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LIST OF ABBREVIATIONS

BEPP	Built Environment Performance Plan
CBD	Central Business District
IZ	Integration Zone
MA	Marginalised Area



SECTION A

A INTRODUCTION AND BACKGROUND

A1. ROLE OF BEPP

The Built Environment Performance Plan (BEPP) is a response to the challenges metropolitan Municipalities face regarding urban spatial restructuring. The BEPP is a sharpening of existing planning tools to assist Metros to achieve built environment outcomes of more productive, sustainable, inclusive and well governed cities, thereby contributing to the impact of reducing poverty and inequality and enabling faster more inclusive urban economic growth.

The first round of BEPP's was initiated in **2011/12** financial year by National Treasury. The primary inventive of the BEPP was to provide a strategic public management framework across sectors and spheres for the alignment of public resources into strategic urban locations across the planning, funding, delivery and operations cycle; and the design and application of fiscal and regulatory instruments aimed at catalysing private fixed investment and spatial transformation.

In addition, the BEPP is a requirement by the **Division of Revenue Act (DORA)** in respect of infrastructure grants related to the built environment of metropolitan municipalities. The BEPP indicates how the City applies its capital financing, including grant resources and other sources of finance. Other monetary components that are indicated within the BEPP include fiscal and regulatory instruments, incentives within its jurisdiction, intended impact and outcomes of these interventions. The table below is a summary of the DORA related Infrastructure Grants applicable to the BEPP process.

Table A1.1: BEPP Infrastructure Related Grants

NAME OF GRANT	PURPOSE OF GRANT
Urban Settlement Development Grant (USDG)	Supplements the capital revenues of metropolitan municipalities in order to support the national human settlements development Programme focussing on poor households
Human Settlements Development Grant (HSDG)	To provide for the creation of sustainable human settlements
Public Transport Infrastructure Grant (PTIG)	To provide for accelerated planning, construction and improvement of public and non-motorised transport infrastructure
Neighbourhood Development Partnership Grant (NDPG)	To support and facilitate the planning and development of neighbourhood development programmes and projects that provide catalytic infrastructure to leverage third party public and private sector development towards improving the quality of life of residents in targeted under-served neighbourhoods (generally townships)

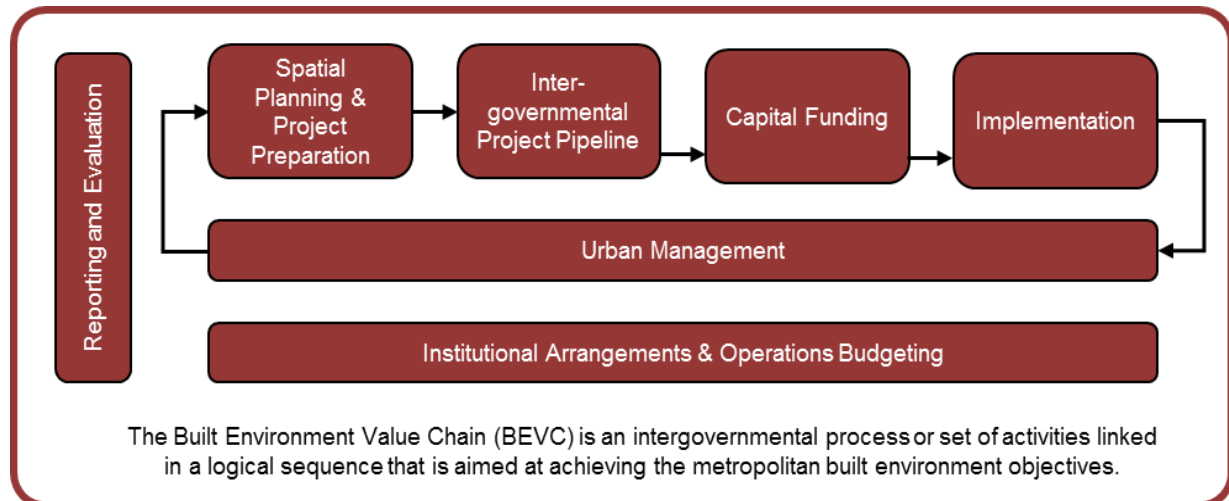


NAME OF GRANT	PURPOSE OF GRANT
Integrated National Electrification Grant (INEG)	To implement the Integrated National Electrification Programme by providing capital subsidies to municipalities to address the electrification backlog of occupied residential dwellings, and the installation of bulk infrastructure and rehabilitation and refurbishment of electricity infrastructure in order to improve quality of supply.

The BEPP for 2017/18 forms part of the eight cycle of the BEPP process. The BEPP process has evolved tremendously with every cycle, with each BEPP cycle gradually building on the previous, to realise spatial transformation aimed at achieving productive, sustainable, inclusive and well governed cities.

The **spatial planning method** adopted and reiterated by the 2017/18 BEPP is based on integrated, transit-oriented development as articulated in the Urban Network Strategy. Three key concepts are critical to this approach, which are encapsulated in the concept of the Built Environment Value Chain (BEVC), namely: (i) Outcomes-led planning; (ii) Planning, Preparation and Prioritisation; and (iii) Progression. The BEVC (see **Diagram A1.1** below) is an intergovernmental process aimed at achieving the built environment objectives in metropolitan municipalities. The BEVC activities are linked together in a logical sequence, and form part of a cyclical process.

Diagram A1.1: Built Environment Value Chain (BEVC)



The primary focus for this BEPP for the 2017/18 MTREF, is to strengthen the overall application of the Built Environment Value Chain (BEVC) through:-

- Clarifying development objectives, strategies and targets relative to agreed productivity, inclusion and sustainability *outcomes*
- Consolidating *spatial planning, project preparation and prioritisation* via transit-oriented development plans and programmes in prioritised integration zones
- Establishing an actionable *intergovernmental project pipeline* of catalytic projects via a portfolio management and project preparation tools



- d) Clarifying long term financing policies and strategies for sustainable *capital financing* of the intergovernmental project pipeline

A2. BEPP ALIGNMENT

The BEPP outlines the City's planning and financial arrangements (emphasising the grant funding component of capital spending) that support national policy objectives of inter alia: integration, inclusivity and sustainability. The National Development Plan (NDP), Integrated Urban Development Framework (IUDF) and more recently the Spatial Planning Land Use Management Act, Act 16 of 2013 (SPLUMA) have clearly articulated these objectives within the national context. The City's Integrated Development Plan (IDP), Spatial Development Framework (SDF) and growth strategies have provided the policy and institutional foundations for future investment and framed localised developmental targets and outcomes.

The BEPP has become an integral part of the municipal package of strategic plans and instruments (**Diagram A2.1**). It is uniquely positioned, being required to annually structure content that is reflective of:

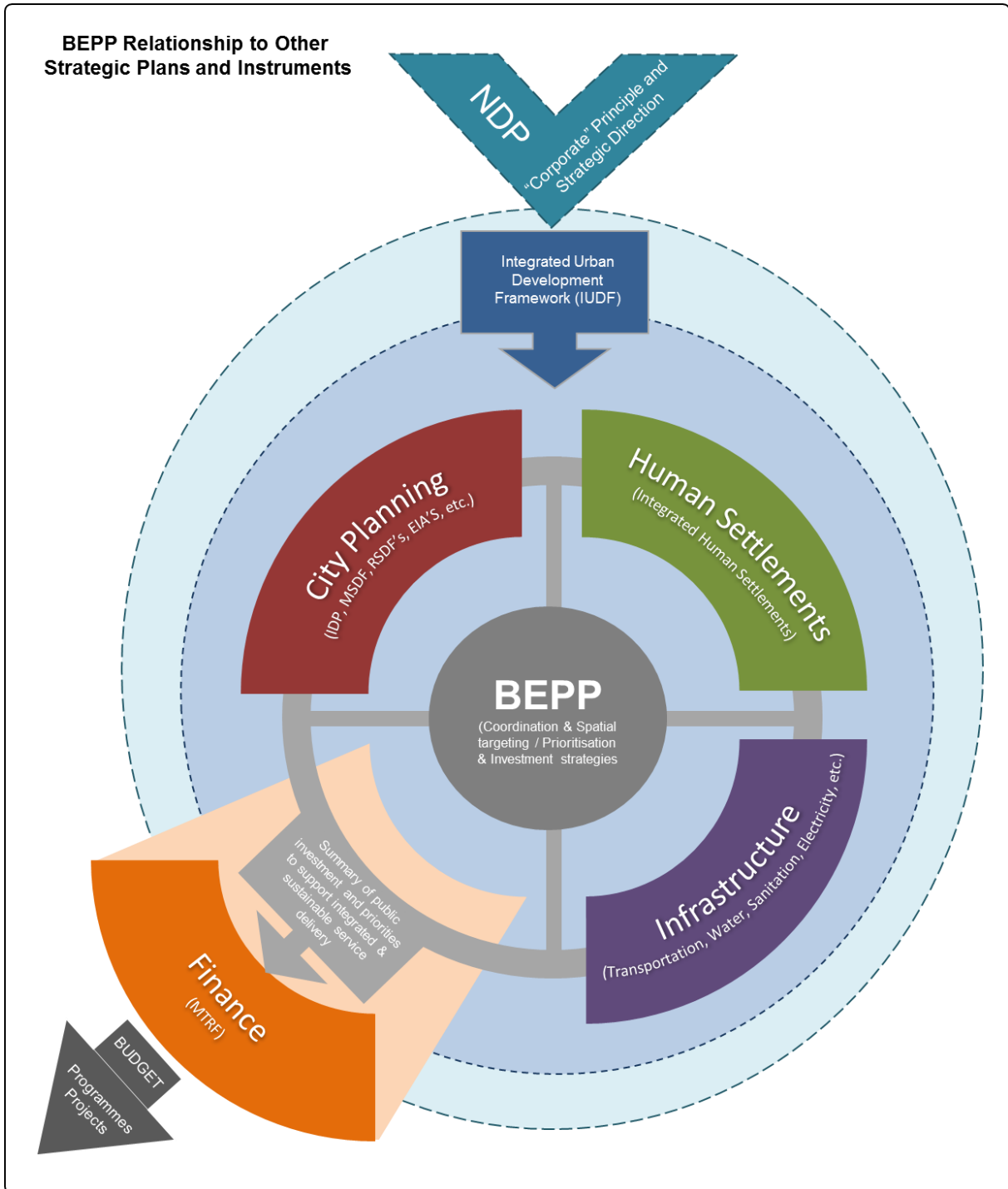
- the founding strategic principles and targets established in the Integrated Development Plan (IDP) and Spatial Development Framework (SDF),
- the current financial, planning and infrastructure initiatives and risks managed by the City via sector and Master plans;
- the broader annual City budget and MTREF with an emphasis on the capital grants mentioned above;
- the investment rationale of other state departments and entities; and
- an increasingly structured and transversal framework for content preparation and strategic themes of national importance emphasised in guidelines issued periodically by National Treasury.

It is noted the EMM MSDF was updated and finalised end of 2015, the BEPP spatial targeting rational will be incorporated into the next revision of the MSDF, no process map and timelines for preparation of the MSDF is currently available. Although it is noted that the 2017 EMM IDP contains a section on BEPP, to ensure integrated planning alignment between the IDP and BEPP.

As per the 2017/18 – 2019/20 Budget Guidelines Memorandum and CIF Capital Prioritization Model User Manual 2016, the 2017/2018 Capital Budget, all new proposed projects need to be evaluated according to the approved BEPP (see **Appendix A** and **Appendix A1**).



Diagram A2.1: BEPP Relationship to Other Strategic Plans and Instruments



As illustrated in Diagram A2.1, the BEPP planning rationale is informed by the NDP and IUDF. Accordingly BEPP informs all future planning of the Metro, with specific planning integration required in terms of Human Settlement, Transportation and Infrastructure Planning. The BEPP is a summary of the CIF projects and reinforces the spatial targeting rationale.



A3. GUIDING DOCUMENTATION

The Ekurhuleni BEPP is compiled from a range of current Ekurhuleni planning and strategy documents.

The key Ekurhuleni documents integrated into this report include:

- The Metropolitan Spatial Development Framework, 2015 Final Report (MSDF);
- The Capital Investment Framework (CIF) as a component of the MSDF;
- The Comprehensive Municipal Infrastructure Plan (CMIP), 2009 – 2025;
- The Comprehensive Integrated Transport Plan (CITP), 2013-2018;
- Long Term Financial Plan, 2010;
- Ekurhuleni Growth and Development Strategy (GDS 2005);
- Ekurhuleni Municipal Housing Development Plan (MHDP), October 2011;
- Ekurhuleni IDP 2011/12-2016/17
- Ekurhuleni Water Service Development Plan, 2014/14
- Ekurhuleni Integrated Waste Management Plan, 2015 Draft
- Ekurhuleni Energy Masterplan
- ERWAT Strategy, 2032
- Phase 2: Draft Concept Framework Tembisa Hub Plan (THP), July 2015
- Integrated Transport Planning Draft Bill: The Discussion Paper, 15 February 2017
- EMM Immovable Property Valuation Guidelines and Policy
- EMM Land Banking Strategy 2015

A4. ADOPTION OF THE BEPP

The Ekurhuleni Metropolitan Municipality BEPP 2016/17 was APPROVED by council on 3 May 2016.

A copy of Council Resolution is included as **Appendix B** (section 15).



SECTION B

B SPATIAL PLANNING AND PROJECT PRIORITIZATION

Section B is structured in accordance with the first three sections of the **Integration Zone Planning Steps** (see **Diagram B1.1**) as set out in the **Integration Zone Planning Guidelines** – Outcome-based Transit Orientated Development (October 2016). The final section as set out within the Integration Zone Planning Guidelines, Intergovernmental Project Pipeline is addressed in Section C of this document.

The first three sub-sections of Section B is therefore structured according to the follow main structuring headings (refer Diagram B1.1):

- Urban Network Planning
- Integration Zone Planning
- Local Area Planning (Precinct Planning / Informal Settlement Planning / Marginalised Areas Planning and Economic Nodes)

In addition, Section B highlights the alignment between public transport and human settlement planning, project preparation and related institutional arrangements

URBAN NETWORK PLANNING

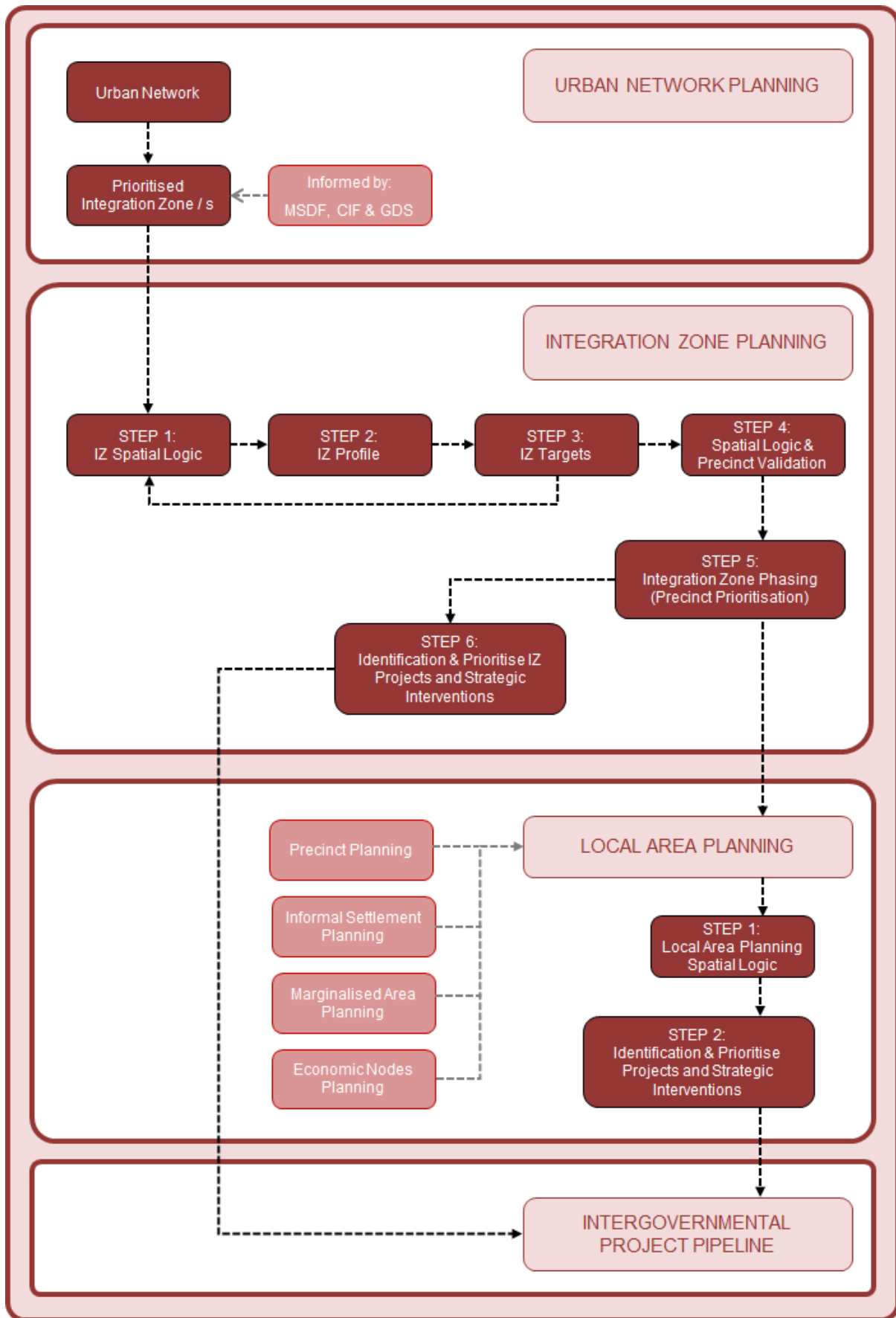
B1. SPATIAL TARGETING RATIONAL

The **Spatial Targeting** of the Built Environment Performance Plan (BEPP) is primarily founded on the Long Term Vision of the EMM as set out in the Ekurhuleni Growth and Development Strategy 2055, the Spatial Development Framework of the Municipality and the EMM Capital Investment Framework reflecting the CIF identified Priority Integration Areas. The aforementioned, in line with the Urban Network Strategy, informed the identification of Integration Zones, marginalised areas (informal settlements, townships and inner city areas) and growth nodes (commercial and industrial) for focused development.

Following is a brief overview of the alignment between the Long Term Vision of the EMM in terms of the GDS, the Spatial Development Framework and the Capital Investment Framework Geographic Priority Areas, which guided the identified of the Integration Zones. *Section B1* concludes with the identified Integrations Zones, marginalised areas and growth nodes.



Diagram B1.1: Integration Zone Planning Steps



■ GROWTH AND DEVELOPMENT STRATEGY 2055 - LONG TERM VISION OF THE MUNICIPALITY

According to the Ekurhuleni Growth and Development Strategy 2055 the vision of the EMM is to be ***The Smart, Creative and Developmental City***. The mission statement developed for the EMM reads as follows:

Ekurhuleni provides sustainable and people centred development services that are affordable, appropriate and of a high quality. We are focussed on social, environmental and economic regeneration of our city and communities, as guided by the principles of Batho Pele and through the commitment of a motivated and dedicated team.

The EMM Growth and Development Strategy 2055 furthermore identified the following number of critical developmental imperatives to be pursued in the metropolitan area:

1. Sustainable urban integration
2. Job creating economic growth
3. Social empowerment
4. Environmental well-being
5. Co-operative governance

Different developmental stages are envisaged in order for the EMM to realise the above developmental imperatives:

- Stage 1: The Delivering City (2012-2020). This would lay the foundation for
- Stage 2: The Capable City (2020-2030), and ultimately enable
- Stage 3: The Sustainable City (2030-2055).

This trajectory lies at the heart of the EMM Growth and Development Strategy 2055 and represents a High Level Strategic Framework for the City to manage its transition through the following five strategic themes: “**Re-urbanise**”, “**Re-industrialise**”, “**Re-generate**”, “**Re-mobilise**” and “**Re-govern**”.

The EMM Growth and Development Strategy is aligned with the following four high level goals as extracted from the national guidelines on performance indicators (National Treasury, 2013):

- a) Well-Governed City:** This is a precondition for reshaping the EMM urban form and sustainable built environment transformation. The EMM vision and leadership will initiate and drive spatial change, efficient and sustainable urban infrastructure transformation, and align with its policies, procedures and resources accordingly. The EMM will target priority areas for transformation, lever additional resources from external sources, and involve stakeholders in the planning and implementation processes.



- b) Inclusive City:** All residents will be able to participate in economic and social opportunities. There will be better physical access to such facilities (through proximity and mobility), and greater social diversity at neighbourhood and city levels. Higher population densities are to be achieved across the city, particularly in well-located areas and around transport hubs and corridors. Priority will be given to redevelopment of brownfield sites, infill development and the intensification of existing inner urban areas to accommodate larger populations. This will be supported by a more efficient and integrated transport system. Social integration will be achieved through mixed-income, mixed-use, inclusionary forms of development with a diverse range of housing typologies and tenure alternatives. This will result in high quality and safe residential environments for all, with public services and recreational amenities within easy reach.
- c) Productive City:** People will earn a decent living which generates sufficient resources to pay for improved infrastructure, services and amenities. The city will function efficiently and make effective use of its human and natural resources. Municipal policies and procedures (related to land, infrastructure, regulations and incentives) will encourage increased private and public investment throughout the city, including both established economic centres and new transformation areas. Public and private business support programmes will be established according to the needs and potential of different types of enterprise in various functional parts of the municipality.
- d) Sustainable City:** The city will have innovative infrastructure networks which enable more efficient use of natural resources and provide affordable services. Investment will be focused towards resource efficient and sustainable urban infrastructure and tariffs will be set at levels to balance real cost (including provisions for maintenance and future capital investments) with affordability. Less municipal-provided resources will be consumed per capita and less solid waste will go to landfill. The EMM will monitor the resource efficiency (of energy and water) and solid waste flows to landfills.

The above themes speak directly to Ekurhuleni's vision for an **integrated, delivering, capable and sustainable** city. The BEPP Reporting and Evaluation Indicators, attached as Annexure 4 speaks directly to the above mentioned themes.



SPATIAL DEVELOPMENT STRATEGY OF THE MUNICIPALITY

Figure B1.1 depicts the **Ekurhuleni Spatial Development Concept** aimed to guide future development in the EMM area. The Spatial Concept is based on the following development principles:

- A strong core relating to the proposed Aerotropolis at OR Tambo International Airport;
- Anchor nodes at Sentrarrand and Tambo Springs Freight Hubs, and Carnival City precinct;
- Promotion of viable east-west linkages by means of the N17 and N12 highways;
- Development of major north-south linkages/ corridors, including a separate road-based freight route;
- Upgrading and expansion of the railway system;
- Extensive agricultural development in the rural extents of the municipal area; and
- A compact urban development footprint comprising a Core Support Zone and an Urban Support Zone around the Metropolitan Core.

The **Ekurhuleni Metropolitan Spatial Development Framework** as illustrated on **Figure B1.2** provides a clear indication of the broad land use pattern to be developed in Ekurhuleni to achieve sustainable spatial development and to thus overcome the spatial imbalances of the past. The MSDF is based on the following twelve Development Objectives as summarised in **Table B1.1**:

Table B1.1: Ekurhuleni MSDF Development Objectives

1.	Objective 1: Create a single Uniform Identity for Ekurhuleni Metropolitan Municipality
	<ul style="list-style-type: none"> • Aerotropolis becomes new metropolitan hub Core Node.
2.	Objective 2: Develop a well-defined system of Activity Nodes
	<ul style="list-style-type: none"> • Identify primary and secondary activity nodes to support the Core Metropolitan Node. • Protect existing industrial areas from the potential negative effects of informal settlements located in close proximity thereof. • Determine an “Ekurhuleni unique” niche market for each of the Primary Nodes. • Improve and further develop existing nodes in the PDAs. • Link activity nodes and public transport nodes. • Link the activity nodes to one another through activity spines and public transport networks.
3.	Objective 3: Promote the Development of a Sustainable Compact Urban Structure
	<ul style="list-style-type: none"> • Densify activity nodes, residential areas and transport linkages. • Delineate a fixed urban edge to accommodate future urban growth. • Direct growth to the Ekurhuleni Core Node. • Identify developable land for infill development mindful of strategic location, socio-economic value and soil conditions.
4.	Objective 4: Create a Sustainable and Functional Open Space Network
	<ul style="list-style-type: none"> • Optimise the unique characteristics of Ekurhuleni. • Incorporate the open space system into the urban fabric. • Optimise unutilised open space in the urban fabric.
5.	Objective 5: Optimise Job Creation Capacity of the Formal Economy
	<ul style="list-style-type: none"> • Promote specialisation in manufacturing, transport, finance, retail and institutional uses. • Develop sector-specific growth strategies. • Protect existing industrial areas from negative effects of informal settlements located in close proximity thereof. • Regenerate industrial areas and CBDs. • Provide infrastructural linkages for globally orientated growth.



	<ul style="list-style-type: none"> Promote SMME Development and Growth.
6.	Objective 6: Integrate the Disadvantaged communities into the Urban Fabric
	<ul style="list-style-type: none"> Support infill development on vacant land located close to CBDs, industrial areas, bus and taxi routes and railway stations. Promote economic development along the main linkages between these communities and the major concentrations of job opportunities. Direct growth of the PDAs to the Ekurhuleni Core Node.
7.	Objective 7: Actively Promote Sustainable Public Transport
	<ul style="list-style-type: none"> Provide public transport along all main corridors. Effectively manage taxi ranks. Promote mixed use, high density development along suitable corridors and at suitable nodes. Promote Transit Oriented Development along the main railway infrastructure. Promote pedestrianisation. Tighten and enforce the Urban Edge to enhance densification. Initiate a "Road to Rail Program" for passengers and cargo.
8.	Objective 8: Promote Access to Social and Municipal Services through CCAs
	<ul style="list-style-type: none"> Promote economic development. Promote essential service delivery.
9.	Objective 9: Identify the Spatial Impact of Climate Change
	<ul style="list-style-type: none"> Develop a compact, integrated and sustainable city with an efficient transport system. Enable the energy sector to better support the local economy of EMM. Provide access for all people to affordable, safe, healthy and modern energy services.
10.	Objective 10: Promote Sustainable Livelihoods Development
	<ul style="list-style-type: none"> Encourage retail development as a kick start strategy. Develop townships into model self-sustaining neighbourhood development areas.
11.	Objective 11: Promote Sustainable Development
	<ul style="list-style-type: none"> Focus on 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. Stormwater plans in relation to floods. EBOSS in relation to land use applications. Water resource management. Food security.
12.	Objective 12: Optimise the Comparative Advantages of EMM
	<ul style="list-style-type: none"> OR Tambo International Airport. Manufacturing. Transport infrastructure (Road, Rail and Air). Ekurhuleni's strategic location.

Figure B1.3 conceptually captures the essence of objectives 2, 3 and 7 as listed above. It firstly shows the priority activity nodes identified in the MSDF as well as the footprint of industrial activity in the EMM. These activity nodes/ areas are linked to one another by way of an Integrated Public Transport Network comprising the PRASA commuter rail network with railway stations, as well as the proposed EMM BRT network. Densification and mixed use development is to be promoted along the BRT network and around the railway stations and within the EMM activity nodes in line with the following density guidelines:

- Transit Oriented Development (TOD), minimum 60 u/ha within a 500m radius of the public transport facility that comprises the core of a TOD (example: commuter railway stations, BRT-trunk station);



- Secondary and tertiary nodes, minimum 60 u/ha within 500m radius from core of node (as may be determined by the municipality);
- Primary nodes minimum 85 u/ha within the node (where node boundaries have been pre-defined, e.g. within CBD-boundaries defined in Ekurhuleni Town Planning Scheme) or within 500m radius from core of node (as may be determined by the municipality);
- Along high order mobility routes (outside the threshold distances specified for TODs, primary, secondary and tertiary nodes), residential densification can be considered on merit, with due regard for considerations such as accessibility, access management, potential impact on transport mobility and potential impact on and interface with other surrounding developments;
- Low density residential zones (0-60 u/ha) – outside above-mentioned densification zones:
 - Up to 60 u/ha within 200m radius of a local neighbourhood or convenience business node (other than a primary, secondary, tertiary or TOD-node);
 - Up to 60 u/ha within 200m radius of social facilities that serve the general public – application of this guideline must take into account the size / extent of the social facility, as well as the extent to which the social facility serves the general public (as opposed to serving just a select group of people, such as a private club or a place of worship for a specific religious denomination);
 - Up to 60 u/ha directly along an interface where a low density residential area abuts a significantly higher density residential area (applied in a manner that will create a gradual density transition);
 - Up to 60 u/ha directly along an interface where a low density residential area abuts a non-residential area;
 - Anywhere else in an existing low density residential area, no portion created by the subdivision of a property for residential purposes may be smaller than 40% of the prevailing size of the surrounding low density residential erven, as determined by the municipality (this guideline aligns to a similar provision in the Ekurhuleni Town Planning Scheme and translates to a density increase equal to 2,5 times the ruling net density of the surrounding low density residential area); and
 - In the application of these guidelines, the compatibility and interface with developments on surrounding properties must be taken into account and provisions of the town planning scheme shall apply to height, coverage, FAR, parking and building lines.

In line with the concept of **Transport Oriented Development**, densification and mixed use should be encouraged along public transportation routes and in areas of extensive public investment in road and rail infrastructure.

The following sections B1.3 and B1.4 highlight the functional relationship between the EMM Spatial Development Framework (B1.2), the EMM Capital Investment Framework (B1.3), and the EMM Integration Zones (B1.4). The MSDF provides the spatial vision, objectives and strategy towards the future development of the EMM; the Capital Investment Framework (CIF) (B1.3) is a component of the



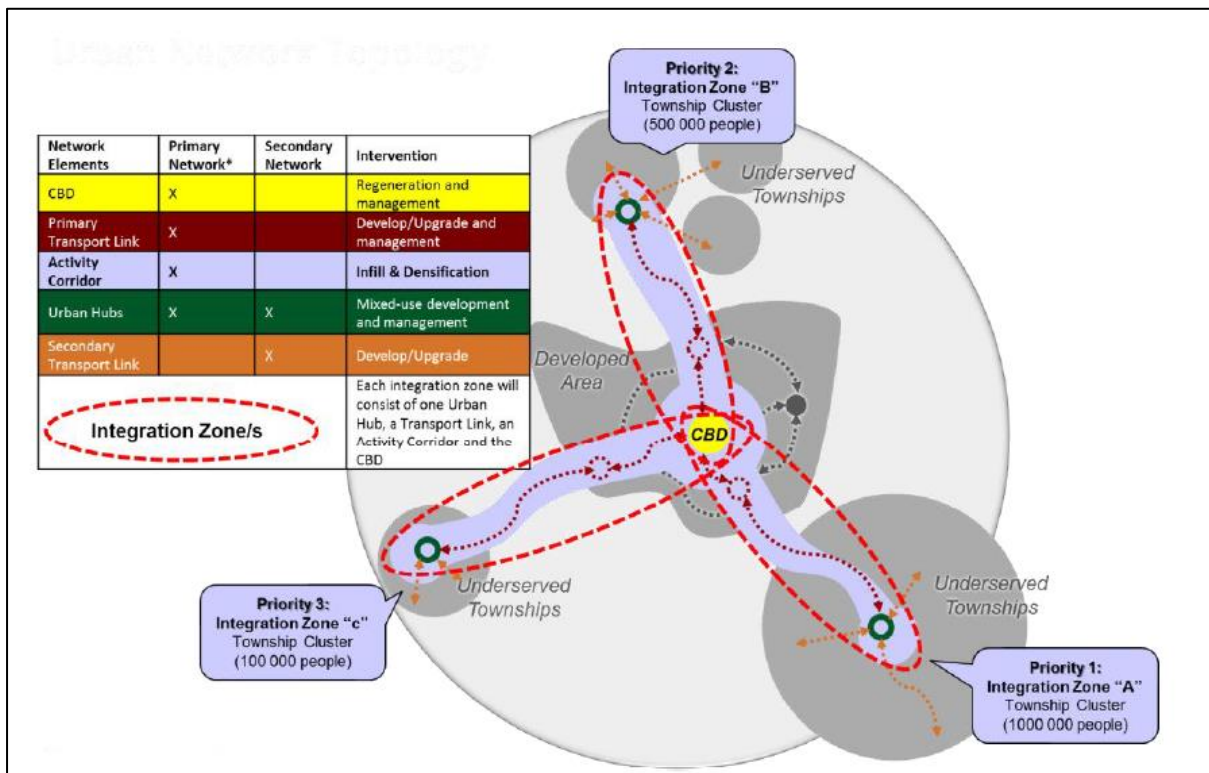
MSDF that fulfils the purpose to strategically and spatially guide and align municipal capital expenditure; and the Integration Zones (including the Urban Network and Hubs) (B1.4) represent a specific, smaller spatial component of the MSDF and CIF and which is the primary focus of the Built Environment Performance Plan.

The Integration Zones, Urban Network and Hubs are part of the EMM CIF but the geographic focus of the EMM CIF is wider than only the Integration Zones.

Figure B1.4 graphically illustrates the concept of the Integration Zone which comprise three elements:

- the consolidation of the urban fabric and promotion of economic activity around the urban hubs in the marginalised areas on the urban periphery;
- the revitalisation of the main activity area in the city (the CBD); and
- effectively linking the Hubs to the CBDs by way of public transport infrastructure and services and promoting medium and higher density mixed use development along these public transport corridors.

Figure B1.4: Concept of the Integration Zone



Source: National Treasury: Urban Network Support Guide



■ **CAPITAL INVESTMENT FRAMEWORK - PRIORITY INTEGRATION AREAS**

The Capital Investment Framework (CIF) is a requirement in terms of Section 4(e) of the Municipal Planning and Performance Management Regulations, 2001 as promulgated in terms of the Municipal Systems Act. It also fulfills the function of a Capital Expenditure Framework (CEF) as required in terms of Section 21(n) of the Spatial Planning and Land Use Management Act, 2013. In addition, the CIF also informs the Capital Expenditure Programme (CEP) as referred to by National Treasury. The CIF also strives to meet Section 153(a) of the constitution¹, in which the developmental duties of a municipality is outlined to “structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community”.

The CIF in its function takes cognizance of overarching national policies such as the National Development Plan 2030 and the National Spatial Development Perspective, 2006, that have outlined the need for metros to target investment into strategically identified spatial areas with the spin off effect of transforming past spatial, social and economic inequalities. The principles set out in the NDP and the NSDP therefore need to be taken into consideration when implementing the CIF as part of strengthening the MSDF. The principles in summary speak to achieving rapid economic growth, the provision of basic services to the community, focusing fixed investment into economic growth points, and promoting infrastructure investment into these economic nodes and potential economic growth points. Imperative to this is avoiding the so called “watering – can”² approach when it comes to investment and planning, whereby programmes and investment is dispersed and not focused. The NSDP therefore argues that dispersed programmes and funding has not managed to achieve successful holistic and comprehensive spatial transformation and economic growth².

The National Development Plan (NDP) affirms this shortfall in that South Africa as a Country is still plagued by spatial inequalities and a lagging economy. The suggested turn around in approach is to work towards focused investment that needs to be reflected in policy, strategy and in the budget³. The CIF can therefore also be defined as a financial planning and regulatory tool in terms of the National Development Plan with the principle of promoting spatial transformation through targeting investment into strategic spatial areas through the combined use of planning, legislative and financial tools. The CIF is therefore geared towards providing a spatial rationale to the budget in order to guide investment into identified priority spatial areas as a means to achieve positive spatial transformation.

The functions of the CIF can thus be summarized as follows:

- Spatially and strategically influence and guide municipal capital prioritisation and allocation;
- Spatially and strategically coordinate and integrate capital expenditure across all sectors;
- Show where the municipality must and will be spending its capital budget; and

¹ *Constitution of the Republic of South Africa, no. 108 of 1996*

² *South African National Government: National Spatial Development Perspective, 2006, pp 3.*



- Map capital projects reflected on the multi-year budget.

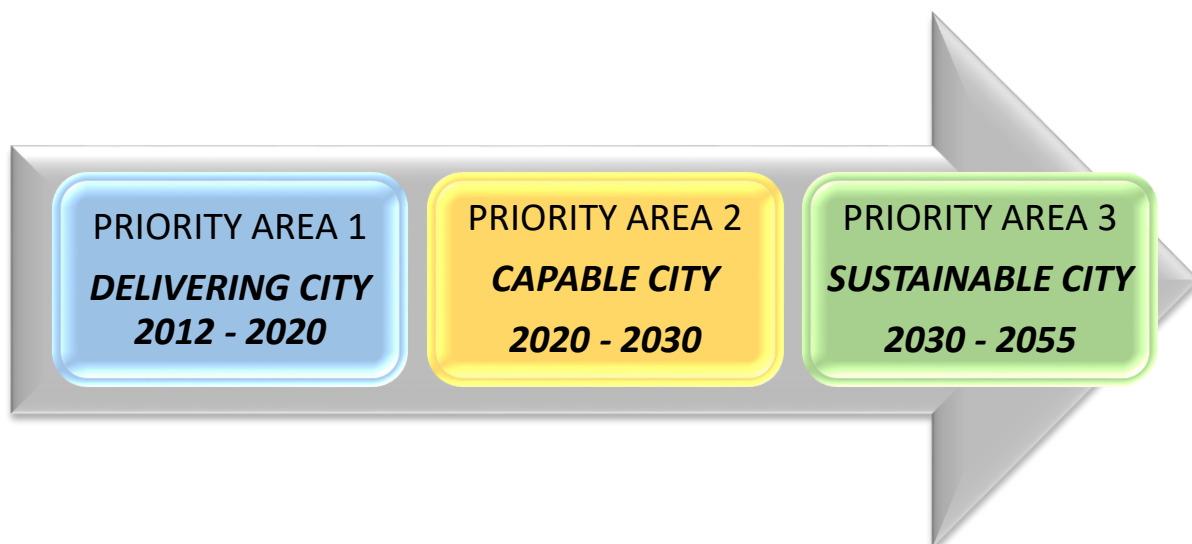
The Capital Investment Framework is therefore a tool utilised within the BEPP to achieve medium to long term outcomes with regard to spatial transformation through guiding and focusing investment into strategic spatial areas – some of which also comprise the BEPP Integration Zones.

The Capital Prioritization Model and Geographic priority areas are the implementation tools of the CIF and are utilized during the annual draft multi-year capital budget evaluation process with the objective to prioritize the draft multi-year capital budget in accordance with the priority areas for targeted and coordinated infrastructure investment.

CIF GEOGRAPHIC PRIORITY AREAS

The EMM Capital Investment Framework is geared towards focusing capital budgeting for the metropolitan area into three strategic geographic priority areas in accordance with the MSDF. The main objective is to achieve the spatial strategy outlined within the MSDF and to align with the development trajectory defined within the GDS in terms of promoting the Metro as a 'Delivering City' with a 10 year implementation horizon, a 'Capable City' within 20 years, and a 'Sustainable City' within a 20 year and beyond implementation horizon.

Figure B1.5: Geographic Priority Areas Alignment to the GDS



Spatial Structuring Elements Defining CIF Geographic Priority Areas

This section provides more detail into the various Spatial Structuring Elements (SSE's) utilised in defining the Ekurhuleni CIF Geographic Priority Areas. **Table B1.2** below provides a brief summary of each of the Spatial Structuring Elements which informed the CIF of Ekurhuleni, while **Figure B1.6** illustrates the spatial distribution of each of these Spatial Structuring



Elements. The allocation of the various SSE's into the three Geographic Priority Areas is reflected on **Figure B1.7**. The prioritisation thereof was based on considerations pertaining to connectivity, access to social and economic opportunities, scope of project, locality, available funding and the implementation timeframe of the project.

The blue areas on **Figure B1.7** depict Priority Area 1, while Priority Area 2 is shown in yellow. Priority Area 3 is illustrated in green.

Table B1.2: EMM CIF Spatial Structuring Elements

IRPTN Corridor	The phase of the IRPTN route that is to be developed should receive more funding during each CIF phase. Implementation of the corridor in the CIF is indicated as per the IRPTN phases as described by the Ekurhuleni Transport Department. The IRPTN phase 1 route, phases A and B have been demarcated as priority 1, with Phase C being demarcated as priority 2. Phase 1C has been demarcated as part of priority area 2 pending available funding being made available in the outer financial years. The remaining IRPTN trunk routes have been demarcated as priority 3 in so far as implementation of the remaining IRPTN routes is only anticipated for 2020 and beyond.
Rail Stations	The Passenger rail stations to be developed should receive more funding during each CIF phase. Highest priority is given to Rail Stations within Primary and Secondary Activity Nodes and that form part of the IRPTN phase 1 route, phases A and B; which are demarcated as priority 1 in terms of the CIF. The stations on the remaining IRPTN routes have been demarcated as priority 3, based on the 2020 and beyond proposed implementation of the phase 1C roll out. Prioritisation of the IRPTN stations therefore follows the implementation roll out timeframe proposed for the IRPTN trunk routes. It must also be noted that PRASA is presently focused on implementing the modernization plan, which refers to the maintenance and upgrading of existing rail stock. In this regard new PRASA stations are not anticipated for the short term. The stations should also be recognized as destination nodes with the potential of developing into activity nodes.
Primary Nodes	It is proposed that Primary Nodes to be developed should be budgeted for as per the CIF priority areas, which has prioritized the Primary Nodes based on spatial strategy, locality in relation to the IRPTN and Urban Renewal projects that are underway and major investment developments. Primary Nodes that fall within priority area 1 are considered as the highest priority, followed by Primary Nodes that fall within priority area 2 and then priority area 3. The remaining Primary Nodes are considered as a lower priority.
Secondary Nodes	Secondary Nodes to be developed should be budgeted for as per the CIF priority areas. Secondary Nodes that fall within geographic priority area 1 and on Route 1A and B of the IRPTN are considered as the highest priority, followed by Secondary Activity Nodes on Phase 1C of the IRPTN, then Route 2 and so on. It must be noted that further refinement of the inclusion of the secondary nodes into the priority areas is required pending available information on the status of the secondary nodes.



Major Housing Projects	Major Housing projects that are well into the implementation phase by the Ekurhuleni Human Settlements Department have been demarcated as priority 1. Prioritisation of these projects was based on the development objectives of the Ekurhuleni Human Settlement Department. The CIF has included the proposed housing projects as reflected on the housing funding model and earmarked the proposed housing projects that fall along the mining belt and form part of infill development as part of priority area 2. Therefore, the CIF has placed more emphasis on prioritizing proposed housing projects that supports infill densification and expansion areas as per the MSDF.
Industrial Areas	New industrial areas need to be developed and existing industrial areas require upgrading during each CIF phase. Phasing of the industrial areas is based upon spatial strategy, income sources (based on modelling geographic income areas), Council initiatives underway, IRPTN, and major investments. It is acknowledged that the EMM industrial areas are a major source of revenue for the metro and a source of employment.
Major Investments and Strategic Projects	<p>Major investment and development projects that have been included to the CIF geographic priority areas include major investments and strategic projects as listed in the 2015 MSDF, and newly identified investments and strategic projects that have been identified as in a phase of initiation and/or implementation. Major investments can be defined as private sector developments which boast significant GGP and job creation for the metro based on the eventual realization of the entire proposed development. Strategic projects must be understood as programmes and projects initiated by the EMM as with the example of the flagship projects.</p> <p>Prioritisation is therefore based on the locality of the project and readiness of the project driver to implement the project. Where possible these projects are to be linked to the implementation of the IRPTN and the priority income generating areas. 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.</p>
Poverty Eradication Areas	The poverty eradication areas were derived out of the identified poverty eradication areas as listed in the 2015 MSDF. It is acknowledged that the provision of access to economic opportunities in close proximity to previously disadvantaged areas is a necessity as outlined in the principles of the NSDP ² . Where possible the prioritisation of the poverty eradication areas should be linked to the implementation of the IRPTN. The poverty eradication areas have also been prioritized as per the role out of the Township Regeneration Plans.
Expansion/Growth Areas	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

² National Spatial Development Perspective, 2006.



	<p>Corridor to the east. This also forms part of the Tembisa – OR Tambo International Airport component of the Ekurhuleni North-South Corridor.</p> <p>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 area as it represents an inward direction of growth for the Daveyton-Etwatwa complex towards the OR Tambo International Airport area. Several subsidised housing projects and bonded housing projects are already underway in this area.</p> <p>The Leeuwpoort area to the south of Sunward Park is the third highest priority Expansion Area. The Ekurhuleni Leeuwpoort housing development initiative is of importance here.</p> <p>Expansion/growth Areas are redefined in the concept so as to promote development and provision of services in nodes and corridors within the Expansion/growth Areas. In terms of the CIF the expansion areas that have been incorporated into the priority areas includes the Aerotropolis core, housing projects, and development in and around the proposed IRPTN routes.</p>
<p>Densification areas</p>	<p>The main focus of these areas is to support public transport and urban sustainability. The aforementioned Infill and Expansion/growth Areas are layered onto the proposed densification areas.</p>
<p>Geography of EMM income</p>	<p>In defining the priority areas it is imperative that the Metro be able to identify spatially where its top investors in terms of revenue generation are located. In drawing future investment and retaining the Metros current investors to ensure future revenue security and growth, the Metro needs to provide a sustainable environment for businesses. Areas of economic opportunity are identified in the MSDF as the Aerotropolis core, CBDs, the logistics hubs, mixed use private sector developments and industrial areas.</p>



Table B1.3 below summarises the Spatial Structuring Elements included in each of the three Geographic Priority Areas as defined in the EMM Capital Investment Framework.

Table B1.3: Summary of the Geographic Priority Areas

SPATIAL STRUCTURING ELEMENT	GEOGRAPHIC PRIORITY AREA 1	GEOGRAPHIC PRIORITY AREA 2	GEOGRAPHIC PRIORITY AREA 3
IRPTN CORRIDOR	Tembisa -Kempton Park, OR Tambo, Benoni via Boksburg- Vosloorus, Daveyton , Etwatwa, Duduza, Kwa-Thema	Ivory Park and Tembisa in the North to Germiston and from Katlehong in the South to Germiston via Alberton	Kempton Park, Benoni and Brakpan, Kwatsaduza. Brakpan to current Natalspruit
RAIL STATIONS	Germiston, Germiston West, Isando, Kempton Park, Leralla, Limindlela, President, Rhodesfield	Apex, Benoni, Boksburg East, Daveyton, Dunswart, East Rand, Elandsfontein, Geldenhuis, India, Kutalo Kwesine, New Kleinfontein Range View, Refinery, Schaperust	Anzac, Avenue, Brakpan, Daggafontein, Germiston South, Germiston Lake, Katlehong, Mplisweni, Natalspruit, Northmead, Pollak Park, Rooikop, Springs, Wadeville
PRIMARY NODES	Tembisa, Kempton Park, Riverfield, Glen Gory, Germiston CBD, Boksburg, Benoni CBD, Thinasonke	Etwatwa, Bedfordview, Vosloorus	Alberton CBD, Brakpan CBD, Edenvale CBD, Springs CBD, Nigel CBD
SECONDARY NODES	Birch Acres, Cason, Daveyton, Jansen Park, Jurgenspark, Zonkizizwe	Admin Triangle, Daveyton, Duduza, Etwatwa, Kwa-Thema, Kwenele, Tsakane, Twala, Vosloorus, Windmill Park	Bonaeropark, Edenvale, Geduld, Kwa-Thema, Langaville, Maryvlei, Sonstraal AH
HOUSING PROJECTS (CURRENT)	Alliance Ext 9, Alra Park Essential Services, Chief A Luthuli Park Ext 4, Chris Hani Proper & Ext 2, Clayville Ext 45, Eden Park West And West Ext 1, Etwatwa Ext 18, Etwatwa Ext 19 (Solomon Mahlangu), Etwatwa Ext 34 (Barcelona), Etwatwa Ext 35 (Combiza), Etwatwa Ext 36 (Kamashonisa), Etwatwa Ext 37 (Magoba Village), Kwa Thema Ext 5, Kwa Thema Ext. 3, Ekuthuleni, Langaville Ext 4, Madelakufa 2, Magagula Heights Top Structures, Mayfield Ext 1, Mayfield Ext 12, Moleleki Ext 1, 2, Payneville Ext 1 & 3, Project Palm Ridge Ext 9, Reiger Park Ext 5, Tinazonke, Tsakane Ext 19, Tsakane Ext 22, Ulana Settlements, Villa Lisa Ext 3, Vosloorus / Kavosh, Zonkizizwe Proper Ext 1 & 2, Sanitation System, Leeuwpoort	Good Hope	Kwa Thema 7a
HOUSING PROJECTS (PROPOSED)	Alliance Ext 2, Dersley, Ecaleni(Coal Yard), Esther Park, Old Mutual Land, Olifantsfontein Cullinan Land, Terenure	Angelo Deep, Apex Land, Badenhorst Land – (Leachville, Rietfontein, Weltevreden), Balmoral Block, Driefontein 85IR Reiger Park, Dukathole Land, Ergo Road, ERPM Village (Comet Village), Esselen Park, Joe Slovo, Klippoortje 112IR, Kutalo Station, Kwa-Thema, Kwesine Station, Leachville Ext 2, Mining Belt Germiston (Makause), Pomona Rehabilitated Land-Angelo, Rietfontein, Kwa Thema, Rose Acres Project, South Germiston Ext 8, Van Dyk Park, Vulcania 279, Wattville /Actonville, Wattville Erf 3130	Brakpan Old Location, Cool Breeze, Daggafontein, Duduza, 119 Klippoortje110-IR, Helderwyk Ext 3 & 7, Holgafontein, Holomisa (Lindelani), Katlehong Roodekop, Klippoortje A H Ptn 127, Kwa-Thema, Langaville Ext 10, Magagula Heights, Palmietfontein 57 & 142, Rietspruit 152-IR & 153-IR, Rondebult 35 & 41, Spaarwater Ptn 2 171 IR, Villa Lisa Ext 5, Vlakfontein 130-IR Ptn 20, Vlakplaats Ptns 36 & 657, Vosloorus Ext 28 Med Risk Dolomite, Vulcania 279, Zwartkopjes Farm
INDUSTRIAL AREAS	Airode South, Apex, Chloorkop, Clayville, Elandsfontein, Fulcrum, Hughes, Isando, Jet Park, N12 Freeway Park, Olifantsfontein, Spartan, Witfontein, Hughes, Isando, Jet Park, Spartan, Witfield	Anderbolt Apex Benoni South, Boksburg East, Dunswart, Elandsfontein, Fulcrum, Industries East & West, Lilianton, Mapleton, Spartan, Vulcania, Witpoort, Activia Park, Anderbolt, Beyers Park, Boksburg East, Delville, Germiston, Heriotdale, Jupiter, Krog Industria, Lilianton, Malvern East, Muswelldale, Primrose,	Airode Airode South Anderbolt, Apex, Benoni South, Dunswart, Eastleigh, Enstra, Fulcrum, Industries East & West, Junction Hill, Knights, Mapleton, N12 Freeway Park, New Era, Nuffield, Putfontein, Roodekop, Spartan, Vulcania, Wadeville, Witpoort, Germiston, Jupiter, Meadowbrook, South Germiston, Sunnyrock, The Stewards, Wilbart



		Rustivia, Satmar, Simmerfield, South Germiston, Ulana Park, Westwood SH, Witfield, Wychwood	
MAJOR INVESTMENTS, STRATEGIC PROJECTS	Aerotropolis Core Node, Badenhorst Estate, Glen Gory, Riverfields, Lords View Estate, Dries Niemandt, Blaauwpan, Germiston Lake, Kaalfontein Catchment Area, Germiston Urban Renewal, Motsu Park, Zonkizizwe Park, M and T, and Tambo Springs Inland Port	Aerotropolis Core Node, Badenhorst Estate, Riverfields, , Civic Lake, Middle Lake, Homestead Lake, Kleinfontein Lake, Murray Park, Leeupan, Presidentspark	Aerotropolis Core Node, Alberton Node
POVERTY ERADICATION AREAS	Tembisa & Surroundings, Germiston CBD, Kleinfontein 67-IR (Benoni)	Actonville/ Wattville, Etwatwa, Dayveyton, Admin Triangle, Natsalspruit, Kwesine, Kwa-Thema, Tsakane, Duduza	

The Geographic Priority Areas as listed above and indicated on **Figure B1.7** 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 relevant RSDF and/ or Precinct Plan.

Future refinements to the priority areas propose to incorporate the strategic land parcels and precinct developments. Both the precinct developments and strategic land parcels are still at the planning stage and on inception will be built into the priority areas as key defining facets in guiding the priority areas in becoming more area specific, thereby reducing the current footprint of the priority areas.

The Capital Prioritization Model as an investment prioritisation tool of the CIF will be discussed in more detail under Section C.

B1.1 SPATIAL LOGIC IN IDENTIFYING THE INTEGRATION ZONES, MARGINALISED AREAS AND ECONOMIC NODES

With the above discussed Spatial Targeting Rationale as background (the alignment between the Long Term Vision of the EMM, the Spatial Development Framework of the EMM and the Capital Investment Framework) the Integration Zones, Marginalised areas and Growth nodes was defined accordingly.

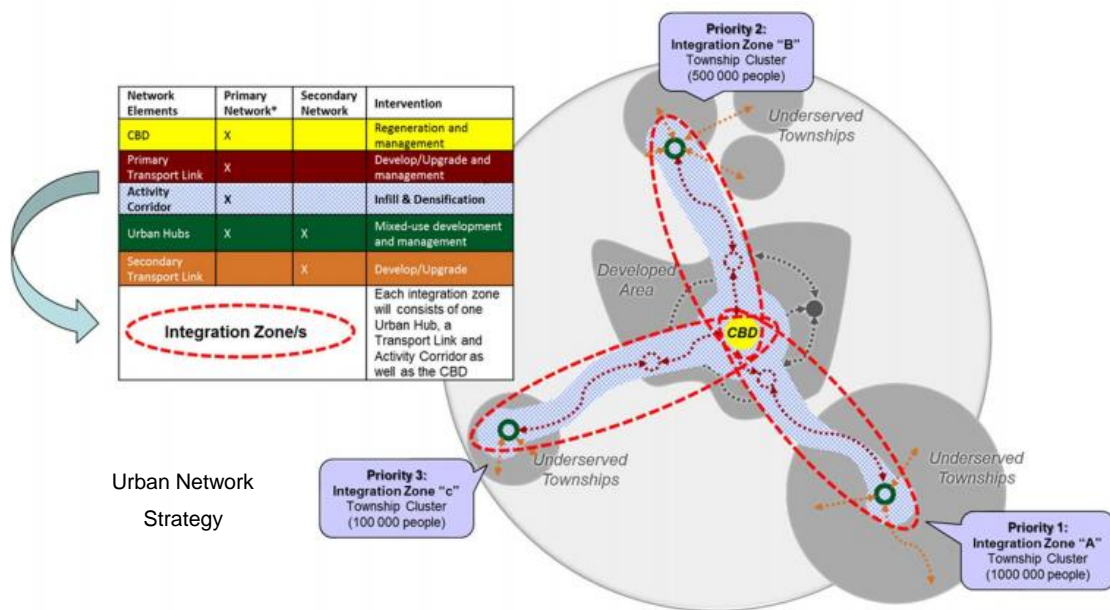
The first cycle of the BEPP was initiated by the National Treasury within the **2011/12 financial year**. As the BEPP process evolved with each cycle, so has the identification and delineation of the Integration Zones. Following is a brief summary of the BEPP, 2014/2015 to present, Integration Zones' evolution.



