure and housing backlogs
- Progress on asset management processes and practices
- Capacity to deliver and manage (institutionally, technically and financially)
 - What is the delivery and management capacity annually and overtime
 - What are the threats to their current state
- State of own contributions to infrastructure delivery and management both for poor and all citizens

15.5.4 Budget Pre-Allocation

The table below serves as an example of how the capital budget can be pre-allocated through the Capital Investment Framework and the Capital Prioritisation Model so as to ensure implementation of the MSDF and thus to ensure achievement of the GDS goals. The table proposes implementation over a 25 year period in 5 cycles of 5 years each. Funding is then pre allocated per political and strategic decision making. The table indicates how percentage allocation must change over time to allow for greater spending in nodes, along corridors and in industrial areas. It is suggested that the table be used as a basis for further discussion on the Capital prioritisation Model in the GDS review process. All percentages indicated are as an example only.

25 Year Capital Investment Framework: Budget % (All % as examples only)						
Priority Investment Area		% Capital Budget per Year				
[Based on Map 14]		Y1toY5	Y6toY10	Y11toY15	Y16toY20	Y21toY25
GRAND TOTAL		100%	100%	100%	100%	100%
NODES TOTAL		25%	30%	35%	35%	35%
Primary	Core Node	7%	9%	9%	5%	5%
	Inner Ring (7)	8%	8%	10%	10%	6%
	Outer Ring (8)	4%	4%	4%	4%	4%
Secondary	Inner Ring	2%	5%	5%	5%	5%
	Outer Ring	2%	2%	5%	5%	5%
Tertiary	Inner Ring	1%	1%	1%	5%	5%
	Outer Ring	1%	1%	1%	1%	5%
CORRIDORS TOTAL		20%	22%	20%	25%	26%
Selected Transportation Corridors & Stations	To Core Node	10%	10%	5%	6%	6%
	Between Inner Primay Nodes	5%	5%	5%	5%	5%
	To Outer Primary Nodes	1%	3%	3%	3%	3%
	Between Outer Primary Nodes	1%	1%	4%	4%	2%
Selected Activity Development Corridors	Inner Secondary Nodes to Core N	1%	1%	1%	5%	5%
	Inner Secondary Nodes to Inner R	1%	1%	1%	1%	3%
	Outer Secondary Nodes to Outer	1%	1%	1%	1%	2%
INDUSTRIAL AREAS TOTAL		28%	23%	20%	20%	20%
Existing	Inner Ring	15%	5%	5%	5%	5%
	Outer Ring	8%	8%	5%	5%	5%
Proposed	Inner Ring (Pomona)	5%	5%	5%	5%	5%
	Outer Ring (Mapleton, ...)	0%	5%	5%	5%	5%
RESIDENTIAL AREAS (OUTSIDE NODES & CORRIDORS) T		25%	20%	20%	15%	15%
Service Upgrading (Townships)	Inner Ring (Tembisa)	10%	5%	5%	4%	4%
	Outer Ring	5%	5%	5%	4%	4%
Service Maintenance (Suburbs)	Inner Ring	3%	3%	3%	3%	3%
	Outer Ring	2%	2%	2%	2%	2%
Service provision (Informal Areas)	Inner Ring	3%	3%	3%	1%	1%
	Outer Ring	2%	2%	2%	1%	1%
ENVIRONMENTAL AREAS TOTAL		2%	5%	5%	5%	5%
	Inner Ring	1.0%	2.0%	2.0%	2.0%	2.0%
	Outer Ring	0.5%	2.0%	2.0%	2.0%	2.0%
	Outside Urban Edge	0.5%	1.0%	1.0%	1.0%	1.0%

15.6 CAPITAL PRIORITISATION MODEL

The Ekurhuleni Capital Prioritisation Model is to be drafted during the review of the Ekurhuleni Growth and Development Strategy. In such Capital Prioritisation model, capital projects will firstly be evaluated by using the approved CIF. Only thereafter will the Project Management Office (PMO) evaluate the projects in terms of the Capital Prioritisation Model to determine whether it is feasible to implement the project over the project duration as proposed by the responsible department.

The Capital Prioritization Model may include budget priorities, GDS priorities, the Spatial Concept, and Priority Geographic Areas (Map 14), together expressed as a quantified percentage (%) of the capital budget. The recent change in the MIG City conditional grant to the Urban Settlement Development Grant (USDG), as well as the increase in the total grant to make out approximately 50% of Council's total Capital budget, will also place an additional responsibility on Council to evaluate its projects in terms of the National Guidelines as stipulated by the USDG. These guidelines will have to be incorporated in the MSDF priorities because of the fact that Council's total capital budget will be measured against the outcomes as set in the mentioned guidelines. This will also play a role and guide the GDS review process which will also reflect the priority areas.