HISTORIC INTEGRATION ZONE EVOLUTION OVERVIEW (2014/2015 to 2016/2017)

»» BEPP 2014/2015

The 2014/2015 BEPP Integration Zones was primarily informed by the EMM Capital Investment Framework (CIF) Priority Integration Areas footprint. The rationale behind its utilisation was based on the core principles of the CIF which relates directly back to the vision of National Treasury’s City Support Program’s goals and objectives. Some of these include sustainability, urban restructuring, densification as well as spatial and sectoral integration and prioritization (EMM BEPP 2014/2015). It is noted that within the 2014/2015 BEPP only one Integration Zone was identified (the Aerotropolis -Tembisa IZ). Other strategic localities identified within the 2014/2015 BEPP, in line with the Urban Network Strategy urban hubs were Daveyton & Etatwa, Katorus and Kwadsaduza (see **Figure B1.8** below).



»» BEPP 2015/2016

Similar to the 2014/2015 BEPP, the 2015/2016 BEPP Integration Zones was primarily informed by the EMM Capital Investment Framework (CIF) Priority Integration Areas footprint based on the same rational. The 2015/2016 BEPP went a step further and overlaid the CIF footprint on the city structure whereby the proposed Urban Network Strategy emerged for the EMM, which consists of a CBD (the Aerotropolis) and five strategically located urban hubs, namely Tembisa, Daveyton & Etwatwa, Katorus and Kwatsaduza. The key structuring element with regards to the Urban Network, the proposed Integrated Rapid Public Transport Network (IRPTN), was then utilized to determine the network footprint which enabled the EMM the to identify corridors that should be earmarked for densification as well as the movement of people to and from places of employment. The O.R.Tambo International Airport was selected as the main economic hub / driver (CBD) within the city. The Urban Network Plan was hence built around the O.R.Tambo international airport.

Within the 2015/2016 BEPP, five integration Zones was identified. Each Integration Zone includes one of the identified strategic localities / urban hubs (Tembisa, Daveyton & Etwatwa, Katorus and Kwatsaduza). **Figure B1.9** graphically represents the 2015/2016 BEPP Integrations Zones. The Integration Zones were informed by the IRPTN alignment, with a 1km buffer on each side.

»» BEPP 2016/2017

The 2016/2017 BEPP used the spatial rational of the previous two cycles of the BEPP process as background. As point of departure, 2016/2017 BEPP was informed by the Long Term Vision of the Ekurhuleni Growth and Development Strategy 2055, the guiding principles of Spatial Development Framework of the Municipality and the EMM Capital Investment Framework reflecting the CIF identified Priority Integration Areas. The aforementioned, in line with the Urban Network Strategy, informed the identification of the Integration Zones of the 2016/2017 BEPP. In addition, the 2016/2017 BEPP made provision for each integration Zone to include a marginalised area, economic nodes (commercial and / or industrial) and a network linkage (IRPTN).

Figure B1.10 graphically represents the 2016/2017 BEPP Integrations Zones, including the marginalized areas and economic nodes. The integration zones are informed by the IRPTN alignment, with a 500m buffer on each side. The Aerotropolis Core node was divided into three section and formed part of the integration zones.

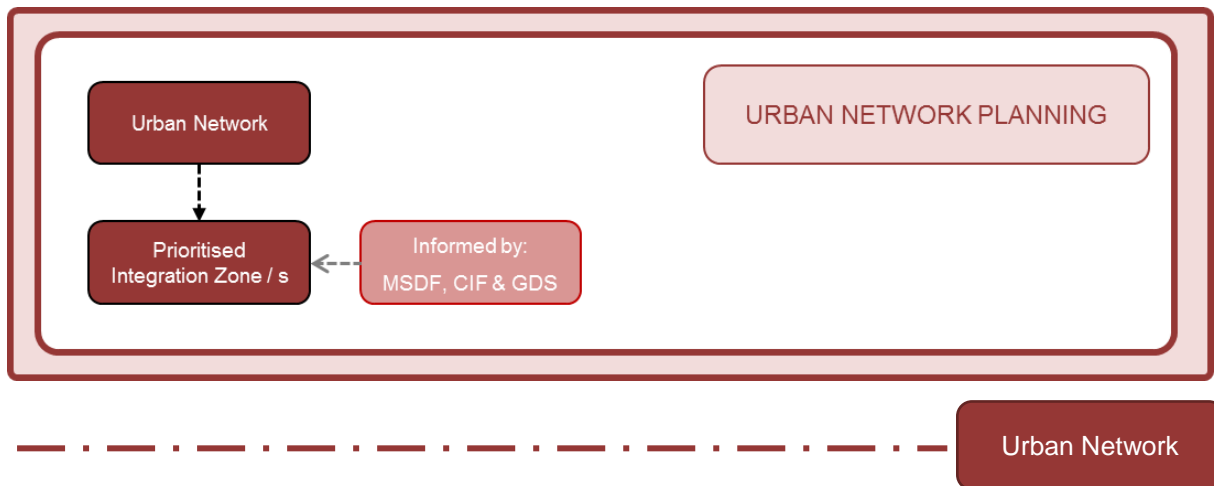


CURRENT INTEGRATION ZONE ANALYSIS (2017/2018)

B1.1.1 PRIORITISED URBAN NETWORK– INTEGRATION ZONES 2017/2018

With the evolution of the Integration Zones as background, the following section deals with the **2017/2018** Urban Network analysis and related Integration Zone prioritisation (refer Diagram B1.2).

Diagram B1.2: Urban Network Planning – BEPP 2017/2018 Integration Zone Rational



» BEPP 2017/2018

The 2017/2018 BEPP is informed by the previous cycles of the BEPP process, primarily based on the Urban Network Strategy guiding principles, entailing the identification of integration zones with a CBD and urban hubs, economic nodes and marginalised areas. In addition, the Integration Zone Planning Guidelines (Outcome-based Transit Orientated Development), which makes reference to the Built Environment Value Chain, were incorporated and utilised to assist in the prioritisation of the integration zones, economic nodes and marginalised areas. The IRPTN forms the network linkage, connecting the CBD with the urban hubs, economic nodes and marginalised areas.

To ensure that the work done on the previous cycles of the BEPP process filter into the 2017/2018 BEPP, the 2015/2016 and 2016/2017 BEPP Integration Zones were overlaid, to delineate the 2017/2018 BEPP Integration Zones. The following figures indicate the respective Integration Zones:

- **Figure B1.11** represents the 2015/2016 BEPP Integration Zones (orange),
- **Figure B1.12** represents the 2016/2017 BEPP Integration Zones (blue) and
- **Figure B1.13** represents the 2015/2016 BEPP (orange) and 2016/2017 BEPP (blue) integration zones overlaid, with the proposed 2017/2018 BEPP (purple) Integration Zones.

The 2017/2018 BEPP Integration Zones (purple) was delineated to incorporate the best elements of each preceding BEPP Integration Zones. **Figure B1.14** represents the 2017/2018 final Integration Zones, which is represented by a 500m on each side of the IRPTN. A 500m buffer was utilised around



each IRPTN station, as this is in line with the Transit Orientated Development (TOD) and walkability principles, which was reconfirmed within the 2017/2018 *Integration Zone Planning Guidelines*.

In addition to the Integration Zones including a CBD, urban hub, the economic nodes and elements of the marginalised areas, the 2017/2018 *Integration Zone Planning Guidelines* make provision for the identification and prioritisation of economic nodes and marginalised areas **separate** to the identification and prioritisation of the Integration Zones. The overall Integration Zone Network (purple) is divided into five separate integration zones, to allow for the prioritisation of the integration zones and related projects. **Figure B1.15 to Figure B1.17** graphically represents the spatial targeting areas (integration zones, economic nodes and marginalised areas):

- **Figure B1.15 – Integration Zones** – segmented into five functional IZ's and reflecting the township populations (based on *Census 2011* calculations). From the Census information, it is evident that the largest concentration of people are residing within the Katsiwa/Tokoza/Vosloorus and related townships, followed by the Tembisa and Kwa-Thema/Tsakane/Duduza townships.
- **Figure B1.16 – Economic Nodes** – segmented into emerging nodes (urban hubs/secondary), established employment nodes (CBD's, Industrial areas and shopping centres).
- **Figure B1.17 – Marginalised Areas** – segmented in townships, informal settlements and inner cities. The marginalised areas are defined by a grouping of Census sub-places in which 60% of households exhibit a monthly household income of less than R3 188. Per month.

The overall prioritised **Urban Network**, consisting of the five identified Integration Zones, the marginalised areas, and the economic nodes are graphically represented in **Figure B1.18**.

A geotechnical element that needs to be taken into account in terms of future developments, is Dolomite. **Figure B1.19** indicated the EMM Integration Zones overlaid on the Dolomite profile of the EMM. The colour intensity indicate the degree of Dolomite. The pink colour indicates there is dolomite at the surface and most likely this area is at a higher risk of sinkhole formation. As per SANS 1936 any new development or structure requires a dolomite stability report. Accordingly the type of uses allowed will be determined. All new development and rezoning's will be subject to a Geotechnical Analysis.

The blue areas indicate no dolomite and allow for all uses. However, the blue colour on the mining belt require additional studies, with specific reference to a Geotechnical Report, accordingly development applications within the mining belts must be submitted to the Department of Mineral Resources. Subject to the outcome of the relevant departments, the proposed uses allowed will be indicated.

All new developments applications needs to be circulated to the relevant department that deals with Dolomite.



EMM HIGH LEVEL POPULATION AND DWELLING UNITS OVERVIEW

Before preceding to the detail analysis of each Integration Zone's profiles, it is valuable to have a holistic overview of the current and projected population and dwelling unit profile of the EMM.

» POPULATION

The total population (refer Table B1.4) of the EMM accumulates to 3 429 423 people, representing 1 090 052 households as calculated for 2015. The anticipated population growth (refer Table B1.5) for EMM in the long term, indicates that by 2040 the total EMM population will be approximately 5 059 800 people, translating into an addition 454 642 households from 2015 to 2040.

Table B1.4: EMM Baseline Population and Households

Variable	2011 (Census)	2015
Population	3,178,470	3,429,423
Households	1,015,467	1,090,052
Household Size	3.1	3.1

Source: Ekurhuleni CIF Task 5-25 year Take - Up, Demacon, August 2015

Table B1.5: EMM Population and Household Projections, 2011-2040

Variable	2011 (Census)	2015	2020	2025	2030	2035	2040
Population	3,178,470	3,429,423	3,845,361	4,178,463	4,477,437	4,771,445	5,059,800
Households	1,015,467	1,090,052	1,183,188	1,275,633	1,366,906	1,456,663	1,544,694

Source: Ekurhuleni CIF Task 5-25 year Take - Up, Demacon, August 2015 / Ekurhuleni, CITP 2013-2017, Plan Associates, 2013

» DWELLING UNITS

Informed by the population projection (calculated per region as indicated in **Table B1.6**) it is evident that by 2025 an additional 185 581 dwelling units will be required within the EMM. Distinguishing between the different housing typologies (refer **Table B1.7**), it is evident that the largest housing demand is within the subsidy bracket, followed by CRU housing, representing 70% of the total housing demand by 2040.

Table B1.6: EMM Household Demand, 25 - year cumulative Forecast per Region

Region	2020	2025	2030	2035	2040
Region A	16,177	31,655	46,295	60,002	72,721
Region B	27,408	53,689	78,590	101,936	123,626
Region C	9,716	20,216	31,565	43,833	57,097
Region D	6,743	13,387	19,886	26,203	32,306
Region E	11,434	23,169	35,176	47,423	59,882
Region F	21,658	43,465	65,342	87,214	109,010
Total Ekurhuleni	93,136	185,581	276,854	366,611	454,642

Source: Ekurhuleni CIF Task 5-25 year Take - Up, Demacon, August 2015



Table B1.7: EMM Household Demand, 25 - year cumulative Forecast per Housing Typology

Region	2020	2025	2030	2035	2040	Total %
Subsidy	45,769	91,376	136,605	181,303	225,376	45%
CRU	5,085	10,153	15,178	20,145	123,626	25%
FLISP/GAP & Social	13,982	27,867	41,582	55,077	57,097	11%
FLISP/GAP & Affordable Bonded	10,119	20,139	30,005	39,675	32,306	6%
Bonded	18,180	36,046	53,483	70,411	59,882	12%
Total Ekurhuleni	93,135	185,581	276,853	366,611	498,287	100%

Source: Ekurhuleni CIF Task 5-25 year Take - Up, Demacon, August 2015

The section to follow includes the Integration Zone prioritisation and a detailed analysis of each Integration Zone.

Prioritised
Integration Zone/s

B1.1.2 PRIORITISATION OF THE INTEGRATION ZONES

The prioritisation of the integration zones is informed by the Long Term Vision of the EMM as set out in the Ekurhuleni Growth and Development Strategy 2055, the Spatial Development Framework of the Municipality, the EMM Capital Investment Framework reflecting the CIF identified Priority Integration Areas (1 to 3) and the IRPTN prioritisation principles as described in the preceding section B1 – Spatial Targeting Rational.

Intergovernmental Project Pipeline

The intergovernmental project pipeline consists of both catalytic and standard projects within the metropolitan space, whether it is a project of the national, provincial or metropolitan government, or that of a public entity. The main purpose of the pipeline is for it to incorporate all spheres and entities to prioritise collective public investment in particular spaces

The prioritisation of the integration zones are as follows (refer Figure B1.15):

- Integration Zone 1: Tembisa-Kempton Park (Priority 1)
- Integration Zone 2: Vosloorus-Boksburg-Bartlett (Priority 2)
- Integration Zone 3: Katlehong-Tokoza-Alberton-Germiston (Priority 3)
- Integration Zone 4: Etwatwa-Daveyton-Benoni (Priority 4)
- Integration Zone 5: Duduza-Tsakane-KwaThema-Boksburg (Priority 5)

Subsequently, all projects identified within Integration Zone 1 to 5, should be prioritised in terms of the Intergovernmental Project Pipeline. The projects identified within each Integration Zone, in accordance with the Intergovernmental Project Pipeline, is reflected in the *Integration Zone Planning* section below.



B1.1.3 KEY PRECINCTS IDENTIFIED AND PRIORITISED

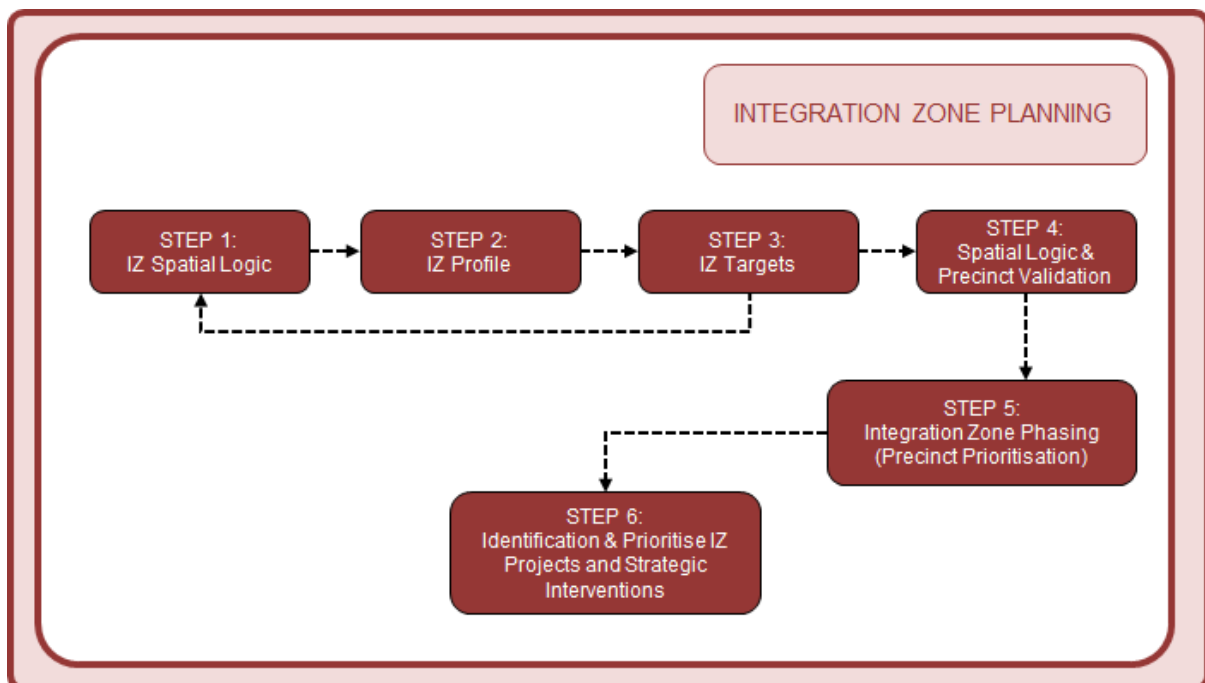
Within the EMM planning domain, three sets of precincts are identified, namely (i) City Planning Precincts, (ii) Strategic Urban Development Areas (SUDA) and (iii) Human Settlements Mega Projects. **Figure 1.20** graphically represents the prioritised Integration Zone with the **key precincts / mega projects identified** (as per the aforementioned categories). Detailed information regarding the precincts / SUDA's / Mega Projects are included in Section B2.1.

INTEGRATION ZONE PLANNING

B1.2 SPATIAL DEVELOPMENT STRATEGY – INTEGRATION ZONE PLANNING AND PROJECT PRIORITISATION

The preceding section discussed the spatial targeting rationale utilised in the identification and delineation of the 2017/2018 integration zones and related development precincts, the economic nodes and marginalised areas. Following is a detailed analysis of each **Integration Zone**, according to the six steps identified within the Integration Zone Planning section as highlighted within the **Integration Zone Planning Guidelines** (refer **Diagram B1.3**).

Diagram B1.3: Integration Zone Planning Steps



The main objective of each Step is as follow:

■ **Step 1: Prepare Draft Spatial Logic**

Put in place a high-level spatial concept for the integration zone that identifies the structuring elements of the integration zone and draws out the key issues and questions that should be the focus of the IZ profile (Step 2).

■ **Step 2: Compile Integration Zone Profile**

Provide an evidence-based baseline for the completion of the IZ Plan via an integrated set of built environment outcome indicators.

■ **Step 3: Set Integration Zone Targets**

Quantify the scale and mix of transit oriented development for the integration zone.

In order to quantify the scale and mix of transit oriented development for the integration zones, the model set up to calculate the development potential and development capacity of the Integration Zones, but with specific focus on mixed use development. This includes a land use mix at relatively high densities and developed within walking distance from Public Transport. Vacant and underutilized land were used in the model, and by applying the relevant development controls (see Integration Zone Target information box on overleaf) the potential floor area, potential dwelling units and workers were calculated.

■ **Step 4: Prepare Spatial Logic and Validate IZ Precincts**

Refine an envisaged spatial structure for the Integration Zone and confirm the location and extent of the IZ precincts earmarked for detailed planning and investment.

■ **Step 5: Outline Integration Zone Phasing**

Determine the relative prioritisation of IZ precincts in order to put in place an outcomes-based planning and investment programme aimed at achieving the IZ targets.

■ **Step 6: Prioritize IZ Projects & Strategic Interventions**

Identify and prioritise (1) specific capital projects required to implement the spatial logic for placement on the intergovernmental project pipeline and (2) key interventions that are required to accelerate activities along the BEVC.

With specific reference to *Step 3: Set Integration Zone Targets*, the insert below provides a summary of the targets utilised in all of the Integration Zones.



INTEGRATION ZONE TARGETS

Specific development targets are identified and referred to within the *Integration Zone Planning Guidelines* to achieve spatial and economic transformation and support public transport, including the desired income mix (subsidy/gap/market) and tenure mix (owned/public rental/ private rental). **Table B1.8** is a summary of the indicator targets included within the guidelines.

Table B1.8: Indicator Targets

Indicator Target	Anchors (CBD & Urban Hub) and Employment Nodes	Intermediate Nodes	Secondary Township Nodes
Gross Residential Density	60-180 du/ha	60-120 du/ha	60-120 du/ha
Land Use Mix	40% residential, 20% commercial, 20% retail 20% community & government services	50% residential, 15% commercial, 20% retail 15% community facilities	65% residential, 10% commercial, 15% retail 10% community facilities
Bulk/ Height	5-8 floors	3-8 floors	2-5 floors
TOD Score	>80	65-80	>65

Indicator Target	Informal Settlements
Gross Residential Density	60-120 du/ha
Land Use Mix	75% residential, 10% retail 15% community facilities
Bulk/ Height	1-3 floors
TOD Score	>50

An **EMM Target Model** was developed to calculate the development potential per Integration Zone. The **Table B1.9** indicates the **Land Use Categories, Height, Coverage and FAR** utilised within the **Target Model**. The Target Land Use Categorisation (as indicated in Table B1.9) is informed by (i) the Indicator Target Guidelines as listed in Table 1.5, (ii) the targets identified within the EMM MSDF and municipal development objectives (refer Section B1 – p14) and (iii) is therefor aligned with the SPLUMA principles.

The above described targets are utilised and referred to in the detailed Integration Zone sections to follow (**Step 3: IZ Targets**).

**Please note, the section to follow is based on the output of the EMM BEPP Integration Zone Model which is subject to a number of assumptions and only represents a scenario of the potential developable land area and population growth per integration zone.*



Table B1.9: IZ Target Model: Land Use Categories

Code	Main Category	Secondary Category	Ground_Floor	Floor_1	Floor_2	Floor_3	Floor_4	Floor_5	Floor_6	Height	Coverage	FAR
A	Mixed use	Airport Related	Retail	Hotel	Hotel	Office	Office	Office	Office	7	40	3.0
B1	Mixed use	Business related	Retail	Office	Office	Office	Office	Office	Office	7	40	3.0
B2	Mixed use	Business related	Community Fac	Residential	Residential					3	30	1.0
B3	Mixed use	Business related	Retail	Residential	Residential					3	30	1.0
B4	Mixed use	Business related	Parking	Residential	Residential					3	30	1.0
C	Mixed use	SMME's	Retail	Residential	Residential					3	30	1.0
D	Mixed use	Residential	Residential	Residential	Residential					3	30	1.0
E	Mixed use	Commercial	Commercial	Residential	Residential					3	30	1.0
F	Mixed use	Airport - Passenger	Offices							1	40	0.5
G	Mixed use	Airport - Cargo & Technical	Commercial							1	40	0.5
H	Mixed use	Casino	Hotel	Hotel	Hotel					3	30	1.0
I1	Mixed use	Offices	Offices	Offices	Offices	Office s				4	30	1.2
I2	Mixed use	Offices	Retail	Offices						2	30	0.6
I3	Mixed use	Offices	Offices	Residential	Residential					3	30	1.0
I4	Mixed use	Low Density Offices	Offices							1	40	0.5
J	Mixed use	Sports and Recreation	Sport	Sport						2	30	0.6
RG	Residential	Residential Greenfields	Residential	Residential						3	30	1.0
RR	Residential	Residential Redevelopment	Residential	Residential	Residential					3	30	1.0
RD	Residential	Residential Densification	Residential	Residential	Residential					3	30	1.0
BG	Business	Business Greenfields	Retail	Office	Office					3	30	1.0
BR	Business	Business Redevelopment	Retail	Office	Office					3	30	1.0

Code	Main Category	Secondary Category	Ground_Floor	Floor_1	Floor_2	Floor_3	Floor_4	Floor_5	Floor_6	Height	Coverage	FAR
BI	Business	Business Intensification	Retail	Office	Office					3	30	1.0
OR	Office	Office Redevelopment	Office	Office	Office					3	30	1.0
IG	Industrial	Industrial Greenfields	Industrial							1	40	0.4
CG	Commercial	Commercial Greenfields	Commercial							1	40	0.4
CR	Commercial	Commercial Redevelopment	Commercial							1	40	0.4
InstG	Institutional	Institutional Greenfields	Institutional	Institutional						2	30	0.6
InstR	Institutional	Institutional Redevelopment	Institutional	Institutional						2	30	0.6






INTEGRATION ZONE 1: TEMBISA-KEMPTON PARK



STEP 1: IZ SPATIAL LOGIC

Graphically represented on **Figure B1.21.1**, Integration Zone 1 represents the functional area extending from the Tembisa node in the north, southwards to Kempton Park CBD and therefrom southward towards the Boksburg CBD, along the IRPTN route (serving as the main transit spine). IZ1 passes through the Aerotropolis Core Node. The table below is a summary of the salient features related to IZ 1.

Table B1.10.1: Integration Zone 1 - Salient Features

ANCHORS - ECONOMIC NODES		
CBD	URBAN HUB	SECONDARY NODES
Kempton Park ¹	Tembisa CCC ²	<ul style="list-style-type: none">  Winnie Mandela Node³,  Oakmoor Station Node⁴,  Tembisa Station Node⁵,  Swazi Inn Node⁶,  Leralla Station Node⁷
MARGINALISED AREA		
Tembisa ⁸		
TRANSIT SPINE		
Proposed IRPTN Phase 1 Bus Feeders Taxi Routes Gautrain Rail (Current and Proposed Extension) <ul style="list-style-type: none"> • Current – Rhodesfield Station • Proposed - East Rand Mall Station Metro Rail		

(Note: The numbers next to the names correlate to the number indicated in the corresponding Figure)

Integration Zone 1 is divided into seven (7) functional section for the purposes of the detailed analysis and Target Model to follow (refer Figure B1.21.3).

STEP 2: IZ PROFILE

Following is a high-level base line assessment of Integration Zone 1, assessing the demographic, land use and infrastructure within the IZ.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that 249 467 people are residing within IZ1, which translates to 95 154 residential units (refer **Table B1.10.2**). The aforementioned IZ1 population represents about 7% of the total population in the EMM (refer **Table B1.4**). As reflected in **Table B1.10.3**, approximately 62% of households (59 136) fall within the low income bracket (R0<R3 188), followed by 30% of households (28 929) fall within the middle income bracket (R2 183<R12 817) and only 8% of households (8 089) fall within the high income bracket (R12 817+). The elevated low income levels



indicate high government dependency of households on social / housing grants and related government provided facilities.

Table B1.10.2: IZ1 Baseline Households, Population and Density

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
IZ 1 Total	96,154	249,467	3,878	25
1.1	64,439	159,762	1,057	61
1.2	1,448	3,900	312	5
1.3	8,193	25,000	354	23
1.4	14,584	39,763	668	22
1.5	4,176	10,916	435	10
1.6	875	2,996	443	2
1.7	2,439	7,130	609	4

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

Table B1.10.3: IZ1 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0 < R3 188)	(R3 183 < R12 817)	(R12 817+)					
IZ 1	62%	30%	8%	100%	59,136	28,929	8,089	96,154
1.1	67%	28%	4%	100%	43,392	18,331	2,716	64,439
1.2	62%	36%	3%	100%	892	518	38	1,448
1.3	58%	35%	7%	100%	4,775	2,870	549	8,193
1.4	55%	34%	11%	100%	8,054	4,916	1,614	14,584
1.5	28%	34%	38%	100%	1,176	1,419	1,581	4,176
1.6	28%	35%	37%	100%	244	307	325	875
1.7	25%	23%	52%	100%	604	568	1,267	2,439

Source: Census 2011, STATS SA

In terms of **residential densities** and **property values**, as indicated on **Figure B1.21.2**, it is evident that the concentration of higher residential densities are located within Tembisa MA, with the lower densities within the remainder of IZ1. The inverse is noted in terms of the property values (based on the EMM valuation roll), the lower property values are noted within Tembisa MA and the higher values associated within the remainder of the IZ.

» LAND USE ASSESSMENT

Integration Zone 1 comprise of approximate 3 877ha. **Table B1.10.4** represents the detail Baseline Land Use Mix (ha and %) and **Diagram B1.4** graphically represents the Baseline Land Use Mix (ha).



From the baseline land uses assessment it is evident that the dominant land use within IZ1 is residential (formal and informal), representing 34% (1 321 ha) of the total IZ1 land area, followed by 19% (743 ha) representing Other / Utilities and 9% (357 ha) Community / Tertiary Social Facilities, whilst 9% (350 ha) of the land area represents Sport Facilities / Open Space. **Figure B1.21.3** graphically represents the current land use mix and social facilities locations of IZ1.

As indicated on **Figure B1.21.4**, 7% (273 ha) of the land area within IZ1 is Vacant and 7% (265 ha) is Agriculture.

Table B1.10.4: IZ1 Baseline Land Use Mix (ha and %)

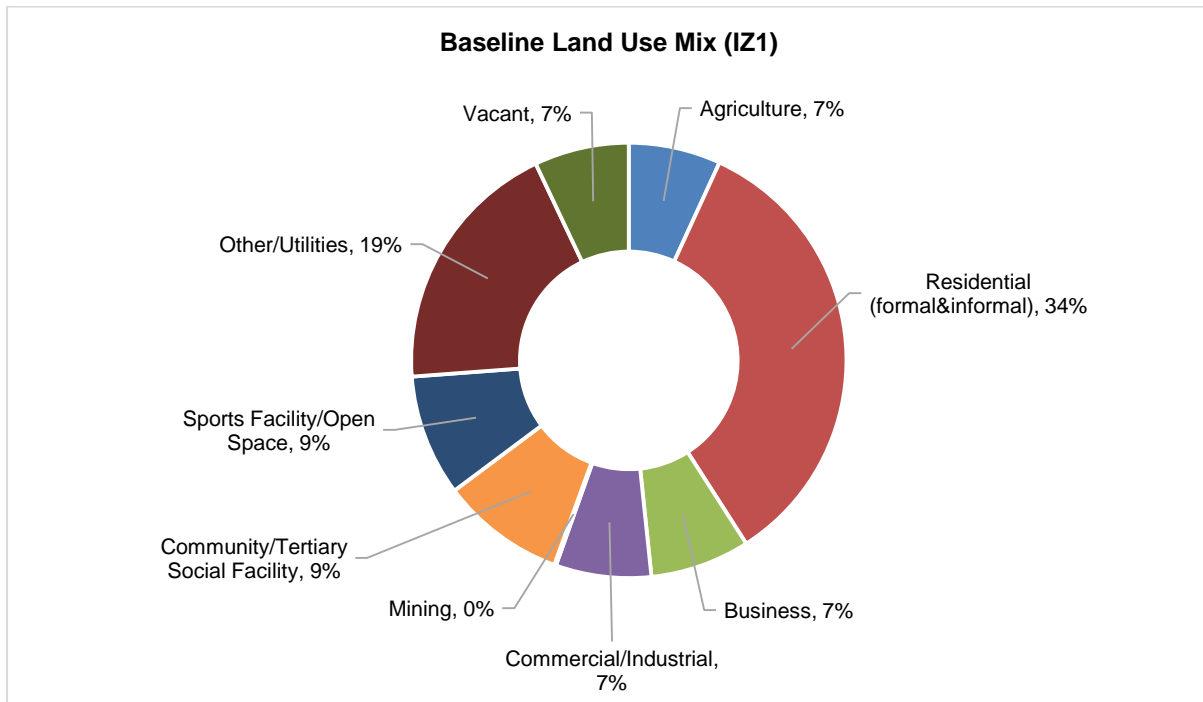
Baseline Land Use Mix (Ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 1	265	1,321	287	275	5	357	350	743	273	3,877
1.1	44	604	20	23	-	98	63	61	144	1,057
1.2	18	59	-	6	-	16	173	31	9	312
1.3	-	169	16	2	-	100	19	35	12	354
1.4	179	123	27	63	-	9	35	211	21	668
1.5	4	141	96	17	-	73	30	36	37	435
1.6	1	56	32	110	-	27	9	189	18	443
1.7	19	169	96	55	5	34	21	179	31	609
Baseline Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 1	7%	34%	7%	7%	0%	9%	9%	19%	7%	100%
1.1	4%	57%	2%	2%	0%	9%	6%	6%	14%	100%
1.2	6%	19%	0%	2%	0%	5%	55%	10%	3%	100%
1.3	0%	48%	5%	1%	0%	28%	5%	10%	4%	100%
1.4	27%	18%	4%	9%	0%	1%	5%	32%	3%	100%
1.5	1%	32%	22%	4%	0%	17%	7%	8%	8%	100%
1.6	0%	13%	7%	25%	0%	6%	2%	43%	4%	100%
1.7	3%	28%	16%	9%	1%	6%	3%	29%	5%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities



Diagram B1.4: IZ1 Base Line Land Use Mix (%)



Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

» INFRASTRUCTURE ASSESSMENT

Existing public transport infrastructure (refer **Figure B1.21.5**) present within IZ1 is the metro rail, Gautrain rail and numerous Taxi routes. The following rail stations are located within IZ1: Oakmoor, Kaalfontein, Tembisa, Limindlela, Leralla, Kempton Park and Isando. The Rhodesfield Gautrain Station is also located with IZ1. The proposed IRPTN route with numerous feeders and proposed station form part of IZ1, as well as the proposed East Rand Mall Gautrain Station.

Walkability, based on a 500m walking distance from any public transport facility, is graphically represented on **Figure B1.21.5**. It is evident that most of the IZ1 adheres to the criteria of walkability. Two sections within the northern parts of IZ1 (Tembisa) has limited walkability, as it is not served by the proposed IRPTN public transport facilities, although some taxi stops are noted.

In terms of bulk infrastructure, the municipality currently experiences capacity shortages within most of the water infrastructure. As indicated in **Figure B1.21.6**, most of the northern sections of IZ1 has no capacity. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities, this is one of the major constraints towards development within EMM. Evident from **Figure B1.21.7**, is that the northern and southern section of IZ1 does have spare capacity with the central section having no capacity. In terms of electricity supply, most of the electricity infrastructure in EMM is currently at its full capacity, with limited section of IZ1 having spare capacity (refer **Figure B1.21.8**).



STEP 3: IZ TARGETS

Based on the **EMM BEPP IZ Target Model**, an additional 33 127 people, which translates into 12 436 residential units, can be accommodated within IZ1 (refer **Table B1.10.5**). The total additional developable land area within IZ1, accumulates to 361 ha. The average dwelling unit density across the entire IZ1, is 34 du/ha, with some sections of the IZ achieving densities of 40 du/ha and even 100 du/ha (refer **Figure B1.21.9 – Residential Density**).

Table B1.10.5: IZ1 Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 1	12,436	9%	33,127	361	34
1.1	1,780	1%	4,607	46	39
1.2	426	0%	1,217	75	6
1.3	2,527	2%	7,600	25	101
1.4	1,863	1%	357	48	39
1.5	662	1%	2,094	14	49
1.6	3,683	3%	12,783	90	41
1.7	1,496	1%	4,469	64	23

From the **IZ Target Model**, based on the developability of vacant and underutilised land (refer **Table B1.10.6**), it is anticipated that 45% of the additional households will fall within the low income bracket (R0<R3 188), representing 5 544 dwelling units. The low income dwelling units represents primarily subsidised housing. The middle income category (R3 183<R12 817) represents 32% of the anticipated future households, representing 2 855 dwelling units. The middle income category is representative of gap (subsidy linked and bonded) housing options. Only 23% of the anticipated future households fall within the higher income category, representing 2 885 dwelling units. The higher income category is representative of market / bonded housing options.

Table B1.10.6: IZ1 Target Model: Households and Income distribution

Integration Zone	Low Income DU (%) (R 0< R3 188)	Middle Income DU (%) (R3 183< R12 817)	High Income DU (%) (R12 817+)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
IZ 1	45%	32%	23%	100%	5,544	4,037	2,855	12,436
1.1	67%	28%	4%	100%	1,199	506	75	1,780
1.2	62%	36%	3%	100%	262	152	11	426
1.3	58%	35%	7%	100%	1,473	885	169	2,527
1.4	55%	34%	11%	100%	1,029	628	206	1,863
1.5	28%	34%	38%	100%	186	225	251	662



Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
1.6	28%	35%	37%	100%	1,025	1,291	1,366	3,683
1.7	25%	23%	52%	100%	370	348	777	1,496

The *Potential Additional Floor Area (m²)* as based on the **EMM BEPP IZ Target Model** (refer **Table B1.10.7**), indicates that the dominant land use to be accommodated within IZ1 is residential (41% - representing 1 182 249 m²), followed by offices (32% - representing 924 536 m²) and industrial (13% - representing 385 424 m²). **Figure B1.21.9** is a graphical representation the accumulated IZ1 *Land Use Categories*.

Figure B1.21.10 and **Figure B1.21.11** graphically represent the potential additional land use per floor, based on the Target Model Categorization (refer *Table B1.9: IZ Target Model: Land Use Categories*). The total Potential Additional Floor Area (m²) for IZ1 accumulates to approximately 2 891 271 m².

The *Potential Additional Workers* target projections (refer **Table B1.10.8**) indicate the latent opportunity for additional 38 522 Office workers (62%), followed by 9 944 Industrial workers (16%) and 8 693 Retail workers (14%) can be accommodated within IZ1. The total Potential Additional Workers for IZ1 accumulates to approximately 62 203 workers.

Figure B1.21.12 and **Diagram B1.5** compare the target potential of dwelling units versus formal workers. It is evident that additional economic potential of IZ1 is relatively larger than the population potential, especially in the Rhodesfield area.

Diagram B1.5: Additional Dwelling Units vs Formal Workers IZ1

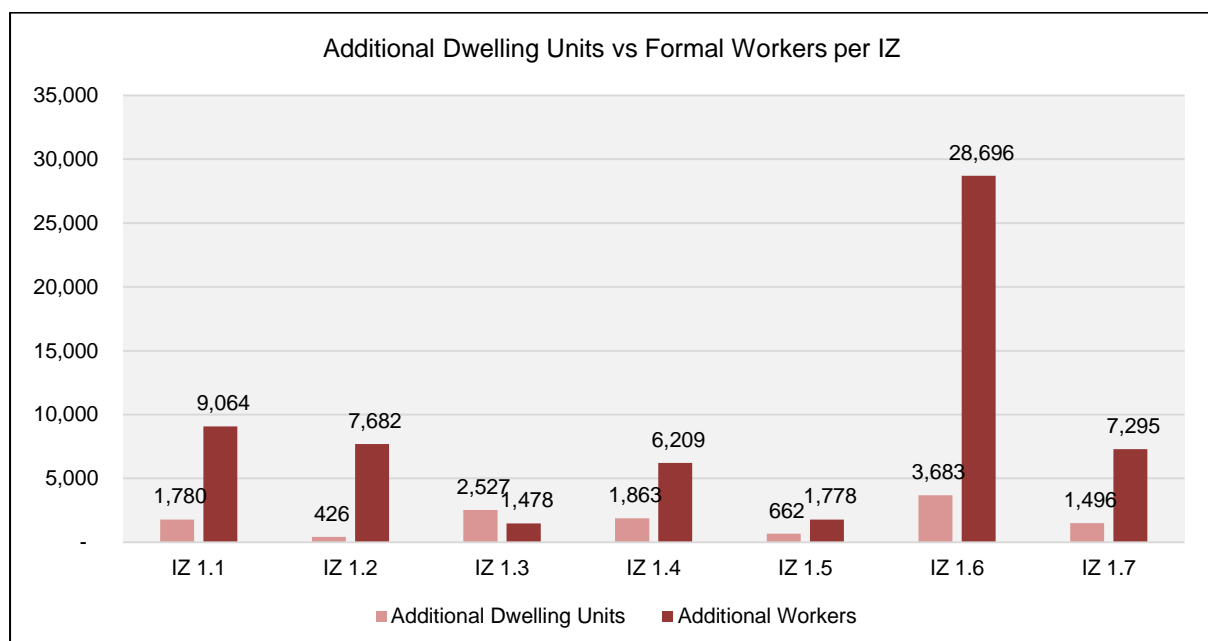


Table B1.10.7: IZ1 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	1,182,249	286,865	924,536	-	11,688	23,254	385,424	77,255	-	2,891,271
1.1	141,187	81,010	118,151	-	11,688	17,727	-	-	-	369,763
1.2	42,565	21,282	-	-	-	-	271,852	-	-	335,700
1.3	130,222	13,091	14,567	-	-	5,527	-	-	-	163,406
1.4	252,242	24,442	90,508	-	-	-	37,018	23,781	-	427,990
1.5	64,992	5,538	33,231	-	-	-	5,594	-	-	109,355
1.6	411,513	118,003	592,019	-	-	-	-	-	-	1,121,536
1.7	139,528	23,497	76,061	-	-	-	70,961	53,474	-	363,522
Potential additional Floor Area (%)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	41%	10%	32%	0.0%	0.4%	0.8%	13%	3%	0%	100%
1.1	38%	22%	32%	0.0%	3.2%	4.8%	0%	0%	0%	100%
1.2	13%	6%	0%	0.0%	0.0%	0.0%	81%	0%	0%	100%
1.3	80%	8%	9%	0.0%	0.0%	3.4%	0%	0%	0%	100%
1.4	59%	6%	21%	0.0%	0.0%	0.0%	9%	6%	0%	100%
1.5	59%	5%	30%	0.0%	0.0%	0.0%	5%	0%	0%	100%
1.6	37%	11%	53%	0.0%	0.0%	0.0%	0%	0%	0%	100%
1.7	38%	6%	21%	0.0%	0.0%	0.0%	20%	15%	0%	100%

Table B1.10.8: IZ1 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	1,133	8,693	38,522	-	584	1,333	9,944	1,993	-	62,203
1.1	86	2,455	4,923	-	584	1,016	-	-	-	9,064
1.2	24	645	-	-	-	-	7,014	-	-	7,682
1.3	158	397	607	-	-	317	-	-	-	1,478
1.4	129	741	3,771	-	-	-	955	614	-	6,209
1.5	81	168	1,385	-	-	-	144	-	-	1,778
1.6	453	3,576	24,667	-	-	-	-	-	-	28,696
1.7	203	712	3,169	-	-	-	1,831	1,380	-	7,295
Potential additional Workers (%)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	2%	14%	62%	0%	1%	2%	16%	3%	0%	100%
1.1	1%	27%	54%	0%	6%	11%	0%	0%	0%	100%
1.2	0%	8%	0%	0%	0%	0%	91%	0%	0%	100%
1.3	11%	27%	41%	0%	0%	21%	0%	0%	0%	100%
1.4	2%	12%	61%	0%	0%	0%	15%	10%	0%	100%
1.5	5%	9%	78%	0%	0%	0%	8%	0%	0%	100%
1.6	2%	12%	86%	0%	0%	0%	0%	0%	0%	100%
1.7	3%	10%	43%	0%	0%	0%	25%	19%	0%	100%

From the above it is thus evident that the following interrelated TOD principles have been adhered to in the target setting:

- Walkability (live-work-play precinct accessibility)
- Density (live)
- Inclusiveness (live: income mix)
- Mixed – use (live-work-play)
- Transit (live-work-play inter precinct accessibility)

The above listed elements inform the New Spatial Logic to follow (Step 4).

STEP 4: SPATIAL LOGIC AND PRECINCT VALIDATION

From the preceding analysis (Step 1 to 3), it is evident that IZ1 consist of a number of anchors / economic nodes (CBD, Urban Hub and Secondary Nodes), a marginalised area and numerous transportation modes (rail, bus, taxi). In addition, IZ1 adheres to the requirement of walkability (500m), with most proposed IRPTN stations allowing for TOD developments (live-work-play concept).

IZ1 currently comprise of 249 467 people (96 154 residential units) with the majority of households falling within the low income bracket (62%). The current residential density across the IZ is calculated at 25 du/ha. The dominant land uses associated with IZ1 is residential (1 321 ha), Other / Utilities (743 ha) and Community / Tertiary Social Facilities (350 ha), with 7% (273 ha) of the land area within IZ1 is Vacant.

Informed by the above, the **EMM BEPP IZ Target Model** analysis highlighted that IZ1 has 361ha of developable land available for future development / redevelopment, to accommodate an addition 33 127 people (12 436 residential units – primarily representing low income households – 45%) at an average of 34 du/ha across the entire IZ. In addition, the potential is identified for additional 2,891,271m² developable floor area, primarily representing residential, office and industrial land use, which can generate an additional 62 203 job opportunities within IZ1, thus further enhancing the concept of live-work-play.

Figure B1.21.13 is a graphical representation of the New Spatial Logic, highlighting the target land uses in relation to the economic nodes, marginalized area and connected by the public transport modes.

****Please note, the citywide projects (e.g. precinct planning, strategic urban development areas, mega housing projects etc.) are discussed in more detail in Section B2 – Local Area Planning to follow. The holistic IZ (B1), Local Area Planning (B2), and Public transport / Housing integration (B3) is summarised in Section B4 – Urban Network Summary.***



STEP 5: INTEGRATION ZONE PHASING

The identified developable land areas (as identified in Step 3) located within IZ1, is prioritised in terms of short (0-5 years), medium (5 to 10 years) and long (10 years+) term growth. The anticipated number of households that has the potential to be developed in the **medium** term is approximate 4 282 additional households, and of the **long** term 8 154 additional households (refer **Table B1.10.9**).

- Within the **medium term**, it is anticipated that 45% of households will be low income households, 28% will be Middle income households, and 27% will be high income households.
- Within the **long term**, it is anticipated that 44% of households will be low income households, 35% will be Middle income households, and 21% will be high income households.

Figure B1.21.14 is a graphical representation of the anticipated development phasing. The development phasing is collectively informed by the anticipated additional number of households, workers and land use projections (based on the **EMM BEPP IZ Target Model**).



Table B1.10.9: IZ1 Target Model: Households Time Frame

Target Model: Households Time Frame (ha)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 1	-	-	-	-	1,926	1,214	1,142	4,282	3,618	2,823	1,713	8,154
1.1	-	-	-	-	993	420	62	1,475	206	87	13	306
1.2	-	-	-	-	-	-	-	-	262	152	11	426
1.3	-	-	-	-	90	54	10	155	1,382	831	159	2,372
1.4	-	-	-	-	300	183	60	543	729	445	146	1,320
1.5	-	-	-	-	173	209	232	614	14	16	18	48
1.6	-	-	-	-	-	-	-	-	1,025	1,291	1,366	3,683
1.7	-	-	-	-	370	348	777	1,496	-	-	-	-
Target Model: Households Time Frame (%)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 1					45%	28%	27%	100%	44%	35%	21%	100%
1.1					67%	28%	4%	100%	67%	28%	4%	100%
1.2									62%	36%	3%	100%
1.3					58%	35%	7%	100%	58%	35%	7%	100%
1.4					55%	34%	11%	100%	55%	34%	11%	100%
1.5					28%	34%	38%	100%	28%	34%	38%	100%
1.6									28%	35%	37%	100%
1.7					25%	23%	52%	100%				

STEP 6: IZ1 PROJECTS AND STRATEGIC INTERVENTIONS

The following section indicates the CAPEX projects located within IZ1 and prioritised according to the following nine (9) categories:

- Priority 1: Economic Node: Aerotropolis Core
- Priority 2: Economic Node: Industrial Area
- Priority 3: Economic Node: Urban Hub
- Priority 4: Housing Precincts
- Priority 5: Housing projects current
- Priority 6: Housing projects proposed
- Priority 7: Informal Settlements
- Priority 8: Marginalised Areas 1: Tembisa
- Priority 9: Remainder of Integration Zone 1

Table B1.10.10 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B1.21.15** graphically represents the spatial locations of the identified projects as listed within Table B1.10.10.

Apart from the abovementioned CAPEX projects, two interventionist projects were identified from the EMM IZ Target Model (refer **Figure B1.21.16**). The projects are well located in terms of the accessibility to public transport and are of a mixed-use nature.

Proceeding, several departments such as City Planning Special Projects, Transportation, Human Settlements and Real Estate need to analyse and prioritise the projects. Thereafter processes such as land release proposals, procurement proposals, future studies / identification of incentives will follow.

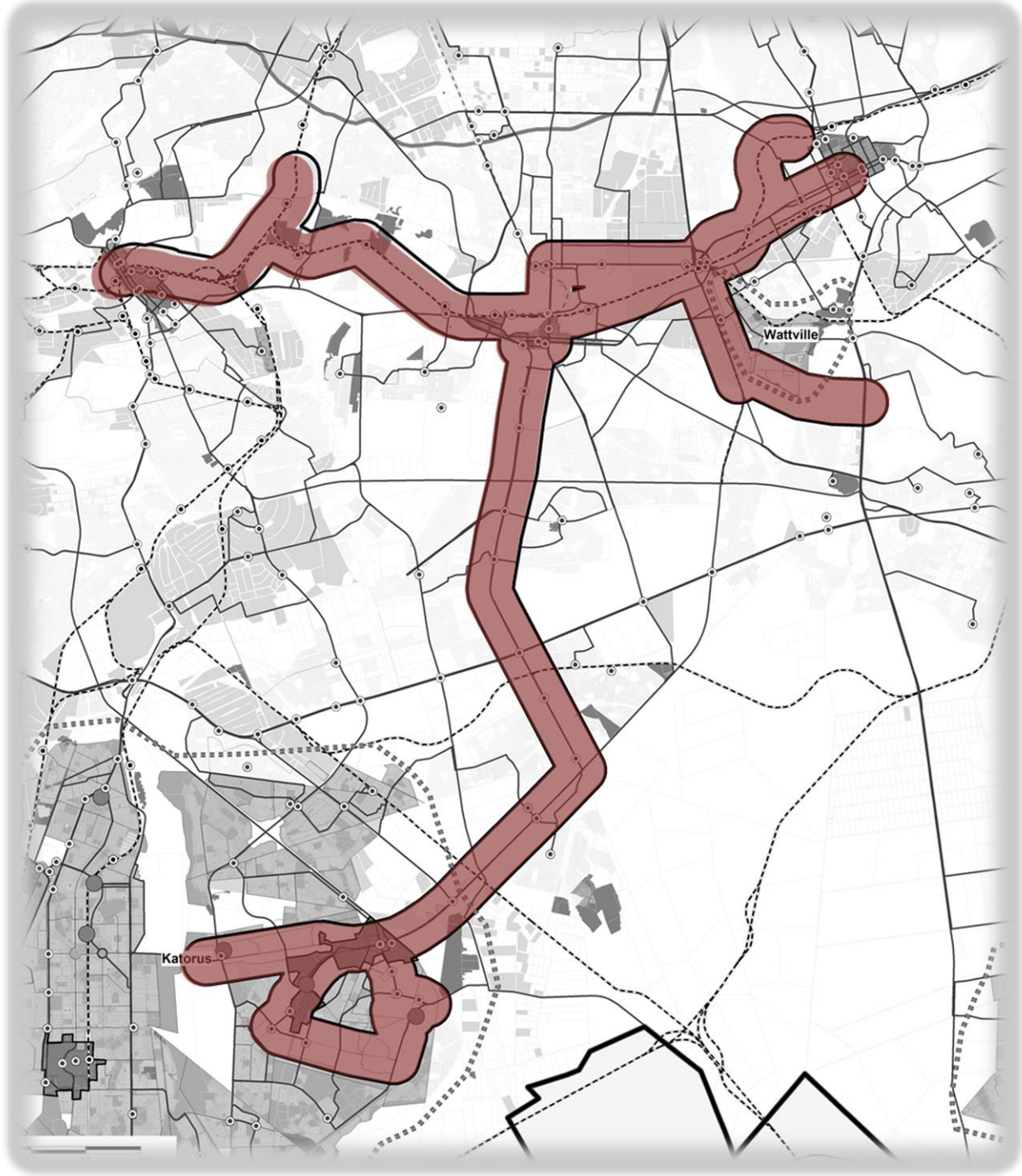


Table B1.10.10: Prioritised Capex Projects in Integration Zone 1

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
Integration Zone 1: Economic Node: Aerotropolis Core					R1,007,285,000	R1,016,045,000	R1,062,025,000	R3,085,355,000
1	Transport	IRPTN: Infrastructure and Implementing (PTNG)	Upgrading and Renewal	Unassigned	R110,000,000	R187,000,000	R220,000,000	R517,000,000
2	Transport	IRPTN: Road Infrastructure (External Loans)	Urban Restructuring	002 - Municipal Infrastructure Grant	R 77,000,000	R77,000,000	R87,000,000	R241,000,000
Integration Zone 1: Economic Node: Industrial Area					R35,000,000	R15,700,000	R26,800,000	R77,500,000
3	Disaster & Emergency Management Services	Specialised Vehicles : Emergency Medical Services(Operational Equipment)	Urban Restructuring	001 - Council Funding	R30,000,000	R -	R -	R30,000,000
4	Energy	Tembisa substation(Tembisa 1)	Economic Development	015 - Borrowings	R -	R10,000,000	R20,000,000	R30,000,000
Integration Zone 1: Economic Node: Urban Hub					R336,750,000	R324,850,000	R345,300,000	R1,006,900,000
5	Energy	Electrification of Informal Settlements (Reblocking Areas)(Corporate)	Economic Development	005 - Urban Settlement Development Grant	R212,000,000	R212,000,000	R231,000,000	R 655,000,000
6	Human Settlements	Urban Renewal: Tembisa Public space upgrade linked with NMT Ibazelo & Isithame(Tembisa 1)	Urban Restructuring	001 - Council Funding	R -	R55,000,000	R55,000,000	R110,000,000
Integration Zone 1: Housing Precincts					R -	R1,000,000	R10,000,000	R11,000,000
7	Waste Management	Facilities, Upgrade and construction of facilities: Eselen Park(Kempton Park)	Economic Development	Unassigned	R -	R -	R10,000,000	R10,000,000
8	Waste Management	Facilities, Upgrade and construction of facilities: Eselen Park(Kempton Park)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R -	R1,000,000	R -	R1,000,000
Integration Zone 1: Housing projects current					R3,400,000	R1,900,000	R6,000,000	R11,300,000
9	Roads and Stormwater	SW Minor (N) SW Illiba, Emoyeni, Emangweni(Tembisa 1)	Urban Restructuring	005 - Urban Settlement Development Grant	R2,500,000	R1,500,000	R -	R4,000,000
10	Roads and Stormwater	Tembisa Ext. 10 stormwater	Urban Restructuring	Unassigned	R -	R -	R3,500,000	R3,500,000
Integration Zone 1: Housing projects proposed					R112,000,000	R190,000,000	R207,000,000	R509,000,000

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
11	Human Settlements	Mega Project: Tembisa Ext 25 (Old Mutual Land)(Tembisa 2)	Urban Restructuring	005 - Urban Settlement Development Grant	R112,000,000	R190,000,000	R -	R302,000,000
12	Human Settlements	Mega Project: Tembisa Ext 25 (Old Mutual Land)(Tembisa 2)	Urban Restructuring	Unassigned	R -	R -	R207,000,000	R207,000,000
Integration Zone 1: Informal Settlements					R49,800,000	R80,400,000	R66,400,000	R196,600,000
13	Water and Sanitation	Tembisa Sewer(Tembisa 1)	Urban Restructuring	005 - Urban Settlement Development Grant	R10,000,000	R20,000,000	R -	R30,000,000
14	Economic Development	Automotive City- Katlehong, Tembisa and Tsakane	Urban Restructuring	001 - Council Funding	R10,000,000	R20,000,000	R -	R30,000,000
Integration Zone 1: Marginalised Areas 1: Tembisa					R273,100,000	R199,570,000	R254,200,000	R726,870,000
15	Transport	IRPTN: Bus Depots	Urban Restructuring	Unassigned	R110,000,000	R110,000,000	R107,000,000	R327,000,000
16	Human Settlements	Refurbishment of Rental Property (Corporate)	Urban Restructuring	005 - Urban Settlement Development Grant	R30,000,000	R30,000,000	R90,000,000	R150,000,000
Integration Zone 1: Remainder of integration zone 1					R5,000,000	R7,400,000	R -	R12,400,000
17	Transport	Drive Thru Boksburg(Boksburg)	Urban Restructuring	007 - CRRF Capital Replacement Reserve Fund	R1,000,000	R4,000,000	R -	R5,000,000
18	Sports Recreation Arts and Culture (SRAC)	Upgrade Boksburg North swimming pool(Boksburg)	Urban Restructuring	007 - CRRF Capital Replacement Reserve Fund	R -	R3,400,000	R -	R3,400,000




INTEGRATION ZONE 2: VOSLOORUS-BOKSBURG-BARTLETT



STEP 1: IZ SPATIAL LOGIC

Graphically represented on **Figure B1.22.1**, Integration Zone 2 represent the functional area along the railway line from Gerniston CBD towards the east up to the Benoni CBD. This section of the IZ includes most of the proposed mining belt projects. In addition, a north-south link is included within this IZ, from Germiston CBD, south along the IRPTN line to Vosloorus. The table below is a summary of the salient features related to IZ2.

Table B1.11.1: Integration Zone 2 Salient Features

ANCHORS - ECONOMIC NODES		
CBD	URBAN HUB	SECONDARY NODES
Germiston ¹ Boksburg ² Benoni ³	Vosloorus CCC ⁴	<ul style="list-style-type: none">  New Natalspruit Hospital⁵,  Naledi Shopping Centre⁶.  Chris Hani Crossing⁷
MARGINALISED AREA		
Wattville ⁸ Katorus ⁹		
TRANSIT SPINE		
Proposed IRPTN Phase 1 Bus Feeders Taxi Routs Gautrain Rail <ul style="list-style-type: none"> • Proposed – Boksburg Station Metro Rail		

(Note: The numbers next to the names correlate to the number indicated in the corresponding Figure)

Integration Zone 2 is divided into nine (9) functional section for the purposes of the detailed analysis and Target Model to follow (refer Figure B1.22.3).

STEP 2: IZ PROFILE

Following is a high-level base line assessment of Integration Zone 2, assessing the demographic, land use and infrastructure within the IZ.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that 121 262 people are residing within IZ2, which translates to 34 975 residential units (refer **Table B1.11.2**). The aforementioned IZ2 population represents about 4% of the total population in the EMM (refer **Table B1.4**). As reflected in **Table B1.11.3**, approximately 52% of households (18 206) fall within the low income bracket (R0<R3 188), followed by 29% of households (9 995) fall within the middle income bracket (R2 183<R12 817) and 19% of households (6 773) fall within the high income bracket (R12 817+). The elevated low income levels indicate high



government dependency of households on social / housing grants and related government provided facilities.

Table B1.11.2: IZ2 Baseline Households, Population and Density

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
Total IZ 2	34,975	121,262	4,736	7
2.1	6,444	20,167	1,105	6
2.2	2,215	6,993	545	4
2.3	62	125	570	0
2.4	3,127	9,974	252	12
2.5	2,718	8,848	270	10
2.6	717	2,327	114	6
2.7	1,130	3,822	197	6
2.8	3,190	11,109	776	4
2.9	15,373	57,899	906	17

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

Table B1.11.3: IZ2 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0 < R3 188)	(R3 183 < R12 817)	(R12 817+)					
IZ 2	52%	29%	19%	100%	18,206	9,995	6,773	34,975
2.1	74%	21%	5%	100%	4,777	1,373	294	6,444
2.2	38%	37%	25%	100%	849	813	554	2,215
2.3	59%	31%	10%	100%	37	19	6	62
2.4	31%	30%	39%	100%	968	927	1,232	3,127
2.5	65%	29%	7%	100%	1,763	778	177	2,718
2.6	26%	15%	59%	100%	186	109	421	717
2.7	21%	13%	66%	100%	234	150	746	1,130
2.8	34%	30%	36%	100%	1,079	953	1,158	3,190
2.9	54%	32%	14%	100%	8,313	4,875	2,185	15,373

Source: Census 2011, STATS SA

In terms of **residential densities** and **property values**, as indicated on **Figure B1.22.2**, it is evident that the concentration of higher residential densities are located within Vosloorus and within the inner cities (CBD's), with the lower densities within the remainder of IZ2. The inverse is noted in terms of the property values (based on the EMM valuation roll), the lower property values are noted within Vosloorus and the higher values associated within the remainder of the IZ.



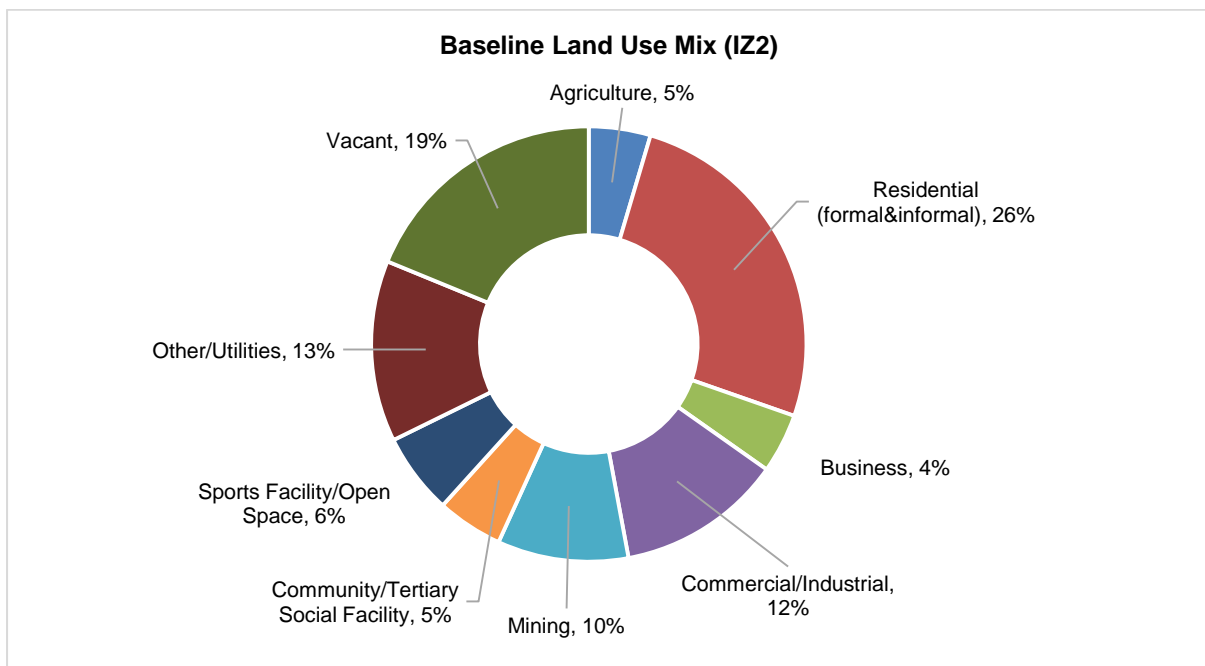
» LAND USE ASSESSMENT

Integration Zone 2 comprise of approximate 4 736ha. **Diagram B1.6** graphically represents the Baseline Land Use Mix (ha) and **Table B1.11.4** represents the detail Baseline Land Use Mix (ha and %).

From the baseline land uses assessment it is evident that the dominant land use within IZ2 is residential (formal and informal), representing 26% (1 220 ha) of the total IZ2 land area, followed by 19% (890 ha) representing Vacant land and 13% (638 ha) Other / Utilities, whilst 6% (285 ha) of the land area represents Sport Facilities / Open Space. It is noted that 5% (232 ha) of the land area within IZ2 represent Community / Tertiary Social facilities. **Figure B1.22.3** graphically represents the current land use mix and social facilities locations of IZ2.

As indicated on **Figure B1.22.4**, 19% (890 ha) of the land area within IZ2 is Vacant and 5% (217 ha) is Agriculture.

Diagram B1.6: IZ2 Base Line Land Use Mix (%)



Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014



Table B1.11.4: IZ1 Baseline Land Use Mix (ha and %)

Baseline Land Use Mix (Ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 2	217	1,220	210	582	461	232	285	638	890	4,736
2.1	15	180	9	96	267	20	14	213	292	1,105
2.2	-	98	37	87	176	47	12	26	63	545
2.3	20	0	99	362	-	16	4	39	29	570
2.4	4	153	21	8	-	19	7	27	13	252
2.5	35	67	0	0	-	10	13	130	14	270
2.6	-	77	6	-	16	6	6	0	4	114
2.7	46	106	2	-	1	12	16	0	13	197
2.8	75	136	3	20	-	7	53	144	339	776
2.9	22	405	32	9	-	97	160	59	123	906
Baseline Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 2	5%	26%	4%	12%	10%	5%	6%	13%	19%	100%
2.1	1%	16%	1%	9%	24%	2%	1%	19%	26%	100%
2.2	0%	18%	7%	16%	32%	9%	2%	5%	11%	100%
2.3	4%	0%	17%	64%	0%	3%	1%	7%	5%	100%
2.4	2%	61%	8%	3%	0%	7%	3%	11%	5%	100%
2.5	13%	25%	0%	0%	0%	4%	5%	48%	5%	100%
2.6	0%	67%	5%	0%	14%	5%	5%	0%	3%	100%
2.7	23%	54%	1%	0%	1%	6%	8%	0%	7%	100%
2.8	10%	17%	0%	3%	0%	1%	7%	19%	44%	100%
2.9	2%	45%	4%	1%	0%	11%	18%	7%	14%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities



» INFRASTRUCTURE ASSESSMENT

Existing public transport infrastructure (refer **Figure B1.22.5**) present within IZ2 is the Metro Rail and numerous Taxi routes. The following rail station are located within IZ2: President, Germiston, Knights, Delmore, Angelo, East Rand, Boksburg, Boksburg East, Dunswart, Avenue and Benoni.

It is noted that the Rail is primarily an east-west linkage (along the mining belt), with no railway line connecting Boksburg with Vosloorus. The Vosloorus community is served primarily by the Taxi industry, with numerous stops located along the R21 and M34, leading up to the Vosloorus Urban Hub. The proposed IRPTN route with numerous feeders and proposed station, as well as the proposed East Rand Mall Gautrain Station form part of IZ2's planned future public transport.

Walkability, based on a 500m walking distance from any public transport station, is graphically represented on **Figure B1.22.5**. It is evident that most of the IZ2 adheres to the criteria of walkability. One section within the southern parts of IZ2 (Vosloorus) has limited walkability, as it is not served by the proposed IRPTN public transport facilities, although numerous taxi stops are noted.

In terms of bulk infrastructure, the municipality currently experiences capacity shortages within most of the water infrastructure. As indicated in **Figure B1.22.6**, small parts of the eastern and western sections of IZ2 has no capacity, with the bulk of IZ 2 central having spare capacity. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities, this is one of the major constraints towards development within EMM. Evident from **Figure B1.22.7**, is that most of IZ2 has no capacity, with a limited section along the mining belt (western section) which has some spare capacity. In terms of electricity supply, most of the electricity infrastructure in EMM is currently at its full capacity, with limited section of IZ2 having spare capacity (refer **Figure B1.22.8**).

STEP 3: IZ TARGETS

Based on the **EMM BEPP IZ Target Model**, an additional 93 954 people, which translates into 33 838 residential units, can be accommodated within IZ2 (refer **Table 1.11.5**). The total additional developable land area within IZ2, accumulates to 777 ha. The average dwelling unit density across the entire IZ2, is 44 du/ha, with some sections of the IZ achieving densities of 40 / 60 and even 80 da/ha (refer **Figure B1.22.9 – Residential Density**).

Table B1.11.5: IZ2 Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 2	33,838	26%	93,954	777	44
2.1	8,363	6%	17,723	141	59
2.2	5,103	4%	14,054	58	87



Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
2.3	257	0%	697	4	67
2.4	1,077	1%	591	29	37
2.5		0%		-	
2.6	60	0%	193	1	80
2.7	2,775	2%	9,901	46	60
2.8	11,675	9%	34,878	413	28
2.9	4,528	3%	15,917	84	54

From the **IZ Target Model**, based on the developability of vacant and underutilised land (refer **Table 1.11.6**), it is anticipated that 46% of the additional households will fall within the low income bracket (R0<R3 188), representing 15 629 dwelling units. The low income dwelling units represents primarily subsidised housing. The middle income category (R3 183<R12 817) represents 28% of the anticipated future households, representing 9 353 dwelling units. The middle income category is representative of gap (subsidy linked and bonded) housing options. Only 26% of the anticipated future households fall within the higher income category, representing 8 856 dwelling units. The higher income category is representative of market / bonded housing options.

Table B1.11.6: IZ2 Target Model: Households and Income distribution

Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 2	46%	28%	26%	100%	15,629	9,353	8,856	33,838
2.1	74%	21%	5%	100%	6,199	1,781	382	8,363
2.2	38%	37%	25%	100%	1,955	1,872	1,276	5,103
2.3	59%	31%	10%	100%	152	80	25	257
2.4	31%	30%	39%	100%	334	319	424	1,077
2.5	65%	29%	7%	100%	-	-	-	-
2.6	26%	15%	59%	100%	16	9	35	60
2.7	21%	13%	66%	100%	574	368	1,832	2,775
2.8	34%	30%	36%	100%	3,951	3,487	4,237	11,675
2.9	54%	32%	14%	100%	2,449	1,436	643	4,528

The **Potential Additional Floor Area (m²)** as based on the **EMM BEPP IZ Target Model** (refer **Table B1.11.7**), indicates that the dominant land use to be accommodated within IZ2 is residential (71% - representing 3 812 219 m²), followed by industrial (12% - representing 665 492 m²) and offices (11% - representing 564 573 m²). **Figure B1.22.9** is a graphical representation the accumulated IZ2 Land Use Categories.



Figure B1.22.10 and **Figure B1.22.11** graphically represent the potential additional land use per floor, based on the Target Model Categorization (refer *Table B1.6: IZ Target Model: Land Use Categories*). The total Potential Additional Floor Area (m²) for IZ2 accumulates to approximately 5 359 813 m².

The *Potential Additional Workers* target projections (refer **Table B1.11.8**) indicate the latent opportunity for additional 23 524 Office workers (42%), followed by 17 170 Industrial workers (31%) and 5 002 Institutional workers (9%) can be accommodated within IZ2. The total Potential Additional Workers for IZ2 accumulates to approximately 56 068 workers.

Figure B1.22.12 and **Diagram B1.7** compare the target potential of dwelling units versus formal workers. It is evident that additional economic potential of IZ2 is relatively larger than the population potential, especially in the Villa Liza.

Diagram B1.7: Additional Dwelling Units vs Formal Workers IZ2

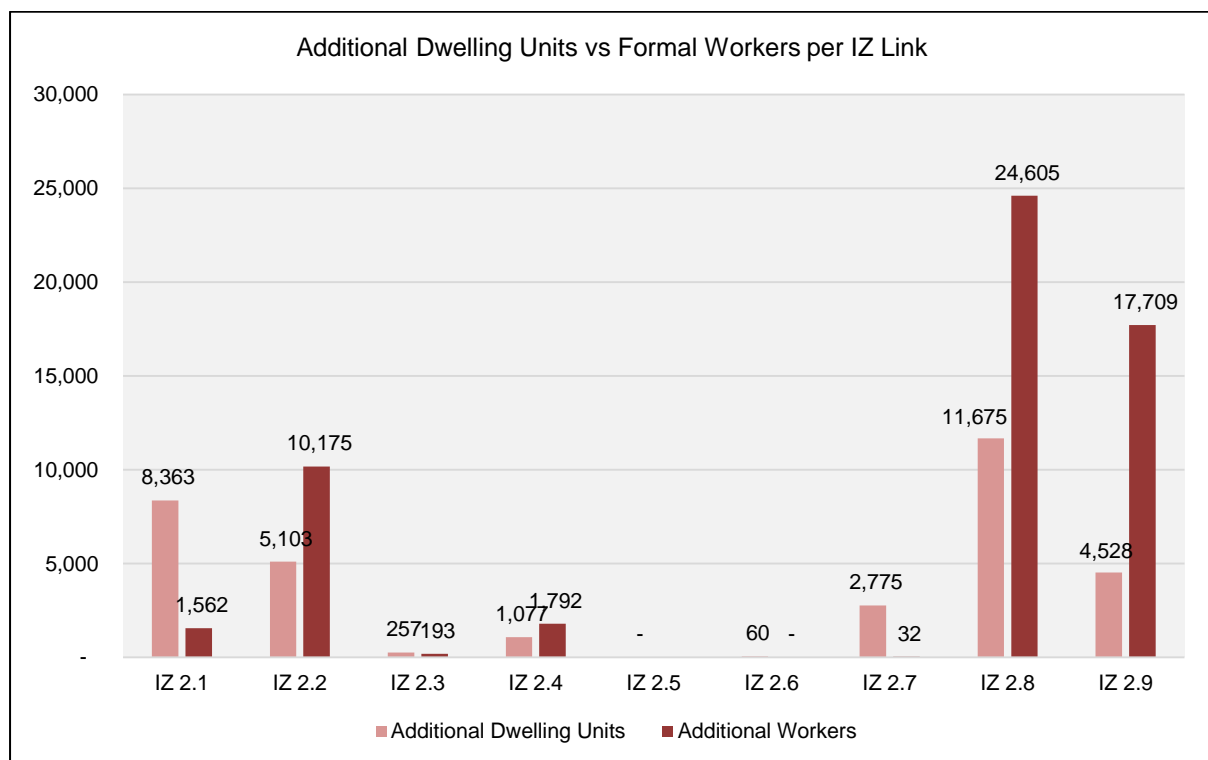


Table B1.11.7: IZ2 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 2	3,812,219	141,619	564,573	-	43,432	87,241	665,492	45,237	-	5,359,813
2.1	1,190,133	10,878	21,756	-	-	-	-	-	-	1,222,767
2.2	405,502	46,680	197,871	-	-	-	-	-	-	650,053
2.3	19,285	-	-	-	-	-	6,843	-	-	26,128
2.4	85,856	-	-	-	-	-	35,113	29,358	-	150,327
2.6	4,519	-	-	-	-	-	-	-	-	4,519
2.7	277,496	785	-	-	-	-	-	-	-	278,281
2.8	1,412,071	28,346	47,066	-	-	84,979	623,536	15,878	-	2,211,875
2.9	417,357	54,931	297,880	-	43,432	2,262	-	-	-	815,863
Potential additional Floor Area (%)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 2	71%	3%	11%	0.0%	0.8%	1.6%	12%	1%	0%	100%
2.1	97%	1%	2%	0.0%	0.0%	0.0%	0%	0%	0%	100%
2.2	62%	7%	30%	0.0%	0.0%	0.0%	0%	0%	0%	100%
2.3	74%	0%	0%	0.0%	0.0%	0.0%	26%	0%	0%	100%
2.4	57%	0%	0%	0.0%	0.0%	0.0%	23%	20%	0%	100%
2.6	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
2.7	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
2.8	64%	1%	2%	0.0%	0.0%	3.8%	28%	1%	0%	100%
2.9	51%	7%	37%	0.0%	5.3%	0.3%	0%	0%	0%	100%

Table B1.11.8: IZ2 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 2	2,743	4,291	23,524	-	2,172	5,002	17,170	1,167	-	56,068
2.1	325	330	906	-	-	-	-	-	-	1,562
2.2	516	1,415	8,245	-	-	-	-	-	-	10,175
2.3	16	-	-	-	-	-	177	-	-	193
2.4	129	-	-	-	-	-	906	757	-	1,792
2.6	-	-	-	-	-	-	-	-	-	-
2.7	8	24	-	-	-	-	-	-	-	32
2.8	416	859	1,961	-	-	4,872	16,087	410	-	24,605
2.9	1,331	1,665	12,412	-	2,172	130	-	-	-	17,709
Potential additional Workers (%)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 2	5%	8%	42%	0%	4%	9%	31%	2%	0%	100%
2.1	21%	21%	58%	0%	0%	0%	0%	0%	0%	100%
2.2	5%	14%	81%	0%	0%	0%	0%	0%	0%	100%
2.3	8%	0%	0%	0%	0%	0%	92%	0%	0%	100%
2.4	7%	0%	0%	0%	0%	0%	51%	42%	0%	100%
2.6	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2.7	26%	74%	0%	0%	0%	0%	0%	0%	0%	100%
2.8	2%	3%	8%	0%	0%	20%	65%	2%	0%	100%
2.9	8%	9%	70%	0%	12%	1%	0%	0%	0%	100%

From the above it is thus evident that the following interrelated TOD principles have been adhered to in the target setting:

- Walkability (live-work-play precinct accessibility)
- Density (live)
- Inclusiveness (live: income mix)
- Mixed – use (live-work-play)
- Transit (live-work-play inter precinct accessibility)

The above listed elements inform the New Spatial Logic to follow (Step 4).

STEP 4: SPATIAL LOGIC AND PRECINCT VALIDATION

From the preceding analysis (Step 1 to 3), it is evident that IZ2 consist of a number of anchors / economic nodes (CBD, Urban Hub and Secondary Nodes), a marginalised area and numerous transportation modes (rail, bus, taxi). In addition, IZ2 adheres to the requirement of walkability (500m), with most proposed IRPTN stations allowing for TOD developments (live-work-play concept).

IZ2 currently comprise of 121 262 people (34 975 residential units) with the majority of households falling within the low income bracket (52%). The current residential density across the IZ is calculated at 7 du/ha. The dominant land uses associated with IZ2 is residential (1 220 ha), Vacant (638 ha) and Other / Utilities (285 ha).

Informed by the above, the **EMM BEPP IZ Target Model** analysis highlighted that IZ2 has 777 ha of developable land available for future development / redevelopment, to accommodate an addition 93 954 people (33 838 residential units – primarily representing low income households – 46%) at an average of 44 du/ha across the entire IZ. In addition, the potential is identified for additional 5,359,813m² developable floor area, primarily representing residential, industrial and office land use, which can generate an additional 56 068 job opportunities within IZ2, thus further enhancing the concept of live-work-play.

Figure B1.22.13 is a graphical representation of the New Spatial Logic, highlighting the target land uses in relation to the economic nodes, marginalized area and connected by the public transport modes.

****Please note, the citywide projects (e.g. precinct planning, strategic urban development areas, mega housing projects etc.) are discussed in more detail in Section B2 – Local Area Planning to follow. The holistic IZ (B1), Local Area Planning (B2), and Public transport / Housing integration (B3) is summarised in Section B4 – Urban Network Summary.***



STEP 5: INTEGRATION ZONE PHASING

The identified developable land areas (as identified in Step 3) located within IZ2, is prioritised in terms of short (0-5 years), medium (5 to 10 years) and long (10 years+) term growth. The anticipated number of households that has the potential to be developed in the **short** term is approximate 8 647 additional households, in the **medium** term it is approximate 24 176 additional households, and of the **long** term 1 014 additional households (refer **Table B1.11.9**).

- Within the **short term**, it is anticipated that 48% of households will be low income households, 27% will be Middle income households, and 25% will be high income households.
- Within the **medium term**, it is anticipated that 44% of households will be low income households, 28% will be Middle income households, and 27% will be high income households.
- Within the **long term**, it is anticipated that 74% of households will be low income households, 21% will be Middle income households, and 5% will be high income households.

Figure B1.22.14 is a graphical representation of the anticipated development phasing. The development phasing is collectively informed by the anticipated additional number of households, workers and land use projections (based on the **EMM BEPP IZ Target Model**).



Table B1.11.9: IZ2 Target Model: Households Time Frame

Target Model: Households Time Frame (ha)												
	Short Term				Medium Term				Long Term			
IZ	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 2	4,119	2,344	2,185	8,647	10,758	6,793	6,625	24,176	752	216	46	1,014
2.1	2,107	605	130	2,842	3,340	960	206	4,506	752	216	46	1,014
2.2	-	-	-	-	1,955	1,872	1,276	5,103	-	-	-	-
2.3	-	-	-	-	152	80	25	257	-	-	-	-
2.4	266	254	338	858	68	65	86	219	-	-	-	-
2.5	-	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	16	9	35	60	-	-	-	-
2.7	-	-	-	-	574	368	1,832	2,775	-	-	-	-
2.8	1,553	1,371	1,666	4,590	2,398	2,116	2,572	7,085	-	-	-	-
2.9	193	113	51	357	2,256	1,323	593	4,171	-	-	-	-
Target Model: Households Time Frame (%)												
	Short Term				Medium Term				Long Term			
IZ	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 2	48%	27%	25%	100%	44%	28%	27%	100%	74%	21%	5%	100%
2.1	74%	21%	5%	100%	74%	21%	5%	100%	74%	21%	5%	100%
2.2					38%	37%	25%	100%				
2.3					59%	31%	10%	100%				
2.4	31%	30%	39%	100%	31%	30%	39%	100%				
2.5												
2.6					26%	15%	59%	100%				
2.7					21%	13%	66%	100%				
2.8	34%	30%	36%	100%	34%	30%	36%	100%				
2.9	54%	32%	14%	100%	54%	32%	14%	100%				

STEP 6: IZ2 PROJECTS AND STRATEGIC INTERVENTIONS

The following section indicates the CAPEX projects located within IZ2 and prioritised according to the following eight (8) categories:

- Priority 1: Economic Node: CBD
- Priority 2: Economic Node: Industrial Area
- Priority 3: Economic Node: Urban Hub
- Priority 4: Housing projects current
- Priority 5: Housing projects proposed
- Priority 6: Marginalised Area 2: Katorus
- Priority 7: MSDF Precincts
- Priority 8: Remainder of Integration Zone 2

Table B1.11.10 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B1.22.15** graphically represents the spatial locations of the identified projects as listed within Table B1.11.10.

Apart from the abovementioned CAPEX projects, three interventionist projects were identified from the EMM IZ Target Model (refer **Figure B1.22.16**). The projects are well located in terms of the accessibility to public transport and are of a mixed-use nature.

Proceeding, several departments such as City Planning Special Projects, Transportation, Human Settlements and Real Estate need to analyse and prioritise the projects. Thereafter processes such as land release proposals, procurement proposals, future studies / identification of incentives will follow.

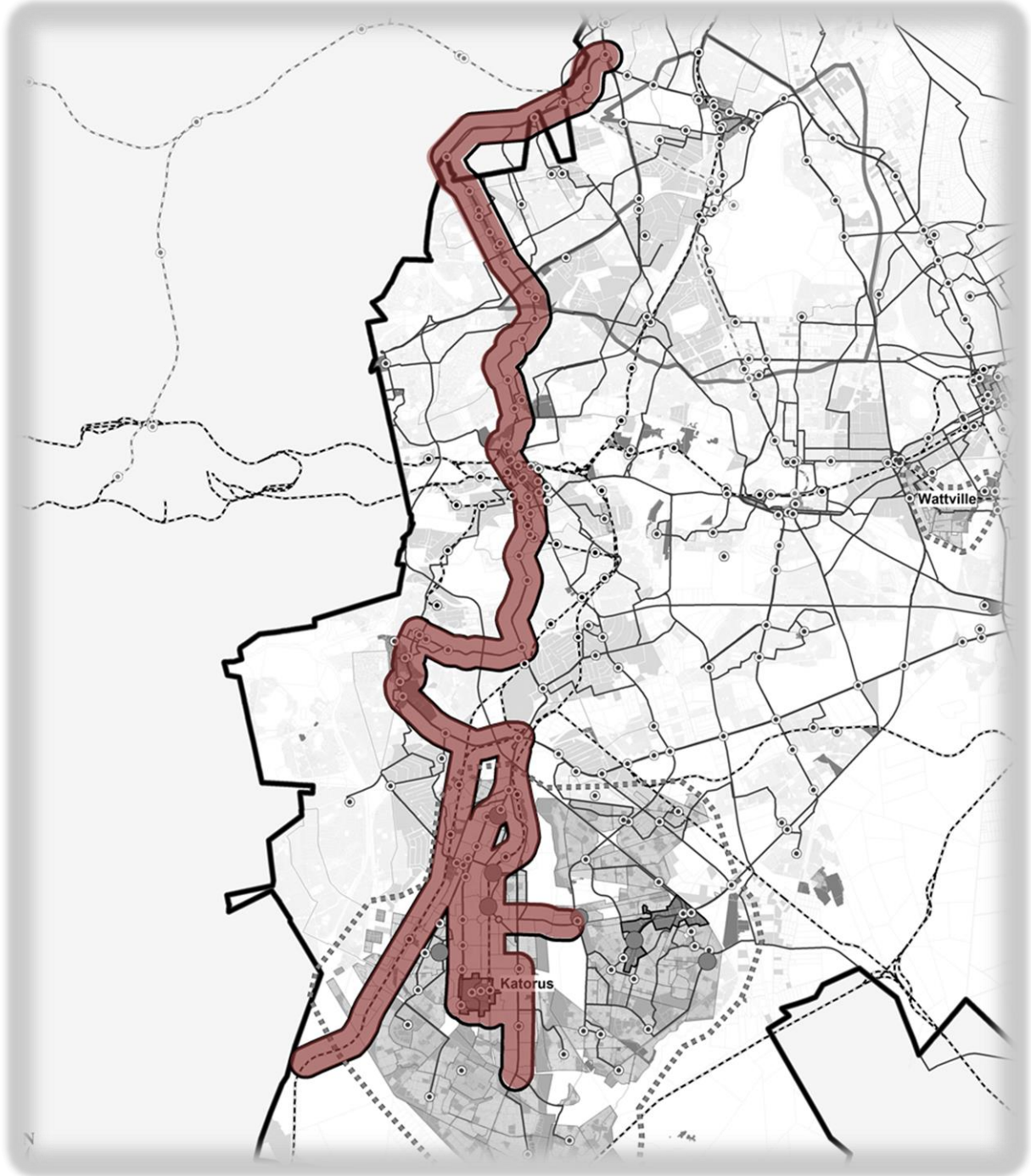


Table B1.11.10: Prioritised Capex Projects in Integration Zone 2

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
Integration Zone 2: Economic Node: CBD					R626,366,970	R476,120,971	R483,805,768	R1,586,293,709
1	Information Communication Technology (ICT)	ERP Phase 1 (Corporate)	Economic Development	015 - Borrowings	R200,000,000	R130,000,000	R143,000,000	R473,000,000
2	City Planning	Germiston Urban Renewal - Germiston Public Space Upgrade(Germiston)	Urban Restructuring	019 - Integrated City Development Grant	R48,646,000	R48,221,000	R50,921,000	R147,788,000
Integration Zone 2: Economic Node: Industrial Area					R44,500,000	R133,978,017	R146,260,000	R324,738,017
3	Human Settlements	Urban Renewal: Wattville Erf 3130 Watville (Benoni)	Urban Restructuring	005 - Urban Settlement Development Grant	R25,000,000	R64,740,000	R -	R89,740,000
4	Human Settlements	Urban Renewal: Wattville Erf 3130 Watville (Benoni)	Urban Restructuring	Unassigned	R -	R -	R67,110,000	R67,110,000
Integration Zone 2: Economic Node: Urban Hub					R65,110,000	R97,790,000	R133,740,000	R296,640,000
5	Human Settlements	Urban Renewal: Katorus: Erf 18383 Vosloorus X 9, Erf 6519 Vosloorus Ext 9, Erf 20846 Ext 30, Portion of RE Portion 192 Farm Vlakplats 138 IR(Vosloorus)	Urban Restructuring	005 - Urban Settlement Development Grant	R41,560,000	R56,440,000	R -	R98,000,000
6	Human Settlements	Urban Renewal: Katorus: Erf 18383 Vosloorus X 9, Erf 6519 Vosloorus Ext 9, Erf 20846 Ext 30, Portion of RE Portion 192 Farm Vlakplats 138 IR(Vosloorus)	Urban Restructuring	Unassigned	R -	R -	R90,540,000	R90,540,000
Integration Zone 2: Housing projects current					R55,979,917	R -	R -	R55,979,917
7	Human Settlements	Balmoral Extension 4(Boksburg)	Urban Restructuring	005 - Urban Settlement Development Grant	R55,979,917	R -	R -	R55,979,917
Integration Zone 2: Housing projects proposed					R3,000,000	R8,000,000	R10,000,000	R21,000,000
8	Roads and Stormwater	Doubling Barry Marais Rd(Boksburg)	Urban Restructuring	015 - Borrowings	R3,000,000	R8,000,000	R -	R11,000,000
9	Roads and Stormwater	Doubling Barry Marais Rd(Boksburg)	Urban Restructuring	Unassigned	R -	R -	R10,000,000	R10,000,000
Integration Zone 2: Marginalised Area 2: Katorus					R11,200,000	R13,000,000	R23,000,000	R47,200,000

10	Environmental Resources Management	Develop/Upgrade Parks VOSLOORUS(Vosloorus)	Upgrading and Renewal	015 - Borrowings	R9,000,000	R9,000,000	R -	R18,000,000
11	Environmental Resources Management	Develop/Upgrade Parks VOSLOORUS(Vosloorus)	Upgrading and Renewal	Unassigned	R -	R -	R9,000,000	R9,000,000
Integration Zone 2: MSDF Precincts					R19,956,000	R25,734,000	R19,836,000	R65,526,000
12	Energy	Brakpan Revenue enhancement(Brakpan)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R5,000,000	R6,000,000	R -	R11,000,000
13	Energy	Brakpan Network enhancement(Brakpan)	Economic Development	015 - Borrowings	R4,500,000	R5,000,000	R -	R9,500,000
Integration Zone 2: Remainder of integration zone 2					R285,664,197	R208,881,566	R184,735,586	R679,281,349
14	Human Settlements	Leeuwpoort Development (Bulk Infrastructure)(Boksburg)	Urban Restructuring	005 - Urban Settlement Development Grant	R241,664,197	R141,451,566	R -	R383,115,763
15	Human Settlements	Leeuwpoort Development (Bulk Infrastructure)(Boksburg)	Urban Restructuring	Unassigned	R	R -	R114,735,586	R114,735,586

INTEGRATION ZONE 3: KATLEHONG-TOKOZA-ALBERTON-GERMISTON



STEP 1: IZ SPATIAL LOGIC

Graphically represented on **Figure B1.23.1**, Integration Zone 3 represent the functional area stretching from Kempton Park West residential in the north (west of the Kempton Park CBD), southwards along the IRPTN towards Katlehong, and Tokoza. Integration Zone three includes the Edenvale, Germiston and Alberton CBD's. The table below is a summary of the salient features related to IZ3 and is.

Table B1.12.1: Integration Zone 3 Salient Features

ANCHORS - ECONOMIC NODES		
CBD	URBAN HUB	SECONDARY NODES
Edenvale ¹ Germiston ² Alberton ³	Kwesini CCC ⁴	<ul style="list-style-type: none"> ■ Admin Triangle⁵, ■ Motse wa Lijane Shopping Centre⁶, ■ Pilot Station⁷
MARGINALISED AREA		
Katorus ⁸		
TRANSIT SPINE		
Proposed IRPTN Phase 1 Bus Feeders Taxi Routs Metro Rail		

(Note: The numbers next to the names correlate to the number indicated in the corresponding Figure)

Integration Zone 3 is divided into thirteen (13) functional section for the purposes of the detailed analysis and Target Model to follow (refer Figure B1.23.3).

STEP 2: IZ PROFILE

Following is a high-level base line assessment of Integration Zone 3, assessing the demographic, land use and infrastructure within the IZ.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that 211 652 people are residing within IZ3, which translates to 72 641 residential units (refer **Table B1.12.2**). The aforementioned IZ3 population represents about 6% of the total population in the EMM (refer **Table B1.4**). As reflected in **Table B1.12.3**, approximately 61% of households (44 042) fall within the low income bracket (R0<R3 188), followed by 26% of households (19 028) fall within the middle income bracket (R2 183<R12 817) and only 13% of households (9 571) fall within the high income bracket (R12 817+). The elevated low income levels indicate high government dependency of households on social / housing grants and related government provided facilities.



Table B1.12.2: IZ3 Baseline Households, Population and Density

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
Total IZ 3	72,641	211,652	5,209	14
3.1	606	1,623	161	4
3.2	2,761	7,938	304	9
3.3	1,084	2,456	155	7
3.4	8,521	13,914	388	22
3.5	1,669	4,507	307	5
3.6	870	2,131	94	9
3.7	2,339	6,952	223	10
3.8	3,044	10,270	518	6
3.9	3,817	12,098	368	10
3.10	5,732	13,165	319	18
3.11	2,526	7,634	414	6
3.12	18,322	53,615	1,092	17
3.13	21,351	75,349	866	25

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

Table B1.12.3: IZ3 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 3	61%	26%	13%	100%	44,042	19,028	9,571	72,641
3.1	20%	16%	63%	100%	122	100	384	606
3.2	27%	23%	51%	100%	736	624	1,400	2,761
3.3	20%	18%	63%	100%	214	191	679	1,084
3.4	71%	19%	11%	100%	6,009	1,613	899	8,521
3.5	36%	38%	26%	100%	601	635	433	1,669
3.6	27%	22%	51%	100%	237	192	441	870
3.7	19%	23%	58%	100%	453	531	1,355	2,339
3.8	27%	25%	48%	100%	824	773	1,446	3,044
3.9	81%	18%	1%	100%	3,083	702	32	3,817
3.10	79%	20%	2%	100%	4,502	1,122	108	5,732
3.11	75%	20%	4%	100%	1,904	516	106	2,526
3.12	65%	30%	5%	100%	11,932	5,449	941	18,322
3.13	63%	31%	6%	100%	13,425	6,579	1,347	21,351

Source: Census 2011, STATS SA

In terms of **residential densities** and **property values**, as indicated on **Figure B1.23.2**, it is evident that the concentration of higher residential densities are located within Kwesine, with the lower densities within the remainder of IZ3. The inverse is noted in terms of the property values (based on the EMM



valuation roll), the lower property values are noted within Kwesine and the higher values associated within the remainder of the IZ.

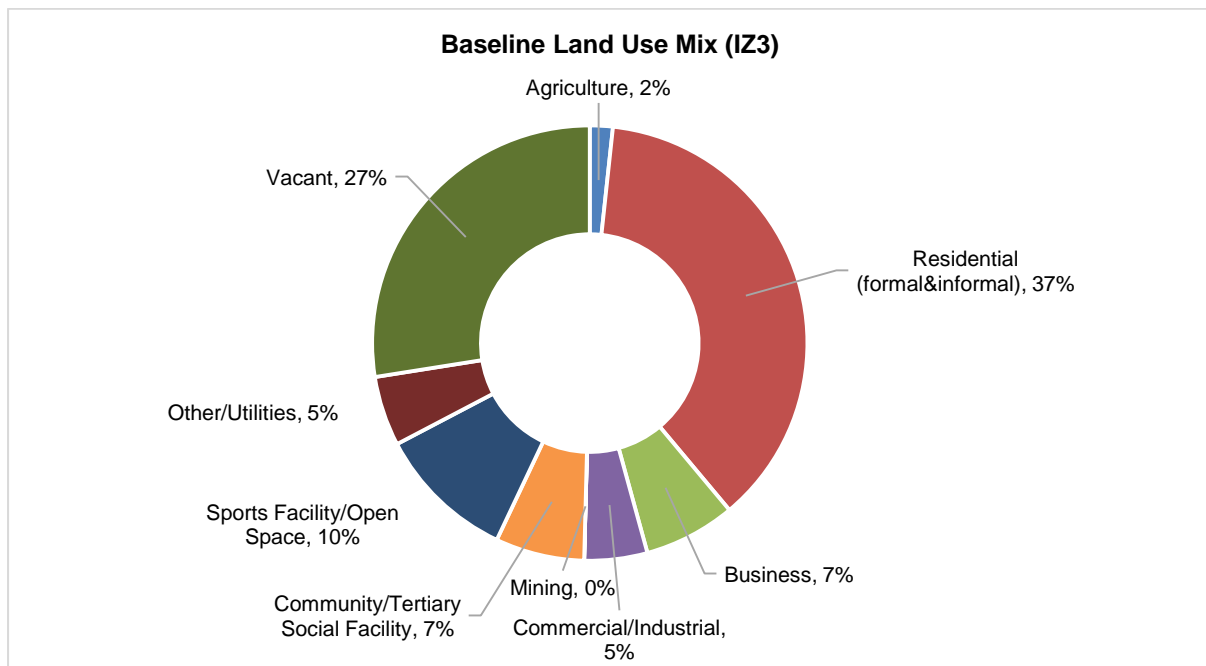
» LAND USE ASSESSMENT

Integration Zone 3 comprise of approximate 5 209 ha. **Diagram B1.8** graphically represents the Baseline Land Use Mix (ha) and **Table B1.12.4** represents the detail Baseline Land Use Mix (ha and %).

From the baseline land uses assessment it is evident that the dominant land use within IZ3 is residential (formal and informal), representing 37% (1 938 ha) of the total IZ3 land area, followed by 27% (1 432 ha) representing Vacant land and 10% (536 ha) Community / Tertiary Social facilities, whilst 10% (536 ha) of the land area represents Sport Facilities / Open Space. **Figure B1.23.3** graphically represents the current land use mix and social facilities locations of IZ3.

As indicated on **Figure B1.23.4**, 27% (1 432 ha) of the land area within IZ3 is Vacant and 2% (89 ha) is Agriculture.

Diagram B1.8: IZ3 Base Line Land Use Mix (%)



Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014



Table B1.12.4: IZ3 Baseline Land Use Mix (ha and %)

Baseline Land Use Mix (Ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/ Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 3	89	1,938	355	244	-	345	536	270	1,432	5,209
3.1	-	37	5	-	-	0	8	2	109	161
3.2	4	207	43	11	-	19	4	6	10	304
3.3	-	31	65	47	-	0	5	3	4	155
3.4	-	178	10	6	-	29	133	14	19	388
3.5	-	44	62	15	-	31	29	24	102	307
3.6	1	61	6	5	-	1	0	3	17	94
3.7	-	149	6	2	-	17	10	3	37	223
3.8	17	186	63	7	-	41	104	6	94	518
3.9	1	55	13	96	-	3	3	47	150	368
3.10	-	85	11	14	-	8	2	9	189	319
3.11	66	61	30	30	-	0	46	86	95	414
3.12	1	354	30	3	-	91	80	47	486	1,092
3.13	-	490	12	7	-	103	112	21	122	866
Baseline Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/ Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 3	2%	37%	7%	5%	0%	7%	10%	5%	27%	100%
3.1	0%	23%	3%	0%	0%	0%	5%	1%	68%	100%
3.2	1%	68%	14%	4%	0%	6%	1%	2%	3%	100%
3.3	0%	20%	42%	30%	0%	0%	3%	2%	2%	100%
3.4	0%	46%	3%	2%	0%	8%	34%	4%	5%	100%
3.5	0%	14%	20%	5%	0%	10%	10%	8%	33%	100%
3.6	1%	66%	6%	6%	0%	1%	0%	3%	18%	100%
3.7	0%	67%	3%	1%	0%	8%	4%	1%	16%	100%
3.8	3%	36%	12%	1%	0%	8%	20%	1%	18%	100%
3.9	0%	15%	3%	26%	0%	1%	1%	13%	41%	100%
3.10	0%	27%	4%	4%	0%	3%	1%	3%	59%	100%
3.11	16%	15%	7%	7%	0%	0%	11%	21%	23%	100%
3.12	0%	32%	3%	0%	0%	8%	7%	4%	44%	100%
3.13	0%	57%	1%	1%	0%	12%	13%	2%	14%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities



» INFRASTRUCTURE ASSESSMENT

Existing public transport infrastructure (refer **Figure B1.23.5**) present within IZ3 is the Metro Rail and numerous Taxi routes. The following rail stations are located within IZ3: President, India, Germiston West, Germiston South, Germiston Lake, Natal Spruit, Mpilisweni, Katlehong, Lindela, Pilot, Kwesine and Angus stations.

It is noted that the Rail is primarily a north-south linkage from the Germiston CBD to Kwesine in the South, with no railway line connecting Kempton Park West with the Germiston CBD along the IZ delineation. Although, it is noted that the proposed IRPTN route with numerous feeders and proposed station, will connect the Kempton Park West area, all the way south up to Kwesine. Currently the taxi industry has numerous stops along the IZ delineation.

Walkability, based on a 500m walking distance from any public transport station, is graphically represented on **Figure B1.23.5**. It is evident that most of the IZ3 adheres to the criteria of walkability. Two sections within the southern parts of IZ3 (Thokoza and Siluma View) has limited walkability, as it is not served by the proposed IRPTN public transport facilities, although numerous taxi stops are noted.

In terms of bulk infrastructure, the municipality currently experiences capacity shortages within most of the water infrastructure. As indicated in **Figure B1.23.6**, most of IZ3 has no capacity. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities, this is one of the major constraints towards development within EMM. Evident from **Figure B1.23.7**, is that the southern section of IZ3 has no spare capacity with the central section having some spare capacity. In terms of electricity supply, most of the electricity infrastructure in EMM is currently at its full capacity, with limited sections of IZ3 having spare capacity (refer **Figure B1.23.8**).

STEP 3: IZ TARGETS

Based on the **EMM BEPP IZ Target Model**, an additional 27 698 people, which translates into 16 387 residential units, can be accommodated within IZ3 (refer **Table B1.12.5**). The total additional developable land area within IZ3, accumulates to 471 ha. The average dwelling unit density across the entire IZ3, is 35 du/ha, with some sections of the IZ achieving densities of 60 80 du/ha and even 80 du/ha (refer **Figure B1.23.9 – Residential Density**).



Table B1.12.5: IZ3 Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 3	16,387	12%	27,698	471	35
3.1	-	0%	-	18	0
3.2	107	0%	421	2	60
3.3	456	0%	858	6	80
3.4	-	0%	-	1	0
3.5		0%		-	
3.6	82	0%	146	13	6
3.7	2,252	2%	6,528	33	69
3.8	1,030	1%	3,424	74	14
3.9	2,254	2%	-	76	30
3.10	3,667	3%	-	126	29
3.11	1,791	1%	1,467	55	32
3.12	2,307	2%	6,631	41	56
3.13	2,441	2%	8,223	26	94

From the **IZ Target Model**, based on the developability of vacant and underutilised land (refer **Table B1.12.6**), it is anticipated that 61% of the additional households will fall within the low income bracket (R0<R3 188), representing 9 944 dwelling units. The low income dwelling units represents primarily subsidised housing. The middle income category (R3 183<R12 817) represents 23% of the anticipated future households, representing 3 832 dwelling units. The middle income category is representative of gap (subsidy linked and bonded) housing options. Only 16% of the anticipated future households fall within the higher income category, representing 2 611 dwelling units. The higher income category is representative of market / bonded housing options.

Table B1.12.6: IZ3 Target Model: Households and Income distribution

Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 3	61%	23%	16%	100%	9,944	3,832	2,611	16,387
3.1	20%	16%	63%	100%	-	-	-	-
3.2	27%	23%	51%	100%	29	24	54	107
3.3	20%	18%	63%	100%	90	80	286	456
3.4	71%	19%	11%	100%	-	-	-	-
3.5	36%	38%	26%	100%	-	-	-	-
3.6	27%	22%	51%	100%	22	18	42	82
3.7	19%	23%	58%	100%	437	511	1,304	2,252
3.8	27%	25%	48%	100%	279	262	489	1,030



Integratio n Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
3.9	81%	18%	1%	100%	1,821	414	19	2,254
3.10	79%	20%	2%	100%	2,880	718	69	3,667
3.11	75%	20%	4%	100%	1,349	366	75	1,791
3.12	65%	30%	5%	100%	1,503	686	118	2,307
3.13	63%	31%	6%	100%	1,535	752	154	2,441

The *Potential Additional Floor Area (m²)* as based on the **EMM BEPP IZ Target Model** (refer **Table B1.12.7**), indicates that the dominant land use to be accommodated within IZ3 is residential (54% - representing 1 584 084 m²), followed by offices (25% - representing 867 680 m²) and retail (12% - representing 409 452 m²). **Figure B1.23.9** is a graphical representation the accumulated IZ3 Land Use Categories.

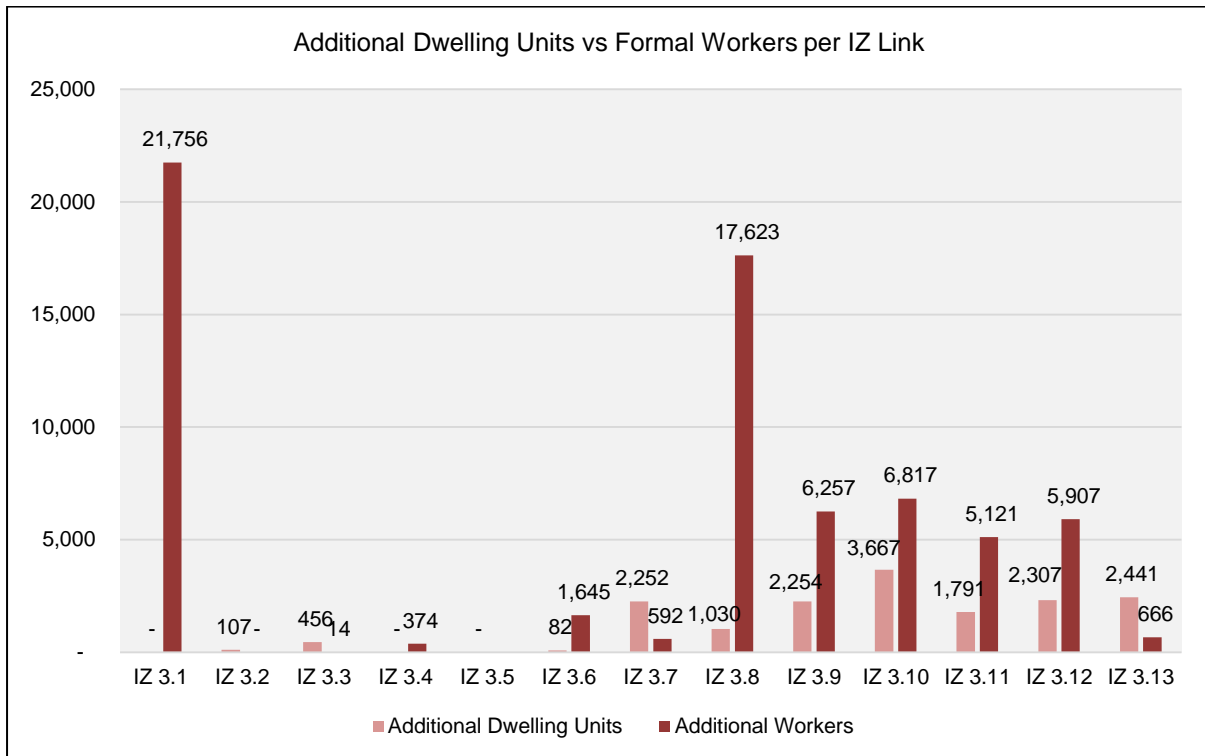
Figure B1.23.10 and **Figure B1.23.11** graphically represent the potential additional land use per floor, based on the Target Model Categorization (refer **Table B1.6: IZ Target Model: Land Use Categories**). The total Potential Additional Floor Area (m²) for IZ3 accumulates to approximately 3 495 156 m².

The *Potential Additional Workers* target projections (refer **Table B1.12.8**) indicate the latent opportunity for additional 36 153 Office workers (54%), followed by 12 408 Retail workers (31%) and 8 254 Commercial workers (12%) can be accommodated within IZ3. The total Potential Additional Workers for IZ3 accumulates to approximately 66 773 workers.

Figure B1.23.12 and **Diagram B1.9** compare the target potential of dwelling units versus formal workers. It is evident that additional economic potential of IZ3 is relatively larger than the population potential, with the formal worker potential especially in the Esther Park and Alberton areas.



Diagram B1.9: Additional Dwelling Units vs Formal Workers IZ3



From the above it is thus evident that the following interrelated TOD principles have been adhered to in the target setting:

- Walkability (live-work-play precinct accessibility)
- Density (live)
- Inclusiveness (live: income mix)
- Mixed – use (live-work-play)
- Transit (live-work-play inter precinct accessibility)

The above listed elements inform the New Spatial Logic to follow (Step 4).



Table B1.12.7: IZ3 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 3	1,584,084	409,452	867,680	-	-	-	314,006	319,934	-	3,495,156
3.1	-	73,847	443,079	-	-	-	-	-	-	516,926
3.2	10,705	-	-	-	-	-	-	-	-	10,705
3.3	34,222	-	-	-	-	-	-	-	-	34,222
3.4	-	2,689	5,379	-	-	-	-	-	-	8,068
3.6	6,163	5,080	10,160	-	-	-	-	41,403	-	62,806
3.7	213,142	19,549	-	-	-	-	-	-	-	232,691
3.8	111,022	142,725	285,449	-	-	-	-	54,025	-	593,221
3.9	112,716	-	-	-	-	-	24,519	205,184	-	342,419
3.10	550,050	-	-	-	-	-	259,014	-	-	809,063
3.11	230,961	65,400	55,556	-	-	-	18,029	11,523	-	381,469
3.12	159,055	80,354	68,056	-	-	-	12,445	7,800	-	327,709
3.13	156,049	19,808	-	-	-	-	-	-	-	175,857
Potential additional Floor Area (%)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 3	45%	12%	25%	0.0%	0.0%	0.0%	9%	9%	0%	100%
3.1	0%	14%	86%	0.0%	0.0%	0.0%	0%	0%	0%	100%
3.2	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
3.3	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
3.4	0%	33%	67%	0.0%	0.0%	0.0%	0%	0%	0%	100%
3.6	10%	8%	16%	0.0%	0.0%	0.0%	0%	66%	0%	100%
3.7	92%	8%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
3.8	19%	24%	48%	0.0%	0.0%	0.0%	0%	9%	0%	100%

3.9	33%	0%	0%	0.0%	0.0%	0.0%	7%	60%	0%	100%
3.10	68%	0%	0%	0.0%	0.0%	0.0%	32%	0%	0%	100%
3.11	61%	17%	15%	0.0%	0.0%	0.0%	5%	3%	0%	100%
3.12	49%	25%	21%	0.0%	0.0%	0.0%	4%	2%	0%	100%
3.13	89%	11%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%

Table B1.12.8: IZ3 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 3	1,857	12,408	36,153	-	-	-	8,101	8,254	-	66,773
3.1	1,056	2,238	18,462	-	-	-	-	-	-	21,756
3.2	-	-	-	-	-	-	-	-	-	-
3.3	14	-	-	-	-	-	-	-	-	14
3.4	68	81	224	-	-	-	-	-	-	374
3.6	-	154	423	-	-	-	-	1,068	-	1,645
3.7	-	592	-	-	-	-	-	-	-	592
3.8	11	4,325	11,894	-	-	-	-	1,394	-	17,623
3.9	331	-	-	-	-	-	633	5,294	-	6,257
3.10	134	-	-	-	-	-	6,683	-	-	6,817
3.11	62	1,982	2,315	-	-	-	465	297	-	5,121
3.12	114	2,435	2,836	-	-	-	321	201	-	5,907
3.13	66	600	-	-	-	-	-	-	-	666
Potential additional Workers (%)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 3	3%	19%	54%	0%	0%	0%	12%	12%	0%	100%

3.1	5%	10%	85%	0%	0%	0%	0%	0%	0%	100%
3.2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3.3	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
3.4	18%	22%	60%	0%	0%	0%	0%	0%	0%	100%
3.6	0%	9%	26%	0%	0%	0%	0%	65%	0%	100%
3.7	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
3.8	0%	25%	67%	0%	0%	0%	0%	8%	0%	100%
3.9	5%	0%	0%	0%	0%	0%	10%	85%	0%	100%
3.10	2%	0%	0%	0%	0%	0%	98%	0%	0%	100%
3.11	1%	39%	45%	0%	0%	0%	9%	6%	0%	100%
3.12	2%	41%	48%	0%	0%	0%	5%	3%	0%	100%
3.13	10%	90%	0%	0%	0%	0%	0%	0%	0%	100%

STEP 4: SPATIAL LOGIC AND PRECINCT VALIDATION

From the preceding analysis (Step 1 to 3), it is evident that IZ3 consist of a number of anchors / economic nodes (CBD, Urban Hub and Secondary Nodes), a marginalised area and numerous transportation modes (rail, bus, taxi). In addition, IZ3 adheres to the requirement of walkability (500m), with most proposed IRPTN stations allowing for TOD developments (live-work-play concept).

IZ3 currently comprise of 211 652 people (72 641 residential units) with the majority of households falling within the low income bracket (61%). The current residential density across the IZ is calculated at 14 du/ha. The dominant land uses associated with IZ3 is residential (1 938 ha), Vacant (1 432 ha) and Community / Tertiary Social facilities (536 ha).