The Capital Prioritization Model may be structured to provide for four main prioritization landscapes as reflected below:

- Social upliftment: % allocation to be determined in GDS and following Prioritisation Model;
- Economic Development: % allocation to be determined in GDS and following Prioritisation Model;
- Physical Services: % allocation to be determined in GDS and following Prioritisation Model; and
- Institutional: % allocation to be determined in GDS and following Prioritisation Model.

Any current departmental Capital Prioritization Models or similar prioritisation systems and processes used by individual departments must be reviewed in order to support the PMO's Capital Prioritisation Model.

15.7 MAJOR CAPITAL PROJECTS

This section of the document intends to highlight how the spatial distribution of the major capital projects for the 2011/2012 financial year relates to the MSDF Capital Investment Framework. For this purpose the major spatial capital projects of all departments will be mapped from the IDP data. It is important not to only focus on expansion and upgrading of services but also to properly maintain the existing services and facilities in Ekurhuleni.

Reference is made to the EMM IDP Budget and SDBIP with regards to its budget allocation as per department in the Detailed Capital Plan of the IDP (Section 5.11 IDP 2009-2011). This section of the IDP whilst defining budget allocation further in terms of new developments, service delivery backlogs and upgrading of existing services does not lend itself to determining spatial priority areas. Specific projects as mentioned per CBD or wards in the EMM IDP Budget and SDBIP, 2009-2012, will be mapped at a later stage as part of the CIF.

15.8 PRIORITY STRATEGIC PROJECTS

The MSDF process identified a number of Priority Strategic Projects. These projects are of a metropolitan wide strategic nature and are of critical importance in building the City of Ekurhuleni as envisaged in the GDS, MSDF and IDP. These projects are listed in the table below, reflecting the responsible department and budget type required initially. Only projects of immediate priority are listed. Projects beyond the first 10 years are to be included in later MSDF reviews. The list of strategic projects should be re-visited after the review of the GDS and must be measured against the USDG Guidelines.

List of Priority Strategic Projects

Project Name	Planning Completed	Department	Budget	Estimated Period*
Provision of infrastructure for the Core Node/ Rhodesfield Area	Yes: Rhodesfield UDF	Water, Roads, Public Trans, Electricity, Econ Dev	Operational and Capital	Year 1 - 10
OR Tambo International Airport related Studies as described in 15.8.1	Yes	City Dev, Roads, Public transport	Operational	Year 1 - 5
Development of the Germiston CBD Precinct	Yes: Germiston LSDF, UDF and Urban renewal Strategy	Water, Roads, Electricity, Public Trans, Housing	Capital	Year 1 - 5
Public Transport Infrastructure (Phase 1) on proposed corridors as per Map 14 and described in 15.8.2.	Yes: Modal Integration Strategy, IRPTN Planning	Water, Roads, Electricity, Public Trans	Operational & Capital	Year 1 - 5
Update and implementation of the Housing 'Migration Plan' (see 10.5 & 15.8.3)	Yes	Housing	Operational & Capital	Year 1 – 25 and beyond
Draft RSDFs for all proposed Ekurhuleni Zones	Yes	City Development	Operational	Year 1 – 2
Investigate the development of the 'University of Ekurhuleni' (see 15.8.4)	No	City Dev, Econ Dev	Operational	2011/12 financial year
Investigate the establishment of the 'Ekurhuleni High Court' (see 15.6.5)	No	City Dev, Legal & Admin	Operational	2011/12 financial year
Investigate the development of the 'Codesa-Ekurhuleni Museum' (see 15.8.5)	In process	SRAC, City Dev	Operational	2011/12 financial year
Investigate the development of a tertiary provincial hospital in Ekurhuleni	No	Health, City Dev	Operational	2011/12 financial year
Investigate the development of a Ekurhuleni Regional Recreation Node	No	SRAC, City Dev	Operational	2011/12 financial year
Prepare an Ekurhuleni Industrial Development & Freight Movement Strategy	No. Outdated 2000 Strategy	City Dev, Econ Dev, Roads	Operational	Year 1 – 2
Provision of infrastructure for the Benoni Northern Areas (see 15.8.6)	Yes: LSDF 33 and LSDF 34	Water, Roads, Public Trans, Electricity	Operational and Capital	Year 5 – 10
Promote the Germiston and Kempton Park Urban Development Zone initiatives	Yes: Kempton Park and Germiston LSDFs	City Dev, Econ Dev	Operational	Year 1 – 3
Pursue the incorporation of the Greenstone-Modderfontein area into EMM	No	Legal & Admin, Econ Dev, Political Office	Operational	2011/12
ERWAT'S WWCW's capacity	In process	IS: Water Services & ERWAT	Operational & Capital	Year 5 – 10

* Year 1: 2012/13 financial year

A number of the projects listed above are described in more detail below.

15.8.1 OR Tambo International Airport related Studies

The following recommendations are made for further urgent studies:

- Development of OR Tambo International Airport to its full potential should be supported subject to a detailed study being undertaken to prove that the land transport system can be developed to sustain this level of development. This study should be commissioned immediately.
- A study should be commissioned to investigate sites for a second international airport for Gauteng. Such a study would also include land use and environmental issues. This study would need to be co-ordinated between the Department of Transport, Civil Aviation Authority, Gauteng Government and affected Local Authorities. This study should also be commissioned immediately.
- A study should be commissioned to establish industry preparedness for a consolidation of general aviation facilities (there are ten minor airfields in Ekurhuleni) and to find suitable sites for general aviation airfields for the whole of Gauteng. This could be combined with the study to find a suitable site for a second international airport. This study would also include land use and environmental aspects.
- Investigate upgrading access to Rand Airport and plan the roads to allow it to fulfil its potential as a regional freight hub.
- A dedicated bus service should be introduced to provide access for airport employees from Isando Station to the various airport facilities.
- Planning should begin immediately for the provision of off-airport parking facilities at strategic locations in the EMM with dedicated bus services to provide quick and convenient airport access for passengers.

(Source: ITP: Volume 1, page 8)

15.8.2 Public Transport

Implementing the IRPTN pilot project by introducing Rapid Public Transit is viewed as a cost effective way of improving mobility within the EMM in general and more specifically within the pilot project area. The IRPTN can be done in stages, requires generally shorter planning and construction time frames and has lower costs and greater flexibility than traditional rail systems. The key components of the IRPTN that should be tested as part of the pilot project include improving the speed, reliability and identity of the Rapid Public Transit system. The main reasons for implementing the pilot project is to test the elements of the IRPTN adjust if required should some elements prove problematic to implementation.

The major part of implementing the pilot project will rest with the physical construction of the roads and other related infrastructure. Implementing the pilot project will involve more than just road construction as the IRPTN system will require stations, stops, integration infrastructure such as pedestrian access, bicycle lanes and parking for cars at stations. There are three aspects that will have to be dealt with decisively by the EMM for the pilot project to be implemented successfully, namely:

- Establishment of an integrated planning authority
- The formalization of the taxi industry
- Consultation with stakeholders

It is recommended that the following aspects be addressed as part of the Institutional Development of the public transport pilot project:

- A robust network operational plan which also includes integrating the road based and non motorized systems with the rail priority corridors;
- A process of creating the transport authority capacity to manage the network in terms of performance contracts with (eventually) fare revenues accruing to the authority

(road based system) and managing performance agreements with Prasa for the rail priority corridors; and

- A process of business planning and negotiation to maximally include existing operators and labour (especially the minibus taxi industry) in the network.

Possible projects were identified in terms of road and rail infrastructure, improvements at nodes, as well as operational improvements. Budgets were linked to each project indicating the possible funding sources. The alignment of spatial planning strategies with transportation strategies is important to achieve integration. The key role for spatial planning integration is an integrated shift for both land use and transportation planning towards public transport dominance. Thus, the effectiveness of public transport modes will be enhanced visibly by realigning land use plans, design standards and zoning codes in support thereof.

The following must be noted in reviewing and implementing all roads and public transport plans:

- The MSDF must form the spatial basis for the review of the Ekurhuleni Road Hierarchy Plan, intended for review from 2011.
- Public Transport: The SPTM (and BRT) should be implemented as a matter of urgency especially to link the Core Development Triangle nodes;
- Major Road Network: It is necessary to have certain national and provincial roads built-PWV 14 & 15.

15.8.3 Housing

The present housing delivery methodology does not promote high density developments. It rather creates peripheral residential development far from public transport nodes, not within the economic/ industrial nodes and further enhances poverty. A total mindset change is required with regards to the utilization of housing related funds. The responsible national government department must be approached so as to amend the housing subsidy system to allow for high density, 'brown-fields', subsidized housing. Level 3 Accreditation could assist EMM in changing the total methodology because planning, funding and implementation will lie with EMM. Level 3 accreditation could assist EMM in implementing the MSDF as described in this document.

The Housing Migration Plan must be worked into RSDFs. The principle of not moving people out of their area must be applied. Migration must be based on availability of job opportunities and social facilities.