Informed by the above, the **EMM BEPP IZ Target Model** analysis highlighted that IZ3 has 471 ha of developable land available for future development / redevelopment, to accommodate 27 698 people (16 387 residential units – primarily representing low income households – 61%) at an average of 35 du/ha across the entire IZ. In addition, the potential is identified for additional 3,495,156m² developable floor area, primarily representing residential, office and retail land use, which can generate an additional 66 773 job opportunities within IZ3, thus further enhancing the concept of live-work-play.

Figure B1.23.13 is a graphical representation of the New Spatial Logic, highlighting the target land uses in relation to the economic nodes, marginalized area and connected by the public transport modes.

**Please note, the citywide projects (e.g. precinct planning, strategic urban development areas, mega housing projects etc.) are discussed in more detail in Section B2 – Local Area Planning to follow. The holistic IZ (B1), Local Area Planning (B2), and Public transport / Housing integration (B3) is summarised in Section B4 – Urban Network Summary.*

STEP 5: INTEGRATION ZONE PHASING (PRECINCT PRIORITIZATION)

The identified developable land areas (as identified in Step 3) located within IZ3, is prioritised in terms of short (0-5 years), medium (5 to 10 years) and long (10 years+) term growth. The anticipated number of households that has the potential to be developed in the **short** term is approximate 7 002 additional households, in the **medium** term it is approximate 7 508 additional households, and of the **long** term 1 876 additional households (refer **Table B1.12.9**).

- Within the **short term**, it is anticipated that 66% of households will be low income households, 21% will be Middle income households, and 13% will be high income households.
- Within the **medium term**, it is anticipated that 59% of households will be low income households, 23% will be Middle income households, and 16% will be high income households.



- Within the **long term**, it is anticipated that 48% of households will be low income households, 27% will be Middle income households, and 24% will be high income households.

Figure B1.23.14 is a graphical representation of the anticipated development phasing. The development phasing is collectively informed by the anticipated additional number of households, workers and land use projections (based on the **EMM BEPP IZ Target Model**).



Table B1.12.9: IZ3 Target Model: Households Time Frame

Target Model: Households Time Frame (ha)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 3	4,608	1,462	932	7,002	4,430	1,856	1,222	7,508	906	513	457	1,876
3.1	-	-	-	-	-	-	-	-	-	-	-	-
3.2	-	-	-	-	29	24	54	107	-	-	-	-
3.3	-	-	-	-	90	80	286	456	-	-	-	-
3.4	-	-	-	-	-	-	-	-	-	-	-	-
3.5	-	-	-	-	-	-	-	-	-	-	-	-
3.6	-	-	-	-	-	-	-	-	22	18	42	82
3.7	100	117	298	515	220	257	656	1,133	117	137	350	604
3.8	279	262	489	1,030	-	-	-	-	-	-	-	-
3.9	-	-	-	-	1,821	414	19	2,254	-	-	-	-
3.10	2,880	718	69	3,667	-	-	-	-	-	-	-	-
3.11	1,349	366	75	1,791	-	-	-	-	-	-	-	-
3.12	-	-	-	-	980	448	77	1,505	523	239	41	803
3.13	-	-	-	-	1,291	633	129	2,053	243	119	24	387
Target Model: Households Time Frame (%)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 3	66%	21%	13%	100%	59%	25%	16%	100%	48%	27%	24%	100%
3.1												
3.2					27%	23%	51%	100%				
3.3					20%	18%	63%	100%				
3.4												
3.5												

3.6									27%	22%	51%	100%
3.7	19%	23%	58%	100%	19%	23%	58%	100%	19%	23%	58%	100%
3.8	27%	25%	48%	100%								
3.9					81%	18%	1%	100%				
3.10	79%	20%	2%	100%								
3.11	75%	20%	4%	100%								
3.12					65%	30%	5%	100%	65%	30%	5%	100%
3.13					63%	31%	6%	100%	63%	31%	6%	100%

STEP 6: IZ3 PROJECTS AND STRATEGIC INTERVENTIONS

The following section indicates the CAPEX projects located within IZ3 and prioritised according to the following ten (10) categories:

- Priority 1: Economic Node: Aerotropolis Core
- Priority 2: Economic Node: CBD
- Priority 3: Economic Node: Industrial Area
- Priority 4: Economic Node: Urban Hub
- Priority 5: Housing Precincts
- Priority 6: Housing projects proposed
- Priority 7: Informal Settlements
- Priority 8: Marginalised Area 3: KwaTsaDuza
- Priority 9: MSDF Precincts
- Priority 10: Remainder of Integration Zone 3

Table B1.12.10 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B1.23.15** graphically represents the spatial locations of the identified projects as listed within Table B1.12.10.

Apart from the abovementioned CAPEX projects, two interventionist projects were identified from the EMM IZ Target Model (refer **Figure B1.23.16**). The projects are well located in terms of the accessibility to public transport and are of a mixed-use nature.

Proceeding, several departments such as City Planning Special Projects, Transportation, Human Settlements and Real Estate need to analyse and prioritise the projects. Thereafter processes such as land release proposals, procurement proposals, future studies / identification of incentives will follow.



Table B1.12.10: Prioritised Capex Projects in Integration Zone 3

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
Integration Zone 3: Economic Node: Aerotropolis Core					R500,000	R -	R -	R500,000
1	Roads and Stormwater	SW Minor (N) MDBK Old age Home(Germiston)	Urban Restructuring	007 - CRRF Capital Replacement Reserve Fund	R500,000	R -	R -	R500,000
Integration Zone 3: Economic Node: CBD					R129,970,000	R127,600,000	R57,100,000	R314,670,000
2	Real Estate	Upgrade and renewal of SAAME Building Germiston(Germiston)	Economic Development	015 - Borrowings	R10,000,000	R38,000,000	R -	R48,000,000
3	Real Estate	Germiston Knowledge Centre(Germiston)	Urban Restructuring	015 - Borrowings	R20,000,000	R27,000,000	R -	R47,000,000
Integration Zone 3: Economic Node: Industrial Area					R10,500,000	R8,500,000	R12,500,000	R31,500,000
4	Roads and Stormwater	Eastleigh Spruit Channel(Edenvale)	Urban Restructuring	015 - Borrowings	R10,000,000	R8,000,000	R -	R18,000,000
5	Roads and Stormwater	Eastleigh Spruit Channel(Edenvale)	Urban Restructuring	Unassigned	R -	R -	R6,000,000	R6,000,000
Integration Zone 3: Economic Node: Urban Hub					R461,543,900	R403,252,050	R386,712,835	R1,251,508,785
6	Energy	Thokoza Network enhancement(Thokoza)	Economic Development	015 - Borrowings	R8,000,000	R5,000,000	R6,000,000	R19,000,000
7	Environmental Resources Management	Develop/Upgrade Parks THOKOZA	Upgrading and Renewal	Unassigned	R -	R9,000,000	R9,000,000	R18,000,000
Integration Zone 3: Housing Precincts					R -	R100,000	R1,000,000	R1,100,000
8	Sports Recreation Arts	Rehabilitate Eden Park stadium	Urban Restructuring	Unassigned	R -	R100,000	R1,000,000	R1,100,000

	and Culture (SRAC)							
Integration Zone 3: Housing projects proposed					0	0	R200,000	R200,000
9	Sports Recreation Arts and Culture (SRAC)	Ramokonopi Courts	Urban Restructuring	Unassigned	0	0	R200,000	R200,000
Integration Zone 3: Informal Settlements					R15,000,000	R10,000,000	R10,000,000	R35,000,000
10	Economic Development	Khumalo Street Tourism Node(Thokoza)	Urban Restructuring	015 - Borrowings	R15,000,000	R10,000,000	R -	R25,000,000
11	Economic Development	Khumalo Street Tourism Node(Thokoza)	Urban Restructuring	Unassigned	R -	R -	R10,000,000	R10,000,000
Integration Zone 3: Marginalised Area 3: KwaTsaDuza					R113,340,000	R64,720,000	R71,600,000	R249,660,000
12	Transport	Establish MVRA/DLTC Katlehong(Katlehong 1)	Urban Restructuring	015 - Borrowings	R70,000,000	R -	R -	R70,000,000
13	Disaster & Emergency Management Services	Katlehong Fire Station(Katlehong 1)	Urban Restructuring	005 - Urban Settlement Development Grant	R12,000,000	R26,000,000	R -	R38,000,000
Integration Zone 3: MSDF Precincts					R39,168,000	R66,917,200	R80,525,000	R186,610,200
14	Transport	Replace Municipal buses (Operational Equipment)	Urban Restructuring	015 - Borrowings	R -	R39,000,000	R -	R39,000,000
15	Energy	Russel Road substation(Germiston)	Economic Development	015 - Borrowings	R5,000,000	R10,000,000	R20,000,000	R35,000,000
Integration Zone 3: Remainder of integration zone 3					R157,035,900	R135,414,850	R147,487,835	R439,938,585
16	Information Communication Technology (ICT)	Refurbishment of existing call centre(Corporate)	Economic Development	001 - Council Funding	R27,000,000	R27,000,000	R29,700,000	R83,700,000
17	Human Settlements	Germiston Urban Renewal - Germiston Fire Station	Urban Restructuring	005 - Urban Settlement	R40,000,000	R -	R -	R40,000,000

		Social Housing Project- Buildings(Germiston)		Development Grant				
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INTEGRATION ZONE 4: ETWATWA-DAVEYTON-BENONI



STEP 1: IZ SPATIAL LOGIC

Graphically represented on **Figure B1.24.1**, Integration Zone 4 represent the functional area east of the Kempton Park CBD, along the IRPTN route up to Benoni CBD, then eastward along the IRPTN line towards the Etwatwa CCC, and along the railway line eastwards up to the Daveyton Urban Hub. The table below is a summary of the salient features related to IZ4.

Table B1.13.1: Integration Zone 4 Salient Features

ANCHORS - ECONOMIC NODES		
CBD	URBAN HUB	SECONDARY NODES
Benoni ¹	Daveyton CCC ²	<ul style="list-style-type: none">  UNISA Campus³,  Etwatwa CCC⁴,  Daveyton Mall⁵
MARGINALISED AREA		
Daveyton-Etwatwa ⁶		
TRANSIT SPINE		
Proposed IRPTN Phase 1 Bus Feeders Taxi Routs Metro Rail		

(Note: The numbers next to the names correlate to the number indicated in the corresponding Figure)

Integration Zone 4 is divided into nine (9) functional section for the purposes of the detailed analysis and Target Model to follow (refer Figure B1.24.3).

STEP 2: IZ PROFILE

Following is a high-level base line assessment of Integration Zone 4, assessing the demographic, land use and infrastructure within the IZ.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that 104 025 people are residing within IZ4, which translates to 32 522 residential units (refer **Table B1.13.2**). The aforementioned IZ4 population represents about 3% of the total population in the EMM (refer **Table B1.4**). As reflected in **Table B1.12.3**, approximately 58% of households (18 811) fall within the low income bracket (R0<R3 188), followed by 25% of households (8 172) fall within the middle income bracket (R2 183<R12 817) and 17% of households (5 539) fall within the high income bracket (R12 817+). The elevated low income levels indicate high government dependency of households on social / housing grants and related government provided facilities.



Table B1.13.2: IZ4 Baseline Households, Population and Density

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
Total IZ 4	32,522	104,025	4,544	7
4.1	1,769	4,475	535	3
4.2	3,716	11,126	464	8
4.3	917	2,519	269	3
4.4	279	1,005	1,096	0
4.5	603	1,749	349	2
4.6	3,782	11,108	721	5
4.7	4,877	15,752	322	15
4.8	10,622	33,165	505	21
4.9	5,956	23,125	282	21

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

Table B1.13.3: IZ4 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0 < R3 188)	(R3 183 < R12 817)	(R12 817+)					
IZ 4	58%	25%	17%	100%	18,811	8,172	5,539	32,522
4.1	35%	25%	40%	100%	615	441	712	1,769
4.2	24%	20%	56%	100%	910	743	2,063	3,716
4.3	31%	38%	31%	100%	285	346	287	917
4.4	39%	31%	31%	100%	107	86	86	279
4.5	25%	14%	61%	100%	150	84	370	603
4.6	65%	28%	6%	100%	2,465	1,072	245	3,782
4.7	61%	25%	14%	100%	2,984	1,199	695	4,877
4.8	72%	23%	6%	100%	7,626	2,407	589	10,622
4.9	62%	30%	8%	100%	3,669	1,795	492	5,956

Source: Census 2011, STATS SA

In terms of **residential densities** and **property values**, as indicated on **Figure B1.24.2**, it is evident that the concentration of higher residential densities are located within Daveyton MA and within the inner cities (CBD's), with the lower densities within the remainder of IZ4. The inverse is noted in terms of the property values (based on the EMM valuation roll), the lower property values are noted within Daveyton MA and the higher values associated within the remainder of the IZ.



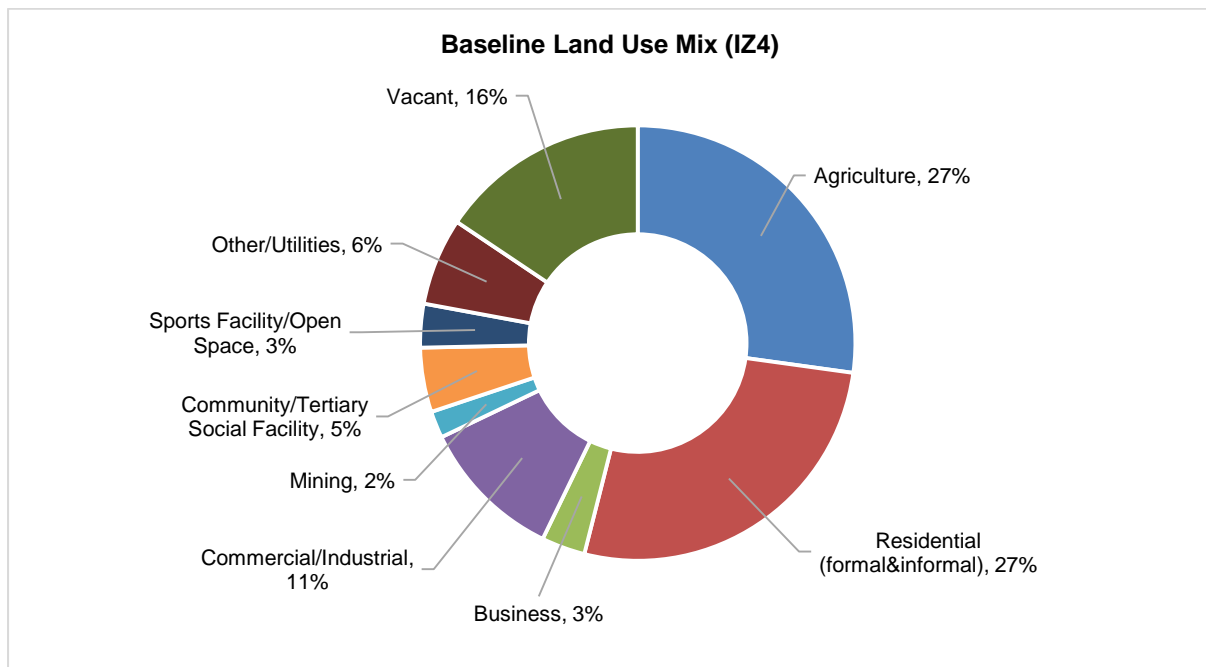
» LAND USE ASSESSMENT

Integration Zone 4 comprise of approximate 4 544 ha. **Diagram B1.10** graphically represents the Baseline Land Use Mix (ha) and **Table B1.13.4** represents the detail Baseline Land Use Mix (ha and %).

From the baseline land uses assessment it is evident that the dominant land use within IZ4 is agriculture, representing 27% (1 235 ha) of the total IZ4 land area, followed by 27% (1 216 ha) representing residential (formal and informal) land and 16% (709 ha) Vacant land, whilst 3% (147 ha) of the land area represents Sport Facilities / Open Space. It is noted that 3% (217 ha) of the land area within IZ4 represent Community / Tertiary Social facilities **Figure B1.24.3** graphically represents the current land use mix and social facilities locations of IZ4.

As indicated on **Figure B1.24.4**, 16% (709 ha) of the land area within IZ4 is Vacant and 27% (1 235 ha) is Agriculture.

Diagram B1.10: IZ4 Base Line Land Use Mix (%)



Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014



Table B1.13.4: IZ4 Baseline Land Use Mix (ha and %)

Baseline Land Use Mix (ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community /Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 4	1,235	1,216	147	486	91	217	147	295	709	4,544
4.1	139	194	12	43	-	8	5	54	81	535
4.2	27	277	24	1	-	80	29	8	19	464
4.3	47	18	79	33	5	10	26	12	39	269
4.4	744	44	4	231	13	11	3	0	47	1,096
4.5	4	51	2	155	-	0	1	21	116	349
4.6	233	116	15	12	73	48	3	69	152	721
4.7	34	104	4	5	-	13	45	3	114	322
4.8	7	263	0	4	-	25	4	126	78	505
4.9	-	151	7	2	-	22	33	3	64	282
Baseline Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community /Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 4	27%	27%	3%	11%	2%	5%	3%	6%	16%	100%
4.1	26%	36%	2%	8%	0%	1%	1%	10%	15%	100%
4.2	6%	60%	5%	0%	0%	17%	6%	2%	4%	100%
4.3	18%	7%	29%	12%	2%	4%	10%	4%	14%	100%
4.4	68%	4%	0%	21%	1%	1%	0%	0%	4%	100%
4.5	1%	15%	1%	45%	0%	0%	0%	6%	33%	100%
4.6	32%	16%	2%	2%	10%	7%	0%	10%	21%	100%
4.7	11%	32%	1%	2%	0%	4%	14%	1%	35%	100%
4.8	1%	52%	0%	1%	0%	5%	1%	25%	15%	100%
4.9	0%	54%	3%	1%	0%	8%	12%	1%	23%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities

» INFRASTRUCTURE ASSESSMENT

Existing public transport infrastructure (refer **Figure B1.24.5**) present within IZ4 is the Metro Rail and numerous Taxi routes. The following rail station are located within IZ4: Northmead, Vanryrn, Alliance, Daveyton Stations.



It is noted that the Rail is primarily an east-west linkage from the Benoni CBD to Daveyton in the East, with no railway line connecting Kempton Park CBD with the Benoni CBD along the IZ delineation. The Emaphupheni community is also not connected via the railway line. Although, it is noted that the proposed IRPTN route with numerous feeders and proposed station, will connect the Kempton Park CBD area, all the way south-east up to Emaphupheni. Currently the taxi industry has numerous stops along the IZ delineation.

Walkability, based on a 500m walking distance from any public transport station, is graphically represented on **Figure B1.24.5**. It is evident that most of the IZ4 adheres to the criteria of walkability. Some smaller sections of the IZ has limited walkability, as it is not served by the proposed IRPTN public transport facilities, although numerous taxi stops are noted.

In terms of bulk infrastructure, the municipality currently experiences capacity shortages within most of the water infrastructure. As indicated in **Figure B1.24.6**, IZ4 has no capacity. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities, this is one of the major constraints towards development within EMM. Evident from **Figure B1.24.7**, is that most of the central sections of IZ4 has some spare capacity, with the remaining sections with no spare capacity. In terms of electricity supply, most of the electricity infrastructure in EMM is currently at its full capacity, with limited section of IZ4 having spare capacity (refer **Figure B1.24.8**).

STEP 3: IZ TARGETS

Based on the **EMM BEPP IZ Target Model**, an additional 59 022 people, which translates into 22 973 residential units, can be accommodated within IZ4 (refer **Table B1.13.5**). The total additional developable land area within IZ4, accumulates to 723 ha. The average dwelling unit density across the entire IZ4, is 32 du/ha, with some sections of the IZ achieving densities of 40, 50 and even 120 da/ha (refer **Figure B1.24.9 – Residential Density**).

Table B1.13.5: IZ4 Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 4	22,973	17%	59,022	723	32
4.1	6,596	5%	15,970	269	25
4.2	1,068	1%	3,142	45	24
4.3	64	0%	177	1	120
4.4	2,862	2%	9,948	80	36
4.5	-	0%	-	15	0
4.6	4,511	3%	6,909	101	45
4.7	3,172	2%	10,676	98	32
4.8	4,038	3%	10,248	102	40



Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
4.9	662	1%	1,951	13	50

From the **IZ Target Model**, based on the developability of vacant and underutilised land (refer **Table B1.13.6**), it is anticipated that 61% of the additional households will fall within the low income bracket (R0<R3 188), representing 9 944 dwelling units. The low income dwelling units represents primarily subsidised housing. The middle income category (R3 183<R12 817) represents 23% of the anticipated future households, representing 3 832 dwelling units. The middle income category is representative of gap (subsidy linked and bonded) housing options. Only 16% of the anticipated future households fall within the higher income category, representing 2 611 dwelling units. The higher income category is representative of market / bonded housing options.

Table B1.13.6: IZ4 Target Model: Households and Income distribution

Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 4	52%	26%	23%	100%	11,867	5,933	5,172	22,973
4.1	35%	25%	40%	100%	2,295	1,644	2,657	6,596
4.2	24%	20%	56%	100%	261	213	593	1,068
4.3	31%	38%	31%	100%	20	24	20	64
4.4	39%	31%	31%	100%	1,103	879	879	2,862
4.5	25%	14%	61%	100%	-	-	-	-
4.6	65%	28%	6%	100%	2,940	1,278	293	4,511
4.7	61%	25%	14%	100%	1,941	780	452	3,172
4.8	72%	23%	6%	100%	2,899	915	224	4,038
4.9	62%	30%	8%	100%	408	200	55	662

The *Potential Additional Floor Area (m²)* as based on the **EMM BEPP IZ Target Model** (refer **Table B1.13.7**), indicates that the dominant land use to be accommodated within IZ4 is residential (50% - representing 2 917 331 m²), followed by offices (22% - representing 1 301 694 m²) and commercial (13% - representing 746 817 m²). **Figure B1.24.9** is a graphical representation the accumulated IZ4 Land Use Categories.

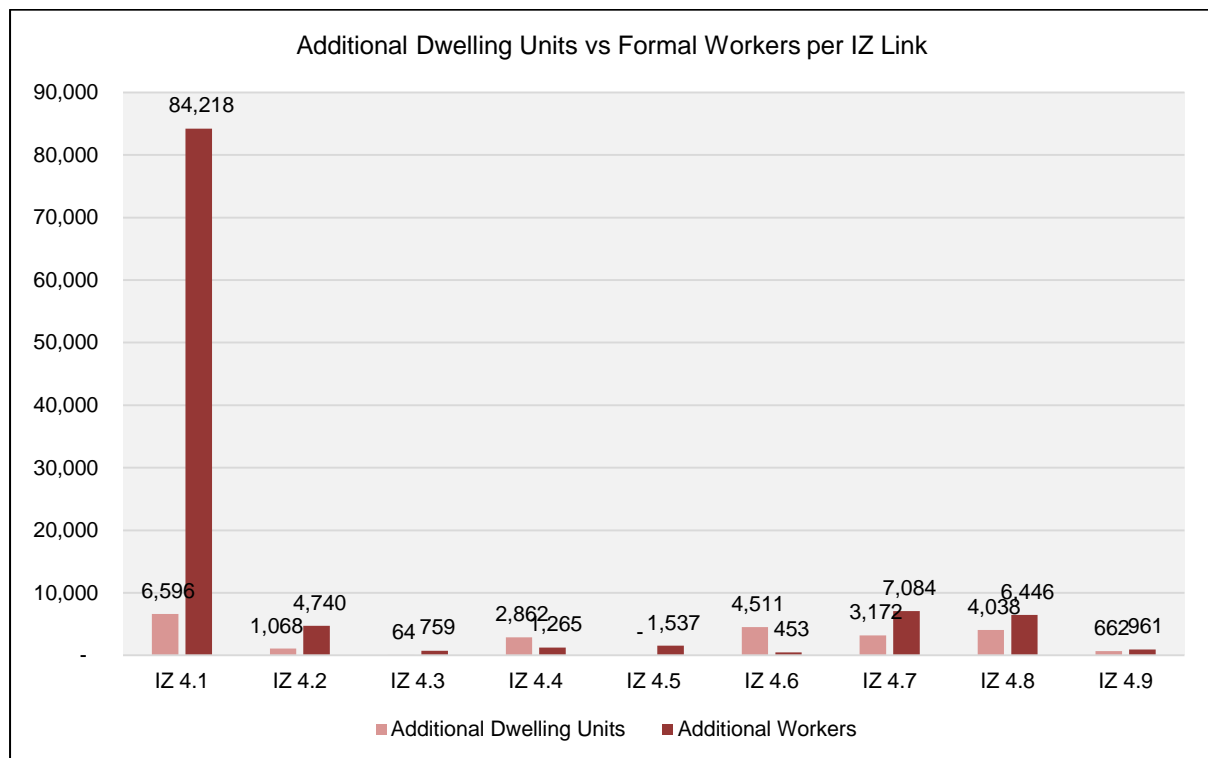
Figure B1.24.10 and **Figure B1.24.11** graphically represent the potential additional land use per floor, based on the Target Model Categorization (refer *Table B1.6: IZ Target Model: Land Use Categories*). The total Potential Additional Floor Area (m²) for IZ4 accumulates to approximately 5 795 099 m².



The *Potential Additional Workers* target projections (refer **Table B1.13.8**) indicate the latent opportunity for additional 54 237 Office workers (50%), followed by 19 268 Commercial workers (18%) and 11 602 Institutional workers (11%) can be accommodated within IZ4. The total Potential Additional Workers for IZ4 accumulates to approximately 107 464 workers.

Figure B1.24.12 and **Diagram B1.11** compare the target potential of dwelling units versus formal workers. It is evident that additional economic potential of IZ4 is relatively larger than the population potential, especially in the ECC area.

Diagram B1.11: Additional Dwelling Units vs Formal Workers IZ4



From the above it is thus evident that the following interrelated TOD principles have been adhered to in the target setting:

- Walkability (live-work-play precinct accessibility)
- Density (live)
- Inclusiveness (live: income mix)
- Mixed – use (live-work-play)
- Transit (live-work-play inter precinct accessibility)

The above listed elements inform the New Spatial Logic to follow (Step 4).



Table B1.13.7: IZ4 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 4	2,917,331	304,107	1,301,694	144,738	-	202,369	63,257	746,817	114,786	5,795,099
4.1	673,871	222,651	1,191,169	144,738	-	202,369	-	319,236	114,786	2,868,820
4.2	165,813	8,365	16,731	-	-	-	-	74,796	-	265,705
4.3	3,213	-	-	-	-	-	-	-	-	3,213
4.4	607,660	-	-	-	-	-	-	43,319	-	650,979
4.5	-	-	-	-	-	-	59,273	-	-	59,273
4.6	598,572	1,016	-	-	-	-	-	4,829	-	604,417
4.7	269,392	20,682	41,364	-	-	-	-	183,488	-	514,927
4.8	520,153	37,123	51,477	-	-	-	-	113,908	-	722,661
4.9	78,656	14,270	953	-	-	-	3,983	7,240	-	105,103
Potential additional Floor Area (%)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 4	50%	5%	22%	2.5%	0.0%	3.5%	1%	13%	2%	100%
4.1	23%	8%	42%	5.0%	0.0%	7.1%	0%	11%	4%	100%
4.2	62%	3%	6%	0.0%	0.0%	0.0%	0%	28%	0%	100%
4.3	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
4.4	93%	0%	0%	0.0%	0.0%	0.0%	0%	7%	0%	100%
4.5	0%	0%	0%	0.0%	0.0%	0.0%	100%	0%	0%	100%
4.6	99%	0%	0%	0.0%	0.0%	0.0%	0%	1%	0%	100%
4.7	52%	4%	8%	0.0%	0.0%	0.0%	0%	36%	0%	100%
4.8	72%	5%	7%	0.0%	0.0%	0.0%	0%	16%	0%	100%
4.9	75%	14%	1%	0.0%	0.0%	0.0%	4%	7%	0%	100%

Table B1.13.8: IZ4 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 4	3,644	9,215	54,237	4,386	-	11,602	1,632	19,268	3,478	107,464
4.1	136	6,747	49,632	4,386	-	11,602	-	8,236	3,478	84,218
4.2	1,860	253	697	-	-	-	-	1,930	-	4,740
4.3	759	-	-	-	-	-	-	-	-	759
4.4	148	-	-	-	-	-	-	1,118	-	1,265
4.5	7	-	-	-	-	-	1,529	-	-	1,537
4.6	298	31	-	-	-	-	-	125	-	453
4.7	-	627	1,724	-	-	-	-	4,734	-	7,084
4.8	237	1,125	2,145	-	-	-	-	2,939	-	6,446
4.9	199	432	40	-	-	-	103	187	-	961
Potential additional Workers (%)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 4	3%	9%	50%	4%	0%	11%	2%	18%	3%	100%
4.1	0%	8%	59%	5%	0%	14%	0%	10%	4%	100%
4.2	39%	5%	15%	0%	0%	0%	0%	41%	0%	100%
4.3	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
4.4	12%	0%	0%	0%	0%	0%	0%	88%	0%	100%
4.5	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
4.6	66%	7%	0%	0%	0%	0%	0%	27%	0%	100%
4.7	0%	9%	24%	0%	0%	0%	0%	67%	0%	100%
4.8	4%	17%	33%	0%	0%	0%	0%	46%	0%	100%
4.9	21%	45%	4%	0%	0%	0%	11%	19%	0%	100%

STEP 4: SPATIAL LOGIC AND PRECINCT VALIDATION

From the preceding analysis (Step 1 to 3), it is evident that IZ4 consist of a number of anchors / economic nodes (CBD, Urban Hub and Secondary Nodes), a marginalised area and numerous transportation modes (rail, bus, taxi). In addition, IZ4 adheres to the requirement of walkability (500m), with most proposed IRPTN stations allowing for TOD developments (live-work-play concept).

IZ4 currently comprise of 104 025 people (32 522 residential units) with the majority of households falling within the low income bracket (58%). The current residential density across the IZ is calculated at 7 du/ha. The dominant land uses associated with IZ4 is agriculture (1 235 ha), residential (1 216 ha) and Vacant (709 ha).

Informed by the above, the *EMM BEPP IZ Target Model* analysis highlighted that IZ4 has 723 ha of developable land available for future development / redevelopment, to accommodate an addition 359 022 people (22 973 residential units – primarily representing low income households – 52%) at an average of 32 du/ha across the entire IZ. In addition, the potential is identified for additional 5,795,099m² developable floor area, primarily representing residential, office and commercial land use, which can generate an additional 107 464 job opportunities within IZ4, thus further enhancing the concept of live-work-play.

Figure B1.24.13 is a graphical representation of the New Spatial Logic, highlighting the target land uses in relation to the economic nodes, marginalized area and connected by the public transport modes.

**Please note, the citywide projects (e.g. precinct planning, strategic urban development areas, mega housing projects etc.) are discussed in more detail in Section B2 – Local Area Planning to follow. The holistic IZ (B1), Local Area Planning (B2), and Public transport / Housing integration (B3) is summarised in Section B4 – Urban Network Summary.*

STEP 5: INTEGRATION ZONE PHASING (PRECINCT PRIORITIZATION)

The identified developable land areas (as identified in Step 3) located within IZ4, is prioritised in terms of short (0-5 years), medium (5 to 10 years) and long (10 years+) term growth. The anticipated number of households that has the potential to develop in the **short** term is approximate 3 761 additional households, in the **medium** term it is approximate 13 209 additional households, and of the **long** term 6 004 additional households (refer **Table B1.10.9**).

- Within the **short term**, it is anticipated that 60% of households will be low income households, 24% will be Middle income households, and 16% will be high income households.
- Within the **medium term**, it is anticipated that 56% of households will be low income households, 26% will be Middle income households, and 18% will be high income households.



- Within the **long term**, it is anticipated that 36% of households will be low income households, 27% will be Middle income households, and 36% will be high income households.

Figure B1.24.14 is a graphical representation of the anticipated development phasing. The development phasing is collectively informed by the anticipated additional number of households, workers and land use projections (based on the **EMM BEPP IZ Target Model**).



Table B1.13.9: IZ4 Target Model: Households Time Frame

Target Model: Households Time Frame (ha)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 4	2,259	885	616	3,761	7,424	3,405	2,379	13,209	2,184	1,643	2,176	6,004
4.1	24	17	28	69	1,063	761	1,230	3,054	1,208	865	1,399	3,473
4.2	96	78	217	390	166	135	376	677	-	-	-	-
4.3	-	-	-	-	20	24	20	64	-	-	-	-
4.4	6	5	5	15	122	97	97	316	976	778	778	2,531
4.5	-	-	-	-	-	-	-	-	-	-	-	-
4.6	-	-	-	-	2,940	1,278	293	4,511	-	-	-	-
4.7	1,301	523	303	2,126	640	257	149	1,046	-	-	-	-
4.8	833	263	64	1,160	2,066	652	160	2,878	-	-	-	-
4.9	-	-	-	-	408	200	55	662	-	-	-	-
Target Model: Households Time Frame (%)												
Integration Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 4	60%	24%	16%	100%	56%	26%	18%	100%	36%	27%	36%	100%
4.1	35%	25%	40%	100%	35%	25%	40%	100%	35%	25%	40%	100%
4.2	24%	20%	56%	100%	24%	20%	56%	100%				
4.3					31%	38%	31%	100%				
4.4	39%	31%	31%	100%	39%	31%	31%	100%	39%	31%	31%	100%
4.5												
4.6					65%	28%	6%	100%				
4.7	61%	25%	14%	100%	61%	25%	14%	100%				
4.8	72%	23%	6%	100%	72%	23%	6%	100%				
4.9					62%	30%	8%	100%				

STEP 6: IZ4 PROJECTS AND STRATEGIC INTERVENTIONS

The following section indicates the CAPEX projects located within IZ3 and prioritised according to the following ten (10) categories:

- Priority 1: Economic Node: Aerotropolis Core
- Priority 2: Economic Node: CBD
- Priority 3: Economic Node: Industrial Area
- Priority 4: Economic Node: Urban Hub
- Priority 5: Housing projects current
- Priority 6: Housing projects proposed
- Priority 7: Informal Settlements
- Priority 8: Marginalised Area 4: Daveyton / Etwatwa
- Priority 9: MSDF Precincts
- Priority 10: Remainder of Integration Zone 4

Table B1.13.10 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B1.24.15** graphically represents the spatial locations of the identified projects as listed within Table B1.13.10.

Apart from the abovementioned CAPEX projects, two interventionist projects were identified from the EMM IZ Target Model (refer **Figure B1.24.16**). The projects are well located in terms of the accessibility to public transport and are of a mixed-use nature.

Proceeding, several departments such as City Planning Special Projects, Transportation, Human Settlements and Real Estate need to analyse and prioritise the projects. Thereafter processes such as land release proposals, procurement proposals, future studies / identification of incentives will follow.



Table B1.13.10: Prioritised Capex Projects in Integration Zone 4

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
Integration Zone 4: Economic Node: Aerotropolis Core					R21,500,000	R63,500,000	R8,500,000	R93,500,000
1	Water and Sanitation	Pomona: New Eastern OF sewer Phase 2 (Kempton Park)	Urban Restructuring	015 - Borrowings	R15,000,000	R30,000,000	R -	R45,000,000
2	Water and Sanitation	Construction of a Bredell Zone Water Supply System(Kempton Park)	Urban Restructuring	015 - Borrowings	R1,500,000	R20,000,000	R5,000,000	R26,500,000
Integration Zone 4: Economic Node: CBD					R18,000,000	R36,200,000	R11,500,000	R65,700,000
3	Real Estate	Densification of Council Buildings Benoni(Benoni)	Upgrading and Renewal	007 - CRRF Capital Replacement Reserve Fund	R -	R20,000,000	R -	R20,000,000
4	Water and Sanitation	W&S:Emergency SVC to informal settlement(Corporate)	Urban Restructuring	005 - Urban Settlement Development Grant	R7,000,000	R9,000,000	R -	R16,000,000
Integration Zone 4: Economic Node: Industrial Area					R3,000,000	R3,000,000	R4,000,000	R10,000,000
5	Energy	Etwatwa Lighting(Etwatwa)	Economic Development	005 - Urban Settlement Development Grant	R3,000,000	R3,000,000	R -	R6,000,000
6	Energy	Etwatwa Lighting(Etwatwa)	Economic Development	Unassigned	R -	R -	R4,000,000	R4,000,000
Integration Zone 4: Economic Node: Urban Hub					R20,500,000	R38,000,000	R65,500,000	R124,000,000
7	Roads and Stormwater	Construct Daveyton CBD/N12 Interchange (Benoni)	Urban Restructuring	Unassigned	R -	R -	R40,000,000	R40,000,000

8	Roads and Stormwater	Construct Daveyton CBD/N12 Interchange (Benoni)	Urban Restructuring	015 - Borrowings	R8,000,000	R20,000,000	R -	R28,000,000
Integration Zone 4: Housing projects current					R43,000,000	R11,000,000	R10,000,000	R64,000,000
9	Water and Sanitation	Mayfield Ext 1(Benoni)	Urban Restructuring	005 - Urban Settlement Development Grant	R30,000,000	R1,000,000	R -	R31,000,000
10	Roads and Stormwater	Roads: Low Cost Housing: East: Access road Mayfield Ext. 6,7 and 12 : Nebiya, Levyte, Tshukudu, Tau,Metsweding, Kwekwezi St(Daveyton)	Urban Restructuring	005 - Urban Settlement Development Grant	R4,000,000	R4,000,000	R -	R8,000,000
Integration Zone 4: Housing projects proposed					R3,791,229	R -	R -	R3,791,229
11	Human Settlements	Mayfield Extension 45(Daveyton)	Urban Restructuring	005 - Urban Settlement Development Grant	R3,791,229	R -	R -	R3,791,229
Integration Zone 4: Informal Settlements					R26,489,691	R6,000,000	R6,000,000	R38,489,691
12	Human Settlements	Daveyton Extension 14(Daveyton)	Urban Restructuring	005 - Urban Settlement Development Grant	R20,489,691	R -	R -	R20,489,691
13	Roads and Stormwater	Roads East: Roads and SW at Mayfield Ext 5,7,8 (Mayfield ext 5 phase 1: Mvubu, Bejane, Shongololo,Tau, Ngonyama, Nyoni, Ndou, Etwatwa Ext 37 Arusha, Conakry, Windhook, Cabinda and Oran, Ext 8 Kgotsong, Lethabo, Hlobane, Phumolong and Masizakhe street(Daveyton)	Urban Restructuring	005 - Urban Settlement Development Grant	R6,000,000	R6,000,000	R -	R12,000,000

Integration Zone 4: Marginalised Area 4: Daveyton / Etwatwa					R60,800,000	R17,000,000	R23,250,000	R101,050,000
14	Water and Sanitation	Etwatwa Sewer Upgrades(Etwatwa)	Urban Restructuring	005 - Urban Settlement Development Grant	R54,000,000	R10,000,000	R -	R64,000,000
15	Health and Social Development	New Clinic Chief A Luthuli Extension (Ward 24) (Level 2) (Benoni)	Urban Restructuring	Unassigned	R -	R -	R12,000,000	R12,000,000
Integration Zone 4: MSDF Precincts					R5,370,000	R2,300,000	R3,439,000	R11,109,000
16	Human Settlements	Vehicles (Operational Equipment)	Urban Restructuring	001 - Council Funding	R4,500,000	R2,300,000	R -	R6,800,000
17	Human Settlements	Vehicles (Operational Equipment)	Urban Restructuring	Unassigned	R -	R -	R2,800,000	R2,800,000
Integration Zone 4: Remainder of integration zone 4					R108,300,000	R59,000,000	R4,000,000	R171,300,000
18	Water and Sanitation	Reservoir Construction - Benoni-Northmead-Tembisa-Fairlands(Corporate)	Urban Restructuring	015 - Borrowings	R25,000,000	R10,000,000	R -	R35,000,000
19	Water and Sanitation	Construction of a new 23MI Kempton Park Reservoir (Kempton Park)	Urban Restructuring	Unassigned	R30,000,000	R -	R -	R30,000,000





INTEGRATION ZONE 5: DUDUZA-TSAKANE-KWATHEMA-BOKSBURG



STEP 1: IZ SPATIAL LOGIC

Graphically represented on **Figure B1.25.1**, Integration Zone 5 represent the functional area south of the Benoni CBD, along the IRPTN line, southwards towards Tsakane and Duduza. Integration Zone 5 includes the Benoni, Brakpan and Springs CBD's. The table below is a summary of the salient features related to IZ5.

Table B1.14.1: Integration Zone 5 Salient Features

ANCHORS - ECONOMIC NODES		
CBD	URBAN HUB	SECONDARY NODES
Benoni ¹ , Brakpan ² , Springs ³	Tsakane CCC ⁴	<ul style="list-style-type: none">  Kwa-Thema CCC⁵,  Ekhaya Shopping Centre⁶,  Tsakane Mall⁷,  Duduza CCC⁸
MARGINALISED AREA		
KwaTsaDuza ⁹		
TRANSIT SPINE		
Proposed IRPTN Phase 1 Bus Feeders Taxi Routs Metro Rail		

(Note: The numbers next to the names correlate to the number indicated in the corresponding Figure)

Integration Zone 5 is divided into fourteen (14) functional section for the purposes of the detailed analysis and Target Model to follow (refer Figure B1.25.3).

STEP 2: IZ PROFILE

Following is a high-level base line assessment of Integration Zone 5, assessing the demographic, land use and infrastructure within the IZ.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that 239 615 people are residing within IZ5, which translates to 67 903 residential units (refer **Table B1.14.2**). The aforementioned IZ5 population represents about 7% of the total population in the EMM (refer **Table B1.4**). As reflected in **Table B1.14.3**, approximately 64% of households (43 348) fall within the low income bracket (R0<R3 188), followed by 27% of households (18 005) fall within the middle income bracket (R2 183<R12 817) and 10% of households (6 549) fall within the high income bracket (R12 817+). The elevated low income levels indicate high government dependency of households on social / housing grants and related government provided facilities.



Table B1.14.2: IZ5 Baseline Households, Population and Density

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
Total IZ 5	67,903	239,615	5,662	12
5.1	3,409	13,527	1,027	3
5.2	224	680	414	1
5.3	3,010	10,490	304	10
5.4	1,448	5,467	233	6
5.5	2,374	7,474	614	4
5.6	5,458	18,883	385	14
5.7	5,698	19,768	293	19
5.8	1,980	6,392	156	13
5.9	27,230	97,543	529	52
5.10	9,620	36,319	313	31
5.11	1,062	3,129	687	2
5.12	2,379	8,338	136	17
5.13	3,878	11,094	217	18
5.14	132	512	353	0

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

Table B1.14.3: IZ5 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0 < R3 188)	(R3 183 < R12 817)	(R12 817+)					
IZ 5	64%	27%	10%	100%	43,348	18,005	6,549	67,903
5.1	47%	35%	19%	100%	1,593	1,179	637	3,409
5.2	25%	25%	51%	100%	55	55	114	224
5.3	39%	32%	29%	100%	1,183	968	859	3,010
5.4	32%	27%	42%	100%	458	385	605	1,448
5.5	35%	34%	30%	100%	841	812	721	2,374
5.6	61%	29%	10%	100%	3,348	1,575	535	5,458
5.7	71%	25%	4%	100%	4,031	1,428	239	5,698
5.8	74%	24%	2%	100%	1,464	467	48	1,980
5.9	67%	26%	7%	100%	18,286	7,106	1,838	27,230
5.10	69%	25%	6%	100%	6,636	2,420	565	9,620
5.11	65%	18%	17%	100%	691	194	177	1,062
5.12	75%	23%	2%	100%	1,787	536	56	2,379
5.13	76%	22%	2%	100%	2,945	850	84	3,878
5.14	24%	23%	54%	100%	31	30	71	132

Source: Census 2011, STATS SA



In terms of **residential densities** and **property values**, as indicated on **Figure B1.25.2**, it is evident that the concentration of higher residential densities are located within Tsakane MA with the lower densities within the remainder of IZ5. The inverse is noted in terms of the property values (based on the EMM valuation roll), the lower property values are noted within Tsakane MA and the higher values associated within the remainder of the IZ.

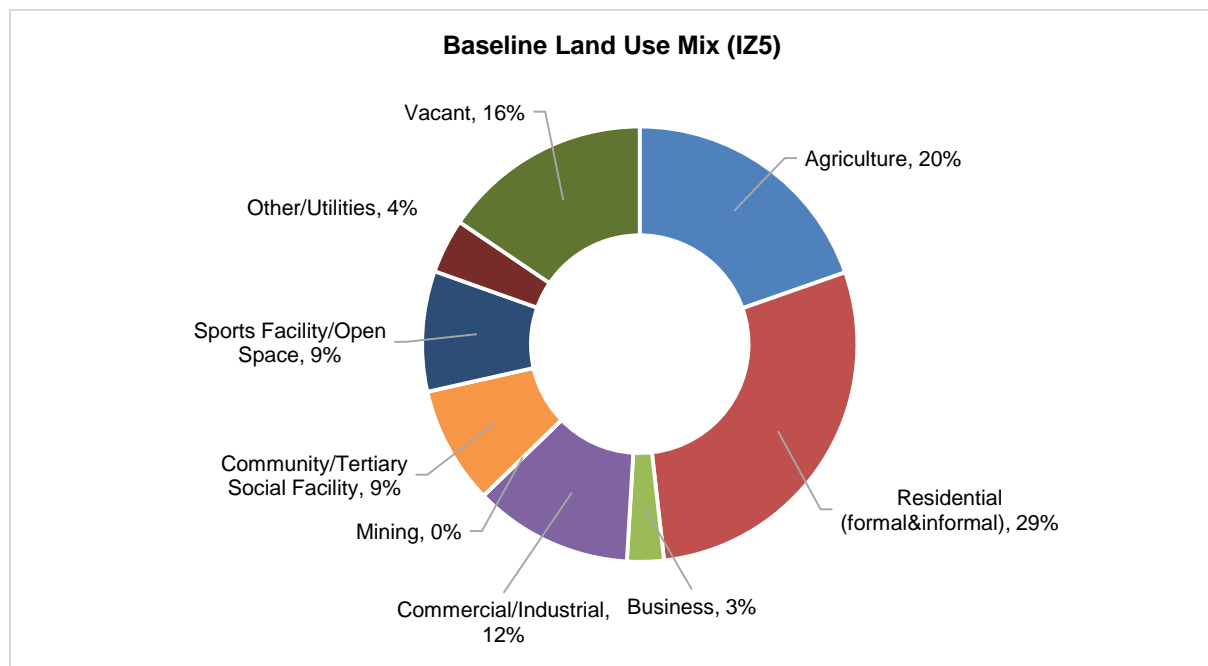
»» **LAND USE ASSESSMENT**

Integration Zone 5 comprise of approximate 5 662 ha. **Diagram B1.12** graphically represents the Baseline Land Use Mix (ha) and **Table B1.14.4** represents the detail Baseline Land Use Mix (ha and %).

From the baseline land uses assessment it is evident that the dominant land use within IZ5 is residential (formal and informal), representing 29% (1 618 ha) of the total IZ5 land area, followed by 20% (1 112 ha) representing agricultural land and 16% (879 ha) Vacant land, whilst 9% (507 ha) of the land area represents Sport Facilities / Open Space. It is noted that 9% (495 ha) of the land area within IZ5 represent Community / Tertiary Social facilities **Figure B1.25.3** graphically represents the current land use mix and social facilities locations of IZ5.

As indicated on **Figure B1.25.4**, 16% (879 ha) of the land area within IZ5 is Vacant and 20% (1 112 ha) is Agriculture.

Diagram B1.12: IZ5 Base Line Land Use Mix (%)



Source: *Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014*



Table B1.14.4: IZ5 Baseline Land Use Mix (ha and %)

Baseline Land Use Mix (ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community /Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 5	1,112	1,618	155	668	1	495	507	229	879	5,662
5.1	551	82	5	89	-	18	60	98	126	1,027
5.2	267	31	30	4	-	40	15	3	22	414
5.3	-	186	40	6	-	22	41	2	7	304
5.4	-	126	1	0	-	75	13	1	18	233
5.5	38	147	41	141	-	54	36	19	138	614
5.6	2	126	12	19	-	80	61	62	23	385
5.7	76	149	4	0	-	8	19	3	34	293
5.8	-	71	-	-	-	2	66	-	18	156
5.9	6	299	15	4	-	67	85	5	47	529
5.10	2	147	3	2	-	45	46	7	62	313
5.11	68	122	1	344	-	81	17	29	25	687
5.12	-	57	-	-	-	3	36	0	39	136
5.13	69	62	-	52	-	-	9	-	25	217
5.14	35	14	1	6	1	-	1	1	295	353
Baseline Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community /Tertiary Social Facility	Sports Facility/ Open Space	Other/ Utilities	Vacant	Total
IZ 5	20%	29%	3%	12%	0%	9%	9%	4%	16%	100%
5.1	54%	8%	0%	9%	0%	2%	6%	10%	12%	100%
5.2	65%	8%	7%	1%	0%	10%	4%	1%	5%	100%
5.3	0%	61%	13%	2%	0%	7%	14%	1%	2%	100%
5.4	0%	54%	0%	0%	0%	32%	5%	0%	8%	100%
5.5	6%	24%	7%	23%	0%	9%	6%	3%	23%	100%
5.6	1%	33%	3%	5%	0%	21%	16%	16%	6%	100%
5.7	26%	51%	1%	0%	0%	3%	7%	1%	11%	100%
5.8	0%	45%	0%	0%	0%	1%	42%	0%	12%	100%
5.9	1%	57%	3%	1%	0%	13%	16%	1%	9%	100%
5.10	1%	47%	1%	1%	0%	14%	15%	2%	20%	100%
5.11	10%	18%	0%	50%	0%	12%	3%	4%	4%	100%
5.12	0%	42%	0%	0%	0%	3%	26%	0%	29%	100%
5.13	32%	28%	0%	24%	0%	0%	4%	0%	12%	100%
5.14	10%	4%	0%	2%	0%	0%	0%	0%	84%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities



» INFRASTRUCTURE ASSESSMENT

Existing public transport infrastructure (refer **Figure B1.25.5**) present within IZ5 is the Metro Rail and numerous Taxi routes. The following rail station are located within IZ5: New Kleinfontein, Range View, Anzac, Brakpan, New Era and Pollak Park Stations.

It is noted that the Rail is primarily an east-west linkage from the Benoni CBD to Springs CBD in the East, with no railway line extending southward toward Tsakane / Duduza, along the IZ delineation. Although, it is noted that the proposed IRPTN route with numerous feeders and proposed station, will connect the Duduza area. Currently the taxi industry has numerous stops along the IZ delineation, serving the Tsakane / Duduza communities.

Walkability, based on a 500m walking distance from any public transport station, is graphically represented on **Figure B1.25.5**. It is evident that most of the IZ5 adheres to the criteria of walkability. One section of the IZ (Tsakane) has limited walkability, as it is not served by the proposed IRPTN public transport facilities, although numerous taxi stops are noted.

In terms of bulk infrastructure, the municipality currently experiences capacity shortages within most of the water infrastructure. As indicated in **Figure B1.25.6**, most of IZ5 has no capacity. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities, this is one of the major constraints towards development within EMM. Evident from **Figure B1.25.7**, is that some of the central sections of IZ5 has some spare capacity, with most of the remaining sections with no spare capacity. In terms of electricity supply, most of the electricity infrastructure in EMM is currently at its full capacity, with limited section of IZ5 having spare capacity (refer **Figure B1.25.8**).

STEP 3: IZ TARGETS

Based on the **EMM BEPP IZ Target Model**, an additional 116 348 people, which translates into 46 049 residential units, can be accommodated within IZ5 (refer **Table B1.14.5**). The total additional developable land area within IZ5, accumulates to 1 200 ha. The average dwelling unit density across the entire IZ5, is 38 du/ha, with some sections of the IZ achieving densities of 60, 70 and even 120 da/ha (refer **Figure B1.25.9 – Residential Density**).



Table B1.14.5: IZ5 Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 5	46,049	35%	116,348	1,200	38
5.1	9,708	7%	21,357	287	34
5.2	4,822	4%	12,826	114	42
5.3	71	0%	218	1	120
5.4	622	0%	978	10	64
5.5	3,051	2%	1,690	63	48
5.6	1,989	2%	6,424	47	42
5.7	6,045	5%	19,344	103	59
5.8	939	1%	3,047	12	76
5.9	2,148	2%	7,514	28	76
5.10	592	0%	2,064	12	50
5.11	9,248	7%	21,590	218	43
5.12	-	0%	-	2	0
5.13	6,330	5%	17,828	158	40
5.14	482	0%	1,467	146	3

From the **IZ Target Model**, based on the developability of vacant and underutilised land (refer **Table B1.14.6**), it is anticipated that 56% of the additional households will fall within the low income bracket (R0<R3 188), representing 26 008 dwelling units. The low income dwelling units represents primarily subsidised housing. The middle income category (R3 183<R12 817) represents 26% of the anticipated future households, representing 11 980 dwelling units. The middle income category is representative of gap (subsidy linked and bonded) housing options. Only 18% of the anticipated future households fall within the higher income category, representing 8 061 dwelling units. The higher income category is representative of market / bonded housing options.

Table B1.14.6: IZ5 Target Model: Households and Income distribution

Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 5	56%	26%	18%	100%	26,008	11,980	8,061	46,049
5.1	47%	35%	19%	100%	4,536	3,357	1,815	9,708
5.2	25%	25%	51%	100%	1,186	1,186	2,450	4,822
5.3	39%	32%	29%	100%	28	23	20	71
5.4	32%	27%	42%	100%	197	166	260	622
5.5	35%	34%	30%	100%	1,081	1,043	927	3,051
5.6	61%	29%	10%	100%	1,220	574	195	1,989
5.7	71%	25%	4%	100%	4,276	1,515	253	6,045



Integration Zone	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
5.8	74%	24%	2%	100%	694	222	23	939
5.9	67%	26%	7%	100%	1,443	561	145	2,148
5.10	69%	25%	6%	100%	408	149	35	592
5.11	65%	18%	17%	100%	6,019	1,687	1,542	9,248
5.12	75%	23%	2%	100%	-	-	-	-
5.13	76%	22%	2%	100%	4,806	1,387	136	6,330
5.14	24%	23%	54%	100%	114	109	260	482

The *Potential Additional Floor Area (m²)* as based on the **EMM BEPP IZ Target Model** (refer **Table B1.14.7**), indicates that the dominant land use to be accommodated within IZ5 is residential (83% - representing 5 964 820 m²), followed by commercial (8% - representing 595 211 m²) and industrial (3% - representing 248 442 m²). **Figure B1.25.9** is a graphical representation the accumulated IZ5 Land Use Categories.