15.8.4 Education

Currently, the Vaal University of Technology has a delivery site in Ekurhuleni. There is nothing prohibiting the municipality from engaging other universities in the region including the University of the Witwatersrand, University of Johannesburg, Tshwane University of Technology and the University of Pretoria. It is advisable that the municipality write to these universities and express an interest for partnerships that will add value to the residents in the municipal area.

Given the problems with 2011 registration at universities and the number of students not being accommodated at existing universities, Ekurhuleni is of the opinion that there is a need for an independent university in Ekurhuleni. There is a strong need for a comprehensive university (a conventional one and a university of technology combined) to be developed in a strategic location in Ekurhuleni. This would greatly increase the chances of Ekurhuleni effectively achieving its vision of being "The Smart, Creative and Developmental City". Ekurhuleni's commerce and industry, services and professionals need a comprehensive university rather than the specialized type of institution offering a relatively narrow range of technology orientated education as commerce and industry, services and professionals

employ people with a very wide range of expertise. Reference must be made to the Germiston Civic Precinct Project.

15.8.5 Institutional

- Establish and manage a Spatial Planning Forum to monitor implementation of the MSDF in all EMM Departments.
- Rescind the Urban Edge Policy, 2003 (Mayoral Committee Resolution B-DP(13-2003)).
- Rescind the 2007 RSDFs.
- Investigate the establishment of an Ekurhuleni University.
- Investigate the establishment of a CODESA/ Peace museum in the Core Node reflecting on:
 - CODESA Centre Exhibition Conceptual Framework Inspirational principles: Democracy in the World;
 - Government by the people: equality, liberty, fraternity, governance and accountability;
 - African Traditional values, Ubuntu, I am what I am because of who we all are; and
 - Democracy in Africa, derived 'firmly in the African past, yet fully accepts the African present'. Basil Davidson. (source: Codesa Presentation- EMM Department Sport, Recreation, Art & Culture).

15.9 MAJOR INVESTMENT AND DEVELOPMENT PROJECTS

During the drafting of the MSDF, a number of major investment and development projects were noted. These include development applications of a large scale, as well as large development initiatives for which no applications have been submitted yet. The table below reflects these Major Investment (Capital) and Development Projects. The processing and evaluation of these projects are to be managed through an interdepartmental committee to be set up for this purpose. Projects might be removed from or added to the list by the Strategic Management Team. Prioritisation of the below listed projects will be done as per the CIF table above and subject to the project cycle consisting of at least the following phases:

- Feasibility Study
- Basic Planning
- Environmental Impact Assessment
- Detail Planning and Design
- Implementation

Major Investment and Development Projects

Project Name	Project Description	CCC	Application Status
Leeuwpoot	Provision of infrastructure for the Leeuwpoot Development area (see 15.6.6). Investment in public infrastructure (roads, water, electricity) in the Leeuwpoot area south of Boksburg. This area should be developed driven by the sustainable livelihoods approach.	Boksburg	Application in process
Glen Gory	Development of a Node of regional significance. Initiated by retail development. Investment in public infrastructure (roads, water, electricity, sewer, and storm water) is desired. The areas development should be driven by the sustainable livelihoods approach.	Benoni	DFA application in process
OR Tambo International Airport	Continuous development of the OR Tambo International Airport Western and Midfield	Kempton Park, Boksburg	In process

	Terminals		
OR Tambo Industrial Development Zone	Plan for and promote the OR Tambo Industrial Development Zone. This development will generate diverse economic activities which will include amongst others a jewellery precinct as part of mineral beneficiation. (Premier's State of the province Speech: February 2011)	Kempton Park	Phase 1 Certificate issued by DTI
Steel Mill	Gauteng Province has adopted an investment project, led by Asambe Steel Corporation, to build a R1 billion steel mill in Ekurhuleni. This is expected to create 1000 jobs. (Gauteng Online, February 2011)	Nigel	
Rand Airport Development	Offices	Germiston	
Nyoni Park Precinct	Funded by EMM Parks Directorate	Kathlehong	
Keditselane Cultural Area	Privately funded	Kathlehong	
Germiston Cultural Precinct	Refer to Germiston LSDF, UDF and Urban Renewal Strategy. Promote Germiston UDZ.	Germiston	
Blue Square Project			
Rhodesfield Project	Redevelopment of Rhodesfield as per the Rhodesfield UDF.	Kempton Park	Various applications in process.
Tambo Springs Inland Port	Support the development of the proposed Tambo Springs Inland Port.	Vosloorus, Kathlehong	Submission for Urban Edge amendment.
Aerotropolis	Included various properties in the proximity of OR Tambo International Airport.	Kempton Park, Boksburg	Various applications and proposals
World Trade Centre	The development of a World Trade Centre in Rhodesfield or close to OR Tambo international.	Kempton Park	Suitable site to be identified.
Container Buildings Concept	Council land throughout Ekurhuleni	All	
Strawberry Farm		Tembisa (Kungweni)	
Waterval	Large housing development south of Palm Ridge	Kathlehong, Tokoza	DFA application in process
Badenhorst land	Mixed Use development.	Brakpan	DFA application in process
Kathorus CBD		Vosloorus, Kathlehong, Tokoza	
Toyota Development	Toyota Development in Atlas Road	Boksburg	