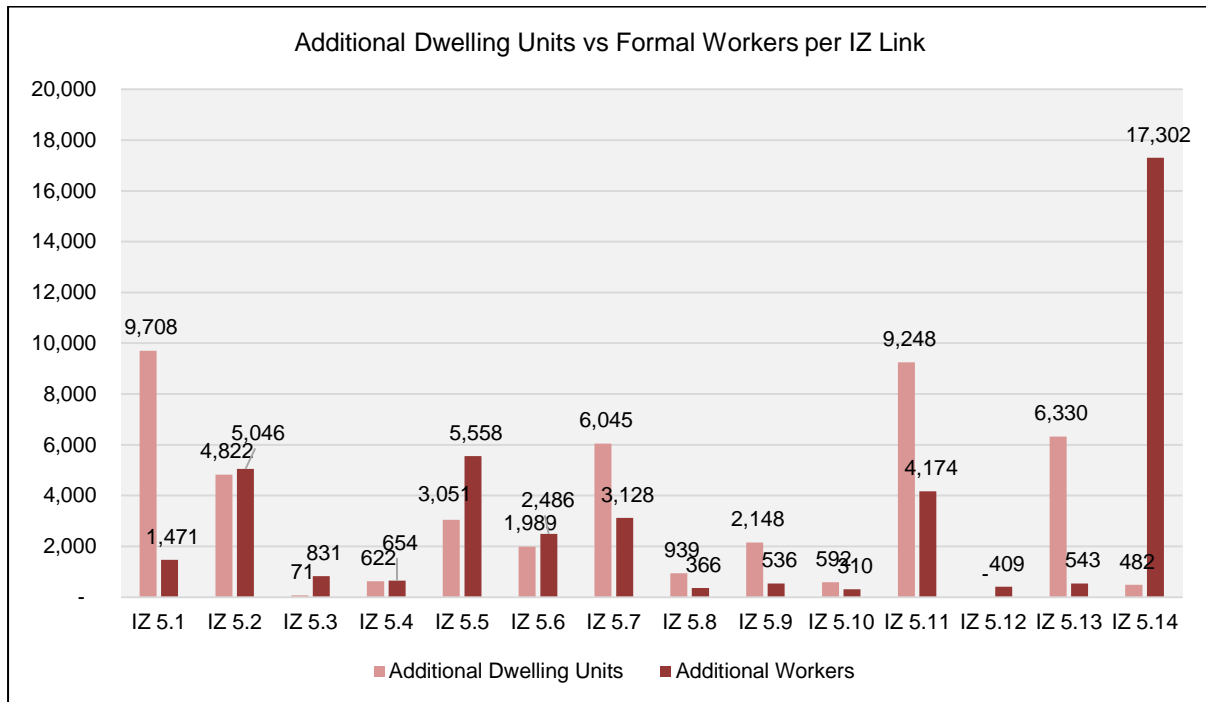
Figure B1.25.10 and **Figure B1.25.11** graphically represent the potential additional land use per floor, based on the Target Model Categorization (refer *Table B1.6: IZ Target Model: Land Use Categories*). The total Potential Additional Floor Area (m²) for IZ5 accumulates to approximately 7 202 149 m².

The *Potential Additional Workers* target projections (refer **Table B1.14.8**) indicate the latent opportunity for additional 15 256 Commercial workers (36%), followed by 10 190 Office workers (24%) and 6 410 Industrial workers (15%) can be accommodated within IZ5. The total Potential Additional Workers for IZ5 accumulates to approximately 42 814 workers.

Figure B1.25.12 and **Diagram B1.13** compare the target potential of dwelling units versus formal workers. It is evident that additional economic potential of IZ5 is relatively larger than the population potential, especially in the Selection Park area.



Diagram B1.13: Additional Dwelling Units vs Formal Workers IZ5



From the above it is thus evident that the following interrelated TOD principles have been adhered to in the target setting:

- Walkability (live-work-play precinct accessibility)
- Density (live)
- Inclusiveness (live: income mix)
- Mixed – use (live-work-play)
- Transit (live-work-play inter precinct accessibility)

The above listed elements inform the New Spatial Logic to follow (Step 4).



Table B1.14.7: IZ5 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 5	5,964,820	147,769	244,570	-	1,337	-	248,442	595,211	-	7,202,149
5.1	1,636,192	-	-	-	-	-	55,518	-	-	1,691,711
5.2	831,059	1,616	3,232	-	-	-	-	61,289	-	897,196
5.3	3,568	-	-	-	-	-	-	-	-	3,568
5.4	58,362	-	-	-	-	-	-	-	-	58,362
5.5	267,390	39,124	78,247	-	-	-	25,240	17,570	-	427,571
5.6	146,957	1,442	-	-	-	-	-	91,744	-	240,142
5.7	453,387	-	-	-	-	-	108,439	-	-	561,825
5.8	74,073	5,950	-	-	1,337	-	-	-	-	81,361
5.9	169,874	9,032	-	-	-	-	-	-	-	178,906
5.10	70,708	9,060	-	-	-	-	-	-	-	79,768
5.11	1,233,826	35,786	71,573	-	-	-	-	-	-	1,341,185
5.12	-	2,389	4,779	-	-	-	-	4,248	-	11,416
5.13	947,054	-	-	-	-	-	-	-	-	947,054
5.14	72,370	43,370	86,739	-	-	-	59,245	420,360	-	682,085
Potential additional Floor Area (%)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 5	83%	2%	3%	0.0%	0.0%	0.0%	3%	8%	0%	100%
5.1	97%	0%	0%	0.0%	0.0%	0.0%	3%	0%	0%	100%
5.2	93%	0%	0%	0.0%	0.0%	0.0%	0%	7%	0%	100%
5.3	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
5.4	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%

5.5	63%	9%	18%	0.0%	0.0%	0.0%	6%	4%	0%	100%
5.6	61%	1%	0%	0.0%	0.0%	0.0%	0%	38%	0%	100%
5.7	81%	0%	0%	0.0%	0.0%	0.0%	19%	0%	0%	100%
5.8	91%	7%	0%	0.0%	1.6%	0.0%	0%	0%	0%	100%
5.9	95%	5%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
5.10	89%	11%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
5.11	92%	3%	5%	0.0%	0.0%	0.0%	0%	0%	0%	100%
5.12	0%	21%	42%	0.0%	0.0%	0.0%	0%	37%	0%	100%
5.13	100%	0%	0%	0.0%	0.0%	0.0%	0%	0%	0%	100%
5.14	11%	6%	13%	0.0%	0.0%	0.0%	9%	62%	0%	100%

Table B1.14.8: IZ5 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 5	6,313	4,478	10,190	-	67	-	6,410	15,356	-	42,814
5.1	39	-	-	-	-	-	1,432	-	-	1,471
5.2	3,281	49	135	-	-	-	-	1,581	-	5,046
5.3	831	-	-	-	-	-	-	-	-	831
5.4	654	-	-	-	-	-	-	-	-	654
5.5	7	1,186	3,260	-	-	-	651	453	-	5,558
5.6	75	44	-	-	-	-	-	2,367	-	2,486
5.7	331	-	-	-	-	-	2,798	-	-	3,128
5.8	119	180	-	-	67	-	-	-	-	366
5.9	263	274	-	-	-	-	-	-	-	536
5.10	36	275	-	-	-	-	-	-	-	310
5.11	107	1,084	2,982	-	-	-	-	-	-	4,174
5.12	28	72	199	-	-	-	-	110	-	409

5.13	543	-	-	-	-	-	-	-	-	543
5.14	-	1,314	3,614	-	-	-	1,529	10,845	-	17,302
Potential additional Workers (%)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 5	15%	10%	24%	0%	0%	0%	15%	36%	0%	100%
5.1	3%	0%	0%	0%	0%	0%	97%	0%	0%	100%
5.2	65%	1%	3%	0%	0%	0%	0%	31%	0%	100%
5.3	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
5.4	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
5.5	0%	21%	59%	0%	0%	0%	12%	8%	0%	100%
5.6	3%	2%	0%	0%	0%	0%	0%	95%	0%	100%
5.7	11%	0%	0%	0%	0%	0%	89%	0%	0%	100%
5.8	33%	49%	0%	0%	18%	0%	0%	0%	0%	100%
5.9	49%	51%	0%	0%	0%	0%	0%	0%	0%	100%
5.10	11%	89%	0%	0%	0%	0%	0%	0%	0%	100%
5.11	3%	26%	71%	0%	0%	0%	0%	0%	0%	100%
5.12	7%	18%	49%	0%	0%	0%	0%	27%	0%	100%
5.13	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
5.14	0%	8%	21%	0%	0%	0%	9%	63%	0%	100%

STEP 4: SPATIAL LOGIC AND PRECINCT VALIDATION

From the preceding analysis (Step 1 to 3), it is evident that IZ5 consist of a number of anchors / economic nodes (CBD, Urban Hub and Secondary Nodes), a marginalised area and numerous transportation modes (rail, bus, taxi). In addition, IZ5 adheres to the requirement of walkability (500m), with most proposed IRPTN stations allowing for TOD developments (live-work-play concept).

IZ5 currently comprise of that 239 615 people (67 903 residential units) with the majority of households falling within the low income bracket (46%). The current residential density across the IZ is calculated at 12 du/ha. The dominant land uses associated with IZ5 is residential (1 618 ha), agriculture (1 112 ha) and Vacant (879 ha).

Informed by the above, the **EMM BEPP IZ Target Model** analysis highlighted that IZ5 has 1 200 ha of developable land available for future development / redevelopment, to accommodate an addition 116 348 people (46 049 residential units – primarily representing low income households – 56%) at an average of 38 du/ha across the entire IZ. In addition, the potential is identified for additional 7,202,149m² developable floor area, primarily representing residential, commercial and industrial land use, which can generate an additional 42 814 job opportunities within IZ5, thus further enhancing the concept of live-work-play.

Figure B1.25.13 is a graphical representation of the New Spatial Logic, highlighting the target land uses in relation to the economic nodes, marginalized area and connected by the public transport modes.

**Please note, the citywide projects (e.g. precinct planning, strategic urban development areas, mega housing projects etc.) are discussed in more detail in Section B2 – Local Area Planning to follow. The holistic IZ (B1), Local Area Planning (B2), and Public transport / Housing integration (B3) is summarised in Section B4 – Urban Network Summary.*

STEP 5: INTEGRATION ZONE PHASING (PRECINCT PRIORITIZATION)

The identified developable land areas (as identified in Step 3) located within IZ4, is prioritised in terms of short (0-5 years), medium (5 to 10 years) and long (10 years+) term growth. The anticipated number of households that has the potential to develop in the **short** term is approximate 16 142 additional households, in the **medium** term it is approximate 20 407 additional households, and of the **long** term 9 500 additional households (refer **Table B1.14.9**).

- Within the **short term**, it is anticipated that 64% of households will be low income households, 22% will be Middle income households, and 13% will be high income households.
- Within the **medium term**, it is anticipated that 53% of households will be low income households, 27% will be Middle income households, and 21% will be high income households.



- Within the **long term**, it is anticipated that 51% of households will be low income households, 31% will be Middle income households, and 18% will be high income households.

Figure B1.25.14 is a graphical representation of the anticipated development phasing. The development phasing is collectively informed by the anticipated additional number of households, workers and land use projections (based on the **EMM BEPP IZ Target Model**).



Table B1.14.9: IZ5 Target Model: Households Time Frame

Target Model: Households Time Frame (ha)												
Integratio n Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 5	10,405	3,613	2,124	16,142	10,747	5,431	4,229	20,407	4,856	2,936	1,708	9,500
5.1	1,083	801	433	2,317	817	605	327	1,749	2,637	1,951	1,055	5,642
5.2	220	220	454	893	966	966	1,996	3,929	-	-	-	-
5.3	-	-	-	-	28	23	20	71	-	-	-	-
5.4	-	-	-	-	49	42	65	156	147	124	195	466
5.5	-	-	-	-	1,026	991	880	2,897	55	53	47	155
5.6	-	-	-	-	1,220	574	195	1,989	-	-	-	-
5.7	-	-	-	-	4,276	1,515	253	6,045	-	-	-	-
5.8	-	-	-	-	108	34	4	146	587	187	19	793
5.9	-	-	-	-	126	49	13	187	1,317	512	132	1,961
5.10	-	-	-	-	408	149	35	592	-	-	-	-
5.11	4,297	1,205	1,101	6,603	1,722	483	441	2,646	-	-	-	-
5.12	-	-	-	-	-	-	-	-	-	-	-	-
5.13	4,806	1,387	136	6,330	-	-	-	-	-	-	-	-
5.14	-	-	-	-	-	-	-	-	114	109	260	482
Target Model: Households Time Frame (%)												
Integratio n Zone	Short Term				Medium Term				Long Term			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 5	64%	22%	13%	100%	53%	27%	21%	100%	51%	31%	18%	100%
5.1	47%	35%	19%	100%	47%	35%	19%	100%	47%	35%	19%	100%
5.2	25%	25%	51%	100%	25%	25%	51%	100%				
5.3					39%	32%	29%	100%				
5.4					32%	27%	42%	100%	32%	27%	42%	100%

5.5					35%	34%	30%	100%	35%	34%	30%	100%
5.6					61%	29%	10%	100%				
5.7					71%	25%	4%	100%				
5.8					74%	24%	2%	100%	74%	24%	2%	100%
5.9					67%	26%	7%	100%	67%	26%	7%	100%
5.10					69%	25%	6%	100%				
5.11	65%	18%	17%	100%	65%	18%	17%	100%				
5.12												
5.13	76%	22%	2%	100%								
5.14									24%	23%	54%	100%

STEP 6: IZ5 PROJECTS AND STRATEGIC INTERVENTIONS

The following section indicates the CAPEX projects located within IZ3 and prioritised according to the following nine (9) categories:

- Priority 1: Economic Node: CBD
- Priority 2: Economic Node: Industrial Area
- Priority 3: Economic Node: Urban Hub
- Priority 4: Housing Precincts
- Priority 5: Housing projects current
- Priority 6: Housing projects proposed
- Priority 7: Marginalised Area 5: Wattville
- Priority 8: MSDF Precincts
- Priority 9: Remainder of Integration Zone 5

Table B1.14.10 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B1.25.15** graphically represents the spatial locations of the identified projects as listed within Table B1.14.10.

Apart from the abovementioned CAPEX projects, one interventionist projects were identified from the EMM IZ Target Model (refer **Figure B1.24.16**). The projects are well located in terms of the accessibility to public transport and are of a mixed-use nature.

Proceeding, several departments such as City Planning Special Projects, Transportation, Human Settlements and Real Estate need to analyse and prioritise the projects. Thereafter processes such as land release proposals, procurement proposals, future studies / identification of incentives will follow.



Table B1.14.10: Prioritised Capex Projects in Integration Zone 5

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017 / 18 - 2019/20
Integration Zone 5: Economic Node: CBD					R14,724,000	R16,234,000	R14,836,000	R45,794,000
1	Energy	Springs Revenue enhancement(Springs)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R5,000,000	R6,000,000	R -	R11,000,000
2	Energy	Springs Network enhancement(Springs)	Economic Development	015 - Borrowings	R4,500,000	R5,000,000	R -	R9,500,000
Integration Zone 5: Economic Node: Industrial Area					R20,500,000	R33,500,000	R36,500,000	R90,500,000
3	Energy	Kwa-Thema Revenue enhancement(Kwa Thema)	Economic Development	015 - Borrowings	R8,000,000	R8,000,000	R -	R6,000,000
4	Energy	Kwa-Thema Network enhancement(Kwa Thema)	Economic Development	015 - Borrowings	R4,500,000	R5,000,000	R -	R9,500,000
Integration Zone 5: Economic Node: Urban Hub					R18,050,000	R52,000,000	R62,000,000	R132,050,000
5	Transport	Construction of MVRA/DLTC Kwatsaduza(Tsakane)	Urban Restructuring	015 - Borrowings	R2,000,000	R45,000,000	R -	R47,000,000
6	Transport	Construction of MVRA/DLTC Kwatsaduza(Tsakane)	Urban Restructuring	Unassigned	R -	R -	R35,000,000	R35,000,000
Integration Zone 5: Housing Precincts					R3,352,000	R -	R15,000,000	R18,352,000
7	Real Estate	Refurbishment of Lettable Facilities, Kwa Thema Police Station	Economic Development	Unassigned	R3,352,000	R -	R15,000,000	R18,352,000
Integration Zone 5: Housing projects current					R46,000,000	R46,000,000	R16,000,000	R108,000,000
8	Economic Development	Kwa-thema Business Hubs	Economic Development	001 - Council Funding	R30,000,000	R30,000,000	R -	R60,000,000
9	Roads and Stormwater	K136 & Rd 1894 Link Road(Tsakane)	Urban Restructuring	015 - Borrowings	R8,000,000	R8,000,000	R -	R16,000,000
Integration Zone 5: Housing projects proposed					R41,327,489	R25,000,000	R32,000,000	R98,327,489

10	Economic Development	Labore & Withoek Industrial park (Tsakane)	Urban Restructuring	015 - Borrowings	R10,000,000	R15,000,000	R -	R25,000,000
11	Human Settlements	Apex Ext 12 (Benoni)	Urban Restructuring	005 - Urban Settlement Development Grant	R22,327,489	R -	R -	R22,327,489
Integration Zone 5: Marginalised Area 5: Wattville					R86,900,000	R46,100,000	R128,200,000	R261,200,000
12	Real Estate	New Office Building in Kwa Thema (Kwa Thema)	Economic Development	Unassigned	R -	R -	R50,000,000	R50,000,000
13	Water and Sanitation	Zulu Xhosa resevoir(Brakpan)	Urban Restructuring	005 - Urban Settlement Development Grant	R48,000,000	R1,000,000	R -	R49,000,000
Integration Zone 5: MSDF Precincts					R500,000	R -	R -	R500,000
14	Roads and Stormwater	Ped. Management (E): Completion of Sidewalk Dube St (Benoni)	Urban Restructuring	007 - CRRF Capital Replacement Reserve Fund	R500,000	R -	R -	R500,000
Integration Zone 5: Remainder of Integration zone 5					R3,672,800	R11,170,000	R8,500,000	R23,342,800
15	Environmental Resources Management	Develop and upgrade cemeteries in the east Brakpan(Brakpan)	Urban Restructuring	015 - Borrowings	R -	R8,000,000	R -	R8,000,000
16	Roads and Stormwater	Reconstruct Rds (E): Mohla, Lerutle, Khumalo, Moscow, Helsilk, Berline, Anthensi, Toyko, Havanna(Kwa Thema)	Urban Restructuring	Unassigned	R -	R -	R5,000,000	R5,000,000

B1.3 INTEGRATION ZONE PLANNING AND PROJECT PRIORITISATION SUMMARY

With each integration Zone analysed in detail, it is valuable to conclude this section with a summary indicating how the integration zones compare to each other.

HOLISTIC IZ PROFILE

Following is a high-level base line assessment of the five Integration Zones compared to each other, assessing the demographic and land use profile.

» DEMOGRAPHIC ASSESSMENT

From the demographic analysis it is evident that IZ1 has the highest number of residential units (96 154) and population (249 467). The population and dwelling unit concentrations corresponds to the highest density of 25 Du/ha. On the other hand, IZ5 comprise of the largest land area, measured at 5 662 ha.

Table B1.15.1 is a summary of the **Baseline Households, Population and Density** of all the integration zones, with **Diagram B1.14** a graphical representation of the baseline information.

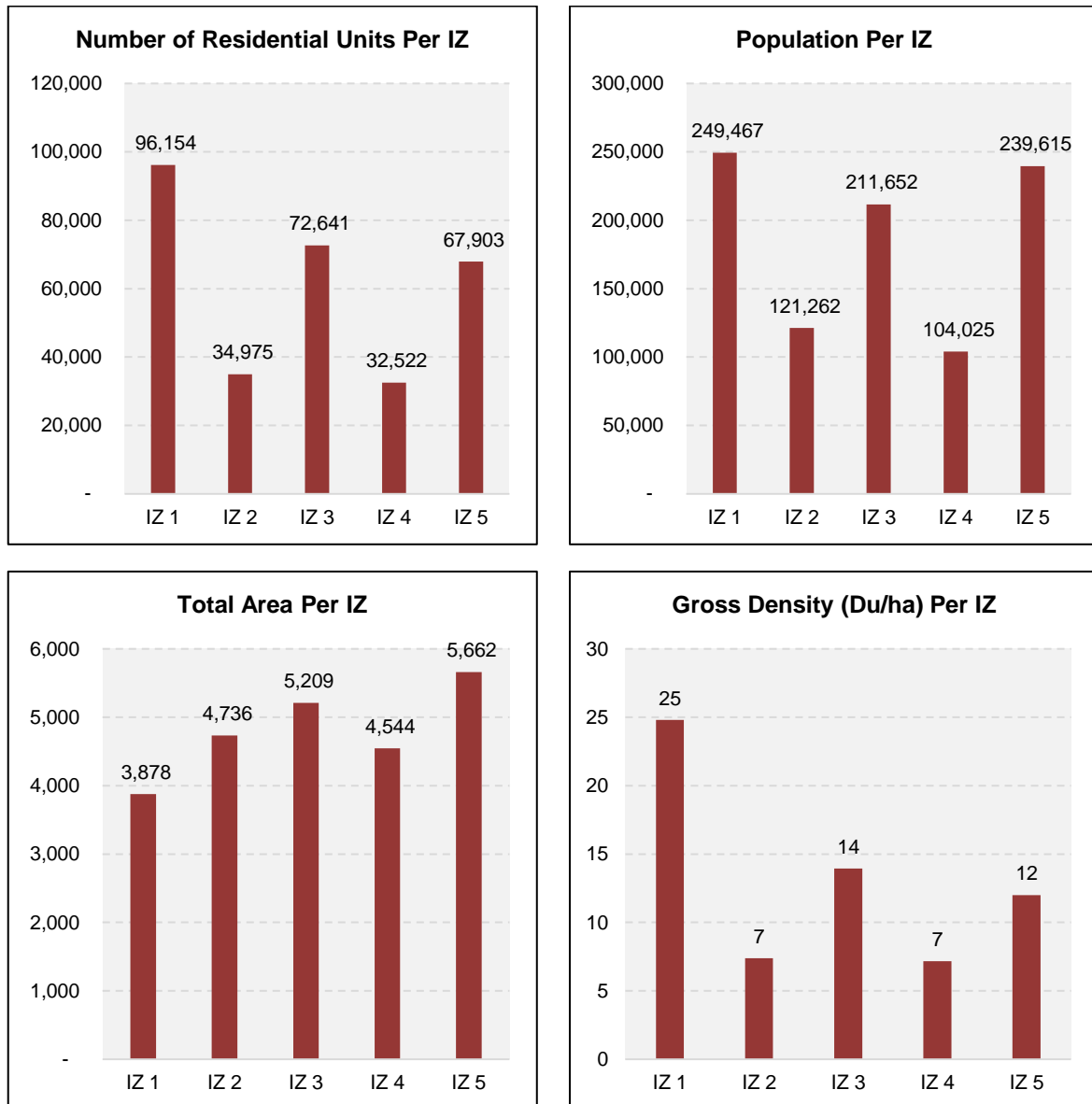
Table B1.15.1: Baseline Households, Population and Density All IZ's

Integration Zone	No. of Residential Units	Population	Area (ha)	Density (du/ha)
IZ 1	96,154	249,467	3,878	25
IZ 2	34,975	121,262	4,736	7
IZ 3	72,641	211,652	5,209	14
IZ 4	32,522	104,025	4,544	7
IZ 5	67,903	239,615	5,662	12
Grand Total	304,194	926,022	24,028	13

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014



Diagram B1.14: All IZ Baseline Demographic Overview



From the Baseline Households and Income Distribution (refer Table **B1.15.2**), and graphically represented on **Diagram B1.15**, it is evident that low income households constitute the majority of households in all IZ's. IZ5 has the highest concentration of low income households, representing 64% of the total IZ5 households. IZ2 on the other hand has the highest number of high income households, representing 19% of the total IZ2 households.

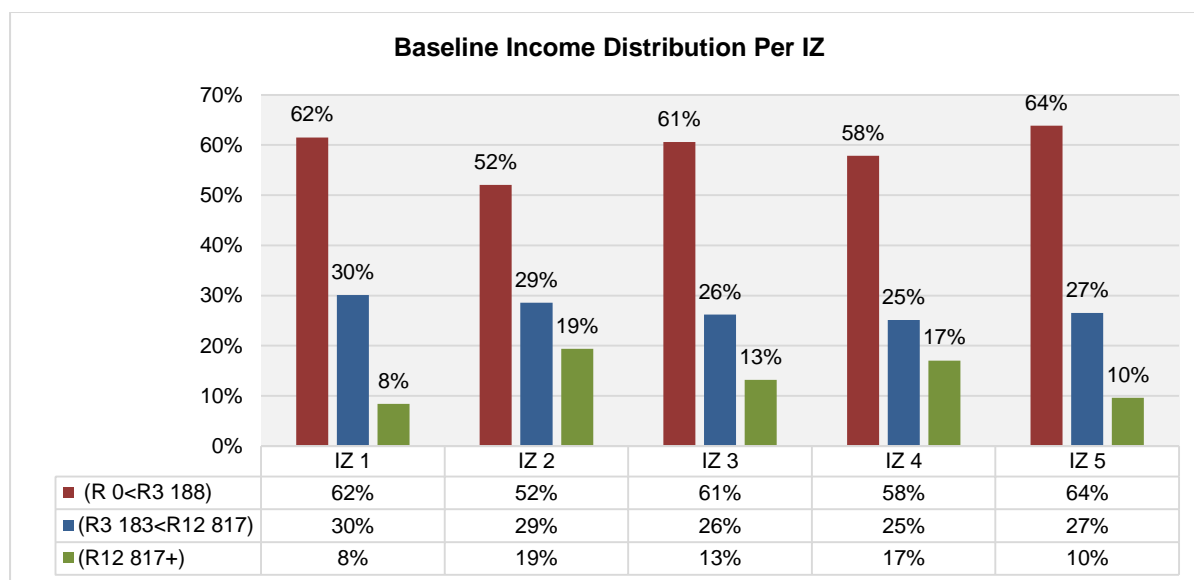


Table B1.15.2: IZ5 Baseline Households and Income Distribution

IZ	Low Income DU (%)	Middle Income DU (%)	High Income DU (%)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
	(R 0< R3 188)	(R3 183< R12 817)	(R12 817+)					
IZ 1	62%	30%	8%	100%	59,136	28,929	8,089	96,154
IZ 2	52%	29%	19%	100%	18,206	9,995	6,773	34,975
IZ 3	61%	26%	13%	100%	44,042	19,028	9,571	72,641
IZ 4	58%	25%	17%	100%	18,811	8,172	5,539	32,522
IZ 5	64%	27%	10%	100%	43,348	18,005	6,549	67,903
Grand Total	60%	28%	12%	100%	183,544	84,129	36,521	304,194

Source: Census 2011, STATS SA

Diagram B1.15: All IZ Income Distribution Overview



» LAND USE ASSESSMENT

From **Table B1.15.3** and **Diagram B1.16** it is evident that residential constitute the largest component of the land use mix in each IZ. Interesting to note the relatively large percentages of vacant and/or agricultural land available in IZ 2 to 5, of which large parts could be utilised for densification and intensification of land use along public transport routes. Also note the relatively large percentage of mining land in IZ 2 (10%), of which some parts could also be utilised in future.



Table B1.15.3: Base Line Land Use Mix (ha and %)

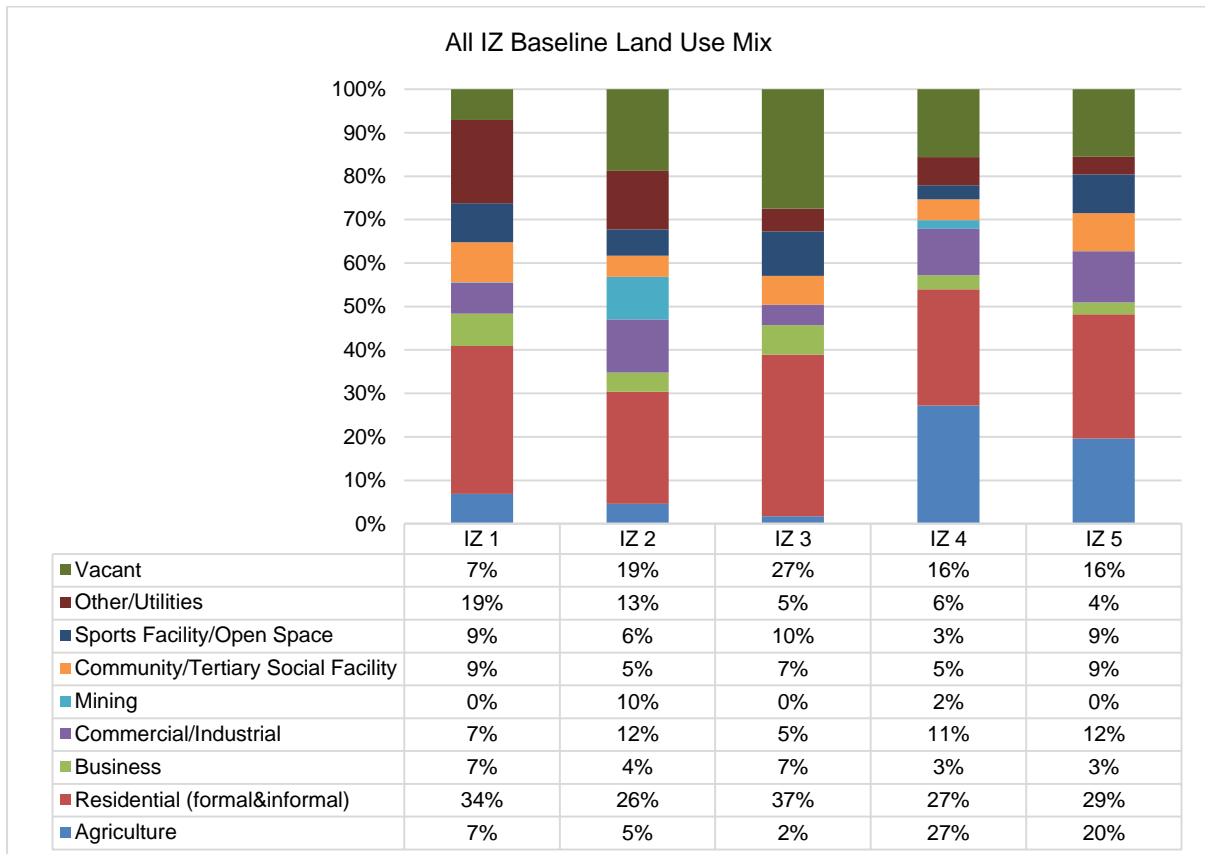
Base Line Land Use Mix (ha)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 1	265	1,321	287	275	5	357	350	743	273	3,877
IZ 2	217	1,220	210	582	461	232	285	638	890	4,736
IZ 3	89	1,938	355	244	-	345	536	270	1,432	5,209
IZ 4	1,235	1,216	147	486	91	217	147	295	709	4,544
IZ 5	1,112	1,618	155	668	1	495	507	229	879	5,662
Total IZ	2,919	7,314	1,154	2,255	558	1,647	1,825	2,174	4,183	24,028
Base Line Land Use Mix (%)										
IZ	Agriculture	Residential (formal & informal)	Business	Commercial/Industrial	Mining	Community/Tertiary Social Facility	Sports Facility/Open Space	Other/Utilities	Vacant	Total
IZ 1	7%	34%	7%	7%	0%	9%	9%	19%	7%	100%
IZ 2	5%	26%	4%	12%	10%	5%	6%	13%	19%	100%
IZ 3	2%	37%	7%	5%	0%	7%	10%	5%	27%	100%
IZ 4	27%	27%	3%	11%	2%	5%	3%	6%	16%	100%
IZ 5	20%	29%	3%	12%	0%	9%	9%	4%	16%	100%
Total IZ	12%	30%	5%	9%	2%	7%	8%	9%	17%	100%

Source: Ekurhuleni Socio-economic study 2014 to inform the asset management planning process, AURECON, October 2014

*Note: Other include Parking areas, Transport facilities, Utilities (water, sanitation, electricity), and other/unknown uses. Government/Municipal is included with Community Facilities



Diagram B1.16: Land Use Distribution per IZ



HOLISTIC IZ TARGETS

The EMM **BEPP IZ Target Model** was developed to assess the development potential and development capacity of each individual IZ, and to be able to compare future IZ’s with each other. Based on the potential that exists by utilising vacant and underutilised land, an additional 131 680 dwelling units can be accommodated in future. This is excluding the current housing programmes running at the moment (refer **Table B1.15.4** and **Diagram B1.17**), The largest increase can be accommodated within IZ5 (46 049 – which translates into 116 348 people), because of the availability of large tracks of vacant land (1200ha).

If compared with the expected demand in dwelling units and population between 2015 and 2037 (454 640 dwelling units) (refer Table B1. 6), the calculated potential can contribute significantly to alleviate the demand, and simultaneously contribute to the integration of land use and transport.



Table B1.15.4: IZ Target Model: Additional Households, Population and Density

Integration Zone	No. of Residential Units	%	Population	Developable Area (ha)	Density (du/ha)
IZ 1	12,436	9%	33,127	361	34
IZ 2	33,838	26%	93,954	777	44
IZ 3	16,387	12%	27,698	471	35
IZ 4	22,973	17%	59,022	723	32
IZ 5	46,049	35%	116,348	1,200	38
Grand Total	131,683	100%	330,150	3,532	37

Figure 1.26 illustrates the spatial distribution of the potential incremental population per IZ. Whilst, Diagram B1.17 illustrates the target population, dwelling units, developable hectare and gross residential density per IZ.

Diagram B1.17: All IZ Target Demographic Overview



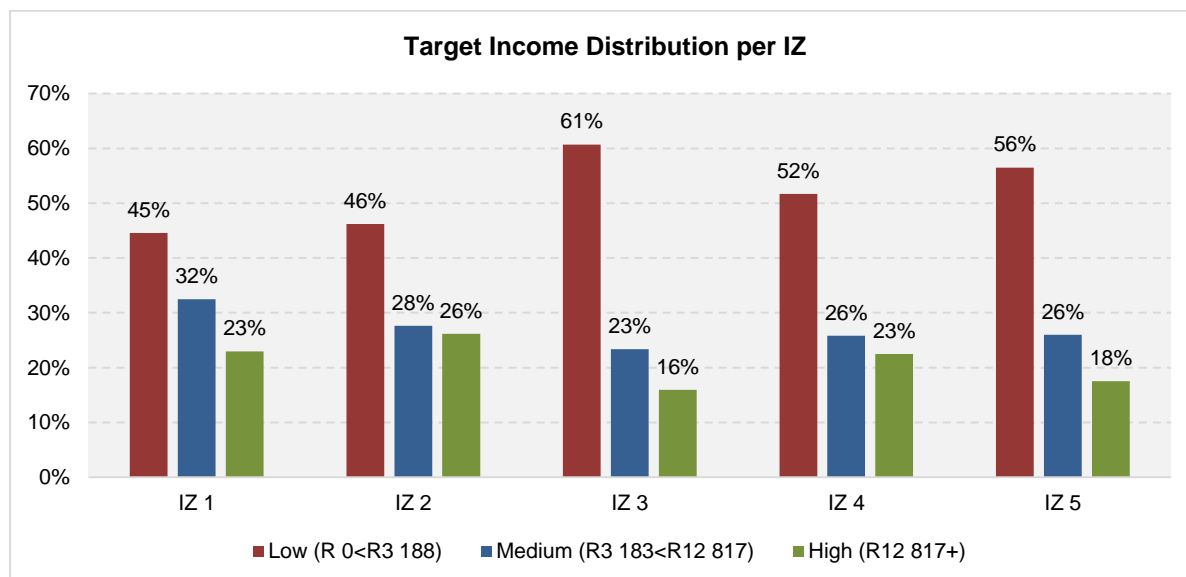
It is evident from **Table B1.15.5** and **Diagram B1.18**, that most of the anticipated additional households for all of the IZ's, will be within the low income bracket, representing 52% (68 993 dwelling units), followed by the middle income, representing 27% (35 134 dwelling units), and lastly 21% high income households (27 555 dwelling units).

In terms of the internal IZ breakdown, the highest anticipated low income household growth is expected in IZ5 (26 000), followed by IZ2 (15 630) and IZ4 (11 870). The highest anticipated medium income household growth is expected in IZ5 (11 980), followed by IZ2 (9 350) and IZ4 (5 930). The largest high income household growth is expected in IZ2 (8 860), followed by IZ5 (8 060) and IZ4 (5 170).

Table B1.15.5: IZ5 Target Model: Households and Income Distribution

IZ	Low Income DU (%) (R 0< R3 188)	Middle Income DU (%) (R3 183< R12 817)	High Income DU (%) (R12 817+)	Total DU (%)	Low Income DU	Middle Income DU	High Income DU	Total DU
IZ 1	45%	32%	23%	100%	5,544	4,037	2,855	12,436
IZ 2	46%	28%	26%	100%	15,629	9,353	8,856	33,838
IZ 3	61%	23%	16%	100%	9,944	3,832	2,611	16,387
IZ 4	52%	26%	23%	100%	11,867	5,933	5,172	22,973
IZ 5	56%	26%	18%	100%	26,008	11,980	8,061	46,049
Grand Total	52%	27%	21%	100%	68,993	35,134	27,555	131,683

Diagram B1.18: Target Income Distribution per IZ



The potential floor area calculated from the BEPP IZ Target Model is shown **Table B1.15.6**. Apart from the residential area which constitutes 62% of the potential floor area, the major non - residential land uses are offices (16%), followed by industrial and commercial (7% each) and retail (5%).

Subsequently the potential number of workers (335 300) were calculated (refer to **Table B1.15.7** and **Figure B1.27**). The majority of the workers are expected to be office workers (48%), followed by commercial/industrial- (27%), retail- (12%), domestic- (5%), community facilities (1%) and sport (1%).

When comparing the EMM Target Model Results with EMM CIF Task 5 – 25 Year Take-Up Rate (refer **Table B1.15.8**), it is evident that at least 29% of the total future growth in dwelling units can be accommodated in the Integration Zones. Regarding economic opportunities, at least 27% of retail and 48% of industrial growth can be accommodated. Ample opportunities exist to accommodate the future office needs within the Integration Zones (mostly in the Rhodesfield and Ekurhuleni City Centre areas).



Table B1.15.6: IZ5 Target Model: Potential additional Floor Area (m²)

Potential additional Floor Area (m ²)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	1,182,249	286,865	924,536	-	11,688	23,254	385,424	77,255	-	2,891,271
IZ 2	3,812,219	141,619	564,573	-	43,432	87,241	665,492	45,237	-	5,359,813
IZ 3	1,584,084	409,452	867,680	-	-	-	314,006	319,934	-	3,495,156
IZ 4	2,917,331	304,107	1,301,694	144,738	-	202,369	63,257	746,817	114,786	5,795,099
IZ 5	5,964,820	147,769	244,570	-	1,337	-	248,442	595,211	-	7,202,149
Grand Total	15,460,703	1,289,811	3,903,053	144,738	56,457	312,864	1,676,621	1,784,454	114,786	24,743,487
Potential additional Floor Area (% per IZ)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	41%	10%	32%	0.0%	0.4%	0.8%	13%	3%	0%	100%
IZ 2	71%	3%	11%	0.0%	0.8%	1.6%	12%	1%	0%	100%
IZ 3	45%	12%	25%	0.0%	0.0%	0.0%	9%	9%	0%	100%
IZ 4	50%	5%	22%	2.5%	0.0%	3.5%	1%	13%	2%	100%
IZ 5	83%	2%	3%	0.0%	0.0%	0.0%	3%	8%	0%	100%
Grand Total	62%	5%	16%	0.6%	0.2%	1.3%	7%	7%	0%	100%
Potential additional Floor Area (% of all IZ's)										
IZ	Residential	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	8%	22%	24%	0%	21%	7%	23%	4%	0%	12%
IZ 2	25%	11%	14%	0%	77%	28%	40%	3%	0%	22%
IZ 3	10%	32%	22%	0%	0%	0%	19%	18%	0%	14%
IZ 4	19%	24%	33%	100%	0%	65%	4%	42%	100%	23%
IZ 5	39%	11%	6%	0%	2%	0%	15%	33%	0%	29%
Grand Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table B1.15.7: IZ5 Target Model: Potential additional Workers

Potential additional Workers										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	1,133	8,693	38,522	-	584	1,333	9,944	1,993	-	62,203
IZ 2	2,743	4,291	23,524	-	2,172	5,002	17,170	1,167	-	56,068
IZ 3	1,857	12,408	36,153	-	-	-	8,101	8,254	-	66,773
IZ 4	3,644	9,215	54,237	4,386	-	11,602	1,632	19,268	3,478	107,464
IZ 5	6,313	4,478	10,190	-	67	-	6,410	15,356	-	42,814
Grand Total	15,690	39,085	162,627	4,386	2,823	17,938	43,257	46,039	3,478	335,323
Potential additional Workers (% per IZ)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	2%	14%	62%	0%	1%	2%	16%	3%	0%	100%
IZ 2	5%	8%	42%	0%	4%	9%	31%	2%	0%	100%
IZ 3	3%	19%	54%	0%	0%	0%	12%	12%	0%	100%
IZ 4	3%	9%	50%	4%	0%	11%	2%	18%	3%	100%
IZ 5	15%	10%	24%	0%	0%	0%	15%	36%	0%	100%
Grand Total	5%	12%	48%	1%	1%	5%	13%	14%	1%	100%
Potential additional Workers (% of all IZ's)										
IZ	Domestic	Retail	Office	Hotel	Community Facilities	Institutional	Industrial	Commercial	Regional Sport	TOTAL
IZ 1	7%	22%	24%	0%	21%	7%	23%	4%	0%	19%
IZ 2	17%	11%	14%	0%	77%	28%	40%	3%	0%	17%
IZ 3	12%	32%	22%	0%	0%	0%	19%	18%	0%	20%
IZ 4	23%	24%	33%	100%	0%	65%	4%	42%	100%	32%
IZ 5	40%	11%	6%	0%	2%	0%	15%	33%	0%	13%
Grand Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table B1.15.8: EMM BEPP Target Model In Relation To Expected 25 – Year Take – Up Rate

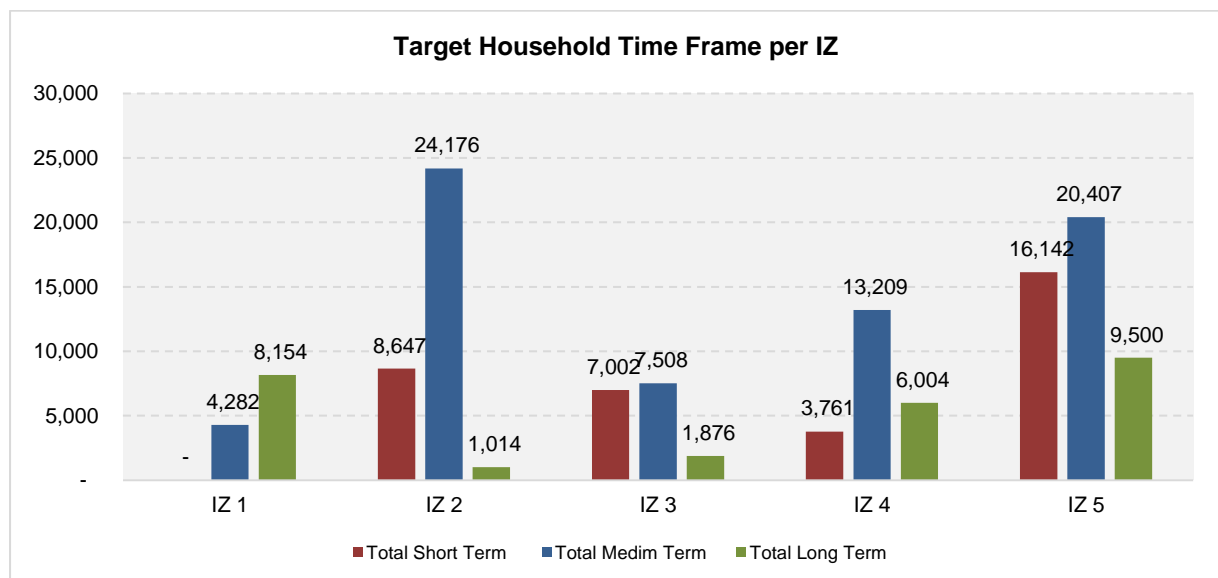
EMM CIF Task 5-25 year land Take - Up				BEPP Target Model			Model as % of Take up		
	2010-2037	2010-2037	2010-2037	2010-2037	2010-2037	2010-2037	2010-2037	2010-2037	2010-2037
Type	Number	Floor Area (m ²)	ha	Number	Floor Area (m ²)	ha	Number	Floor Area (m ²)	ha
Dwelling Units	454,642			131,683			29%		
Retail		4,713,848			1,289,811			27%	
Office		3,567,521			3,903,053			109%	
Industrial			2,381			1,154			48%
Source:	Demacon, August 2015			EMM BEPP 2017/2018					

HOLISTIC IZ PHASING

From the phasing analysis (refer **Diagram B1.19** and Table **B1.15.9**) it is evident that in the short term an additional 35 552 households can be accommodated in all the IZ, followed by 69 582 additional households in the medium term, and 26 548 additional households in the long term.

IZ5 is expected to experience the highest households growth within the short term (16 164 households), followed by IZ2 the highest households growth in the medium term (24 176 households) and IZ5 the households growth within the long term (9 500 households).

Diagram B1.19: Target Total Number of Households (Short/ Medium / Long Term)



The proposed phasing of the intervention list projects from the EMM BEPP Target Model is as follow (refer **Figure B1.28**):

- Short Term: Leralla Station (IZ1)
 Mayfield (IZ4)
 Maryvlei /Thema Road (IZ5)

- Medium Term: Mining Belt Redevelopment of mining land (IZ2)
 Old Cinderella Prision Site (IZ2)
 N3/Villa Loza / Vosloorus Intersection (IZ2)

- Long Term: Prasa Station in Tembisa (IZ1)
 Katlehong and Yhokoza (IZ3)

The private sector development in the Rhodesfield area and Ekurhuleni City Centre will take place over a period of time as market forces dictates.



Table B1.15.9: IZ5 Target Model: Households Time Frame

Households Time Frame																
IZ	Short Term				Medium Term				Long Term				Total			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 1	-	-	-	-	1,926	1,214	1,142	4,282	3,618	2,823	1,713	8,154	5,544	4,037	2,855	12,436
IZ 2	4,119	2,344	2,185	8,647	10,758	6,793	6,625	24,176	752	216	46	1,014	15,629	9,353	8,856	33,838
IZ 3	4,608	1,462	932	7,002	4,430	1,856	1,222	7,508	906	513	457	1,876	9,944	3,832	2,611	16,387
IZ 4	2,259	885	616	3,761	7,424	3,405	2,379	13,209	2,184	1,643	2,176	6,004	11,867	5,933	5,172	22,973
IZ 5	10,405	3,613	2,124	16,142	10,747	5,431	4,229	20,407	4,856	2,936	1,708	9,500	26,008	11,980	8,061	46,049
Grand Total	21,391	8,304	5,857	35,552	35,286	18,699	15,597	69,582	12,315	8,132	6,101	26,548	68,993	35,134	27,555	131,683
Households Time Frame (%)																
IZ	Short Term				Medium Term				Long Term				Total			
	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total	Low	Middle	High	Total
IZ 1					45%	28%	27%	100%	44%	35%	21%	100%	45%	32%	23%	100%
IZ 2	48%	27%	25%	100%	44%	28%	27%	100%	74%	21%	5%	100%	46%	28%	26%	100%
IZ 3	66%	21%	13%	100%	59%	25%	16%	100%	48%	27%	24%	100%	61%	23%	16%	100%
IZ 4	60%	24%	16%	100%	56%	26%	18%	100%	36%	27%	36%	100%	52%	26%	23%	100%
IZ 5	64%	22%	13%	100%	53%	27%	21%	100%	51%	31%	18%	100%	56%	26%	18%	100%
Grand Total	60%	23%	16%	100%	51%	27%	22%	100%	46%	31%	23%	100%	52%	27%	21%	100%

B1.4 PROOF OF CONSULTATION: FINALIZING URBAN NETWORK AND IZ PLANNING PRIORITISATION

Please see attached **Appendix C** for the evidence of consultation with relevant provincial, national and SOE sectors (meeting agenda, minutes and / or attendance registers of meetings) with regard to the finalization of the Urban Network and the prioritisation of the IZ's.

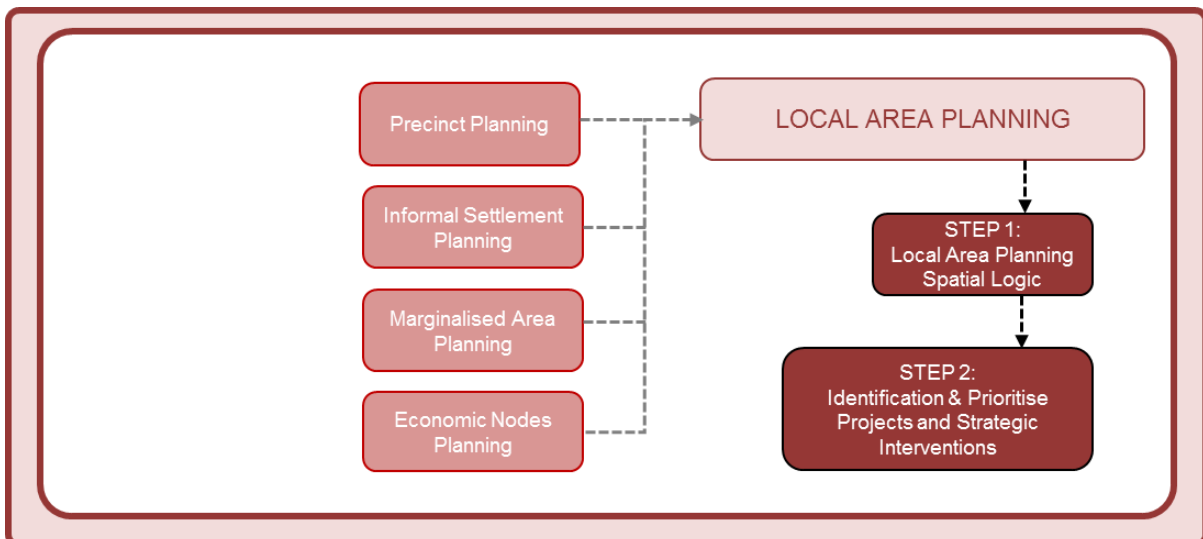
- Evidence of Consultation – Human Settlements and Transportation Input to BEPP
 - Attendance Register 6 March 2017

LOCAL AREA PLANNING

B2. LOCAL AREA PLANNING

The following section dealing with local area planning, consist of four elements, namely Precinct Planning, Inform Settlement Planning, Marginalised Area Planning and Economic Nodes Planning, as identified within the *Integration Zone Planning Guidelines* and specified within the Progress Evaluation Instrument Requirements (refer **Diagram B1.1**).

Diagram B2.1: Local Area Planning



B2.1 PRECINCT PLANNING

Precinct Planning forms part of the Ekurhuleni Urban Design Initiative, which represents an important element of the new spatial vision of Ekurhuleni, one that is guided by the Theory of Change.



A Theory of Change, in this context, can be described as defining all building blocks required to bring about a given long-term goal. This set of connected building blocks – interchangeably referred to as outcomes, results, accomplishments, or preconditions is depicted on a map known as a pathway of change/change framework, which is a graphic representation of the change process. Built around the pathway of change, a Theory of Change describes the types of interventions that bring about the outcomes depicted in the pathway of a change map. Each outcome in the pathway of change is tied to an intervention, revealing the often complex web of activities that are required to bring about change.

The Ekurhuleni Theory of Change aims to put the City of Ekurhuleni on the required trajectory - through the stages identified in the Ekurhuleni GDS 2055 - of being a *Delivering City*, *Capable City* and ultimately towards a *Sustainable City*. In order to achieve the ultimate state of a *Sustainable City*, the Theory of Change is based on the five pillars in the GDS, ie:

- To **Re-Urbanise** – aimed at achieving sustainable urban integration
- To **Re-Industrialise** – aimed at achieving economic growth that creates jobs
- To **Re-Generate** – aimed at achieving environmental well-being
- To **Re-Mobilise** - aimed at achieving social empowerment; and
- To **Re-Govern** - aimed at achieving effective co-operative governance.

The new city design, as informed by the theory of change, is intended to guide and drive social, economic and spatial transformation in order to build a viable, compact, vibrant and sustainable region. In this regard, in his 2016 *State of the City Address*, Cllr Mondli Gungubele, Executive Mayor of the Ekurhuleni Metropolitan Municipality, outlined the City's work on the conceptualisation of three key functional economic corridors as an effective way to reconfigure our urban spaces, and economic centres, namely:

- Thami Mnyele Corridor (Tembisa-to-Vosloorus);
- OR Tambo Aerotropolis Core Corridor (Kempton Park-Boksburg-Germiston); and
- Thelle Mogoerane Corridor (Alberton-Nigel).

The detail of the above strategies and initiatives begins to manifest through the formulation of a range of planning and urban design initiatives, including a number of Urban Design Precinct Plans for priority areas within the municipality. These urban design precinct plans, supported by 3D-modeling, provides a visual and spatial vision of the manner in which development in such precincts could manifest, showing the envisaged built form, the key urban design structuring elements, and spatial strategies and projects to catalyse development. The Urban Design Precinct Plans will further be underpinned by a metro-wide Urban Design Policy, which will contribute towards the establishment of a clear metropolitan (city) identity.

The Ekurhuleni Urban Design Initiative involves three main components:



- The formulation of a **metro-wide Urban Design Policy**;
- The establishment of an **Urban Design Review Committee**;
- The formulation of **Urban Design Precinct Plans**.

B2.1.1 KEY PRECINCTS IDENTIFIED

A precinct plan defines the desired development direction of the precinct and recommends a range of public realm projects to facilitate new relationships between the public and private realms. The precinct planning process envisaged for the current project is viewed as an ongoing process of local area elaboration and planning (complementing and supporting the Metropolitan and Regional Spatial Development Frameworks of the municipality) rather than merely a series of independent products.

In line with the Spatial Vision outlined in the *State of the City Address*, the following Precinct Plans have been initiated by the EMM City Planning Department (refer **Figure B2.1.1**):

- The ***Thelle Mogoerane Precinct*** in Vosloorus, as part of the Thelle Mogoerane Corridor;
- The ***Dries Niemand Precinct*** in Kempton Park, part of the Aerotropolis Corridor;
- The ***Kempton Park CBD Precinct***, key to both the Aerotropolis Corridor and the Thami Mnyele Corridors;
- The ***Bredell Precinct***, central to the growth of the logistics potential and capacity of the Aerotropolis Corridor;
- The ***Germiston Lake Precinct***, encompassing the Victoria Lake area and Rand Airport, a key Precinct in the Corridor.
- The Primrose Precinct,
- The Benoni CBD Precinct
- Dunnottar - John Dube Precinct
- Leeupan - Brakpan Airport Precinct

Following is a brief description of the nine precincts as listed above:



THE THELLE MOGOERANE PRECINCT

The Thelle Mogoerane Hospital Precinct is located in the southern parts of Vosloorus, in Region F of the Ekurhuleni Metropolitan Municipality. By virtue of its location, the precinct remains largely marginalised from mainstream urban activity in the broader Ekurhuleni Urban System.

The investment related to the new hospital, however, does provide scope for exploring the longer term role of the areas as a new nodal area, with potential to provide a range of social and commercial opportunities, linked into the broader context through the city's IRPTN system.



The precinct area itself is relatively underdeveloped, with large tracts of vacant land, although a number of development proposals do exist for the site, such as a complex containing nurses' accommodation and a training facility related to the hospital and a proposed taxi facility.

THE DRIES NIEMAND PRECINCT

The Dries Niemandt Precinct is located just east of the Kempton Park Central Business District and the precinct itself straddles two administrative regions of the City, being located predominantly in Region A, with a small portion of the Precinct falling within Region B. It measures approximately 566Ha in extent, and is bounded by CR Swart Road and Edleen to the north, the main railway line to the east, the suburbs of Esther Park to the west, and Plane Street and the suburbs of Cresslawn and Spartan to the south.

From a political administrative perspective, the precinct is included in two different political wards: most of the area falling within Ward 17, with the portions to the north falling within ward 16.

The precinct area currently comprises a number of public or community functions, namely:

- The **Barnard Stadium and sports fields**, which accommodate a range of sporting disciplines at different competitive levels. The stadium itself, with a capacity of 7 000, is the home ground of the Falcons rugby team, and this facility and the surrounding sports fields are used extensively by schools and sports clubs;
- The **Zuurfontein Cemetery** exists on the southern edge of the site. This facility has a capacity of 13 600 graves, and is expected to reach this capacity, for first internments, in the current year;



- The **Kempton Park Golf Course** occupies a large area in the eastern part of the precinct. This is an established P18 hole parklands course with a membership of approximately 700.