15.10 POVERTY ERADICATION

In a recent Provincial study, all the poorest wards in Gauteng were identified and were listed for provincial intervention. A number of wards in Ekurhuleni were included on the provincial list. These wards are listed below and must also be prioritised as part of the Ekurhuleni CIF.

WARD NUMBER (2006-2011)	AREA NAME
1, 2, 4	WINNIE MANDELA PARK
10	EHLANZENI
25, 67 - 71	DAVEYTON
25, 26, 65, 66, 67	ETWATWA
30, 31	WATTVILLE
31, 74, 77 – 87	KWATSADUZA
58, 61, 62, 64	GREENFIELDS

40, 48 – 52, 54, 55, 58, 59, 60, 63	KATLEHONG
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Chapter 16

Marketing the MSDF

After approval, the MSDF must be marketed and/ or communicated to the role players and implementers. The MSDF must be made available as effectively and widely as possible.

16.1 MARKETING AND COMMUNICATION TOOLS

The following tools will be used to market the MSDF proposals:

- Paper copies of the respective reports;
- CDs with Report 1, 2, 3 and 4 as .pdf files, a MS Power Point presentation and all MSDF shape files to be distributed to identified internal and external role players;
- Email distribution of Report 2 to be distributed to identified internal and external role players;
- Glossy booklets of the MSDF Executive Summary to be distributed to identified internal and external role players;
- Making a MS Power Point presentation to identified audiences, e.g. the Development Forum, Captains of Industry, and internal meetings;
- Distribution of a memo to all EMM users via email to inform all EMM staff of the approval of the MSDF;
- Placement of a notice in the Ekurhuleni Talk (to all staff) to inform all EMM staff of the approval of the MSDF;
- Publication of Report 1, 2, 3 and 4 as pdf files, a MS Power Point presentation and all MSDF shape files on the Ekurhuleni Intranet;
- A press release to all local media to inform the public of the approval of the MSDF;
- Placement of a notice in the Ekurhuleni Talk (to the community) to inform the public of the approval of the MSDF;
- Publication of Report 1, 2, 3 and 4 as pdf files, a MS Power Point presentation and all MSDF shape files on www.ekurhuleni.gov.za;
- Capturing all MSDF shape files on the City Development GIS; and
- Printed A0 maps.

16.2 INTERNAL ROLE PLAYERS

Internal role players include:

- Political leadership (Executive Mayor and Mayoral Committee);
- Ward Councilors;
- Ward Committees;
- Strategic leadership (City Manager, Deputy City Managers, Executive Directors);
- Technical Departments (Corporate, Regional and CCCs); and
- City Development staff (Corporate, CCCs).

The methods described below will be utilized to market the MSDF to the identified internal role players.

Role player	Report (Paper Copy)	Electronic Copy (CD)	Electronic Copy (email)	Glossy Booklet	Explanatory Presentation	Intranet Memo	EMM Talks to Staff	Shape files	A0 Map (Map 12/ Map 14)
Executive Mayor	Report 2	Yes	Report 2, Presentation	Yes	Yes	Yes	No	No	Framed
MMC City Development	Report 1, 2, 3	Yes	Report 2, Presentation	Yes	Yes	Yes	No	No	Framed
Mayoral Committee	Report 2	Yes	On request	Yes	Yes	Yes	No	No	Laminated
Ward Councilors	No	Yes	On request	Yes	Yes	Yes	No	No	Laminated
Ward Committees	No	On request	On request	Yes	Yes, x2	No	No	No	No
PR Councilors	No	On request	On request	Yes	Yes	Yes	No	No	On request
City Manager	Report 1, 2, 3	Yes	Report 2, Presentation	Yes	On request	Yes	Yes	No	Framed
Deputy City Managers	Report 1, 2, 3	Yes	Report 2, Presentation	Yes	On request	Yes	Yes	No	Framed
Executive Directors	Report 2	Yes	Report 2, Presentation	Yes	On request	Yes	Yes	No	Framed
Technical Departments (Corporate)	Report 2	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	Yes	Laminated
Technical Departments (Regional/ CCCs)	No	Yes	On request	Yes	On request	Yes	Yes	No	Laminated
City Development (Corporate)	Report 2	Yes	Report 2, Presentation	Yes	On request	Yes	Yes	Yes	Framed
City Development (Area Managers)	Report 2	Yes	On request	Yes	On request	Yes	Yes	Yes	Framed
City Development (Area Planners)	Report 2	Yes	On request	Yes	On request	Yes	Yes	No	Laminated
City Development (other staff)	No	On request	On request	On request	On request	Yes	Yes	No	On request
All other EMM Staff	No	No	On request	On request	On request	Yes	Yes	No	On request

16.3 EXTERNAL ROLE PLAYERS

External role players include:

- National government departments;
- Provincial government departments;
- Adjoining municipalities;
- Parastatals and service providers;
- Effected major land owners (Urban Edge);
- Top 40 Account holders;
- Planning and development related consultants;
- All residents and ratepayers; and

- Special interest groups (e.g., EBI, Development Forum, Mining Forum).

The methods described below will be utilized to market the MSDF to the identified external role players.

Role player	Report (Paper Copy)	Electronic Copy (CD)	Electronic Copy (email)	Glossy Booklet	Explanatory Presentation	Direct mailing (Letter)	Press release	EMM Talks to the	Shape files	A0 Map (Map 12/ Map 14)
National government departments	No	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	No	Yes	No
Provincial government departments	Report 2	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	No	Yes	Laminated
Adjoining municipalities	No	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	No	Yes	Laminated
Parastatals	No	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	No	Yes	Laminated
Registered I&A parties	No	On request	Yes	On request	On request	Yes	Yes	Yes	No	Laminated
Top 40 account holders	No	On request	On request	Yes	Yes	Yes	Yes	Yes	No	Laminated
Planning Consultants	No	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	No	Yes	Laminated
Special Interest Groups	No	Yes	Report 2, Presentation	Yes	Yes	Yes	Yes	Yes	No	No
Residents & Rate payers	No	No	No	On request	No	No	Yes	Yes	No	No

Chapter 17

Monitoring and Evaluation

The national government has a monitoring and evaluation system developed in the Presidency dated 2007 and titled “Policy Framework for the Government-wide Monitoring and Evaluation System”. In this system monitoring involves “collecting, analyzing and reporting on inputs, activities, outputs, outcomes and impacts as well as external” factors. Evaluation is time bound and periodic.

Monitoring and evaluation system is a set of organizational structures, management processes, standards, strategies, plans, indicators, information systems, reporting lines and accountability relationships which enables national, provincial departments, municipalities and other institutions to discharge their ineffectively. Whilst some government departments and municipalities have used report scorecards, Ekurhuleni uses the legislated SDBIP. The SDBIP shall be used to monitor expenditure on capital projects of Departments. These will be applied to spatial capital investments projects of line functionaries/Departments for the local government capital projects as follows:

Specifics of the intervention: Spatial capital projects of council shall be oriented towards job creation and service delivery. The number of labour intensive jobs created per labour hour shall be optimized and measured by the council. This includes procurement of goods in the process. The intended outcome is improved service delivery and job creation and economic empowerment.

Developing appropriate indicators: The appropriate indicators will be developed with Departments but for capital projects employment shall be in line with national targets of Expanded Public Works Programme (EPWP) of the national government. A proportion of the work to be delivered shall be labour intensive distributed to benefit women, youth and the vulnerable. The proportion would be based on current data sources as bases for determining targets, for example, the DPLG proportion is as follows: 40% women; 30% youth (under age 35) and 2% disabled. These figures can be amended accordingly to suit Ekurhuleni circumstances.

Develop data collection strategy: The data shall be provided by line Departments on job creation figures for various categories that will be predetermined. The total capital budget of the Council shall will be factored in. current 2009/2010 capital investment labour intensive projects shall form the base data to determine targets. Other capital investment projects shall be evaluated to determine the appropriateness of making them labour intensive for income purposes.

Collection of baseline data and setting of realistic performance targets: The baseline data will be taken from current projects measured against current budget to get a feel of the ratio of jobs to provided budget.

Monitoring the implementation of the intervention by collecting data on indicators: Data for monitoring will be collected from the projects delivered and will be compared with similar projects implement at other spheres of government.

Use monitoring data for evaluation, planning, management and reporting: This improves performance measurement. Monitoring data is used to evaluate planning and management functions, evaluate and explain emerging issues, and share information with others.

The logical framework (log frame) may be used to measure indicators but currently the metro uses the legislated Service Delivery Budget Implementation Plan (SDBIP). The advantage of the SDBIP is that it is in use and only the data of employ people should be sourced. Currently it is a monthly exercise and should be continued with as part of the monitoring process.

In conclusion, monitoring and evaluation would go a long way to measure the successes and failures of Council capital development expenditure. A separate database based on the SDBIP concept will be established.