The north-western parts of the precinct comprise parts of the Esther Park suburb, a low density middle-income settlement, with a private school extending from the eastern edge of this suburb. The far eastern parts of the study area contain the Festival Mall retail centre. This sub-regional shopping centre, opened in 2004 with a GLA of 68 300m², was recently upgraded to 80 230m² of retail space. South of the Festival Mall are a number of municipal facilities, including a fire station and infrastructure depots.

■ THE KEMPTON PARK CBD

The Kempton Park CBD Precinct is approximately 365ha in extent. It is located in the immediate vicinity of the Kempton Park CBD area, with OR Tambo International Airport, Rhodesfield and Edenvale located to the south and south-west. It is surrounded by low-density suburban area making up the rest of the broader Kempton Park area in the north and Bonaero Park in the south. To the east, the typology is dominated by agricultural small holdings (Pomona, Nortons Home Estates, Benoni North, Brentwood Park etc.). Industrial areas in this broader region include areas such as Spartan, Isando, Elandsfontein, Jetpark, Germiston and Anderbolt.

Kempton Park CBD is part of a broader economic focus area comprising the CBDs of Kempton Park, Germiston, Boksburg and Benoni. Conceptually, this economic 'triangle' of CBD nodes was identified as being the potential optimum location for future core economic focus area.

Importantly, the Dries Niemandt Park area is located to the west, immediately over the railway tracks. There is a definite divide between these two spaces due to the railway line, but current precinct planning for both Dries Niemandt and Kempton Park CBD will serve to bring integration between the two.

The Kempton Park CBD Precinct is a part of Region A of Ekurhuleni. Importantly, the airport (as an emerging Aerotropolis), is also located in this region. This will have a major influence on the CBD whilst, in turn, the CBD will provide key services to support this crucial economic zone. In addition, the Rhodesfield area has been identified for a major revitalization

■ THE BREDELL PRECINCT

The Bredell Precinct is the largest of the current set of precincts, measuring a total of 2783ha in extent. It is located to the east of the Kempton Park CBD area, and north east of OR Tambo International Airport. It primarily comprises residential area and agricultural smallholdings, and is scattered with fairly small scale commercial and industrial sites. The study area encapsulates Bredell A H also includes parts of Pomona A H.



The north of the site is most densely covered by agricultural land, with larger tracts of farming land located beyond the Bredell area to the east.

The Bredell area could principally be defined as an agricultural production area which also offers wider outdoor recreation activities such as horse riding and BMX racing. It is considered a supportive area to its more densely urbanised neighboring areas such as Kempton Park. The draft precinct Plan has looked at a spatial strategy for the Bredell area that could allow the precinct to function as a sustainable, and smart, growth area:

- A part of the **Aerotropolis**;
- A **key logistics hub** to the SADC region;
- An attractive place for **investors**;
- An **outdoor recreation/sporting hotspot**;
- A place for **reinforcing community interaction**.

■ THE GERMISTON LAKE PRECINCT

The Germiston Lake Precinct is located in the east of Ekurhuleni and is approximately 1572ha in extent. It is located in the immediate vicinity of the mining belt and as such was established directly in response to gold mining activity.

The precinct is anchored by a large and attractive lake system with recreational parks surrounding it, as well as the country club to the west. Surrounding the lake as a core area, are the Rand Airport (south), the country club's golf course (west), industry such as refineries (north) and residential area with a stadium to the east.

Beyond these areas, the nearby highways act as distinct barriers to the site, such as the N3 and N17 highways to the south and west, while the railway lines in the north and east also serve to physically separate Germiston from adjacent areas.

■ THE PRIMROSE PRECINCT

Primrose is a dynamic precinct. Over the years the character of this area has dwindled causing the precinct to slip into urban decay and blight. The once strong activity corridor along Rietfontein Road has also started to show signs of deteriorating conditions.

The RSDf identifies strong Mixed Use Activity along Rietfontein Road which supports the high



street concept. Once this High Street is realised its optimum potential will be seen. With the proposal for residential densification, public realm improvements, an array of commercial opportunities as well as night life, Primrose will transform into a robust, thriving Town Centre.

Primrose is an area which lacks recreational opportunities and in order to change this a Mashie course, Sports Precinct and “Primrose Waters View Park” have been proposed. These interventions will ultimately transform the area by providing the locals with a new recreation opportunities which lacked in the Town Centre previously. The Waters View Park will allow Primrose to differ from other Town Centres.

Residential densification as well as residential opportunities identified to the south of Primrose will ensure that ample residential opportunities are available for those within Primrose. NMT routes will ensure that Primrose is well connected internally as well as to the broader Germiston and Bedfordview regions. In terms of future sustainability, a skill training and business development hub has been identified along Main Reef Road. With the realisation of the High Street and Waters View Park, local-employment opportunities will drastically increase and allow for the upliftment of those within

THE BENONI CBD PRECINCT

The Benoni CBD Precinct is focused on the Central Business District (CBD) of Benoni, and an established residential area to the west. A series of three lakes; Middle Lake, Civic Lake and Kleinfontein Lake, are key landscape features defining the northern edge of the study area. The Lakeside Mall is a key spatial and



economic landmark on the study area. The south-eastern portion of the study area is predominately vacant or mining impacted land which offers potential space for the future expansion of the Precinct.

The Benoni CBD was historically described as the “*Jewel of the East Rand*”. Its lakes, public and open spaces, and the quality of its streets for pedestrian shopping were what gave it this name. Today the Benoni CBD holds little of that character. This initial strategy looks to reclaim some of Benoni’s historic charm and identity, and provide a public space backbone on to which to drive urban regeneration. Central to the vision for the precinct is a high quality urban environment with active, integrated hard and



soft public spaces. Streets forming part of the public space system and should be well developed with supportive edges giving streets a sense of enclosure and protection

The residential base of the CBD needs to grow in order for the CBD to regain a 24 hour active atmosphere - which supports increased safety and developmental growth. The Benoni CBD has two primary public transport networks - taxi and rail. The integration of these two networks should be addressed to improve connectivity and access both locally and regionally.

THE DUNNOTTAR PRECINCT

The Dunnottar Precinct area is located within the Nigel CCA in the South Eastern corner of the Municipality covering an approximate area of 2013 Hectares (Ha). The precinct is predominantly an agricultural area with vast tracts of undeveloped land along both a sensitive and scenic ecological landscape. The precinct is



surrounded by low density residential and agricultural settlements of diverse income groupings. These include: Kwa-Thema, Duduza, Springs, Duduza and Dunnottar, all to the west of the precinct.

The Dunnottar precinct can be viewed as having a broader role of stitching the Nigel, Duduza and Springs CCA while at the same-time serving as a gateway into Ekurhuleni from the east. Proposed development broadly include the multiple road proposals as a way of making the area more permeable and regionally connected, the ecological corridors as an asset and integrator for Dunnottar and tracks land available for greenfield development.

The land to the east of the station within the Dunnottar precinct area side has been identified for affordable housing and together with Provincial Housing, the release of housing with economic opportunity in the vicinity of an existing transport node will complement each other. As the economic findings indicate, the demand will materialise if housing is aligned with the development around the station, then sufficient thresholds will be formed in order to develop a TOD node.



■ WATTVILLE – LEEUPAN PRECINCT

The Wattville-Leeupan Precinct is 587ha in extent and is well located, as it is situated within Gauteng's eastern development corridor, which is supported by the N12, N17 highways and an extensive railway network; and includes a prominent waterbody, the Leeupan and its associated natural open space.

The vision of the Wattville – Leeupan precinct is to transform this area, through integrating its unique resources into the urban fabric, where a mix of land uses can contribute to Transit Oriented Developments (TODs), enabling people to live, work and socialise in the same vicinity whilst enjoying improved public transport mobility, quality public places and protected, well-managed open spaces.

Leeupan is an asset and should be understood as a major regional park in Ekurhuleni. Large portions of the park are sterilised and are being dumped on, with the fenceline being broken down to favour pedestrian movement. It therefore becomes important to investigate carefully how to get a win-win in terms of development opportunities that would assist in funding comprehensive management of the pan as an environmental and social asset.

In addition to the nine precinct plans highlighted above, one other current precinct plan is identified, the Actonville Sports Grounds¹⁰ Precinct:

Subsequently, the EMM has identified 9 additional precinct to be investigated. The table below is a summary of the ten current and nine proposed precincts (refer Figure B2.1.1)

Table B2.1: Current and Proposed Precincts

City Planning	
Current Precinct Plans (10)	Proposed Precinct Plans (9)
Thelle Moegerane ¹	Boksburg CBD ¹
Dries Niemand ²	Springs CBD ²
Kempton Park CBD ³	Old Natalspruit – Tokoza ³
Bredell ⁴	Brakpan CBD ⁴
Germiston Lake - Rand Airport ⁵	Aerotropolis City Centre (ACC) ⁵
Primrose ⁶	Actonville Node ⁶
Benoni CBD ⁷	Kwa-Thema CBD ⁷
Dunnottar - John Dube ⁸	BRT Andrew Mapheto / Brian Mazebuko ⁸
Leeupan - Brakpan Airport ⁹	BRT - China Gate / Terenure ⁹
Actonville Sports Grounds ¹⁰	



B2.1.2 STRATEGIC URBAN DEVELOPMENT AREAS

Strategic Urban Development Areas (SUDA's) entail strategically located vacant areas designated by the local government for future growth and development. The area is chosen due to its strategic location, the services available in the area, and/or local zoning regulations or comprehensive plans. These areas are used as priority funding areas and can represent both infill development and urban expansion. Within the EMM, eleven SUDA's are identified and as follow (refer **Figure B2.1.2**):

- Badenhorst Estate (Carnival Junction)
- Glen Gory Residential Node
- GreenReef Development
- Leeuwpoot Housing
- M&T Development
- O.R. Tambo International Airport Precinct
- Prasa Gibela
- Riverfields
- S & J Industrial
- Tambo Springs Inland Port
- Lords View Estate

Following is a brief description of the eleven SUDA's.

■ BADENHORST ESTATE

Badenhorst Estate is located within Ward 52 and forms part of the designated Carnival City Regional Node. It is situated to the east of the K109/R23 (Rangeview Road) in the vicinity of the Apex industrial areas. It is furthermore bordering onto the residential neighbourhoods of Leachville, Dalpark, Wattville, and Larrendale. The Land Development Area is also in relative close proximity to the Benoni CBD, Brakpan CBD, Boksburg, the N12, N17 and N3 Highways

The Badenhorst estate is an extensive, large scale mixed use development that is anticipated to develop in phases over the development horizon of 15 to 20 years. The first phase of this development will be Dalpark Ext 19 that contains a number of planned commercial uses with tenants such as a Makro, Build-It and Hyundai Dealership.

Land use categories:

- Special for (Automotive and Related use, Retail & Wholesale, Themed Retail, Substation, light industries, Offices and Commercial.
- Residential 3
- Residential 4
- Business 2



- Agricultural
- Industrial 2
- Private Open Space and Public Open Space

The proposed Badenhorst Estate development will generate and provide job opportunities to surrounding residential communities, such as Wattville, Dalview and Brakpan. Also it will strengthen an emerging mixed-use node centered on the N17-Rangeview Road interchange, which currently comprises the Carnival City Casino and a commercial area located on the north-western quadrant of this interchange (Carnival Mall).

GLEN GORY RESIDENTIAL NODE

The proposed development is located on the corner of Glen Gory Road and Elm Road, Benoni. The development is situated in what is referred to as the Glen Gory Residential node, towards which the areas of Rynfield, Northmead, Farrarmere, Crystal Park and Daveyton are developing. The development, being 37.40 ha, will be a world class node in which it will be incorporating a regional mall, a lifestyle mall, a value mark centre, big box retailers such as a Builders Warehouse and a Makro. The retail component will consist of a potential tenant mix that will mirror the lifestyle that we all aspire to, including retailers such as a Checkers, Woolworths, Edgars, Foschini and Pick 'n Pay. Up-market brands as well as other great South African brands will also be secured. The mall will also incorporate a Piazza for showcasing of events, concerts and other community festivities as well as an office node consisting of medical suite and offices.

Table B2.2: Glen Gory Proposed Land Use Mix

Erf Number	Land Use	Size
Erf 798 Valkhoogte Ext 13	"Special" for shops, business premises, place of instruction, place of refreshment, place of amusement, social halls, hotel and institutional	18.5556 ha
Erf 799 Valkhoogte Ext 13	"Special" for automotive retail, warehouse retail, and place of refreshment	1.7216 ha
Erf 800 Vlakhoogte Ext 13	"Special" for business premises, hotel and institutional	0.8988 ha
Erf 801 Vlakhoogte Ext 13		4.8512 ha

GREENREEF DEVELOPMENT

The Living Africa Group owns in excess of 600 ha (phase 1 comprises of 348 ha) of prime land within the central Ekurhuleni area. **GREENREEF** is converting an old gold-reef mining area into a greenbelt. Greenreef is intended to be developed as a Smart City, which will be capable of competing on a global scale. It is an inspiring example of how mining land, made fallow by mine-workings that have subsequently been reworked and removed, can be rehabilitated and integrated back into the city system, thus knitting together the segregated towns and neighbourhoods that remain a legacy both of mining and apartheid planning. This metro-fit concept



will retain the best from the past, develop for the needs of today and ensure that the project is sustainable for tomorrow.

GreenReef is an economically inclusive and socially integrated mixed-use/mixed income Innovation District. It is set to transform Ekurhuleni through the development and fusion of a new CBD hub within the Ekurhuleni proposed City Core, high-density residential precincts, innovative, knowledge-based, technology and manufacturing industries as well as state-of the art basic, vocational and tertiary education facilities. The project is being designed to embrace sustainable 21st century urban living that is ecologically sensitive to its environment. This will be achieved through an interconnected network of open spaces and natural areas, parks, reserves and wetlands where native plant vegetation naturally manages storm water, reduces flooding risk and improves water quality.

Table B2.3: GreenReef Proposed Land Use Mix

Description	Percentage Split %	Floor Area Hectares	Notes
Residential	73	152.5	This includes 1, 2, 3 Bedroom apartments and student apartment
Retail	7	14	
Office	4	8.5	
Commercial Floor	7	15	This includes micro manufacturing, Maker Hub, Service Based Retail
Institutional	8	17.5	This includes University, Colleges, Primary & Secondary Schools
Other	14	140	This include roads; parks/open spaces and propose station
Total	100	384	
# of Residential Units		23 462	

LEEUPPOORT HOUSING

The proposed Leeuwpoot Housing Development (4 032.63ha) consists of 3 Townships, namely: Reiger Park Extension 19 and Parkdale Extension 7, the land parcels (Portion 51 and the Remaining Extent of the farm Leeuwpoot No. 113 IR) and the Remaining Extent of the farm Leeuwpoot No. 113 IR) are earmarked for the development of affordable housing. This townships (Reiger Park Extension 19 and Parkdene Extension 7) forms part of the larger "Leeuwpoot North" development which will comprise approximately 4 621 residential units and erven on the former mining land.

Leeuwpoot South – proposed Sunward Park Ext 23 (Remaining Extent of the Farm Leeuwpoot No. 113 IR) is earmarked for the development of a mixed income development. This township forms part of the larger "Leeuwpoot" development which will comprise a total of approximately 13 532 residential units and erven on the former mining land.



The proposed project is located North and South of Boksburg CBD which is typical mixed use business area consisting of government and commercial offices, retail, residential units and commercial and warehouses as well as civic facilities.

The Ekurhuleni MM earmarked the land for the development at various densities and far various levels of affordability to be a missed use and mixed income development in line with the principles of breaking New Ground. Thus the Remaining extent of the farm Leeuwpoort No. 113IR) is earmarked for the development of affordable housing.

■ MT DEVELOPMENT

The M&T development (Twenty one Industrial Park) will be focusing only in the Townships that fall within the Urban Edge. There is more land that is still available outside the urban edge and it will only be profiled as soon as the urban edge is amended. With regard to location all townships that falls within the urban edge are strategically located and straddle the R21 Albertina Sisulu Freeway to the east and west between Pretoria and OR Tambo International Airport. The Olifantsfontein interchange on the R21 Freeway is situated centrally within the Twenty One developments.

Proposed Land Use Mix:

- Medium density residential dwelling units (90 units per ha)
- Mixed Land-use (Business, retail, showrooms, residential
- "Business 1"
- Office
- "Industrial 1"
- Industrial 2"
- "Special" for Warehousing and distribution
- "Special "for Industrial uses and buildings
- Open Space (Public open space and Private open space)
- Educational

■ OR TAMBO INTERNATIONAL AIRPORT PRECINCT

The O.R.Tambo International Airport precinct (1551,7 ha) consists of various current and future projects been developed by ACSA as well as other role players within the precinct such as the Gauteng IDZ. The projects mostly comprise of enhancing capacity as well as developing O.R.Tambo International Airport into a more efficient transport hub for southern Africa in line with the Aerotropolis Master Plan.

Proposed Land Use Mix:

The land uses contained within the precinct range from Industrial, Hotel, Commercial, Retail, Transport, Logistics, Warehousing, Roads and various other airport related facilities.



■ PRASA GIBELS

The Passenger Rail Agency of South Africa (PRASA), in joint venture with Gibela Rail Transport Consortium (Pty) Ltd has embarked on a refurbish and replace campaign in order to transform and modernise all of its current rolling stock. Gibela (61% Alstom owned) has been awarded the rolling stock contract by PRASA to build and deliver 600 trains made up of 3 600 coaches to South Africa's metro rail networks between 2015 and 2025. Prasa-Gibela intends to establish a rail manufacturing plant (288 ha in extend) for the manufacturing of the new rolling stock of approximately 3 500 train carriages. The project will improve the current state of trains in South Africa. The trains it will provide as excellent service that is safe and secure to people who make use of the public railway system.

Table B2.4: PRASA GIBELS Proposed Land Use Mix

Land Use	Erf Numbers	Land Use Size	Number of Erven
Industrial 1	2415, 2416, 2420	77.903 ha	3
Business 2	2414	1.027 ha	1
Public open space	2417, 2418	18.771 ha	2
Transportation	2419	1.330 ha	1
Roads		5.590 ha	

■ RIVERFIELDS DEVELOPMENT

The Riverfields development (1 900 Ha) is a mixed-use development strategically located northeast of the existing Kempton Park CBD and the Albertina Sisulu Freeway (R21) between O.R. Tambo International Airport and Tshwane. The Riverfields Development commenced in 1998 and combines a number of current and proposed developments.

The Riverfields Development commenced in 1998 and the developments listed below have been completed or in the planning stage:

1. Glen Erasmia Boulevard (430 residential stands) and Zimbali Cluster Development
2. Gleneagle Estate (392 residential stands), 4 cluster developments (to be developed) Clubhouse, tennis court, squash court and extensive parks
3. The Gleneagle Office Park which is currently being serviced and is practically sold out
4. Plumbago Business Park, which is fully serviced and in the process of being developed. John Deere and Blue Sky Logistics have already taken occupation.
5. Plumbago Logistics Park, which is currently being serviced. Tenants include DB. Schenker Logistics SA Head Office.
6. The Riverfields Retail Mall will be established on the south-western intersection of the R21 and R25. Applications for the township establishment have been approved and is in the process of being phased.
7. The Remainder of the Riverfields Development is being conceptualised in an Urban Development Framework which is currently being created and contains mixed uses for the whole of the area as indicated in the next section.



Table B2.5: Riverfields Proposed Land Use Mix

	No of Erven	No of Units	Proposed GLA
Distribution/Industry	-	-	2,519,841m2
Extended Golf Estate	-	-	-
High Density Residential	-	1925	-
High Tech Mixed Use	-	-	-
Low Density Residential	933	-	-
Medium Density Residential	-	-	-
Mixed Use	-	-	139,077m2
Mixed use/Retail	-	-	78,507m2
Natural Open Space/ Wetland	-	-	-
Office	-	-	73,963m2
Planned Open Space	-	-	93,417m2
PWV Reserve	-	-	-
Quarry	-	-	-
Road network	-	-	-
Social & Institutional	-	-	90,021m2
Special	-	-	445,626m2

S&J INDUSTRIAL PRECINCT

The S&J Industrial development is strategically located in the mining belt on part of the remainder of Portion 2 of farm Elandsfontein 90-IR and Portion 531 Elandsfontein 108 IR that is located between the N3 and Germiston. The development is in application phase which includes the following proposed developments:

1. Jupiter X8 (approximately 40HA)
2. Jupiter X9 (approximately 160HA)
3. Simmerfield X2 (approximately 10HA)

The development (Jupiter Ext.8, 9 & Simmerfield X2) is owned by Redefine Properties Ltd. (45%), The Pivotal Property Fund Ltd. (45%) and Abland (10%).

Due to the nature of the development and the specific uses (manufacturing and warehousing), as well as the developable bulk, the potential exists to create a number of new business contributing to Industry Agglomeration (at least 5).

Proposed Land Use Mix:

- Industrial
- Warehouse, distribution, logistics centers
- Commercial (retail, restaurants, personal service industries etc)
- Offices
- Conference facility
- Private open space



■ TAMBO SPRINGS INLAND PORT

The proposed Tambo Springs Inland Port (Remaining Extent of Portion 37(a portion of Portion 34) of the Farm Tamboekiesfontein 173 IR - better known as Magagula Height Extension 1) was identified as the Gauteng- Durban Freight Corridor's most important inland port. The Project is part of the Strategic Infrastructure Programme (SIP 2) which is led by the national government and Transnet. Tambo Springs Inland Port was identified by Transnet as a solution for the required freight capacity expansion. The identified site will be developed as an Intermodal terminal and associated logistics hub. The development will comprise of roads and rail facilities, trucking and intermodal yards, warehousing, customs clearance facilities and other uses subservient to an Inland Port and Logistics Hub.

This Inland port is in line with the Gauteng spatial model and is located along the existing N3 freeway and the K146 and K148 PWV K-routes. The site forms part of the Gauteng-KZN 2050 programme and has other strategic and beneficial linkages. The project has the support of Transnet who have signed a Memorandum of Understanding (MOU) with the City of Ekurhuleni and the Gauteng Provincial Government on the 25th October 2013. The MOU allows for collaboration and co-operation of all the parties towards the envisaged inland port.

Table B2.6: Tambo Springs Proposed Land Use Mix

Proposed Land Use	Land size of each land
"SPECIAL"-for railway purposes including rail siding, arrivals and departures yards, maintenance depot and subservient uses.	59.71 ha
"INDUSTRIAL"- for industries, offices, commercial purpose, showroom, motor dealers, panel beaters, builders yard, service industries, fitment Centre, motor workshop as well as other related and subservient uses.	21.85ha
"SPECIAL"-for transportation center including railway facilities, container depot, inland port, logistic hub, Intermodal terminus. truck staging. security access control, ablution facilities. administration and offices. stacking space for containers, as well as other related and subservient uses.	24.17ha
"SPECIAL"-for transportation center including railway facilities. container depot, inland port, logistic hub, intermodal terminus. truck staging, security access control, ablution facilities. administration and offices. stacking space for containers, customer clearance. industrial 1 as well as other related and subservient uses.	307.12ha
"SPECIAL"- for custom clearance and associates uses as well as warehousing .	5.50ha
"PRIVATE ROADS" for access, access control and municipal services	24.12ha
"PRIVATE OPEN SPACE" for parks, garden, nature reserves, botanical gardens, conservation, heritage sites, monuments, historical buildings, play parks, open space, squares and building used in conjunction with municipal purposes and cemetery.	93.76ha



■ LORDS VIEW INDUSTRIAL ESTATE

Lords View provides a prime location to help reduce transportation costs and streamline the supply-chain process. Chloorkop has been selected for the Lords View Logistics Park due to its centrality, its excellent road infrastructure and proximity to a large labour force. With the increased global competition and transportation costs the location of your company distribution Centre or manufacturing base becomes vitally important in cost management. The Lord Trust provides a prime location in Lords View to help reduce transportation costs and streamline the supply-chain process. Lords View has been planned as an environmentally friendly and eco-sensitive industrial and logistics park and makes use of the latest developments in cleaner greener township development.

Chloorkop Ext 66 is 25.6 hectares consisting of 21 erven and was launched as phase 1 of the Lords View Logistics Park. The remaining townships Chloorkop Ext 64, 68 and 69 and Klipfonteinview Ext 5 are 70.86 hectares and consist of 51 erven and will be launched as phases 2, 3, 4 and 5 of the Lords View Industrial Park. Future phases will be launched as market demand dictates.

All of the identified SUDA represents private sector projects and are reflected within the intergovernmental project pipeline accordingly.

B2.1.3 HUMAN SETTLEMENTS MEGA PROJECTS

In addition to the above identified City Planning Development Precincts and SUDA's, the following Mega Housing projects were identified by Human Settlements, of which some projects are public/private partnerships other are public/public partnerships (refer **Figure B2.1.3**):

Table B2.7: Mega Project Clusters

Cluster	Housing Projects
Northern Cluster	<ul style="list-style-type: none"> • Clayville 45, 50/71 and 51 • Esselen Park • Tembisa ext. 25
Eastern Cluster	<ul style="list-style-type: none"> • John Dube 2 (Duduza / Grootfontein) • Brakpan Old Location • Tsakane ext. 22 • Chief Luthuli ext. 6
Southern Cluster	<ul style="list-style-type: none"> • Leeuwpoort • Rietfontein-Rietspruit, Palm Ridge ext. 10 and 11, Palmietfontein and Zwartkoppies • Germiston housing projects linked to Germiston Urban Renewal (Delville ext. 9, Erf 808 Germiston South, Germiston Station, Pirowville, Goodhope, Dukathole Kutalo/ Robert-Stratchan, Balmoral ext. 4 and ext. 5.)



Projected Five-Year Roll-Out Plan for Top Structures

Tables B2.9 (on the overleaf) indicate that the Planning, Detail Designs, Procurement phase of the project is completed. The figures provided are for the construction of top structures.

Table B2.8: Project Location Description

Cluster	Projects	Marginalised Areas/ Priority Intervention Areas
Northern Development Cluster	<ul style="list-style-type: none"> Clayville X 45; X 50; X 71; Xs 76-80 Birchleigh North X 4 (Ptn of the farm Witfontein Esselen Park) Tembisa X 25 	Madelakufa 1, 2, Freedom Square, Winnie Mandela Double Allocations, Vusimusi / Enhlanzeni, Tswelopelo 8
Eastern Development Cluster	<ul style="list-style-type: none"> John Dube 2 Brakpan Old Location Tsakane X 22 Chief Albert Luthuli X 6 Rietfontein 128 IR Kwathema 210 IR 	Gabon informal, Kwa-Thema (Ekuthuleni, X 5 and X 7) Tsakane X 10 double allocations, Vosloorus,
Southern Development Cluster	<ul style="list-style-type: none"> Leeuwpoort Van Dyk Park Comet Erf 808 Germiston South /Pirrowville / Germiston Station Balmoral X 4 & X 5 Dukathole/ Goodhope Kutalo/ Robert Strachen Zwartkoppies Palmietfontein Palm Ridge Xs 10 & 11 (Ptns 89 & 90 of the farm Rietfontein 153 IR) 	Somalia, Mpilisweni, Sakhile, Ramaphosa, Eden Park, Thokoza



Table B2.9: Mega Project Northern Cluster – Construction of Top Structures

NORTHERN CLUSTER									
PROJECT	TOTAL YIELD			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Clayville X 45	3 202	BNG Low Density	200		200	200			
		BNG High Density	1 421			500	500	421	
		FLISP	1 129			718	411		
		Social Housing	452				250	202	
Clayville X 50, X 71 & Xs 76-80	11 126	BNG High Density	4 446			189	587	157	3 513
		FLISP	4 498			434	523	480	3 061
		Social Housing	2 182			126	185	105	1 766
TembisaX 25	1 571	BNG High Density	1 257				1 257		
		Social Housing	314					314	
Birghleigh North X 4 (Esselen Park)	7 200	BNG High Density	3 600				3 600		
		FLISP	1 440						1 440
		Social Housing	1 440					1 440	
		Bonded	720						720
TOTAL	23 099				200	2167	7 313	3 119	10 500

Table B2.10: Mega Project Eastern Cluster – Construction of Top Structures

EASTERN CLUSTER									
PROJECT	TOTAL YIELD			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
John Dube 2	12 295	BNG High Density	6 147					3 147	3 000
		FLISP	2 459						2 459
		Social Housing	2 459						2 459
		Bonded	1 230						1 230
Brakpan X 13	7 547	BNG High Density	3 774				3 774		
		FLISP	1 511						1 511
		Social Housing	1 512					1 512	

PROJECT	TOTAL YIELD	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
	Bonded	750					750	
SUBTOTAL	19 842	19 842			3774	4 659	11 409	
IMPLEMENTING AGENT: GAUTENG DHS								
PROJECT	TOTAL YIELD	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Tsakane X 22	6 400	BNG High Density	4 480					
		FLISP	1 280		1 667	1 667	1 667	
		Bonded	640					
Chief Albert Luthuli X 6	7 274	BNG High Density	3 637	1 527	820	1 395	1 395	
		FLISP	1 455					
		Social Housing	1 454					
		Bonded	728					
Rietspruit / Riefontein	9 049	BNG High Density	4 524				4 524	
		FLISP	1 810				1 810	
		Social Housing	1 810				1 810	
		Bonded	905				905	
SUBTOTAL	22 723	22 723	1 527	2 487	3 062	3 062	10444	
TOTAL	42 565	42 565	1 527	2 487	3 062	6 836	7 721	21 853

Table B2.11: Mega Project Southern Cluster – Construction of Top Structures

SOUTHERN CLUSTER									
PROJECT	TOTAL YIELD	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21		
Leeuwpoort	19 453	BNG Low Density	1 957		820	450	277	350	60
		BNG High Density	5 010		2 050	1 175	698	932	155
		FLISP	3 099		304	324	457	576	1 438
		Social Housing	5 752		699	1 037	1 350	1 034	1 632
		Bonded	3 635		270	375	425	673	1 892
Van Dyk	3 350					1 675	0	0	

SOUTHERN CLUSTER									
PROJECT	TOTAL YIELD			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Park		FLISP	670				0	0	670
		Social Housing	670				0	670	0
		Bonded	335				0	0	335
Palmietfontein Ptn 57	3 687	BNG High Density	1 844				1 844	0	0
		FLISP	738				0	0	738
		Social Housing	737				0	737	0
		Bonded	368				0	0	368
Delville	112	Social Housing	112	112					
Erf 808 Germiston South	344	Social Housing	344	144	200				
Germiston Station	484	Social Housing	484					484	
Pirowville	2 500	BNG High Density	1 500					1 500	
		Social Housing	1 000						1 000
Goodhope	778	BNG High Density	778				400	378	
Dukathole	2 000	BNG High Density	2 000					500	1 500
Kutalo/ Robert- Stratchan	3 300	BNG High Density	1 900						1 900

SOUTHERN CLUSTER									
PROJECT	TOTAL YIELD			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
		BNG Low Density	1 400					1 400	
Balmoral X 4 & X 5	2 285	BNG Low Density	2 285			685	800	800	
SUBTOTAL	11 803			256	200	685	1 200	5 062	4 400
IMPLEMENTING AGENT: GAUTENG DHS									
PROJECT	TOTAL YIELD			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Comet	1 500	BNG Low Density	1 500						1 500
Palm Ridge X 10 & 12									
Zwart-koppies	7 000	BNG High Density	3 500						3 500
		FLISP	1 400						1 400
		Social Housing	1 400						1 400
		Bonded	700						700
SUBTOTAL	8 500								8 500
TOTAL	20 303								12 900

B2.1.4 PRIORITISED INTERVENTIONS

No detailed prioritised interventions, related to land release proposals, opportunities, risk mitigation etc. is currently available for the precincts, SUDA's and mega projects. Refer section E for EMM land release strategy.

Although, the following section indicates the CAPEX projects located within the precincts, SUDA's and mega projects as listed above, prioritised according to the following eight (8) categories:

- Priority 1: Integration Zone 1: Housing Precincts
- Priority 2: Integration Zone 2: MSDF Precincts
- Priority 3: Integration Zone 3: Housing Precincts
- Priority 4: Integration Zone 3: MSDF Precincts
- Priority 5: Integration Zone 4: MSDF Precincts
- Priority 6: Integration Zone 4: Precincts in remainder of integration zone 4
- Priority 7: Integration Zone 5: Housing Precincts
- Priority 8: Integration Zone 5: MSDF Precincts
- Priority 9: Housing Precincts (Outside Integration Zones) : Remainder
- Priority 10: MSDF Precincts (Outside Integration Zones): Remainder
- Priority 11: Precincts in Economic Nodes (Outside Integration Zones): Economic Node: Aerotropolis Core
- Priority 12: Precincts in Marginalised Areas (Outside Integration Zones): Remainder
- Priority 13: Precincts in all other projects not allocated to a Spatial Targeting Area: City-wide projects

Table B2.12 lists two projects per Priority Categories (as listed above) with the highest monetary value allocated within the Intergovernmental Project Pipeline. **Figure B2.1.4** graphically represents the spatial locations of the identified projects as listed within Table B2.12.

B2.1.5 PROOF OF CONSULTATION: PRECINCT PLANNING

Please see attached **Appendix D** for the evidence of consultation with relevant provincial, national and SOE sectors (meeting agenda, minutes and / or attendance registers of meetings) with regard to precinct planning.

- Evidence of Consultation - Thelle Mogoerane Precinct
 - Stakeholder Engagement Report - Thelle Mogoerane Precinct 13 March 2017



Table B2.12: Prioritised Capex Projects Local Area Planning

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017/18 - 2019/20
Integration Zone 1: Housing Precincts					-	R 1,000,000	R 10,000,000	R11,000,000
1	Waste Management	Facilities, Upgrade and construction of facilities: Eselen Park(Kempton Park)	Economic Development	Unassigned	R-	R-	R 10,000,000	R10,000,000
2	Waste Management	Facilities, Upgrade and construction of facilities: Eselen Park(Kempton Park)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R-	R 1,000,000	R-	R 1,000,000
Integration Zone 2: MSDF Precincts					R 9,956,000	R 25,734,000	R 9,836,000	R 65,526,000
3	Energy	Brakpan Revenue enhancement(Brakpan)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R 5,000,000	R 6,000,000	R-	R11,000,000
4	Energy	Brakpan Network enhancement(Brakpan)	Economic Development	015 - Borrowings	R 4,500,000	R 5,000,000	R-	R 9,500,000
Integration Zone 3: Housing Precincts					-	R 100,000	R 1,000,000	R 1,100,000
5	Sports Recreation Arts and Culture (SRAC)	Rehabilitate Eden Park stadium	Urban Restructuring	Unassigned	R-	R 100,000	R1,000,000	R 1,100,000
Integration Zone 3: MSDF Precincts					R 39,168,000.00	R 66,917,200.00	R 80,525,000.00	R 186,610,200.00
6	Transport	Replace Municipal buses (Operational Equipment)	Urban Restructuring	015 - Borrowings	R-	R39,000,000	R-	R39,000,000
7	Energy	Russel Road substation(Germiston)	Economic Development	015 - Borrowings	R 5,000,000	R10,000,000	R 20,000,000	R35,000,000
Integration Zone 4: MSDF Precincts					R 5,370,000	R2,300,000	R 3,439,000	R 11,109,000
8	Human Settlements	Vehicles(Operational Equipment)	Urban Restructuring	001 - Council Funding	R 4,500,000	R 2,300,000	R-	R 6,800,000
9	Human Settlements	Vehicles(Operational Equipment)	Urban Restructuring	Unassigned	R-	R-	R2,800,000	R 2,800,000
Integration Zone 4: Precincts in remainder of integration zone 4					R 9,000,000	R 7,000,000	R -	R 16,000,000
10	Ekurhuleni Metro Police Department (EMPD)	Const Benoni Precinct (Benoni)	Urban Restructuring	015 - Borrowings	R 9,000,000	R 7,000,000	R-	R16,000,000

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017/18 - 2019/20
Integration Zone 5: Housing Precincts					R 3,352,000	R -	R 15,000,000	R 18,352,000
11	Real Estate	Refurbishment of Lettable Facilities, Kwa Thema Police Station	Economic Development	Unassigned	R 3,352,000	R-	R 15,000,000	R18,352,000
Integration Zone 5: MSDF Precincts					R 500,000	R -	R -	R 500,000
12	Roads and Stormwater	Ped. Management (E): Completion of Sidewalk Dube St (Benoni)	Urban Restructuring	007 - CRRF Capital Replacement Reserve Fund	R 500,000	R-	R-	R 500,000
Housing Precincts (Outside Integration Zones) : Remainder					R 116,793,992	R 29,340,000	R 14,000,000	R 160,133,992
13	Human Settlements	Palm Ridge Extension 9(Katlehong 2)	Urban Restructuring	005 - Urban Settlement Development Grant	R71,793,992	R-	R-	R71,793,992
14	Energy	Edenpark substation(Alberton)	Economic Development	007 - CRRF Capital Replacement Reserve Fund	R20,000,000	R15,000,000	R-	R35,000,000
MSDF Precincts (Outside Integration Zones): Remainder					R 328,850,000	R 217,170,000	R213,500,000	R 759,520,000
15	Council General	Provision for Bulk Infrastructure(Benoni)	Economic Development	015 - Borrowings	R 303,650,000	R 181,000,000	R-	R 484,650,000
16	Council General	Provision for Bulk Infrastructure(Benoni)	Economic Development	Unassigned	R-	R-	R 175,000,000	R 175,000,000
Precincts in Economic Nodes (Outside Integration Zones): Economic Node: Aerotropolis Core					R 10,000,000	R -	R -	R 10,000,000
17	Ekurhuleni Metro Police Department (EMPD)	Const Kempton Park Precinct (Kempton Park)	Urban Restructuring	015 - Borrowings	R10,000,000	\$-	\$ -	R10,000,000
Precincts in Marginalised Areas (Outside Integration Zones): Remainder					R 6,000,000	R4,000,000	R 2,000,000	R 12,000,000
18	Ekurhuleni Metro Police Department (EMPD)	Const Tembisa Precinct (Tembisa 1)	Urban Restructuring	015 - Borrowings	R 6,000,000	R 4,000,000	R-	R10,000,000
19	Ekurhuleni Metro Police Department (EMPD)	Construction of Etwatwa Precinct (Etwatwa)	Urban Restructuring	Unassigned	R-	R-	R2,000,000	R 2,000,000

MAP NO.	Department	Project	Capitalisation Investment Framework Category	Source of Funding	Capital Budget 2017/18	Capital Budget 2018/19	Capital Budget 2019/20	MTREF Total 2017/18 - 2019/20
Precincts in all other projects not allocated to a Spatial Targeting Area: City-wide projects					R 8,000,000	R8,000,000	R 2,000,000	R 18,000,000
20	Ekurhuleni Metro Police Department (EMPD)	Const Precinct Edleen(Kempton Park)	Urban Restructuring	015 - Borrowings	R 8,000,000	R 8,000,000	R-	R16,000,000
21	Ekurhuleni Metro Police Department (EMPD)	Construction of Kingsway / Lindelani Precinct (Daveyton)	Urban Restructuring	Unassigned	R-	R-	R2,000,000	R 2,000,000

B2.2 INFORMAL SETTLEMENT PLANNING

The following section highlights the Planning / Development of Prioritised Informal Settlements and Informal Sector Upgrading Strategy.

B2.3.1 PLANNING / DEVELOPMENT OF PRIORITISED INFORMAL SETTLEMENTS

Table B2.13: Informal Settlements

2016/17	Funds Allocated/ Spent 2016/17
<p>Re-blocking Programme</p> <ul style="list-style-type: none"> Re-blocking Programme has already started with the 6 pilot Informal Settlements: Winnie Mandela, Ekuthuleni, Thusong, Nkanini, Emandleni and Makaase. An additional 14 settlements were added for implementation in the current year. The remaining 99 settlements will be completed in the next four years. Service Provider already appointed to undertake conceptual designs. Electricity has already provided to 10 settlements. Working on the development of a Re-blocking Model Settlement for Angelo informal settlement. 	R30 000 000
<p>House Construction</p> <p>EMM planned to deliver 689 houses Delivered 266 houses in the following projects:</p> <ul style="list-style-type: none"> 153 - Alra Park X completed and allocated 113 - Etwatwa X 35 completed and allocated 423 houses completed by 30th of June 2017. <p>Gauteng Department of Human Settlements planned to deliver 2259 houses: Delivered 775 houses in the following projects:</p> <ul style="list-style-type: none"> Tsakane X 22; Chief Albert Luthuli X 6; Bluegumview Xs 2,3,4,5&6; Villa Liza X 2, Clayville X 45; <p>Housing Development Agency (HDA) appointed by the Gauteng Department of Human Settlements to deliver 1808 houses in the following projects:</p> <ul style="list-style-type: none"> 300 - Mackenziville X 2 329 - Chief Albert Luthuli X 4 900 - Palm Ridge X 9 277 - Eden Park X 1 <p>All the projects still under construction</p>	R65 781 674
<p>Social Housing</p> <ul style="list-style-type: none"> 256 units by end March 2017 in Delville X 9 and Erf 808 Germiston South (Fire Station Phase 1). 200 units by October 2017 (Fire Station Phase 2). <p>Detailed designs to be completed June 2017:</p> <ul style="list-style-type: none"> 770 units Erf 18383 Vosloorus X 9 584 RDP Walkups Erf 18383 Vosloorus X 9 264 RDP walk-up units Erf 3130 Wattville 	R116 081 504
<p>Projects in Implementation Phase at various stage:</p> <ul style="list-style-type: none"> 1091 Stands -Balmoral X 4 comprising: Work Package 1 (259 Stands) - 48% Complete Work Package 2 (388 Stands) & 3 (444 stands) and Bulk Water and Sewer – Site handover Complete 326 Stands - Chief Albert Luthuli X4 comprising: Construction progress - 81% 600 stands - Mackenzieville X 2 comprising: 	R79 312 000



2016/17	Funds Allocated/ Spent 2016/17
<p>Construction progress - 88% Complete</p> <ul style="list-style-type: none"> • 1355 Stands - Palm Ridge X 9 comprising: Work Package 3 (390 Stands) - 74% Complete • 634 Stands - Alliance X 9 comprising: Roads and Storm Water Construction expected to commence by September 2017, at which time the Water and Sanitation Department will be completed with their contract for the internal Water and Sanitation Infrastructure • 1 097 Stands - Payneville X 1 comprising: Construction Progress – 21% Complete. • 209 Stands - Langaville X 4 comprising: Construction Progress – 11% Complete <p>Housing Development Agency (HDA): projects in procurement stage:</p> <ul style="list-style-type: none"> • 958 Stands - Daveyton X 14 • 630 Stands - Mayfield X 45 • 223 Stands - Moleleki X 2 <p>PLANNING Projects at detail design stage, planned for implementation in the 2017/18 financial year:</p> <ul style="list-style-type: none"> • 2961 Stands- Alliance X 1 • 331 Stands - Apex X 12 <p>In addition to the above it is planned to release serviced stands at Mayfield Extensions 32 and 34 for 329 stands during the 2017/18 financial year.</p> <p>Projects in the detail design stage, planned for implementation post the 2017/18 financial year:</p> <ul style="list-style-type: none"> • 1224 Stands - Dalpark X 25 (Subject to successful Appeal on GDARD Authorization) • 323 Stands - Balmoral X 5 • 828 Stands - Payneville X 3 <p>The acquisition of serviced stands, comprising of Further detail design are to be done for new projects during the 2017/2018 financial year, presently in the Township Establishment phase. However, Township Planning for the development of Serviced stands comprising in excess of 520 hectares of developable land is further required and receiving attention within the Department.</p>	
392 Title Deeds issued in all Regions	Funded by the Gauteng Department of Human Settlements.

B2.3.2 INFORMAL SECTOR UPGRADING

The National Upgrading Support Programme and Ekurhuleni Metropolitan Municipality have put in place an agreement to provide technical assistance in terms of updating the EMM's informal settlement Upgrading Programme; assessing and categorising 33 settlements; providing settlement level upgrading plans as well as sustainable livelihoods programmes for these settlements. There are 33 informal settlements that forms part of this round of technical. **Table B2.14** (and **Figure B2.1.5**) list the 33 prioritised informal settlements:



Table B2.14: Informal Sector Upgrading Prioritised Settlements

	Name of Settlement	Number of Households
1	Beach front	800
2	Driefontein	226
3	Jerusalem	3558
4	Joe Slovo	1279
5	Kaalfontein	257
6	Kwa-Thema Ext 3 Enkanini	941
7	Kwa-Thema Ext 3 Marinkana transit Area	972
8	N12 Highway park	2357
9	Payneville Ext 1 & 3 Everest	3031
10	Phola Park Coal Yards	496
11	Reiger Park School Erf (Rama)	179
12	Ramaphosa Road Reserve (Reiger Park)	2154
13	Rooikop Station	348
14	Sakhile Mngadi	657
15	Sophia Town	1166
16	Tamaho (Mandela Park Open time)	1600
17	Thulasizwe	147
18	Tokyo Sexwale (Reiger Park EXT 9)	2157
19	Winnie Mandela 1	8000
20	Winnie Mandela 2	
21	Winnie Mandela 3	
22	Winnie Mandela 4&5	
23	Winnie Mandela 6	
24	Winnie Mandela 7	
25	Makause	
26	Vlakfontein Portion 36	800
27	Waterval	54
28	Wetevreden	40
29	Umgababa	278
30	Nkanini	138
31	Emandleni	3750
32	Thusong	642
33	Msholozhi	699
TOTAL		4 1926

B2.3 MARGINALISED AREAS PLANNING

B2.4.1 PRIORITY MARGINALISED AREAS IDENTIFIED

Five Marginalised Areas was identified within the EMM, which comprises of the following:

- Tembisa
- Katoru
- KwaTsaDuza
- Daveyton / Etwatwa
- Wattville

Refer Figure B1.17 that spatial represents the Marginalised Areas, identifying townships, informal settlements (2016) and inner city areas.



B2.4 ECONOMIC NODES PLANNING

In line with the new Integration Zone Planning Guidelines and 2017/18-2019/20 BEPP Guidance Notes, economic nodes are identified separately for the Integration Zones and are prioritised accordingly. The following table is a summary of the most predominant economic nodes within the EMM, consisting of a core node, urban hubs, CBD's, secondary nodes, shopping centres and industrial areas. Refer Figure B1.16 which is a graphical representation of the Economic Nodes. It is noted that the economic nodes are viewed as the main employment nodes.

Table B2.15: Economic Node Summary

Economic Nodes	Description
Core Node	Aerotropolis Core Node
Urban hubs	<ul style="list-style-type: none"> ■ Tembisa CCC2 ■ Vosloorus CCC4 ■ Kwesini CCC4 ■ Daveyton CCC2 ■ Tsakane CCC4
CBD's	<ul style="list-style-type: none"> ■ Kempton Park ■ Edenvale ■ Germiston ■ Boksburg ■ Benoni ■ Brakpan ■ Springs ■ Alberton ■ Nigel
Secondary node	<ul style="list-style-type: none"> ■ Winnie Mandela Node ■ Oakmoor Station Node ■ Tembisa Station Node ■ Swazi Inn Node ■ Leralla Station Node ■ New Natalspruit Hospital ■ Naledi Shopping Centre ■ Chris Hani Crossing ■ Admin Triangle ■ Pilot Station ■ Motse wa Lijane Shopping Centre ■ UNISA Campus ■ Etwatwa CCC ■ Daveyton Mall ■ Kwa-Thema CCC ■ Ekhaya Shopping Centre ■ Tsakane Mall ■ Duduza CCC
Shopping centre (Super Regional / Regional / Small Regional)	<ul style="list-style-type: none"> ■ Eastgate Shopping Centre ■ Westgate Shopping Centre ■ East Rand Mall ■ East Rand Galleria ■ Festival Mall ■ Mall @ Carnival ■ Lakeside Mall – Benoni ■ Chris Hani Crossing ■ Meadowdale Mall ■ The Avenues ■ Tsakane Mall ■ East Rand Retail Park ■ Sunwards Lifestyle Centre ■ Newmarket Mall ■ Birch Acres Mall ■ OT Tambo International Airport ■ K90 Shopping Centre ■ Mayfield Square ■ Alberton City Shopping Centre
Industrial areas	<ul style="list-style-type: none"> ■ Alrode ■ Anderbolt ■ Balmoral ■ Benoni South ■ Boksburg East ■ Chloorkop ■ Clayville ■ Commercia ■ Driekoek ■ Klipfontein ■ Lilianton ■ Mapleton ■ Meadowdale ■ Nestadt ■ Pomona ■ Prosperita ■ Raceway Industrial Park ■ Rietfontein



<ul style="list-style-type: none"> ■ Dunswaart ■ Elandsfontein ■ Elandshaven ■ Germiston South ■ Gosforth Park ■ Henville ■ Isando ■ Jet Park ■ Junction Hill ■ Jupiter 	<ul style="list-style-type: none"> ■ Roodekop ■ Roxton ■ Sebenza ■ Spartan ■ Sterkfontein ■ Tunney ■ Vlakplaats ■ Vosterkroon ■ Wadeville ■ Witfontein
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B2.4.1 NODAL CATEGORISATION

All of the CBD’s within the EMM is identified as declining economic nodes, with the exclusion of the Edenvale CBD’s. The urban Hubs are all emerging nodes. While the industrial areas are viewed as established nodes.

B2.4.2 INTERVENTION STRATEGY - ECONOMIC NODES

Following is an example of the intervention strategy (precinct plan) for the redevelopment of the Kempton Park CBD, which is identified as a declining CBD:

The Kempton Park CBD Precinct plan focuses on the Central Business District (CBD) of Kempton Park, and the surrounding support Zone. The Kempton Park CBD Precinct falls within Region A of Ekurhuleni. Importantly, the airport (as an emerging Aerotropolis core) is also located in this region. This will have a major influence on the CBD whilst, in turn, the CBD will provide key services to support this crucial economic zone. In addition, the Rhodesfield area has been identified for a major revitalisation, and a plan and process is in place to guide this vision.

Kempton Park CBD is part of a broader economic focus area comprising the CBDs of Kempton Park, Germiston, Boksburg and Benoni. Conceptually, this economic ‘triangle’ of CBD nodes was identified as being the potential optimum location for future core economic focus area.

The Kempton Park CBD Precinct plan development vision and philosophical approached is informed by the following elements:

Complete Streets	Places pedestrians, cyclists and public transit users on equal footing with car drivers. The initiative is dualistic in its intentions: it aims to improve quality of life by creating streets that are both great public spaces and sustainable transportation networks.
Densification & Intensification	While the two are related, densification refers to an intensified or compressed concentration of people living in a given area to achieve compaction.



	Intensification refers to augmenting or boosting production /activity on an existing brownfields site.
Urban Renewal	Urban renewal pertains to the up-cycling of land in an area experiencing urban decay e.g. an old or outdated city centre. It typically involves the redevelopment of areas within a large city, and involves the clearance of slums.
Place-Making	Place making promotes environments for people and environment, not just cars or malls. It acknowledges the importance of lively neighbourhoods and inviting public spaces such as squares, piazzas, parks & streets that will attract people because they are pleasurable or interesting. In addition, its goals are to create ownership and a certain pride of place among residents, users and visitors. Importantly, the natural landscape often plays an important role in not only the process of designing these spaces, but also their functionality.

The redevelopment of the CBD aims to achieve the following:

- A 24 hour CBD to serve locals and internationals across the board – from entertainment offerings to hospitality, habitat, convenience, mobility and accessibility
- A convenient and world-class medical tourism (e.g. cosmetic, specialised maternity etc.) destination with research and technology to support
- A PPP - - space/enabler
- A place of entrepreneurial opportunity
- A market base (e.g. produce from Bapsfontein located nearby)
- A place for public gathering (e.g. having a civic square with basement parking – similar to Beyers Naude Square)

B3. ALIGNMENT OF PUBLIC TRANSPORT AND HOUSING PLANS

EMM has embarked on the development of a more sustainable transport management approach which include an integrated public transport network namely IRPTN (Integrated Rapid Public Transport Network). The IRPTN is currently the main focus for the municipality's transport plans. The long-term plan is constantly reviewed, to align with new developments or changes in strategic policy.

Figure B3.1 indicates the IRPTN main BRT routes and the feeder routes compared to the EMM top priority targeted areas, which includes the integration zones, prioritized marginalized areas and established employment nodes. From Figure B3.1 it is evident that the transport plans of the municipality serve all the integration zones, marginalized areas and most of the employment nodes. Expansion or additional feeder routes can be considered for future planning in order to cover all the industrial areas which are currently not being served by the IRPTN network.



Figure B3.2 indicates all mega, current and planned housing projects in relation to the Integration Zones, prioritised marginalised areas and established employment nodes. From the figure it is evident that most of the housing project are located within the marginalised areas, which is served by the proposed IRPTN network. Strengthening the alignment of public transport and future housing plans, future housing project should primarily be informed by the EMMI Z Model findings, ensuring future housing project are located within the Urban Network footprint.

B3.1 HUMAN SETTLEMENTS DEMAND PROJECTIONS

The housing demand projections were identified per region, up to 2040. The table below is a summary of the housing demand projections per region up to 2040. .

Table B3.1: Housing Demand, 25 Year Cumulative Forecast per Region

Region	2020	2025	2030	2035	2040
Region A	16 177	31 655	46 295	60 002	72 721
Region B	27 408	53 689	78 590	101 936	123 626
Region C	9 716	20 216	31 565	43 833	57 097
Region D	6 743	13 387	19 886	26 203	32 306
Region E	11 434	23 169	35 176	47 423	59 882
Region F	21 658	43 465	65 342	87 214	109 010
Total Ekurhuleni	93 136	185 582	276 853	366 611	454 642

Source: Demacon CIF Task 5: 25 Year Land Take Up Report

The table below is a summary of the housing demand for the 10 year cumulative forecast per housing typology.

Table B3.2: Housing demand, 10 Year Cumulative Forecast per Housing Typology

Housing Typology	Region A	Region B	Region C	Region D	Region E	Region F	EMM
Subsidy (BNG)	13 017	25 239	11 641	5 879	13 129	22 472	91 376
CRU	1 446	2 804	1 293	653	1 459	2 497	10 153
FLISP/GAP & Social	3 982	8 747	3 094	1 898	3 486	6 661	27 867
FLISP/GAP & Affordable Bonded	3 567	5 895	1 788	1 788	2 392	4 709	20 139
Bonded	9 643	11 004	2 401	3 169	2 703	7 126	36 046
Total	31 655	53 689	20 216	13 387	23 169	43 465	185 582

Source: Demacon CIF Task 5: 25 Year Land Take Up Report



B3.2 PUBLIC TRANSPORT DEMAND PROJECTIONS

During the household travel survey conducted in 2013 the modal shares for all trip purposes in EMM were captured per area and is indicated below, the largest % of the municipality's population walk or use cars as their main mode of transport followed by the use of taxi's.