CHAPTER 18

CONCLUSION

In conclusion, the SDF should not be used in isolation from the Growth and Development Strategy and the Integrated Development Plan for the Ekurhuleni Metropolitan Municipality. Furthermore, the SDF constitutes more than a plan indicating desired land uses, but puts forward spatial objectives and strategies for the EMM. Future capital investment in Ekurhuleni must be undertaken within the ambit of the SDF, while the hierarchy of plans should be updated to guide development and land use decisions.

The broad perspective of development needs and priorities provided by the SDF emphasises the need for a Capital Investment Framework with a Capital Prioritisation Model to ensure the equitable allocation of resources between different development priorities.

REFERENCE DOCUMENTS

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This is Report 2 of the full set of four MSDF reports.

Report 1: MSDF Status Quo Report

Report 2: The Spatial Development Framework

Report 3: MSDF Participation Report

Report 4: MSDF Executive Summary

This report must be read in conjunction with Report 1 and Report 3.

ANNEXURE “A”

RECOMMENDATIONS FROM THE WITS CRITIQUE

RECOMMENDATIONS FROM THE WITS CRITIQUE

17. The strongest recommendation that emerges from this report is to move away from the idea of detailed comprehensive plans for some 103 areas in the municipality.
18. In order to move beyond the rather broad regional plans, a less detailed LSDF covering fewer but larger areas, and linked to the way the municipality is organised institutionally, could make sense. This was the approach that was adopted previously in Ekurhuleni with its 'nine towns'. However, Ekurhuleni is specifically moving away from this approach, and a recommendation of this sort is unlikely to be acceptable. Planning for a small number of areas (of the order of 7-12) would in any event be relatively broadly based, and would still require more detailed planning in specific areas.
19. Instead of the 103 areas, it is argued that more detailed (but still meso-level) local planning should focus on:
 - a. Areas of strategic importance within the municipality as defined at metropolitan or regional level. These might include for example major nodes or corridors.
 - b. Areas where there is significant development pressure as evidenced for example by several development applications for changes in land use, or areas where significant growth is expected.
 - c. Areas where major changes are expected, and there is a need for planning to respond to major impacts, such as stations for the Gautrain and expansion of the airport.
 - d. Areas where the municipality wishes to undertake major development intervention, or to enable development, for example to upgrade living conditions or promote economic development in poorer areas within the municipality.
20. The type of planning that is undertaken – namely the specific sectors that are included in the planning process – should be guided by the concerns and issues to be addressed in the area. Thus planning at a local scale should not necessarily be comprehensive, covering all sectors or even all aspects currently included in the Scope of Work Modules. The Scope of Work Modules nevertheless provide a checklist of issues which could be considered if appropriate.
21. The purpose of planning in a particular context should be clearly defined.
22. Planning of this sort should:
 - a. Begin with a strong contextual analysis, including economic and demographic trends as appropriate, development pressures, problems and issues to be addressed;
 - b. Possibly use scenario planning to assess possible development trajectories, where the future of the area is uncertain;
 - c. Develop a set of visions, development objectives and principles for future development.
 - d. Develop a spatial plan for the area, as well as other linked sectoral plans as is appropriate to the problems and issues to be addressed.
23. Planners within the municipality need to play a key role in deciding on areas of focus and in defining what planning needs to occur, although an interactive process with consultants may be needed. This is likely to require further expenditure on increasing the number of well qualified, skilled and experienced municipal planning staff as opposed to relying largely on consultants to address standardised briefs.

24. It is also apparent from the study that planning capacity is a problem that needs to be addressed in the municipality.
25. The costing of the planning suggested in recommendation 3 above should not be standardised, but should be based on what needs to be done.
26. An important concern within the municipality is how planning can help to improve conditions in poorer areas. Local area planning that is focused on development, and with a strong emphasis on implementation, could be helpful here. There is considerable experience now in South Africa with this type of area based planning – in government's urban renewal programme, and in other area based planning across the country (for instance in eThekweni's area based management programme, in its old Warwick Avenue and Cato Manor projects etc). There are also various institutional models for this sort of planning, and a significant literature on the topic. The municipality could give consideration to undertaking area based planning and development of this sort in selected areas. The approach suggested in recommendation 6 above of undertaking an analysis, developing objectives and visions, and formulating a spatial framework would be useful, but would also need to be strongly participatory, bringing in the main stakeholders in an area, and would need to include a strong emphasis on development strategies and the formulation of action plans for implementation. Planning of this sort would be more about promoting and facilitating development than providing guidance for land use change. In addition, it is concerned as much about ongoing operational management and 'soft' projects as about capital works. In several contexts, a small multi-sectoral team tasked with working through the planning for the area, and implementing it has been helpful to these processes, and provides a way of creating integrated planning and service delivery.
27. In addition, the municipality should give consideration to the way in which its 'normal' planning can help to carry through the planning principles embodied in national legislation and in the IDP and the EMM and regional spatial frameworks. For instance, in giving permission to shopping malls, it might be important to ensure that they accommodate taxis, link to public transport, and provide for pedestrians to make them accessible to all communities, and to prevent negative local impacts. Where policies do not exist on issues that are commonly addressed by land use planners making decisions on planning applications, and that would benefit from a common policy position, it may be useful to develop such policies.
28. In areas where single development applications are put in for developments that are contrary to the current planning schemes, applicants can be expected to provide a motivation that takes into account the broader context of the site. The municipality may also wish to undertake its own assessment: this could include elements of some the modules, but would be undertaken on a more localised and far more focused basis. Although a LSDF might in theory be helpful for making decisions of this sort, they will often still be too broad, and other investigations would be required. The time involved to do this sort of planning and the level of planning required also seems out of proportion. Instead, the assessments suggested here could be undertaken much more quickly, in a focused way, and at much less cost.
29. The municipality could also give consideration to developmental issue based planning in certain contexts. For instance, if safety and security is a major concern in particular areas, there are well developed methodologies for conducting safety audits in a highly participatory way (including a various groups of people), and in developing solutions spanning across intervention in the built environment and design and the management of areas.

30. The municipality has a well developed set of policies and plans at EMM level, ranging from IDPs and SDFs to various environmental management plans to densification and retail strategies, amongst others. It could however give consideration to the development of a growth management strategy, such as was outlined in the first report, under the case study of the City of Johannesburg. Internationally, growth management strategies are being used to guide and manage the location of growth, to shape it in ways that are more sustainable and consistent with the planning, and to link planning, development and infrastructure.
31. EMM is part of the broader Gauteng City-Region: a large, complex and interrelated area. While there is communication between the metropolitan municipalities in the region, and some links are being forged, it is worth considering extending these links to enable greater interchange between municipalities on the strategies and approaches they are adopting, and to begin to consider common approaches. All three metropolitan municipalities are using different approaches to go beyond initially broadly based metro level planning, and much could be learnt by comparing the experiences and considering whether any kind of common approach would be useful. For instance, should a common growth management approach be extended across the region? Importantly as well, it needs to be stressed that planning must take into account the fact that the municipality is within a city region, and consideration needs to be given to 'cross-border' planning issues and impacts, and to strategic developments for the region.
32. Finally, the study has highlighted the need for better links and communication between departments within the municipality, with more cooperation between sections and greater knowledge and understanding of each others' concerns, policies and intentions. This is critical since planning cannot happen in isolation. The LSDFs clearly were intended to provide a means of coordination, but as indicated in previous sections, coordination is importantly an institutional issue, requiring stronger structures and mechanisms to enable this process and better capacity to make it possible.

ANNEXURE “B”

THE WITS CRITIQUE – APPROVAL RESOLUTION

EKURHULENI METROPOLITAN MUNICIPALITY
MINUTES
ELEVENTH CORPORATE SERVICES AND CITY PLANNING PORTFOLIO
COMMITTEE MEETING
2010.11.10

ITEM C-CORP (231-2010) CITY DEVELOPMENT DEPARTMENT:
METROPOLITAN SPATIAL DEVELOPMENT
FRAMEWORK (MSDF): REVIEW AND APPROVAL
OF THE RECOMMENDATIONS OF THE WITS
ACADEMIC CRITIQUE ON THE SYSTEM OF
LOCAL SPATIAL DEVELOPMENT FRAMEWORKS
FOR EKURHULENI METROPOLITAN
MUNICIPALITY
(15/1/6/2/1)

RESOLVED

1. That the content of this report on the progress with the MSDF review, **BE NOTED.**
2. That the MSDF Approach, Concept and Proposals as described in Chapters 7, 8 and 9 of the MSDF Report **BE APPROVED** as the basis for the further Review of the MSDF.
3. That the proposed alternatives for Planning and Urban Management (P&UM) Areas as described in Chapter 10 of the MSDF Report **BE NOTED** as the basis for the demarcation of P&UM Areas.
4. That the amendments to the Urban Edge as described in Chapter 9 of the MSDF Report **BE APPROVED** as the basis for public and technical participation in demarcating the Ekurhuleni Urban Edge.
5. That the recommendations as contained in Paragraph 6 of Annexure "B" (The Academic critique of the Local Spatial Development Framework Modules - Phase 3: Recommendations"), **BE APPROVED.**