Home Transport Analysis Zone	Main mode - % of trips made by residents of TAZ					
	Train	Bus	Taxi	Car	Walk	Other
Alberton	0.0%	3.4%	3.2%	87.7%	5.1%	0.7%
Bedfordview-Edenvale	0.0%	0.7%	1.6%	87.0%	9.2%	1.4%
Benoni	1.4%	1.9%	17.1%	53.6%	23.3%	2.7%
Boksburg	5.3%	4.3%	12.4%	54.7%	18.4%	5.0%
Brakpan	1.1%	5.7%	7.7%	64.8%	16.8%	3.9%
Daveyton	4.4%	8.0%	20.4%	12.7%	45.8%	8.7%
Duduza		2.1%	28.0%	17.5%	46.5%	6.0%
Ekurhuleni East	17.3%	8.9%	36.4%	2.7%	34.7%	
Ekurhuleni North	5.6%	5.8%	25.2%	15.7%	44.8%	2.9%
Etwatwa	2.1%	4.7%	18.7%	8.5%	55.6%	10.4%
Germiston	7.1%	9.4%	11.6%	46.1%	22.8%	2.9%
Katlehong	7.1%	10.2%	28.2%	11.3%	38.7%	4.5%
Kempton Park	2.7%	3.7%	7.6%	69.3%	13.5%	3.2%
Kwa Thema	0.8%	0.5%	31.0%	15.7%	50.1%	1.8%
Nigel	1.2%	1.6%	15.7%	49.4%	27.9%	4.2%
Springs	2.9%	6.9%	11.6%	59.5%	16.3%	2.8%
Tembisa	15.5%	0.9%	24.3%	15.3%	37.1%	6.9%
Thokoza	8.0%	5.2%	28.0%	8.1%	47.8%	2.9%
Tsakane	0.2%	4.3%	36.4%	14.5%	42.7%	1.9%
Vosloorus	0.6%	7.1%	36.1%	21.7%	30.9%	3.6%
Ekurhuleni MM	5.0%	4.9%	21.5%	32.1%	32.3%	4.2%

It is indicated in the business plan of the IRPTN that a trend has been observed over a long time that the number of bus and rail passengers in Ekurhuleni is reducing . It remains to be shown whether these passengers are converting to using taxis or are using private vehicles. Another trend is that the number of trips in private vehicles in Ekurhuleni is increasing at a rate (4.5% p.a.) ahead of the population growth rate of Ekurhuleni (2.5% p.a.).



The Household Travel Survey conducted in 2013 has led to the estimation that there are 290 000 citizens regularly using public transport (40 000 rail, 10 000 bus, 240 000 taxi) during the morning peak period (06:00 – 09:00) and a further 410 000 citizens who walk significant distances (35 000) or use private vehicles (375 000), some of whom could convert to become public transport passengers if the circumstances were conducive. It can thus be deduced that of these 700 000 commuters during the peak period, 58,6% can be targeted for converting into public transport passengers. Of this 58,6%, the number of net converts to using IRPTN might only be as low as 2%, or 14 000 peak-period passengers, but that would translate into, for instance, approximately 9 000 fewer passenger cars if these are all current private car users.

The implementation of the IRPTN will influence the mode share of public transport. EMM should execute the exercise to determine the public demand projections per mode and area as part of the next CITP cycle.

B3.3 ACHIEVING MODAL ALIGNMENT AND LAND USE INTEGRATION

National legislation is being formulated to guide and strengthen modal alignment, integration within public transport networks and integration of land uses. The *Integrated Transport Planning Draft Bill: The Discussion Paper (15 February 2017)* is currently in process.

The vision for this legislation proposal is to ensure that the transport sector is equipped with an all-inclusive medium to long term and systematically integrated multi-modal transport plan(s) to guide sustainable transport investment in the Republic of South Africa to provide for mobility choices that are affordable, safe, accessible, efficient and environmental sensitive transport infrastructure & services, to meet current and tomorrow's developmental needs; just in time; to optimally support and enable government development strategies in response to societal needs and economic growth.

Objective 2 of the proposed legislation entails the facilitation of alignment of transport planning with land use planning; population dynamics and taking into account the economic vision of a specific area.

Within the context of the EMM, a *Modal Integration Strategy and Action Plan for Ekurhuleni Metropolitan Municipality* was compiled in June 2008. The vision for Ekurhuleni, as indicated in the aforementioned plan, is 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 one place to any other place, with seamless transfers in the Ekurhuleni Metropolitan Municipal Area. Following is a brief summary of the elements highlighted within the plan.



Transport Operational Integration

Effective operational integration will act as catalyst for the transformation of public transport in Ekurhuleni in general, whereby the quality of existing services, vehicles and facilities will be stimulated to improve over time, in response to higher expectations from travellers, linked to improved levels and quality of service experienced by commuters within the system and at nodes. Operational integration is aimed at addressing the following aspects namely:

- Network Integration
- Physical Integration at Transport Nodes and Development of Transit Precincts
- Through Ticketing
- Information Integration
- Technical Integration

» STRATEGY IMPLEMENTATION AND ACTION PLANS

Network Integration

The approach that has been followed in compiling a strategy for modal integration in Ekurhuleni consists of the identification of four corridors mainly on existing roads that covers all the development nodes in Ekurhuleni. Because of the extensive rail network that serves the entire urban complex of the EMM area linking the disadvantaged communities of Tembisa, Katorus and Daveyton-Etwatwa to all four core areas of economic activity as well as all the CBD areas except for Edenvale, it has been agreed to identify road-based rapid transit corridors that is not in direct competition with the origin destination pairs served by existing rail.

The four corridors identified took into account information on the existing GSPTN, main commuter movements, the busiest taxi and bus routes, proposed corridors in previous studies, suggested HOV lanes, existing and future developments. These corridors are described below and are illustrated on **Figure B3.3²**:

- Corridor 1: Tembisa – Chloorkop Industrial - Kempton Park West, Modderfontein / Edenvale - Germiston - Alberton - Wadeville / Alrode Industrial areas - Katlehong
- Corridor 2: Kempton Park – ORTIA / Jetpark – Benoni – Boksburg East – Sunward Park – Vosloorus
- Corridor 4: Kepmton Park – Benoni – Brakpan – Katlehong and Brakpan – Kwa Thema
- Corridor 5: Daveyton – Springs

² Source.: *Modal Integration Strategy and Action Plan, June 2008*



» PHYSICAL INTEGRATION AT TRANSPORT NODES

In each corridor, several nodes with the highest potential for implementation were identified measuring each against the following criteria:

- Regional accessibility
- Availability of land
- Surrounding network and interconnectivity
- Status of rail/ road operations
- Status of public transport planning
- Low cost of implementing versus potential impact
- Complexity of implementation
- Passenger Volumes
- Existence and conditions of facilities
- Existing land use composition surrounding the node

The identified nodes are listed below and illustrated in **Figure B3.4**:

Corridor 1:

- Leralla Station
- Germiston Station
- Natalspruit Hospital Node

Corridor 2:

- Kempton Park Station
- Rhodesfield Gautrain and SARCC / Metrorail Stations
- Isando Stations
- East Rand Mall node
- Dunswart Station
- Boksburg – East Station
- Northmead Station
- Vosloorus Node

Corridor 4:

- Brakpan Station

Corridor 5:

- Daveyton Station
- New Era Station



For each Station / node, strategies were developed for the short, medium and long term to address the generic objectives, as well as action plans to meet the strategies.

The following generic issues were identified as part of the implementation of the strategy at the identified Stations and nodes.

- Improve safety, security and cleanliness at the station/node.
- Provide Non-Motorized Transport (walkways/ pedestrian access and cycling paths)
- Improve urban design/ landscaping at stations

Most of the identified generic issues refer to the short terms due to the general poor state of the public transport systems. Kempton Park Station is used as an example of the process followed for each one of the identified Stations and nodes. The action plans are listed in relation to the station, as illustrated on **Figure B3.5**.

» KEMPTON PARK STATION:

Strategies:

Short term strategies

- Improve safety, security and cleanliness at the subway
- Investigate the closure of the pedestrian bridge from the western access and recommend best solution for passenger movement from western side of railway line
- Upgrade the subway to provide for cycling
- Provide bicycle storage facilities at Station

Medium term strategies:

- To construct the Road Based Rapid Transport Station facility on Pretoria Road in front of the Kempstar Mall
- Relocate and upgrade the informal taxi rank
- Provide cycling paths from the CBD and the residential areas to the Station
- Provide bicycle maintenance facility at the station

Long term strategies:

- To revitalize the CBD and provide for high density residential development
- To investigate the feasibility of the Kempstar Mall and Festival Mall in relation to the CBD uses.

Action Plans:

Short term (1-3 years) action plans:

- Employ security guards to safeguard the subway for the duration of the rail operation
- Provide energy saving lights, paved surface and regular cleaning services at the subway
- Request SARCC/ Metrorail or Intersite to investigate the re-opening of the pedestrian bridge to improve access from the western side of the railway line
- Provision of paved, undercover walkways from informal taxi rank to Station entrance



- Prepare an integrated Non-Motorized Transport (NMT) action plan for the station precinct and feeding area
- Provide facility where bicycles can be parked safely

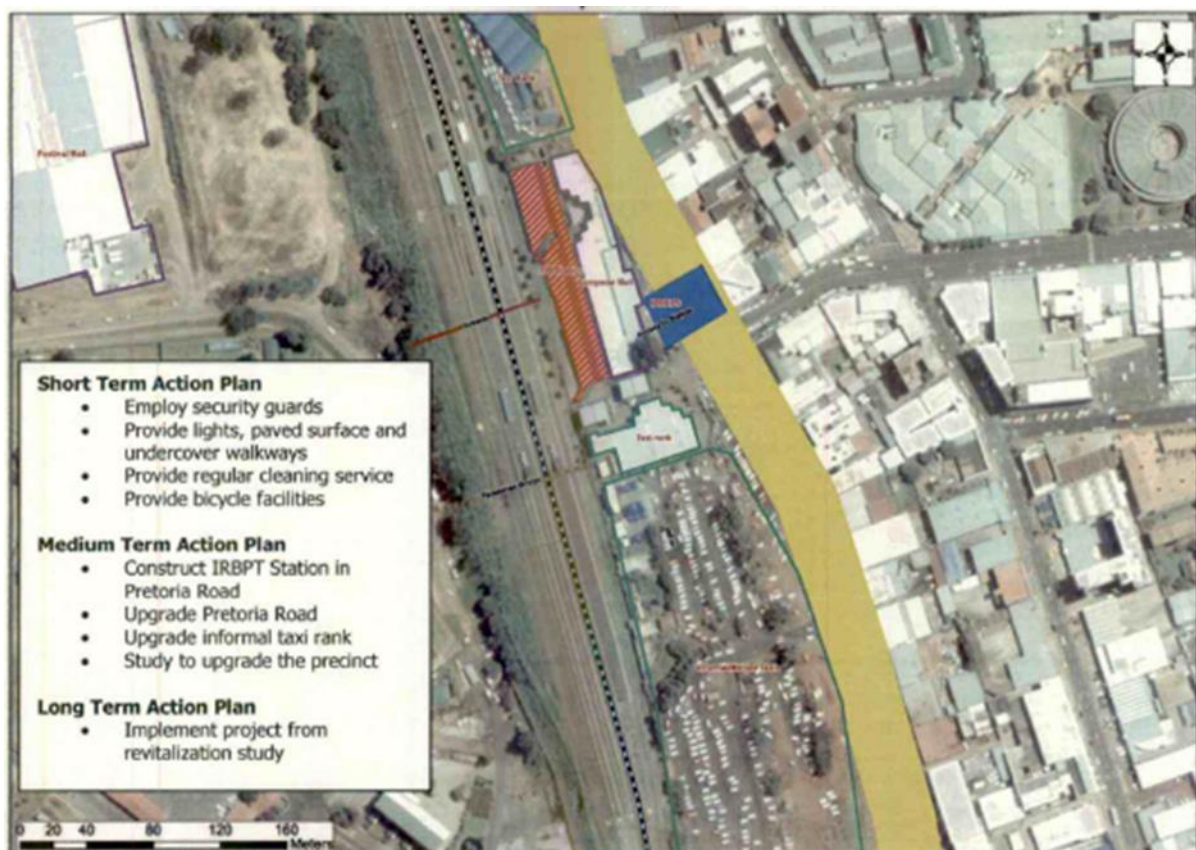
Medium term (3 - 5 years) action plan:

- Constructing the Mass Transit Transfer facility on Pretoria Road, in front of the Kempstar Mall
- Upgrade Pretoria Road to accommodate the Rapid Transit System
- Extend NMT routes to cover wider area in Kempton park
- Provide maintenance facility for bicycles at Station
- Possible relocation and upgrade of informal taxi rank closer to the entrance of the Station
- Undertake a study to determine what can be done in terms of low cost high impact projects to revitalize the CBD, starting closest to the Station

Long term (5 – 10 years) action plan:

- Implementing projects identified in the revitalization study

Figure B3.5: Action Plans for Kempton Park Station



Source: *Modal Integration Strategy and Action Plan, June 2008*

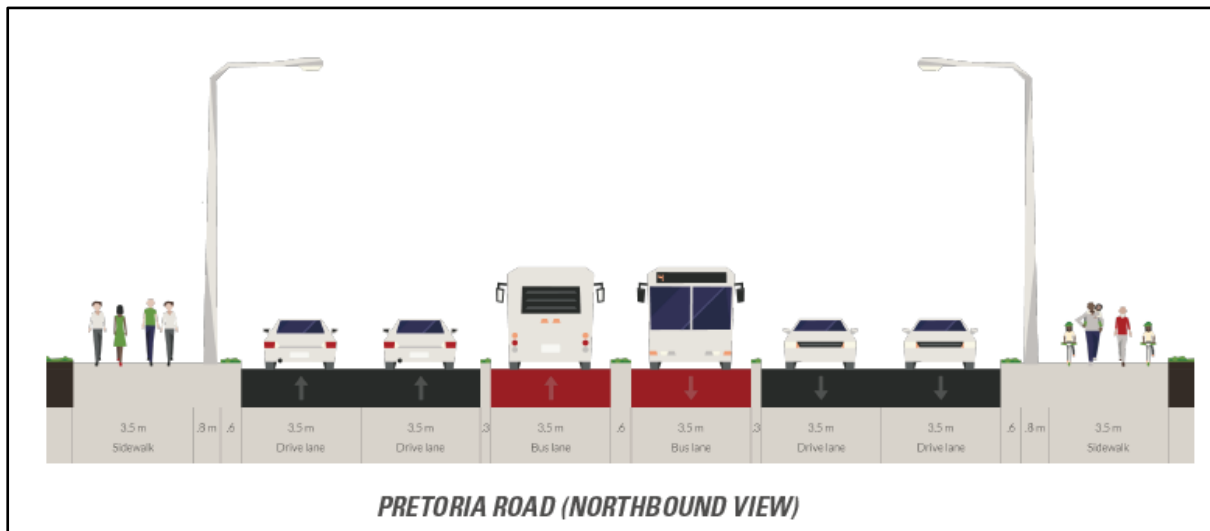
Kempton Park Station revitalization project will influence the Pretoria Road Precinct, which is the gateway pedestrian precinct to the Kempton Park CBD. Its location along a significant public transport corridor (Gautrain Feeder Bus and Integrated rapid Public Transport Network, PRASA Metrorail and minibus-taxi services) strengthens its function as an important economic and activity centre in the CBD.



There are a number of factors influencing traffic circulation within and through the precinct. The Pretoria Road Precinct must find the correct balance between public and private transport, while also promoting and creating high quality pedestrian environment.

Pretoria Road will accommodate all commuters, whether using private and public transport, with specified bus lanes as well as cycling lanes and 3.5m sidewalks for pedestrians.

Figure B3.6: Integrated Rapid Public Transport Network



Source: *Modal Integration Strategy and Action Plan, June 2008*

It is critical for the success of the Pretoria Road Precinct to increase the role of the NMT as one of the key transport modes, integrate NMT as an essential element of public transport, and provide safe NMT infrastructure for the development and promotion of NMT.

»» THROUGH TICKETING

A general approach towards rolling out a through-ticketing initiative in the EMM may include some of the following:

- For the EMM transport planners and decision makers to have full understanding of the scope, scale and implications of implementing a through-ticketing system in EMM in terms of the national framework discussed above
- To consider and monitor the state of readiness and programs of key-players, such as the banking industry and technology vendors, to make products available to operators and passengers, to enable the efficient implementation of a through-ticketing system in EMM
- Address issues related to the requirement of upgrading or phasing out so-called legacy system and consider incentives for operators to do so
- Agree with role-players a programme for the implementation of a through-ticketing system
- Secure the necessary funding for the implementation



- Commence with the roll-out
- “need-to-know” fact and benefits in parallel with the roll-out process

Action Plans:

In support of the approach to integrated ticketing proposed in the paragraphs above, it is suggested that the following be done over a period of three years, also providing inputs into the EMM's new Integrated Rapid Transport initiative:

- An audit to determine the scope, scale and implications of implementing a through-ticketing system in EMM. This audit should also include the state of readiness of key role-players to participate in such a system and provide realistic timeframe for the successful implementation of the through-ticketing system for the EMM
- Planning of the implementation of the various components of the through-ticketing system, including extensive consultation with role-players and stakeholders
- Roll-out and implementation of the through-ticketing system, which would inter alia include:
 - Adaptation of facilities and amenities
 - Acquiring and installation of technology (hardware and software)
 - Development of a data base for public transport travel data
 - Commercial agreements
 - Testing and commissioning system
 - Running a marketing and information campaign mainly aimed at users
 - Launching the system

»» INFORMATION INTEGRATION

A general approach towards creating an integrated information system in the EMM may include some of the following:

- For the EMM transport planners and decision-makers to have full understanding of the scope, scale and implications of implementing such a system on a daily basis
- To consider and monitor the state of readiness and changes in transport programmes by communicating and updating the information
- To make sure various transport information communicates to each other through a central information hub and that operations and information is checked often to ease out potential lack of communications
- Agree with role-players a programme for the implementing a system agreeing the format of the system and the point where information is communicated to
- Secure the necessary funding for the implementation
- Commence with the roll-out
- Run an information and marketing campaign to inform users of the implications, key “need-to-know” facts and benefits in parallel to the roll-out process



Action Plans:

In support of the approach to develop an integrated information system, it is suggested that the following be done, also providing inputs into the EMM's new Integrated Rapid Transport Network Initiative:

- An audit to determine the scope, scale and implications of implementing an Integrated Information in EMM. This audit should also include the state of readiness of key role-players to participate in such a system and provide realistic timeframe for the successful implementation and integration of information
- Planning of the implementation of the various components of the system, including extensive consultation with role-players and stakeholders
- Roll-out and implementation of the integration information system, which would inter alia include:
 - A central information hub with the required amenities
 - Acquiring and installation of technology (hardware and software)
 - Development of travel maps for the public transport user
 - Commercial agreements
 - Testing and commissioning of the system
 - Running a marketing and information campaign mainly aimed at users
 - Launching the system

»» TECHNICAL INTEGRATION

Taking into consideration existing initiatives such as the Taxi Recapitalization, Metrorail rolling-stock refurbishment and the Gautrain, agreement should be reached on minimum standards for vehicles and rolling-stock to be used to provide public transport services in the EMM, with respect to inter alia:

- General vehicle accessibility (i.e. floor heights, steps, pneumatic suspension, etc.)
- Levels of accessibility for the mobility impaired
- Seating-standing ratios
- Quality seating
- Ambient temperatures (air-conditioning and heating)
- Quality of ride
- Noise levels within vehicles
- Safety and security features
- Travel information available
- Levels of emissions harmful to the natural environment

Action Plans:

A project encompassing all of the aspects mentioned in the previous paragraph will have to be launched. It may be more feasible to initially start with the bus fleets operated in the EMM and then gradually extending this to the taxi industry as more integrated designs of the subsidized provincial bus contracts are implemented and progress is made with the IRPTN for the EMM.



The technology integration in the passenger rail sector can most probably only be a longer-term objective and may have to be dealt with separately from the road-based modes.

In addition to the above mentioned *National Legislation* and *Modal Integration Strategy and Action Plan for Ekurhuleni Metropolitan Municipality*, the EMM has established a *Land Use and Transport Integration Committee* (in terms of the National Land Transport Act, 2009) to oversee future transport and land use related planning initiatives.

The Land Use and Transport Integration Committee (LUTI) was established as a sub-committee of the EMM Intermodal Planning Committee (IPC). Following are some key highlights of the committee role and responsibilities.

Purpose of LUTI:

- To facilitate the integrated planning of land use and transport projects that have been identified by the Ekurhuleni Metropolitan Municipality (EMM), Gautrain Management Agency (GMA), Transnet and the Passenger Rail Agency of South Africa (PRASA).
- To encourage the coordination of multimodal and intermodal planning across the various transportation modes within Ekurhuleni Metropolitan Municipality.
- To coordinate the integration of infrastructure and land use development around transit nodes.

Goals of LUTI:

- To jointly identify and assess transit nodes where intermodal planning and development should be encouraged.
- To integrate the planning of land uses and transportation along transport corridors and around transit station nodes in Ekurhuleni.
- To ensure that developments around transit nodes adhere to the principles of Transit Oriented Development (TOD).

The Committee consist of the following role players:

- Transport
- Human Settlements
- City Planning
- Economic development
- PRASA
- GMA
- Transnet

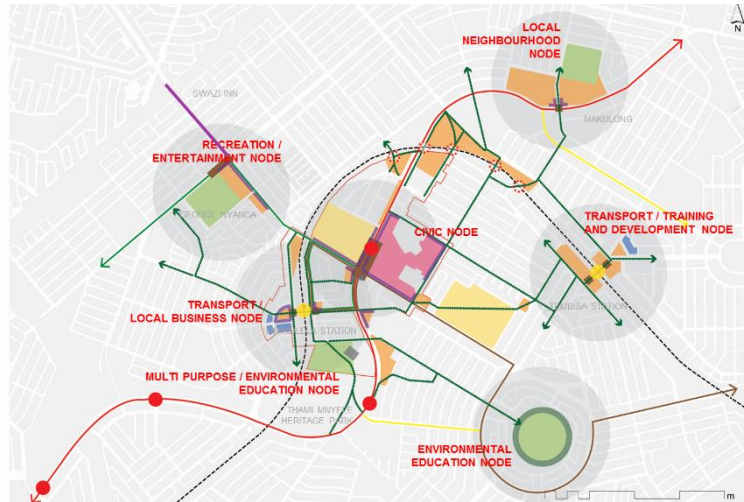
Future transportation and land use planning within the EMM will primarily be guided by the national *Integrated Transport Planning Bill*, the *Modal Integration Strategy and Action Plan for Ekurhuleni*



Metropolitan Municipality and overseen by the Land Use and Transport Integration Committee to ensure the alignment of planned housing and transport investment projects to the top priority targeted areas.

B3.4 MODAL ALIGNMENT AND HOUSING INTEGRATION CASE STUDY

The current IRPTN (Integrated Rapid Public Transport Network) project being implemented by EMM integrates various modes of transport including mini-bus taxis, buses, rail and non-motorised transport to improve the quality of public transport by improving accessibility, commuter security, reducing journey times and making public transport more affordable to more commuters. The IRPTN stations incorporated the TOD development principles, ensuring optimum land use integration.



The *Tembisa Hub* development, located within Integration Zone 1, is a good examples of modal alignment and land use (housing) integration. Following is a brief description of the *Tembisa Hub* development.

» TEMBISA HUB DEVELOPMENT

The *Tembisa Hub*³ development concept focus on modal alignment and integration of public transport networks. The Hub “Heart”, or core, of the Tembisa Hub, comprises of the Civic Centre Block and the land immediately adjacent to it. The Hub Heart includes both Public Transport Nodes, consisting of Rail and the Phase 1 BRT, land currently zoned for non-residential purposes as well as parts of adjacent residential neighbourhoods (refer **Figure B3.7**).

The proposed introduction of new major public transportation infrastructure and services (BRT system) along Andrew Mapheto Drive starts to reinforce connection between the activity and between the Hub and population residing within the Tembisa Integration Zones outside of the Hub. The trunk PT infrastructure and services, consisting of the BRT Route and the BRT terminal station will set up a new movement patterns in and around the Civic Centre Block.

Mixed use is encouraged throughout the Hub Heart in mixes appropriate to location within the Hub Heart. Public Service uses will form the core of the heart and will be mixed with Retail and Offices in

³ Source: Phase 2: Draft Concept Framework Tembisa Hub Plan (THP), 2015



the Civic Block whilst retail and/or office and high density residential mixes should occur around the edges of the Heart. This would include new build residential as well as the conversion of existing low density residential to higher densities and or commercial uses. Ground floor land uses within the interchange zone and along primary movement and pedestrian routes within the Heart and leading to the Heart should be retail or service oriented to maximise active street frontage in the Hub Heart.

In this option a primary “town square” adjacent to the Town Hall anchors are proposed. This integrates the public service core with the retail and office components and is linked directly into the BRT station via a pedestrian mall and into surrounding sub precincts via pedestrian lanes. The square is linked to the interchange zone via pedestrian routes along Andrew Mapheto Drive and Hadebe Street.

B3.5 PROOF OF CONSULTATION: TRANSPORTATION AND HOUSING ALIGNMENT

Please see attached **Appendix E** for the proof of consultation with relevant provincial, national and SOE sectors (meeting agenda, minutes and / or attendance registers of meetings) regarding spatial targeting and transportation planning alignment:

- Evidence of Consultation - Intermodal Planning Committee
 - Agenda IPC 27 February 2017
 - Minutes IPC 27 February 2017
 - Attendance Register IPC 27 February 2017
- Evidence of Consultation - Intermodal Planning Committee and Rail Steering Committee
 - Minutes IPC & RSC 22 June 2016
- Evidence of Consultation - Land Use and Transport Integration
 - Draft Minutes LUTI 25 April 2016

B4. URBAN NETWORK SUMMARY (CITY WIDE PROJECTS)

Figure B4.1 is a graphical summary of the EMM Urban Network Summary, representing:

- Integration Zones
- Marginalised Areas
- Economic Nodes
- Public Transport Modes
- All planes projects (precincts, SUDA, Mega Projects)
- Proposed IZ land use



The preceding analysis (B1-B4) informed some of the BEPP outcome Indicators and Targets (see **Annexure 1**).

B5. PROJECT PREPARATION

The Capital Investment Framework (CIF) is a key contributor to the formulation and development of the Ekurhuleni Metro's Integration Zones and guides prioritisation of Municipal capital projects through focusing investment into identified areas in order to achieve targeted spatial transformation for the EMM. The Ekurhuleni CIF is also an infrastructure planning policy tool that is utilised within the Built Environment Performance Plan (BEPP) with regard to spatial transformation through guiding and focusing investment into strategic spatial areas.

The Capital Prioritisation Model (CPM) is an instrument utilised in the implementation of the CIF in alignment with the annual budget process set out by the EMM Finance Department in order to strategically prioritise the EMM multi-year capital budget. The CPM strives to align and co-ordinate the following into the prioritisation process:

- Project Management,
- IDP needs analysis, and
- SDBIP

The CPM also:

- Incorporates the geographic priority areas (GPAs) and Integration Zones in providing for a spatial rationalisation of the budget,
- Establishes a set process for implementation as aligned to the budget process, and
- Guides and familiarises departments with the capital project prioritisation process and requirements.

Collective action and collaboration between essential departments with an identified strategic involvement in the budget process (i.e. Finance, Strategy and Corporate Planning (IDP), EPMD, Human Settlements, Economic Development, Environment and City Planning) is enabled and facilitated, thereby promoting alignment of departmental functions, strategic policies and sector plans.

Once the Capital Budget has been formally approved, projects are put out to tender, aligned to the timeframes required for timeous commencement of each project, and procedures and guidelines are followed as set out in the Metro's Supply Chain Management Policy and requirements of the MFMA.

During the implementation of projects the EPMD Department is responsible for project management and quality control. All applicable stakeholders are involved by means of technical meetings, project steering committee meetings and monthly site meetings (where relevant). Progress reports, including expenditure, challenges, job creation etc. are submitted on a monthly basis.



B6. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

The following section highlights the planning alignment between BEPP, the Integrated Development Plan (IDP) and Spatial Development Framework (SDF). Secondly the Private Real Estate and Financing Sector relevant to the spatial targeting areas.

B6.1 PLANNING ALIGNMENT BETWEEN BEPP, IDP AND SDF

As indicated in Section A2, joint interactive planning and budgeting at the metro level, particularly in terms of aligning the planning and delivery of provincial and national infrastructure, including public entities should be realised through BEPP.

B6.2 PRIVATE REAL ESTATE AND FINANCE SECTORS

It is critical that strategic partnerships are formed by the Metro and a comprehensive stakeholder consultation programme is effected in order to sustain the progress gained to date. This is due to the fact that work on major projects such as the Ekurhuleni Aerotropolis hinges on the development of a comprehensive value proposition for the regional economy of Ekurhuleni and the broader Gauteng Global City Region by leveraging its inherent areas of potential, sectors of competitiveness and its economic infrastructure so that investment is attracted and to also spatially reconfigure the City towards a sustained economic path.

Towards this objective, the Aerotropolis Project Office in collaboration with other relevant EMM Departments engages stakeholders to discuss pivotal matters related to the impact of the Aerotropolis. These engagements also allow the City to gain an understanding of current challenges being experienced by its stakeholders and how it could possibly intervene in order to unblock them. Some of the stakeholders engaged to date include the Ekurhuleni Business Association, Business Unity South Africa, Bidvest, Avis, SANRAL, PRASA and DENEL among others.

Engagements to date with the external role players yielded information indicating investments into the EMM from Airports Company South Africa (ACSA), the Gauteng Growth and Development Agency, and Passenger Rail Agency South Africa (PRASA). Ongoing interaction with external role players is proposed and required to feed into modelling for the CIF on income geography.

An Aerotropolis Planning Committee has been established which consists of all EMM departments, relevant ACSA departments as well as other spheres of government who sit on the relevant streams of expertise within the committee. An official MOU and Terms of Reference has been signed between EMM and ACSA regarding the Aerotropolis. A pledge of support has also been signed by the then Premier of Gauteng, Nomvula Mokanyane, Executive Mayor of Ekurhuleni Councillor Mondli Gungubele and the City Manager Khaya Ngema with regards to the Aerotropolis Project.



Further engagements are taking place with Schipol Area Development Company (SADC) based in the Netherlands for assistance regarding Ekurhuleni's Aerotropolis as well as with SAA (South African Airways) and numerous Government institutions.

Integral to developing a comprehensive CIF is the inclusion of external role players in the form of National and Provincial Government, Parastatals and agencies. The external role players have been identified as having a stake within the EMM in terms of financial investment, major projects and development growth (socially, economically and physically), which projects have been listed as supporting and complementary projects. The following table provides a summary of major private investment projects where the City has partnered with the Private Sector in order to facilitate economic development, job creation and empowerment.



SECTION C

C INTERGOVERNMENTAL PROJECT PIPELINE

C1. INTERGOVERNMENTAL PIPELINE

The summarised Intergovernmental Project Pipeline for the Metro is given below. Please refer to **Annexure 2** for a detailed breakdown of the Intergovernmental Project Pipeline.

Table C1.1: Summarised Intergovernmental Project Pipeline

Category	MUNICIPAL	PROVINCIAL	ACSA	PRASA	TRANSNET	TOTAL
Integration Zone 1 : Tembisa-Kempton Park	R 2 952 786 364	R 535 642 000				R 3 488 428 364
Integration Zone 2 : Vosloorus-Boksburg-Bartlett	R 3 140 375 200	R 458 080 000				R 3 598 455 200
Integration Zone 3 : Katlehong-Tokoza-Alberton-Germisto	R 1 749 708 785	R 296 043 000				R 2 045 751 785
Integration Zone 4 : Etwatwa-Daveyton-Benoni	R 468 457 327	R 1 387 615 000				R 1 856 072 327
Integration Zone : 5 Duduza-Tsakane-KwaThema-Boksburg	R 709 016 289	R 37 900 000				R 746 916 289
Marginalised Area - Informal Settlements	R 698 400 000	R 531 525 000				R 1 229 925 000
Marginalised Area - other	R 1 476 500 000					R 1 476 500 000
Economic/Employment Node	R 2 397 364 909		R 3 500 000 000		R 52 400 000 000	R 58 297 364 909
City-wide Projects	R 1 043 500 000			R 4 790 334 000		R 5 833 834 000
Remainder of Metro Area / Other	R 5 984 879 548	R 1 710 894 000				R 7 695 773 548
Total	R 20 620 988 422	R 4 957 699 000	R 3 500 000 000	R 4 790 334 000	R 52 400 000 000	R 86 269 021 422

HIGH LEVEL COST ESTIMATES FOR ALL PROJECTS

PROJECT AND PROGRAMME VALUES PER INTEGRATION ZONE

The breakdown of projects and programmes per Integration Zone is given in the table below. These amounts are estimates at present due to the mapping of the exact GPS coordinates of projects still being in progress.

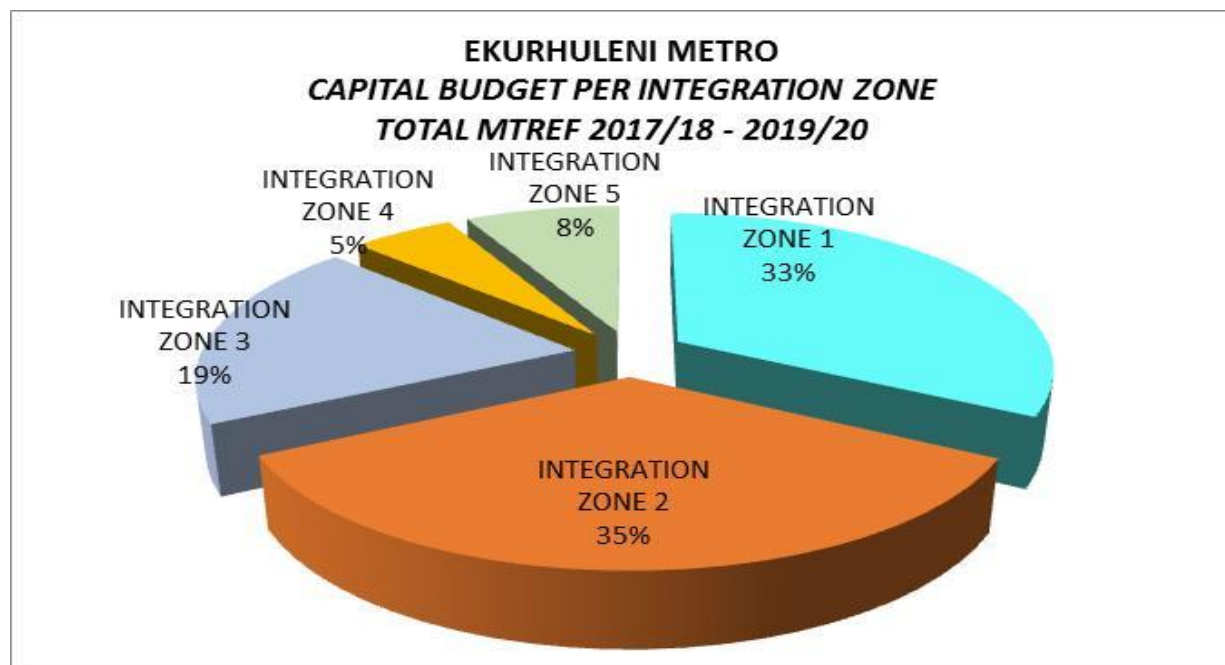


Table C1.2: MTREF 2017/18 – 2019/20 Capital Budget per each Integration Zone

Integration Zone / Details	Capital Budget 2016/2017	%	Capital Budget 2017/2018	%	Capital Budget 2018/2019	%	Capital Budget 2019/2020	%	Total MTREF Budget 2017/18 - 2019/20	%
INTEGRATION ZONE 1	R 920 518 222	31.5%	R 1 054 935 000	34.1%	R 924 926 364	31.5%	R 972 925 000	32.5%	R 2 952 786 364	32.7%
INTEGRATION ZONE 2	R 1 011 487 588	34.6%	R 1 053 060 114	34.0%	R 1 034 486 369	35.3%	R 1 052 828 717	35.2%	R 3 140 375 200	34.8%
INTEGRATION ZONE 3	R 650 475 926	22.3%	R 604 913 900	19.5%	R 602 502 050	20.6%	R 542 292 835	18.1%	R 1 749 708 785	19.4%
INTEGRATION ZONE 4	R 159 174 111	5.4%	R 192 059 691	6.2%	R 158 058 636	5.4%	R 118 339 000	4.0%	R 468 457 327	5.2%
INTEGRATION ZONE 5	R 181 422 945	6.2%	R 191 876 289	6.2%	R 211 904 000	7.2%	R 305 236 000	10.2%	R 709 016 289	7.9%
TOTAL	R 2 923 078 791	100%	R 3 096 844 995	100%	R 2 931 877 419	100%	R 2 991 621 552	100%	R 9 020 343 966	100%

The spatial location of the projects making up the above capital budget allocations is graphically reflected in **Diagram C1.1**. Due to the GIS process of linking coordinates to capital projects being recently completed by the Metro with applicable assistance, it is now possible to plot the projects more accurately. It can be seen that each project is spatially located within an Integration Zone.

Diagram C1.1: Spatial Location of the Capital Budget



GRANT ALLOCATIONS BY GRANT PROGRAMME

Capital grant funding from the Government for the 2017/18 – 2019/20 3 year MTREF period is shown below:

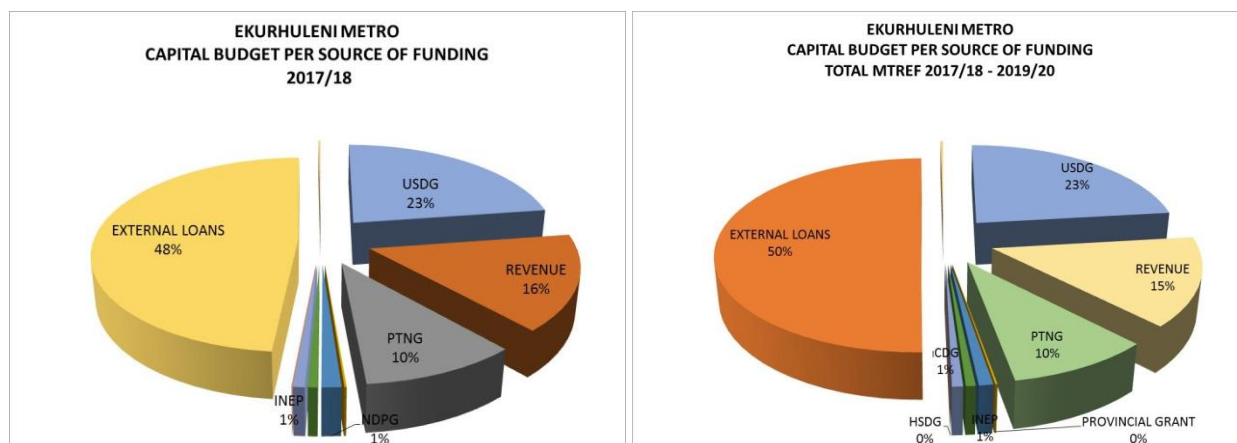


Table C1.3: Capital Budget per Source of Finance

FUNDING SOURCE	Capital Budget 2017/18	%	Capital Budget 2018/19	%	Capital Budget 2019/20	%	MTREF Total 2017/18 - 2019/20	%
USDG	R 1 451 300 242	23%	R 1 606 968 591	23%	R 1 714 531 717	23%	R 4 772 800 550	23%
REVENUE	R 1 002 765 300	16%	R 1 000 054 021	15%	R 1 000 267 603	14%	R 3 003 086 924	15%
PTNG	R 660 718 000	10%	R 631 906 000	9%	R 670 650 000	9%	R 1 963 274 000	10%
SRAC Provincial Grant	R 9 000 000	0%	R 9 000 000	0%	R 9 000 000	0%	R 27 000 000	0%
NDPG	R 82 000 000	1%	R 55 000 000	1%	R 55 000 000	1%	R 192 000 000	1%
INEP	R 40 000 000	1%	R 45 000 000	1%	R 45 451 000	1%	R 130 451 000	1%
ICDG	R 48 646 000	1%	R 48 221 000	1%	R 50 921 000	1%	R 147 788 000	1%
HSDG	R -	0%	R -	0%	R -	0%	R -	0%
EXTERNAL LOANS	R 3 092 927 170	48%	R 3 444 160 778	50%	R 3 799 500 000	52%	R 10 336 587 948	50%
EEDMS	R 12 000 000	0%	R 16 000 000	0%	R 20 000 000	0%	R 48 000 000	0%
CRRF	R -	0%	R -	0%	R -	0%	R -	0%
Total	R 6 399 356 712	100%	R 6 856 310 390	100%	R 7 365 321 320	100%	R 20 620 988 422	100%

The spatial location of the capital budget per source of funding for projects in the Integration Zones is graphically represented in **Diagram C1.2**.

Table C1.2 Capital Budget per Source of Funding



PRIORITISED CATALYTIC PROJECTS PER PRIORITISED SPATIALLY TARGETED AREAS

The summarised Prioritised Catalytic Projects identified per the prioritised spatially targeted areas for the Metro is given in Table C1.4 below. Please refer to **Annexure 3** for a detailed breakdown.



Table C1.4: Summarised Prioritised Catalytic Projects

Metro	No. of projects reflected on pipeline	Catalytic Projects	Total Value (R'm)	Municipal	Loan	Grant	Province	SOE	PPP
Ekurhuleni Metro	Various	1. Aerotropolis EMM implemented projects; O.R. Tambo International Airport (extension of western and midfield terminal); M&T Development Project; Riverfields Development	R 172 626 500 000	R 116 000 000	R101 000 000	R 9 500 000		R 3 500 000 000	R 168 900 000 000
Ekurhuleni Metro	Various	2. Revitalization of Township Economies EMM implemented projects - Tembisa, Kwa-thema, Etwatwa	R 84 000 000	R 84 000 000					
Ekurhuleni Metro	7	3. Revitalization of Manufacturing Sector EMM implemented projects; Tambo Springs Inland Freight Port; Prasa Gibela Project; Lords View Industrial Estate	R 66 365 000 000	R 40 000 000	R 25 000 000			R 56 500 000 000	R 9 800 000 000
Ekurhuleni Metro	1	4. Digital City EMM implemented projects	R 1 052 326 000	R 1 052 326 000					
Ekurhuleni Metro	4	5. IRPTN EMM implemented projects; Strategic Land Parcels - Dries Niemandt; New Natal Spruit Hospital SLP-Phase 1C	R 2 046 756 000	R 1 348 000 000		R 615 274 000	R 83 482 000		
Ekurhuleni Metro	2	6. Urban Regeneration Germiston CBD / Kempton Park CBD	R 1 163 800 000	R 483 800 000	R580 500 000	R 99 500 000			
Ekurhuleni Metro	15	7. Revenue Management and Enhancement EMM implemented projects; Badenhorst Estate; Glen Gory Development	R 11 178 000 000	R 173 000 000	R 55 000 000				R 10 950 000 000
Ekurhuleni Metro	2	8. Beautification of Lakes and Dams EMM implemented projects - Boksburg Lake, Germiston Lake	R 40 000 000	R 40 000 000					
Ekurhuleni Metro	Various	9. Urban Renewal EMM implemented projects -Wattville, Katorus etc.	R 1 288 993 992	R 775 945 992		R 513 048 000			
Ekurhuleni Metro	4	10. Catalytic Housing Projects Cluster: Northern Clayville Ext 45, 71, Heartland; Esselen Park (Witfontein) / Esselen Park Ext 3; Tembisa Ext 25	R 1 021 800 000	R 435 000 000	R151 300 000	R 435 500 000			
Ekurhuleni Metro	5	11. Catalytic Housing Projects Cluster: Eastern John Dube 2; Brakpan Old Location; Tsakane Ext 22; Chief Albert Luthuli Ext 6	R 2 278 000 000	R 57 000 000		R 21 000 000			R 2 200 000 000
Ekurhuleni Metro	6	12. Catalytic Housing Projects Cluster: Southern Leeuwpoot; Germiston Urban Renewal Housing; Zwartkoppies; Palmietfontein; Rietspruit/Rietfontein; Palmridge 10 & 11	R 9 497 851 349	R 106 735 586	R383 115 763	R 8 000 000			R 9 000 000 000
Ekurhuleni Metro	2	13. Strategic Land Parcels Land Banking and Property Acquisition	R 1 083 500 000	R 108 000 000	R198 000 000	R 777 500 000			

Category	Project Description	Capital Budget 2017/18	Capital Budget 2017/18	Capital Budget 2018/19	MTREF Total 2017/2018 - 2019/2020
Integration Zone 1 : Tembisa-Kempton Park					
Catalytic	Aerotropolis	R 218 935 000	R 222 720 000	R 237 150 000	R 678 805 000
Catalytic	IRPTN	R 270 718 000	R 241 906 000	R 277 650 000	R 790 274 000
Catalytic	Northern Catalytic Human Settlement Projects: Clayville, Esselen Park, Olifantsfontein	R 115 000 000	R 213 000 000	R 289 000 000	R 617 000 000
Catalytic	Digital City	R 96 632 000	R 102 169 000	R 38 325 000	R 237 126 000
Catalytic	Urban Regeneration: Kempton Park CBD	R 146 500 000	R 231 000 000	R 120 000 000	R 497 500 000
Catalytic	Township Regeneration: Tembisa	R 82 000 000	R 6 611 364	R 10 000 000	R 98 611 364
Catalytic	Revenue Enhancement	R 15 000 000	R 18 000 000	R 24 000 000	R 57 000 000
Integration Zone 1 : Tembisa-Kempton Park					
R 944 785 000 R 1 035 406 364 R 996 125 000 R 2 976 316 364					
Integration Zone 2 : Vosloorus-Boksberg-Bartlett					
Catalytic	IRPTN	R 390 000 000	R 390 000 000	R 393 000 000	R 1 173 000 000
Catalytic	Beautification of Lakes and Dams	-	R 21 000 000	R 24 000 000	R 45 000 000
Catalytic	Revenue Enhancement	R 8 000 000	R 9 000 000	R 11 000 000	R 28 000 000
Catalytic	Township Regeneration: Katorus	R 85 120 000	R 132 880 000	R 178 080 000	R 396 080 000
Catalytic	Township Regeneration: Wattville	R 61 240 000	R 166 220 000	R 176 960 000	R 404 420 000
Catalytic	Southern Catalytic Human Settlement Projects Cluster: Leeuwoort; Germiston Urban Renewal Housing; Rierspruit / Rietfontein; Palmietfontein; Palm Ridge Ext. 10 & 11	R 282 664 197	R 245 112 344	R 213 066 717	R 740 843 258
Integration Zone 2 : Vosloorus-Boksberg-Bartlett					
R 827 024 197 R 964 212 344 R 996 106 717 R 2 787 343 258					
Integration Zone 3 : Katlehong-Tokoza-Alberton-Germiston					
Catalytic	Urban Regeneration: Germiston CBD	R 24 500 000	R 68 000 000	R 61 000 000	R 153 500 000
Catalytic	Urban Renewal: Germiston	R 48 646 000	R 48 221 000	R 50 921 000	R 147 788 000
Catalytic	Revenue Enhancement	R 18 000 000	R 20 000 000	R 26 000 000	R 64 000 000
Integration Zone 3 : Katlehong-Tokoza-Alberton-Germiston					
R 91 146 000 R 136 221 000 R 137 921 000 R 365 288 000					
Integration Zone 4 : Etwatwa-Daveyton-Benoni					
Catalytic	Eastern Catalytic Housing Projects Cluster: John Dube Ext.2; Brakpan Old Location; Tsakane Ext. 22; Chief Albert Luthuli 6	R 7 000 000	R 34 000 000	R 49 000 000	R 90 000 000
Catalytic	Revenue Enhancement	R 5 000 000	R 6 000 000	R 8 000 000	R 19 000 000
Catalytic	Township Regeneration: Daveyton-Etwatwa	-	R 6 388 636	R 7 000 000	R 13 388 636
Integration Zone 4 : Etwatwa-Daveyton-Benoni					
R 12 000 000 R 46 388 636 R 64 000 000 R 122 388 636					
Integration Zone 5 : Duduza-Tsakane-KwaThema-Boksburg					
Catalytic	Township Regeneration	-	R 10 500 000	R 9 500 000	R 20 000 000
Catalytic	Revenue Enhancement	R 8 000 000	R 8 000 000	R 8 000 000	R 24 000 000
Integration Zone 5 : Duduza-Tsakane-KwaThema-Boksburg					
R 8 000 000 R 18 500 000 R 17 500 000 R 44 000 000					
Marginalised Area - Informal Settlements					
Catalytic	Bulk Services provision to Informal Settlements: Roads, Water, Sanitation, Electricity	R 225 650 000	R 226 750 000	R 246 000 000	R 698 400 000
Marginalised Area - Informal Settlements					
R 225 650 000 R 226 750 000 R 246 000 000 R 698 400 000					
Marginalised Area - other					
Catalytic	Revitalisation of the Manufacturing Sector	R 20 000 000	R 35 000 000	R 40 000 000	R 95 000 000
Marginalised Area - other					
R 20 000 000 R 35 000 000 R 40 000 000 R 95 000 000					
Economic/Employment Node					
Catalytic	Aerotropolis	R 125 496 000	R 148 304 000	R 63 186 000	R 336 986 000
Catalytic	Revitalisation of the Manufacturing Sector	R 15 000 000	R 25 000 000	R 35 000 000	R 75 000 000
Catalytic	Digital City	R 472 417 170	R 432 017 971	R 555 219 768	R 1 459 654 909
Catalytic	Revitalisation of Township Economies	R 54 000 000	R 30 000 000	R 0	R 84 000 000
Economic/Employment Node					
R 666 913 170 R 635 321 971 R 653 405 768 R 1 955 640 909					
City-wide Projects					
Catalytic	Strategic Land Parcels & Property Acquisition (for Human Settlements)	R 265 500 000	R 360 000 000	R 418 000 000	R 1 043 500 000
City-wide Projects					
R 265 500 000 R 360 000 000 R 418 000 000 R 1 043 500 000					
Remainder of Metro Area / Other					
Catalytic	Revenue Enhancement	R 20 000 000	R 24 000 000	R 32 000 000	R 96 000 000
Remainder of Metro Area / Other					
R 20 000 000 R 24 000 000 R 32 000 000 R 96 000 000					
Total		R 3 081 018 367	R 3 481 800 315	R 3 601 058 485	R 10 183 877 167

(Note: The above amounts are estimates only and subject to change due to the fact that the Metro is still refining the allocation and classification of catalytic allocations and BEPP spatial targeting categories per line item in the Capital Budget to the different Catalytic projects/ programmes, and also trying to link GIS coordinates to the capital budget more accurately. The same applies to all tables presented in sections C and D.)



Breakdown of current expenditure in each prioritised Integration Zone into IZ-wide projects and prioritised IZ precinct projects

Table C1.5 Current Expenditure Breakdown per IZ

Spatial Category	Capital Budget 2017/2018	%	Capital Budget 2018/2019	%	Capital Budget 2019/2020	%	Total MTREF Budget 2017/18 - 2019/20	%
INTEGRATION ZONE 1	R 1 054 935 000	16.5%	R 924 926 364	13.5%	R 972 925 000	13.2%	R 2 952 786 364	14.3%
Economic Node: Aerotropolis Core	R 665 035 000	10.4%	R 639 545 000	9.3%	R 697 025 000	9.5%	R 2 001 605 000	9.7%
Economic Node: Industrial Area	R 26 400 000	0.4%	R 25 400 000	0.4%	R 34 000 000	0.5%	R 85 800 000	0.4%
Economic Node: Urban Hub	R 95 000 000	1.5%	R 27 611 364	0.4%	R 20 400 000	0.3%	R 143 011 364	0.7%
Housing Projects current	R 500 000	0.0%	R -	0.0%	R -	0.0%	R 500 000	0.0%
Housing Precincts	R -	0.0%	R -	0.0%	R -	0.0%	R -	0.0%
Informal Settlements	R 12 400 000	0.2%	R 12 500 000	0.2%	R 10 200 000	0.1%	R 35 100 000	0.2%
Marginalised Areas 1: Tembisa	R 249 600 000	3.9%	R 212 270 000	3.1%	R 209 100 000	2.8%	R 670 970 000	3.3%
MSDF Precincts	R 5 000 000	0.1%	R -	0.0%	R -	0.0%	R 5 000 000	0.0%
Remainder of Integration Zone 1	R 1 000 000	0.0%	R 7 600 000	0.1%	R 2 200 000	0.0%	R 10 800 000	0.1%
INTEGRATION ZONE 2	R 1 053 060 114	16.5%	R 1 034 486 369	15.1%	R 1 052 828 717	14.3%	R 3 140 375 200	15.2%
Economic Node: CBD	R 205 750 000	3.2%	R 182 403 000	2.7%	R 211 011 000	2.9%	R 599 164 000	2.9%
Economic Node: Industrial Area	R 13 500 000	0.2%	R 12 000 000	0.2%	R 11 000 000	0.1%	R 36 500 000	0.2%
Economic Node: Urban Hub	R 52 460 000	0.8%	R 82 540 000	1.2%	R 120 740 000	1.6%	R 255 740 000	1.2%
Housing projects current	R 55 979 917	0.9%	R -	0.0%	R -	0.0%	R 55 979 917	0.3%
Housing projects proposed	R 8 000 000	0.1%	R 30 567 025	0.4%	R 7 500 000	0.1%	R 46 067 025	0.2%
Marginalised Area 2: Katorus	R 30 800 000	0.5%	R 35 900 000	0.5%	R 49 000 000	0.7%	R 115 700 000	0.6%
MSDF Precincts	R 4 956 000	0.1%	R 10 634 000	0.2%	R 836 000	0.0%	R 16 426 000	0.1%
Remainder of integration zone 2	R 681 614 197	10.7%	R 680 442 344	9.9%	R 652 741 717	8.9%	R 2 014 798 258	9.8%
INTEGRATION ZONE 3	R 604 913 900	9.5%	R 602 502 050	8.8%	R 542 292 835	7.4%	R 1 749 708 785	8.5%
Economic Node: Aerotropolis Core	R 5 000 000	0.1%	R 5 000 000	0.1%	R 6 000 000	0.1%	R 16 000 000	0.1%
Economic Node: CBD	R 182 470 000	2.9%	R 144 600 000	2.1%	R 92 300 000	1.3%	R 419 370 000	2.0%
Economic Node: Industrial Area	R 1 500 000	0.0%	R 2 800 000	0.0%	R 7 800 000	0.1%	R 12 100 000	0.1%
Economic Node: Urban Hub	R 30 000 000	0.5%	R 30 000 000	0.4%	R 90 000 000	1.2%	R 150 000 000	0.7%
Housing Precincts	R -	0.0%	R 100 000	0.0%	R 1 000 000	0.0%	R 1 100 000	0.0%
Informal Settlements	R -	0.0%	R -	0.0%	R -	0.0%	R -	0.0%
Marginalised Area 3: KwaTsaDuza	R 155 340 000	2.4%	R 148 620 000	2.2%	R 131 900 000	1.8%	R 435 860 000	2.1%
MSDF Precincts	R 54 668 000	0.9%	R 78 417 200	1.1%	R 92 025 000	1.2%	R 225 110 200	1.1%
Remainder of integration zone 3	R 175 935 900	2.7%	R 192 964 850	2.8%	R 121 267 835	1.6%	R 490 168 585	2.4%
INTEGRATION ZONE 4	R 192 059 691	3.0%	R 158 058 636	2.3%	R 118 339 000	1.6%	R 468 457 327	2.3%
Economic Node: Aerotropolis Core	R -	0.0%	R 3 000 000	0.0%	R -	0.0%	R 3 000 000	0.0%
Economic Node: Industrial Area	R 5 000 000	0.1%	R 5 000 000	0.1%	R 2 000 000	0.0%	R 12 000 000	0.1%
Economic Node: CBD	R 19 500 000	0.3%	R 56 200 000	0.8%	R 16 500 000	0.2%	R 92 200 000	0.4%
Economic Node: Urban Hub	R 18 000 000	0.3%	R 39 388 636	0.6%	R 57 000 000	0.8%	R 114 388 636	0.6%
Housing projects current	R 35 500 000	0.6%	R 17 000 000	0.2%	R 12 000 000	0.2%	R 64 500 000	0.3%
Housing projects proposed	R -	0.0%	R -	0.0%	R -	0.0%	R -	0.0%
Marginalised Area 4: Daveyton / Etwatwa	R 31 289 691	0.5%	R 8 000 000	0.1%	R 23 000 000	0.3%	R 62 289 691	0.3%
MSDF Precincts	R 5 370 000	0.1%	R 2 470 000	0.0%	R 3 439 000	0.0%	R 11 279 000	0.1%
Remainder of Integration Zone 4	R 77 400 000	1.2%	R 27 000 000	0.4%	R 4 400 000	0.1%	R 108 800 000	0.5%
INTEGRATION ZONE 5	R 191 876 289	3.0%	R 211 904 000	3.1%	R 305 236 000	4.1%	R 709 016 289	3.4%
Economic Node: CBD	R 5 726 800	0.1%	R 5 234 000	0.1%	R 3 836 000	0.1%	R 14 796 800	0.1%
Economic Node: Industrial Area	R 2 500 000	0.0%	R 4 500 000	0.1%	R 5 000 000	0.1%	R 12 000 000	0.1%
Economic Node: Urban Hub	R 3 500 000	0.1%	R 45 000 000	0.7%	R 35 000 000	0.5%	R 83 500 000	0.4%
Housing Precincts	R -	0.0%	R -	0.0%	R -	0.0%	R -	0.0%
Housing projects current	R 16 000 000	0.3%	R 16 000 000	0.2%	R 16 000 000	0.2%	R 48 000 000	0.2%
Housing projects proposed	R 27 327 489	0.4%	R 6 000 000	0.1%	R 8 000 000	0.1%	R 41 327 489	0.2%
Marginalised Area 5: Wattville	R 127 452 000	2.0%	R 108 600 000	1.6%	R 215 200 000	2.9%	R 451 252 000	2.2%
MSDF Precincts	R -	0.0%	R -	0.0%	R 2 300 000	0.0%	R 2 300 000	0.0%
Remainder of Integration zone 5	R 9 370 000	0.1%	R 26 570 000	0.4%	R 19 900 000	0.3%	R 55 840 000	0.3%
ECONOMIC NODES (Outside IZs)	R 746 593 170	11.7%	R 758 113 971	11.1%	R 892 657 768	12.1%	R 2 397 364 909	11.6%
Aerotropolis Core	R 606 583 170	9.5%	R 591 321 971	8.6%	R 622 155 768	8.4%	R 1 820 060 909	8.8%
CBD	R 17 140 000	0.3%	R 32 572 000	0.5%	R 49 302 000	0.7%	R 99 014 000	0.5%
Industrial Area	R 122 870 000	1.9%	R 134 220 000	2.0%	R 221 200 000	3.0%	R 478 290 000	2.3%
MARGINALISED AREAS (Outside IZs)	R 448 680 000	7.0%	R 528 240 000	7.7%	R 499 580 000	6.8%	R 1 476 500 000	7.2%
INFORMAL SETTLEMENTS (Outside IZs)	R 212 650 000	3.3%	R 212 750 000	3.1%	R 232 000 000	3.1%	R 657 400 000	3.2%
HOUSING PROJECTS: CURRENT (Outside IZs)	R 182 208 718	2.8%	R 76 600 000	1.1%	R 72 050 000	1.0%	R 330 858 718	1.6%
HOUSING PROJECTS: PROPOSED (Outside IZs)	R 194 850 229	3.0%	R 290 900 000	4.2%	R 213 000 000	2.9%	R 698 750 229	3.4%
HOUSING PRECINCTS (Outside IZs)	R 46 400 000	0.7%	R 26 120 000	0.4%	R 8 100 000	0.1%	R 80 620 000	0.4%
MSDF PRECINCTS (Outside IZs)	R 365 449 800	5.7%	R 263 450 000	3.8%	R 207 275 000	2.8%	R 836 174 800	4.1%
Other	R 1 105 679 800	17.3%	R 1 768 259 000	25.8%	R 2 249 037 000	30.5%	R 5 122 975 800	24.8%
TOTAL	R 6 399 356 712	100%	R 6 856 310 390	100%	R 7 365 321 320	100%	R 20 620 988 422	100%



C2. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

C2.1 LEADERSHIP, GOOD GOVERNANCE AND PLANNING (STRATEGIC & OPERATIONAL)

The Ekurhuleni Metropolitan Municipality is committed to providing effective service delivery to its communities and has therefore structured its administration into a number of key directorates. The Office of the City Manager provides the momentum of the administration and integrates all the separate components of the Metro. The main thrusts for sector integration are to:

- Facilitate ring-fencing of the functions associated with provision of services for proper costing and to enhance effective service delivery;
- Build capacity to ensure effective integrated planning and coordination of key projects, especially those that are grant funded; and
- Implement a service delivery performance monitoring and evaluation function, in line with National and Provincial Government initiatives.

In addition to the above directorates, the Office of the City Manager is further capacitated with two significant strategic functions, namely the Operations unit and the Organisational Planning and Performance Monitoring unit. These functions support the City Manager in the compilation of the IDP, SDBIP, and in ensuring that governance systems are in place to manage and track institutional performance.

The metro's capital budget is linked to the IDP Strategic Objectives and action plans. Each submitted budget project has to demonstrate relevance and linkage in meeting service delivery needs and related national outcomes.

The Ekurhuleni Metro's MTREF allocations are largely based on the Growth and Development Strategy (GDS 2055), which is anchored on the following five pillars:

- Re-Urbanise – to achieve sustainable urban integration;
- Re-Industrialise – to achieve job-creating economic growth;
- Re-Generate – to achieve environmental well-being;
- Re-Mobilise – to achieve social empowerment; and
- Re-Govern – to achieve effective co-operative governance.

Working together with the Gauteng Provincial Government, the Metro's MTREF allocations are aligned to the Ten Pillar Programme, which brings into effect the Gauteng City Region. The main programme focus areas and desired outcomes of the Ekurhuleni Metro's budget are:



- Aggressive implementation of infrastructure to address spatial gaps and quality of the infrastructure;
- Creating a climate for investment in the metro through revitalising manufacturing and township economies;
- Increasing private-sector investment participation in and through urban regeneration;
- Rapid provisioning of quality basic services;
- Fighting poverty and building clean, healthy, safe and sustainable communities;
- Support for job creation and skills training, with a special emphasis on the increase local spending targeting youth, women and people living with disabilities;
- Modernising the metro and improving its communication;
- Continuing to enhance governance and compliance with applicable legislations;
- Optimising institutional transformation to ensure capacity to achieve set objectives; and
- Maintaining financial sustainability.

A mechanism is required to determine in which order the identified projects should be implemented, when they should be implemented and how they will be funded. The EMM's Capital Investment Framework (CIF) and associated Capital Prioritisation Model (CPM) are the mechanisms used for this process. They enable integrated planning and therefore integration of the key sectors by informing and setting the basis for spatial targeting by identifying the what, when, and where. The CIF is a key contributor to the formulation and development of the Municipality's integration zones and guides prioritisation of municipal capital projects through focusing investment into identified areas in order to achieve targeted spatial transformation for the EMM.

Capital Investment Framework: Institutional and Legislative Arrangements

The Capital Investment Framework is of fundamental importance due to several reasons:

- The CIF is a requirement in terms of Section 4(e) of the Municipal Planning and Performance Management Regulations, 2001 as promulgated in terms of the Municipal Systems Act;
- The CIF also fulfils the function of a Capital Expenditure Framework (CEF) as required in terms of Section 21(n) of the Spatial Planning and Land Use Management Act (SPLUMA), 2013;
- The CIF also informs the Capital Expenditure Programme (CEP) as referred to by National Treasury;
- The CIF also strives to meet Section 153(a) of the constitution, in which the developmental duties of a municipality are outlined to "structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community";
- The CIF is a component of the MSDF and fulfils the purpose to strategically and spatially guide, align and co-ordinate municipal capital expenditure across all sectors that will make provision for balanced spending of the municipal budget so as to promote economic growth and meet the infrastructure and services needs of the Ekurhuleni Metropolitan Municipality (EMM) residents.



The Ekurhuleni Capital Investment Framework (CIF) as an infrastructure planning policy tool has therefore been incorporated into the Built Environment Performance Plan. Although the content of a CIF is not specifically defined within legislation, the above-mentioned legislation outlines the functions of the CIF, which have been summarised as follows:

- Spatially and strategically influence and guide municipal capital prioritisation and allocation;
- Spatially and strategically coordinate and integrate capital expenditure across all sectors;
- Show where the municipality must and will be spending its capital budget; and
- Map capital projects reflected on the multi-year budget.

The CIF can also be defined as a financial planning and regulatory tool in terms of the National Development Plan (NDP), which makes reference to the need to achieve spatial transformation through targeting investment into strategic spatial areas through the combined use of planning, legislative and financial tools. The CIF is therefore geared towards providing a spatial rationale to the budget in order to start guiding investment into identified priority spatial areas as a means to achieve positive spatial transformation.

The EMM's 2013 State of the City Address resonated with the objective of the NDP and function of the CIF by stating that the CIF be utilized as an instrument that will "channel CAPEX funding to critical economic infrastructure programmes, such as the Special Economic Zones (SEZ), Industrial Development Zones (IDZ), Export Processing Zones (EPZ) and Industrial Parks and Estates."

The CIF has also taken cognisance of the Local Government Turnaround Strategy (LGTS) in that the values underpinning the CIF embrace the objectives set out in the LGTS with regards to:

- Providing residents with infrastructure and social services;
- Creating liveable, integrated and inclusive urban and rural areas;
- Promoting Local Economic Development; and
- Promoting Community Empowerment.

The Local Government Turnaround Strategy also highlights some of the major hurdles that municipalities are faced with, which includes poor financial management, inability to sufficiently grow economically and provide basic services within the realm of continued spatial inequality. The CIF is therefore geared towards promoting improved financial management that allows for accountability and transparency of the budget process by guiding, prioritising, aligning and co-ordinating future municipal expenditure that will yield targeted spatial transformation of the Metro.



Capital Investment Framework: Spatial Targeting and Transformation

The purpose of the CIF within the BEPP is premised on informing and setting the basis for spatial targeting by identifying the what, when, and where. This includes the integration of key sectors (economic development, transport, housing, finance, environment, and project management), co-ordination, fiscal alignment and governance that should result in triggering long-term spatial transformation and facilitating economic growth. The Capital Investment Framework is therefore a tool utilised within the BEPP to achieve medium to long-term outcomes with regard to spatial transformation through guiding and focusing investment into strategic spatial areas.

Geographic Priority Areas

The Capital Investment Framework is geared towards focusing capital budgeting for the Ekurhuleni Metro into strategic Geographic Priority Areas (GPAs) in accordance with the MSDF in order to achieve the spatial strategy outlined within the MSDF and take into consideration new spatial trends. The geographic priority areas are therefore based on the spatial structuring elements (SSEs) from the MSDF Spatial Concept and Land Use Proposals, namely previous MSDF priority areas, densification areas, the geography of Ekurhuleni income, major housing projects, IRPTN Corridor, rail stations, primary and secondary nodes, industrial areas, major investment and strategic projects. The purpose of the geographic priority areas is also to indicate the relative strategic spatial importance of one area against another.

Integration Zones

The Ekurhuleni Metropolitan Municipality has also utilised its Capital Investment Framework footprint as the basis for its Integration Zones. The rationale behind its utilisation lies in the core principles of the CIF which relate directly back to the vision of National Treasury's City Support Program's goals and objectives. Some of these include sustainability, urban restructuring, densification as well as spatial and sectoral integration and prioritisation. By overlaying the CIF, the proposed Urban Network Plan emerges for the EMM.

C2.2 INTER-SECTORAL MUNICIPAL CONSULTATION

Technical Structures

The technical preparation of the MTEF is guided by the structures and processes outlined below.

Medium Term Expenditure Committee (MTEC): MTEC is a committee of senior officials that makes recommendations to MINCOMBUD regarding budget allocations in the medium term expenditure framework, taking into account government priorities, funding available, alternative funding sources and



the division of revenue amongst the three spheres of government. It is composed of the Directors-General of the following departments: National Treasury (Chair), Planning Commission, Performance Monitoring and Evaluation, Cooperative Governance, and Public Service and Administration.

Technical Committee on Finance (TCF): TCF is a committee of the heads of all provincial treasuries and is chaired by the DDG of the Intergovernmental Relations division of the National Treasury. The TCF considers intergovernmental finances and the division of revenue and may make recommendations to the Budget Council, Budget Forum and MTEC. If agreed in these forums, matters are referred to MINCOMBUD. The TCF will be consulted on all significant changes proposed to intergovernmental transfers, to ensure that the interests of provinces have been taken into account. SALGA should also be consulted on any changes impacting local government.

MTEC sub-committees

National Treasury appoints Budget Group Leaders, who will be responsible for engaging with institutions and preparing reports to the MTEC for each Budget Group. They will convene Budget bilaterals and Budget Group discussions. A first report of the Budget Group Leader is considered, together with other inputs, at a Function MTEC prior to its presentation at the MTEC. In function areas with concurrent powers (health, basic education and local economic development and social infrastructure), the Function 10x10 may substitute for, or complement, the role of the Function MTEC.

Having taken account of the discussion at the Function MTEC, the Budget Group Leader prepares a report to MTEC. MTEC takes final decisions on the recommendations that will be presented to MINCOMBUD. The table below summarises the composition and mandate of key sub-structures of MTEC. The full terms of reference of these structures will be adopted by MTEC. The MTEC sub-committees are as follows:

- Budget Bilateral
- Budget Group
- Function MTEC
- Function 10x10

Other consultative forums

City Budget Forum (CBF): The CBF is a technical forum of City Managers and Chief Financial Officers of the eight metropolitan municipalities, and is chaired by the DDG for Intergovernmental Relations, National Treasury. The CBF considers intergovernmental finances and the division of revenue from the perspective of the largest cities, focussing on issues of integrated development and management of the built environment. It may make recommendations to the Budget Forum or MTEC, and should be



consulted on all significant changes proposed to intergovernmental transfers to ensure that the interests of large urban municipalities have been taken into account.

The Gauteng Provincial Treasury includes the 3 Gauteng metros in the provincial planning and budgeting planning process starting July/Aug each year to influence the priorities and spatial location for the delivery of health and education facilities for the MTREF. The Gauteng Provincial Treasury is currently working with the 3 Gauteng metros to plot the spatial location of the MTEF projects – this will enable the cities and the Provincial departments to compare and discuss spatial priorities. Similarly, the 3 Gauteng metros will include Gauteng Provincial Government in the metro BEPP process. From 2016/17 the National Treasury will require Provincial treasuries to make the GPS co-ordinates available for provincial infrastructure. The methodology used In Gauteng can be reviewed and refined and then used by the 4 other provinces and relevant metros with National Treasury.

The link between the BEPP Process and the annual budget cycle is being strengthened. This is being achieved through aligning the time frames for the development and submission of Medium Term Strategic Plans and/or Annual Performance Plans of the relevant National and Provincial departments and public entities to the BEPP planning timeframes, and having a structured process and mechanism/s for joint inter-sphere planning and budgeting as part of the general annual budget process led by National Treasury. These changes will be implemented for the 2017/18 cycle. The City Budget Forum has established a Planning Alignment Task Team to address medium to longer term planning reform requirements.

The CSP will assist metros for 2016/17 to meet with Provincial Treasuries to begin the alignment of the planning and delivery of provincial infrastructure. This will be complemented by National Treasury working through its Provincial Infrastructure and Provincial Budget Analysis Units.

Alignment of BEPP, Budget and IDP Processes

The Department of Cooperative Governance has committed to align the IDP Assessment to the Budget and Benchmarking process, where Day 1 is dedicated for the IDP Assessment and alignment of the BEPP and IDP, and Day 2 is for the Budget Benchmarking.

C2.3 RISK MITIGATION STRATEGIES

The Metro has an established and well-functioning Risk Committee which meets on at least a quarterly basis and is chaired by the Chief Risk Officer. A Risk Management Register is maintained and progress in addressing risks is discussed at the meetings, as well as any other risks that may have come to light, and how to address them.



Challenges previously experienced in the Metro affecting project implementation and achievement of spatial transformation objectives include the high staff turnover of engineers, the capacity of project managers and supply chain practitioners, and the lengthy property acquisition process, amongst others. Some of the interventions being implemented to address the above challenges and mitigate the risks include the formation of a panel of professional staff including engineers, weekly visits to projects, regular meetings with senior management including contractors, working with the EDC to drive property acquisitions. Extensive training of SCM officials has also been undertaken.

Specific risks related to the built environment and within the context of the BEPP process are shown below, together with risk mitigation strategies.

Risk	Mitigation Factors / Strategy
1. Tender / procurement initiation of capital projects not timeously carried out due to SCM capacity constraints, resulting in delays in project commencement and underspending of allocated budget	Extensive training of SCM and Project Managers has taken place, including international certification. Monitoring and coaching being performed by EPMO of Project Managers within EMM. Capacitation of SCM Dept. through appointment of more SCM officials to handle work load
2. High staff turnover of engineers and other key project professionals	Approximately 100 Project Managers and Engineers have been appointed to a panel and trained on various areas of Project Management including International Certification
3. Excessive reliance on grant funding from Government for key projects	The Metro is well aware of this risk and has formulated approaches in its Investment Strategy to raise more own revenue in future through innovative measures
4. Excessive focus on implementation commencement and construction of capital infrastructure may divert focus away from equally important future operational aspects and funding	At CIF and Integration Zone task team meetings, key management are briefed on the importance of incorporating future operating expenditure requirements into departmental budgets so that adequate planning and funding availability is secured upfront
5. Lack of awareness of other projects within the Metro's space by other Government entities, resulting in planning in isolation and not utilising potential synergies and cost savings	Engagement with other Government and private entities within the Metro, attendance of various Intergovernmental forums in order to ensure planning and implementation co-ordination and alignment and formulation of the Intergovernmental Project Pipeline resulting from the above
6. Delays in project funding approvals or provision of timeous tranche payments to ensure streamlined funding and project implementation progress	Catalytic and spatial transformation projects receive strong focus from Government and funding availability
7. Polycentric nature of the Metro, with possible lack of cooperation between key departments in different geographic locations in the Metro	The various departments of the Metro meet together at numerous management and strategic implementation structure and similar meetings, although attendance is often still a challenge. There is a definite trend of growing 'togetherness' and better co-operation between departments is



Risk	Mitigation Factors / Strategy
	increasing and evident, and is being actively promoted by the Metro
8. Potential conflict between Municipal and Provincial planning, priorities and project implementation	Refer to strategy under 5 above
9. Potential misalignment between BEPP spatial targeting requirements and the Metro's Geographic Priority Areas	The Metro's CIF process makes accommodation for both and tries to integrate them as much as possible
10. Financial implications of setting up Urban Management and Precinct Management Structures and securing necessary resources, capacity and systems	Some of these structures are intergovernmental in nature and sharing of costs will lighten expenditure on any one party. Planning for sustainable revenue generation to cover operating expenses, whilst taking cognisance of community and consumer affordability is emphasised.

C2.4 OPERATING BUDGET IMPLICATIONS

The product of the planning approach is the identification and planning of Integration Zones that include an intergovernmental project pipeline (catalytic metro, provincial, national and SOC urban development projects) within the following targeted spaces:

- Integration Zones
- Marginalised areas (Informal settlements, townships and inner city areas)
- Growth nodes (commercial and industrial nodes)

This planning approach should clearly influence the allocation of capital funding, and result in service delivery implementation, which in turn requires urban management to protect and sustain public and private investment. The successful implementation of BEPPs relies on effective institutional arrangements and budgeting for ongoing operational expenditures. Sustained implementation and urban management should result in service delivery and spatial transformation that positively contributes to inclusive economic growth and the reduction of poverty and inequality over the long term.

Prioritisation and preparation: The prioritisation of Integration Zones, informal settlements, marginalised areas and areas for growth relative to other areas within the metro, and the resultant intergovernmental project pipeline will collectively support the achievement of targets associated with building more productive, inclusive and sustainable cities. The prioritisation of particular areas mentioned above does not translate into an exclusion of allocation of resources to other areas, although a substantial portion of resources should be allocated to the three categories of targeted spaces and this allocation should increase year on year.

Approximately 40% of the budget is earmarked to upgrade and renew the metro's infrastructure, 30% for changing the City's landscape and addressing spatial challenges, and a further 30% for economic development. Below are some of the major sector development outcomes and outputs expected from the Metro's investment in the Built Environment.



Transport

Transport infrastructure includes repairs and maintenance, the Integrated Rapid Public Transport Network (IRPTN), construction of four new taxi ranks in Palm Ridge, New Vosloorus, Bluegum and Phutaditshaba, as well as metro busses to cover new routes in the east.

Roads and Stormwater

Included in roads and stormwater is funding for construction of roads and storm water, safety, pedestrian walkways, as well as bridges across the city with special emphasis on 71 priority wards, as well as rehabilitation and resurfacing of roads and storm water.

Energy

Funds have been budgeted for energy expansion in order to provide sustainable energy supply and to protect the integrity of the energy network. This will be utilised for street and high mast lighting, upgrading of substations, network enhancements and electrification and alternative energy sources, focusing on informal settlement areas.

Water and Sanitation

The Metro's main water and sanitation projects include the water loss eradication programme, the bulk supply of the Albertina Sisulu Corridor in Pomona and broadening access to water and sanitation services, amongst others.

Human Settlements

Achievement of the following objectives and outcomes have been budgeted for:

- Servicing several thousand stands to improve the living conditions of people awaiting their houses;
- Refurbishment of rental houses;
- Watville-Actonville, Tembisa and Katorus urban renewal;
- Social housing in Germiston.

The Gauteng Department of Human Settlements has set aside funding million for human settlements in the eastern corridor to cover the provision of housing units among areas such as:

- Chief Albert Luthuli;
- John Dube Extension 2;
- Tsakane Extension22;



- Germiston South;
- Leeuwpoot;
- Rietfontein;
- Clayville Extension 45; and
- Redevelopment of hostels in Springs (Kwa-Thema) and Tembisa.

Some of the above settlements also form part of catalytic mega human settlements development projects.



SECTION D

D CAPITAL FUNDING

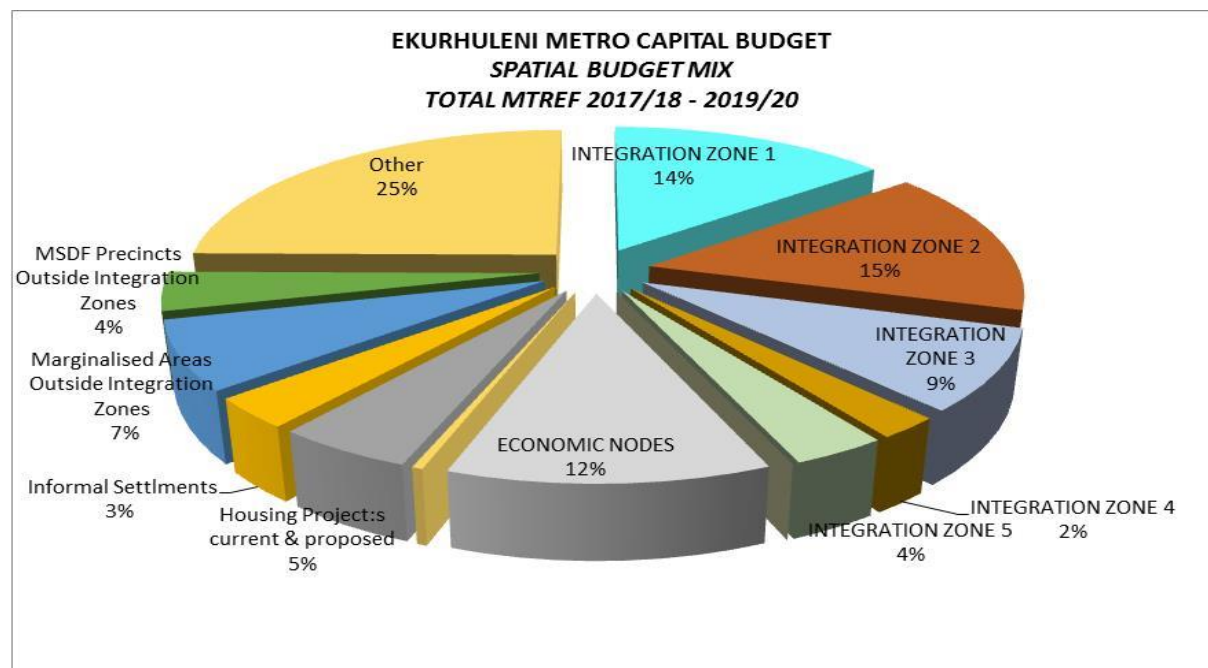
D1. SPATIAL BUDGET MIX

The summarised MTREF Capital Budget and Prioritised Projects allocations for each of the **Spatial Targeting Categories** are shown below:

Table D1.1: Capital Budget and Prioritised Projects for each of the Spatial Targeting Categories

Spatial Category	Capital Budget 2017/2018	%	Capital Budget 2018/2019	%	Capital Budget 2019/2020	%	Total MTREF Budget 2017/18 - 2019/20	%
INTEGRATION ZONE 1	R 1 054 935 000	16.5%	R 924 926 364	13.5%	R 972 925 000	13.2%	R 2 952 786 364	14.3%
INTEGRATION ZONE 2	R 1 053 060 114	16.5%	R 1 034 486 369	15.1%	R 1 052 828 717	14.3%	R 3 140 375 200	15.2%
INTEGRATION ZONE 3	R 604 913 900	9.5%	R 602 502 050	8.8%	R 542 292 835	7.4%	R 1 749 708 785	8.5%
INTEGRATION ZONE 4	R 192 059 691	3.0%	R 158 058 636	2.3%	R 118 339 000	1.6%	R 468 457 327	2.3%
INTEGRATION ZONE 5	R 191 876 289	3.0%	R 211 904 000	3.1%	R 305 236 000	4.1%	R 709 016 289	3.4%
ECONOMIC NODES (Outside IZs)	R 746 593 170	11.7%	R 758 113 971	11.1%	R 892 657 768	12.1%	R 2 397 364 909	11.6%
MARGINALISED AREAS (Outside IZs)	R 448 680 000	7.0%	R 528 240 000	7.7%	R 499 580 000	6.8%	R 1 476 500 000	7.2%
INFORMAL SETTLEMENTS (Outside IZs)	R 212 650 000	3.3%	R 212 750 000	3.1%	R 232 000 000	3.1%	R 657 400 000	3.2%
HOUSING PROJECTS: CURRENT (Outside IZs)	R 182 208 718	2.8%	R 76 600 000	1.1%	R 72 050 000	1.0%	R 330 858 718	1.6%
HOUSING PROJECTS: PROPOSED (Outside IZs)	R 194 850 229	3.0%	R 290 900 000	4.2%	R 213 000 000	2.9%	R 698 750 229	3.4%
HOUSING PRECINCTS (Outside IZs)	R 46 400 000	0.7%	R 26 120 000	0.4%	R 8 100 000	0.1%	R 80 620 000	0.4%
MSDF PRECINCTS (Outside IZs)	R 365 449 800	5.7%	R 263 450 000	3.8%	R 207 275 000	2.8%	R 836 174 800	4.1%
Other	R 1 105 679 800	17.3%	R 1 768 259 000	25.8%	R 2 249 037 000	30.5%	R 5 122 975 800	24.8%
TOTAL	R 6 399 356 712	100%	R 6 856 310 390	100%	R 7 365 321 320	100%	R 20 620 988 422	100%

Diagram D1.1: Spatial Targeting Categories and Capital Budget allocation



D2. INVESTMENT STRATEGY

The Metro has an approved Integrated Long Term Funding Strategy to ensure the balance between internal and external funding is optimal, whilst also aimed at increasing the capital budget to ensure both the stimulation of the local economy as well as the eradication of backlogs and as such creating sustainable human settlements.

The components that have impacted on the long funding strategy include:

1. EMM's revised Growth and Development Strategy (25 year horizon) – the level of services to be rendered
2. EMM's Spatial Development Framework and Capital Investment Framework - Funding allocation model - % of budget to backlogs vs. % towards economic development projects
3. EMM's Consolidated Municipal Infrastructure Plans (10 – 15 year horizon) - Enhanced set of data on revenue and expenditure available resulting from CMIP's that can supplement economic and financial forecasts as well as more refined maintenance requirements available
4. EMM's Integrated Development Plan (5 year horizon)
5. EMM's Medium Term Revenue and Expenditure Framework.

Ekurhuleni has also formulated a strategic vision of the city in 2055, known as the Ekurhuleni Growth and Development Strategy 2055 (GDS 2055), to be reviewed at five-year intervals. The purpose of the Integrated Long Term Funding Strategy is to ensure that the GDS is funded with the focus being in the first two phases of the GDS of becoming a Delivering City (2012 – 2020) and a Capable City (2020 – 2030), with the intention of becoming financially sustainable in the long term i.e. Sustainable City (2030 – 2055).

Other enablers for achieving the GDS 2055 objectives include Capital Investment Framework, Municipal Spatial Development Frameworks (MSDF) and Comprehensive Municipal Infrastructure Plan (CMIP), which forms the cornerstone of the investment program to be funded. The CMIP 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. CMIP guided the CIF in identifying geographic 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 provided guidance in determining priority geographic areas in relation to a projected capital investment scenario. 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 investment program as per its priority geographic areas. The proposed funding strategy has been developed in line with the relevant legislative and regulatory frameworks that govern municipal activity.

Funding Strategic Objectives



- To comply with the legislative requirements
- To increase state and private sector investment
- To ensure the long term financial sustainability of the Ekurhuleni Metropolitan Municipality
- To ensure that funding sources are managed efficiently and effectively
- Increase tax base and income stream, to identify new revenue sources as funding option for future years
- To adequately provide for both capital requirements as well as the servicing of debt incurred to fund capital infrastructure
- To ensure that annual surpluses are properly appropriated in terms of the policy such that cash can be managed more efficiently and effectively
- To ensure that adequate financial ratios are maintained at all times, for the management of cash flows
- To ensure that external funding is received from reputable service providers
- To progressively improve collections and reduce the provision for bad debts budget
- To secure cost effective funding
- Matching assets and liabilities.

In consideration with the above EMM strategic intent and policy objectives, the funding strategy is aimed at providing the Metro with funding options to address its financing needs over the next 15 years. Furthermore, the proposed funding strategy will provide a clear and structured view on how capital projects should be prioritised whilst balancing risk and return.

D3. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

The Capital Prioritisation Model as a key component of the Capital Investment Framework

The Capital Prioritisation Model (CPM) is an instrument utilised in the implementation of the CIF in alignment with the annual budget process set out by the EMM Finance Department in order to strategically prioritise the EMM multi-year capital budget. The CPM strives to align and incorporate project management, IDP needs analysis and the SDBIP into the prioritisation process, and incorporates the geographic priority areas (GPAs) in providing a spatial rationalisation to the budget, and establishes a set process for capital project prioritization as aligned to the budget process.

The CPM fulfils the following important functions as part of the Capital Programme Management process:

- Facilitates and guides the prioritisation of the multi-year capital budget;
- Establishes a uniform process to be followed during the budget process in the allocation and prioritisation of the budget both strategically and spatially;
- Guides the budget allocation split;



- Requires collective action and collaboration between essential departments with an identified strategic involvement in the budget process (i.e. Finance, Strategy and Corporate Planning (IDP), EPMO, Human Settlements, Economic Development, Environment, Real Estate and City Planning);
- Promotes alignment of departmental functions, strategic policies and sector plans;
- Outlines actions to be pursued during the capital budget prioritisation process;
- Makes provision for monitoring and evaluation to assess the impact of the CIF on the multi-year capital after allocation of the budget; and
- Makes allowance for a transparent and accountable budget process.

The implementation of the CIF as per the Capital Prioritisation Model is best understood as following a process of test, guide and align with respect to gradually changing the EMM departments' approach to the budgeting process by taking cognisance of the CIF priority areas and budgeting process through the CPM. The phasing in of the CIF needs to ultimately promote increased alignment of departmental capital projects.

The phasing of the Capital Prioritization model is summarized below and illustrated in figure 9:

1. Allocation of the budget into project categories:

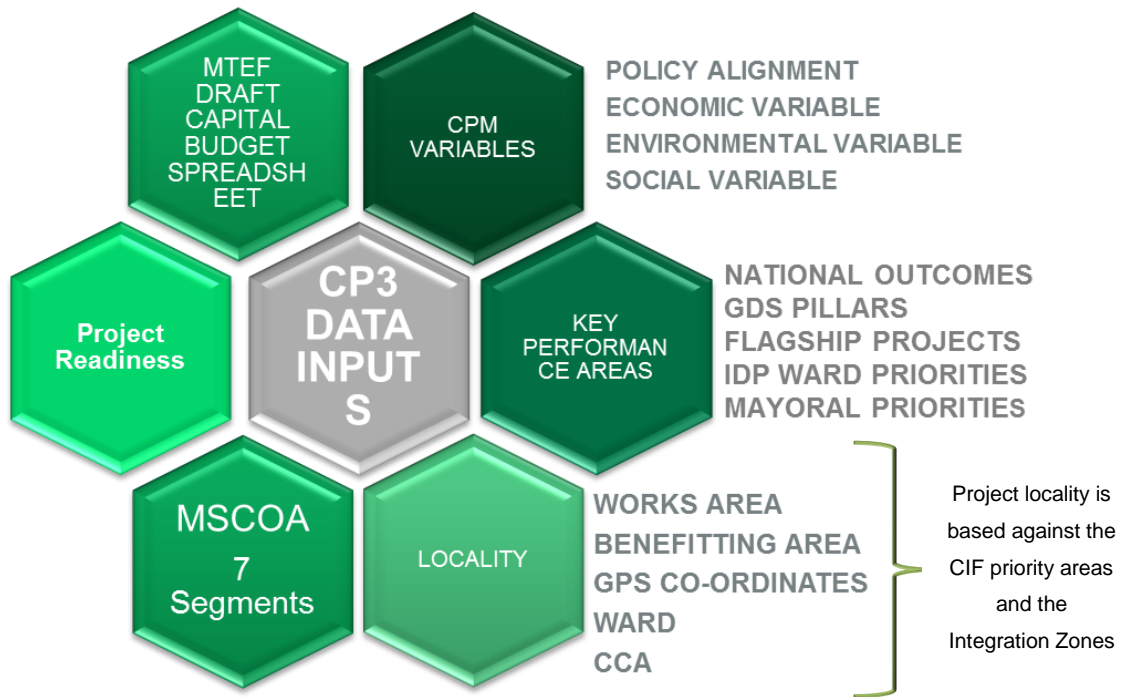
- a. Urban Restructuring-Social and physical infrastructure geared towards eradicating historical backlogs.
- b. Upgrading and Renewal - Upgrading refers to the extension of existing bulk capacity, whilst renewal refers to the maintaining of existing bulk infrastructure.
- c. Economic Development - projects that are focussed towards extending bulk infrastructure for the purpose of stimulating growth, and are therefore purely income generating projects.

2. Allocation of the budget percentage split per the project categories:

- a. Urban Restructuring – 30%
- b. Upgrading and Renewal – 40% (National Treasury requirement)
- c. Economic Development – 30%



3. Departments submit budget submissions inclusive of:



4. Allocation of projects in terms of the geographic priority areas and the project categories.

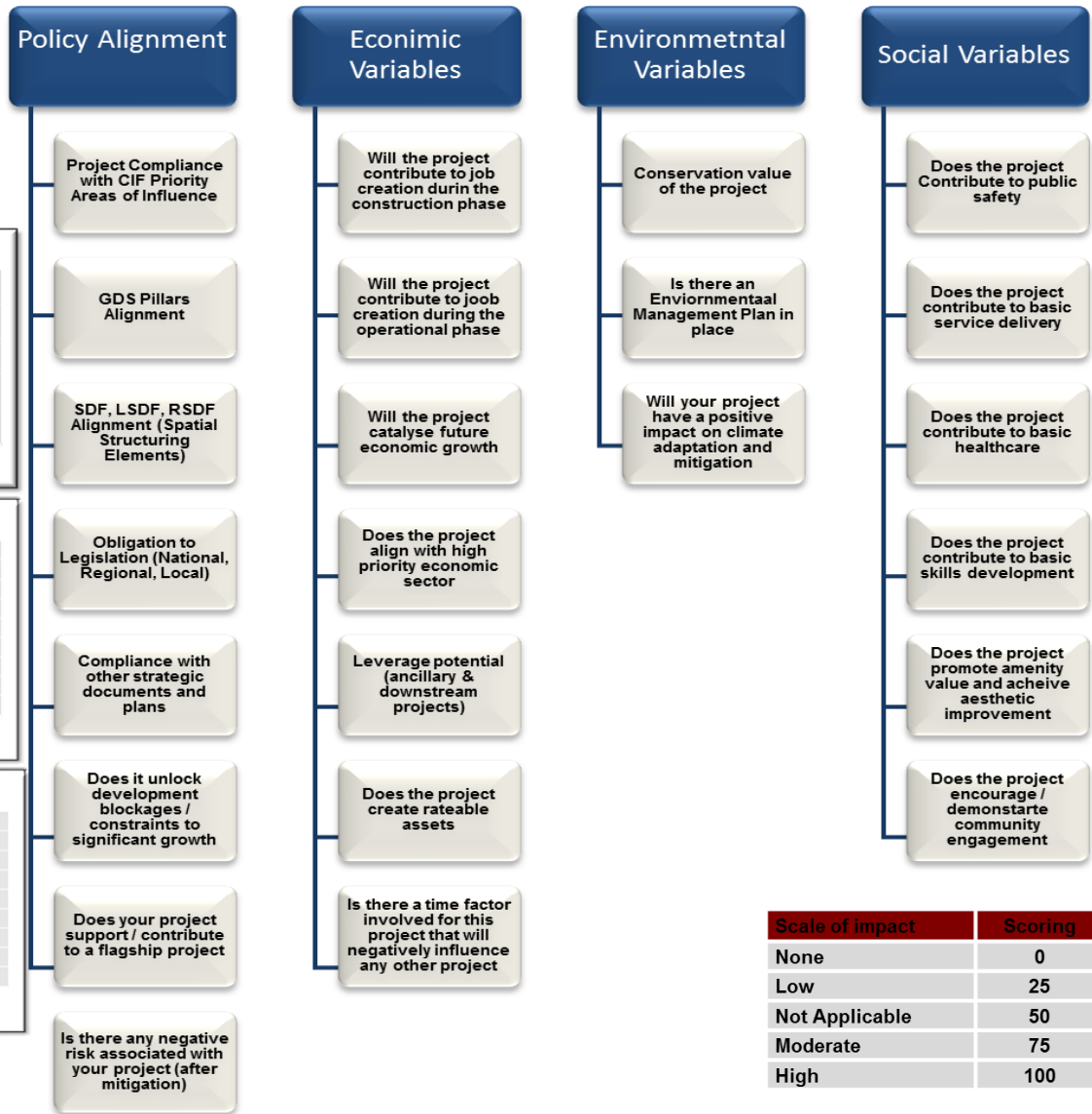
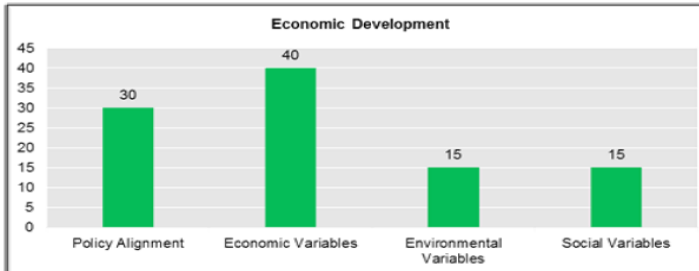
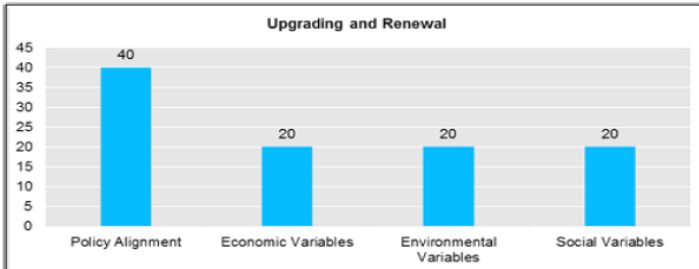
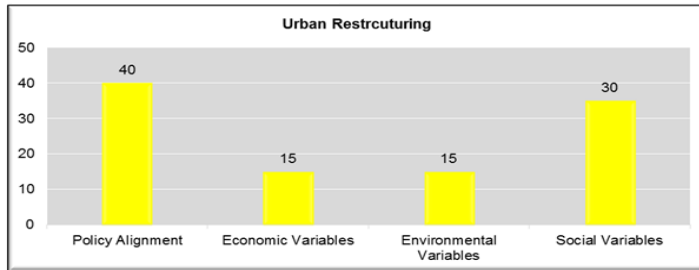
Draft capital budget submission assessed in terms of project locality in relation to the priority areas and nature of the project. Preliminary assessment of the draft capital budget includes identification of the budget allocation as per the priority areas and the project categories.



5. Budget prioritization –project weighting (based on departmental input to the CPM variables)

Diagram D3.1: Project Prioritization Weighting Methodology

Project Categories:



Scale of impact	Scoring
None	0
Low	25
Not Applicable	50
Moderate	75
High	100

Project weighting (Diagram D3.1):

- a. Projects are weighted as per the allocated project category
- b. Project ranking determined against the criteria as per the variable sectors:
 - i. Policy alignment
 - ii. Economic
 - iii. Environmental
 - iv. Social
- c. Project criteria is weighted against a scale of impact based on a none to high scoring based on the nature of the project as based against the variable criteria.
- d. Highest ranking projects as per project category are deemed most strategically located and aligned across the EMMs strategic objectives.

6. Screen submitted departmental projects through the Budget evaluation committee:

- Weighting (includes spatial alignment to geographic priority areas);
- IDP alignment;
- SDBIP; and
- Project Management (project readiness).

7. One on one engagement with departments

Departments are afforded the opportunity to provide clarity on draft budget submissions during the budget evaluation process.

8. Budget fit and approval

	Commitment Status	Score	Total as Cap
CIF Portfolio Category Urban Restructuring (<i>Historical Backlogs</i>) Upgrading and Renewal (<i>Bulk maintenance and capacity</i>) Economic Development (<i>Revenue generation</i>)	2016/17 CIF Classification	Highest score based on the EMMs strategic objectives	Total budget as Cap

The budget fit takes into account the budget cap per financial year and determines a list of prioritized projects based on weighting, and fitted according to the capping amount determined per financial year.

9. Monitoring expenditure

Capital projects are monitored as follows:

- Expenditure in relation to spatial locality (Finance and City Planning);
- and project status and progress (EPMO).



Diagram D3.2: Phasing of the Prioritization Model

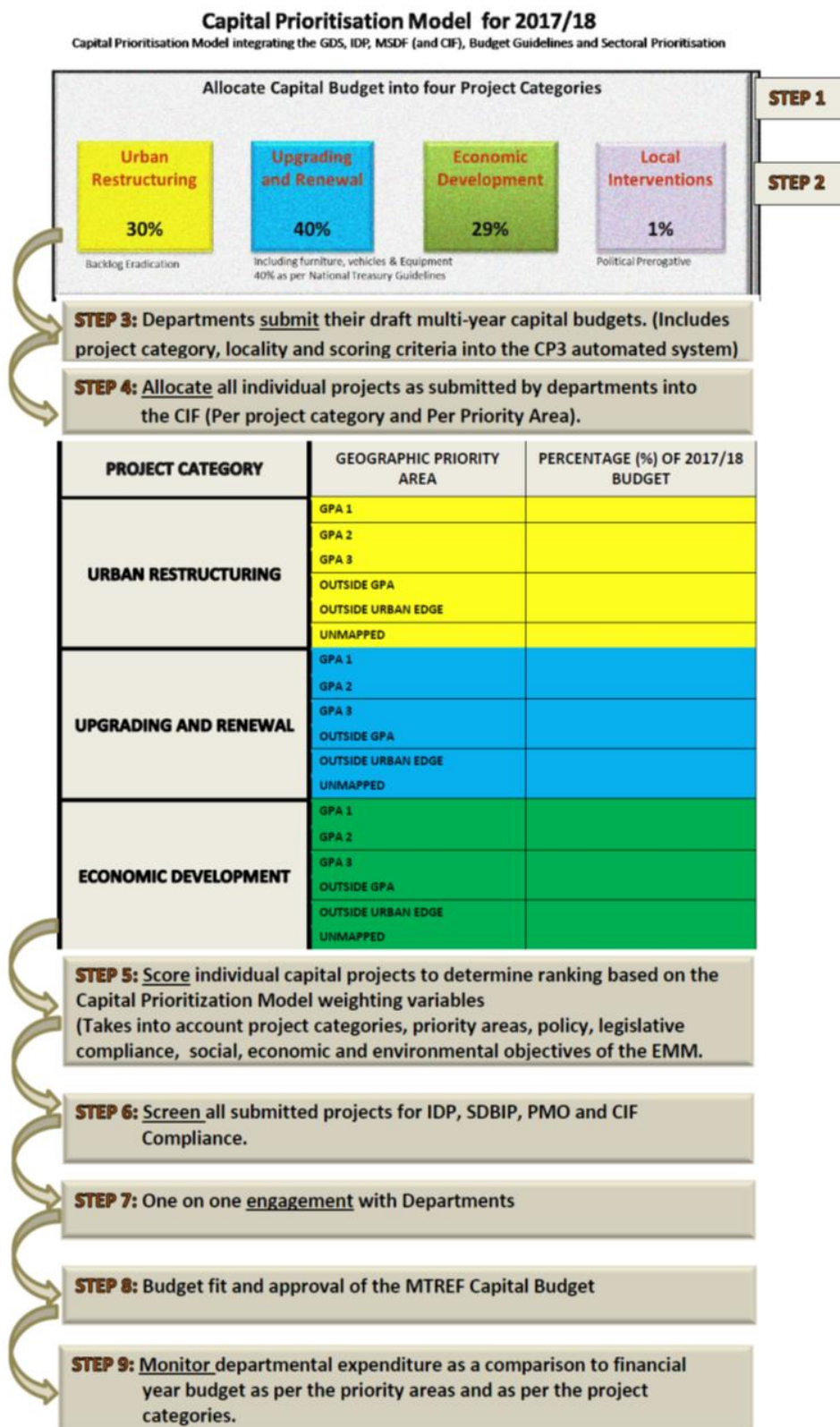
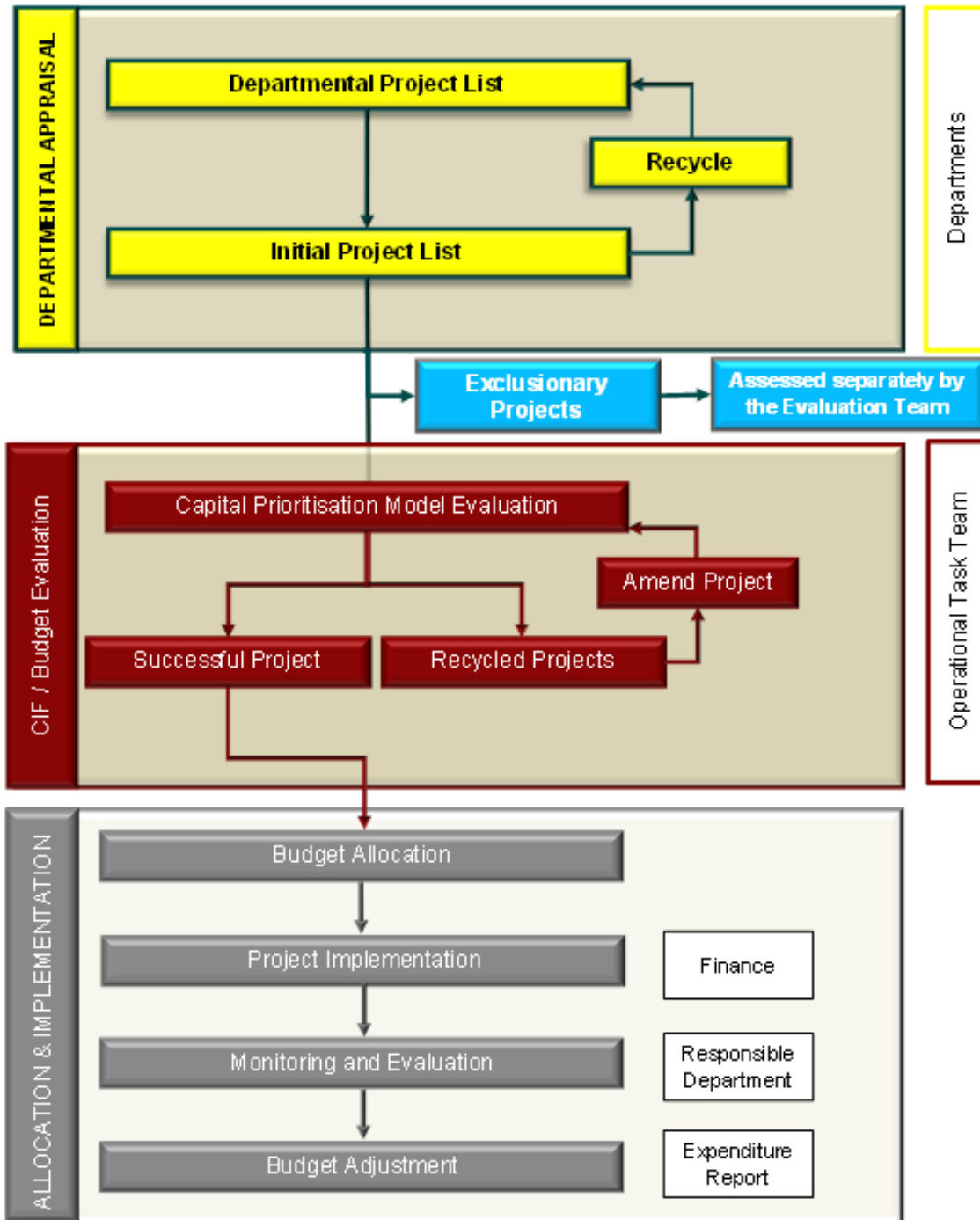


Diagram D3.3: Project Prioritization from Department through to budget adoption and project implementation



This stage of the model is concerned with the project evaluation within each of the department. The departments within the EMM develop an initial project list of a number of projects important to that department in terms of reaching their objectives and needs.

The individual departments rationalise, plan and prioritise the draft departmental capital budget projects (and that this should be done in cognisance of the CPM weighting criteria)



Each department determines its own unique criteria and weighs those criteria based on values, strategic direction, departmental goals and objectives, available resources, IDP wards needs analysis etc. Projects are then evaluated internally and an initial list of prioritised projects for each department is determined for placement onto the draft capital budget.

A second phase of project testing is then required (Tier 2). The need for the second phase evaluation process stems from the fact that certain departments do not have their own internal comprehensive prioritisation process.

Therefore an overarching prioritisation model is required, as this will assist with the effective prioritisation of capital projects as part of the budget evaluation process. Projects forming part of the initial project list within a department is then provided to the Special Projects Unit, in order to determine the priority of each of these projects in order to assist the EMM in the budget planning process and allocation.

Impact of the CIF on the MTREF Capital Budget

The impact analysis strives to assess the impact that the CIF implementation had on the MTREF capital budget in terms of percentage of budget allocated to the priority areas for spatial targeting of investment and the percentage of budget allocated to the project categories.

Diagram D3.4: Percentage of MTREF Budget Allocation per the CIF Priority Areas

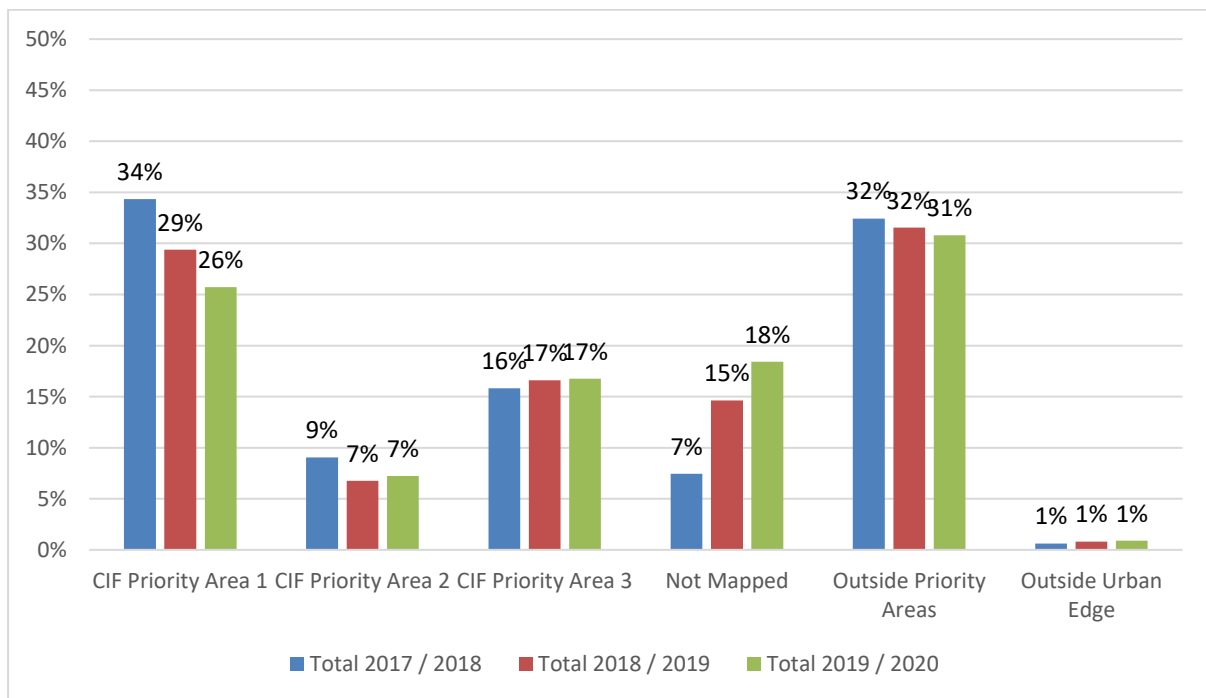
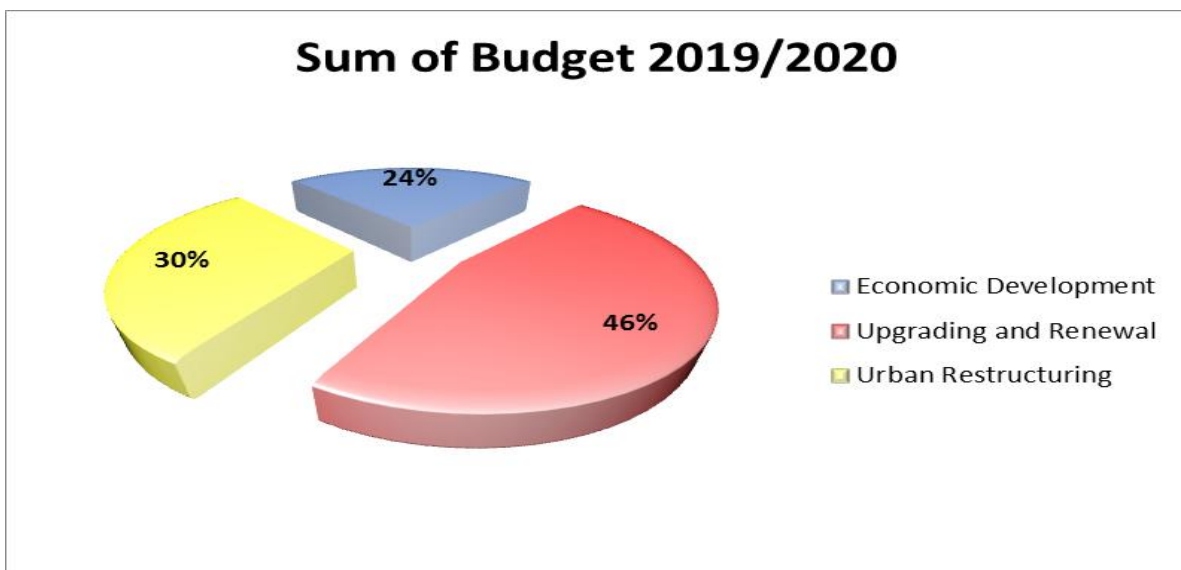
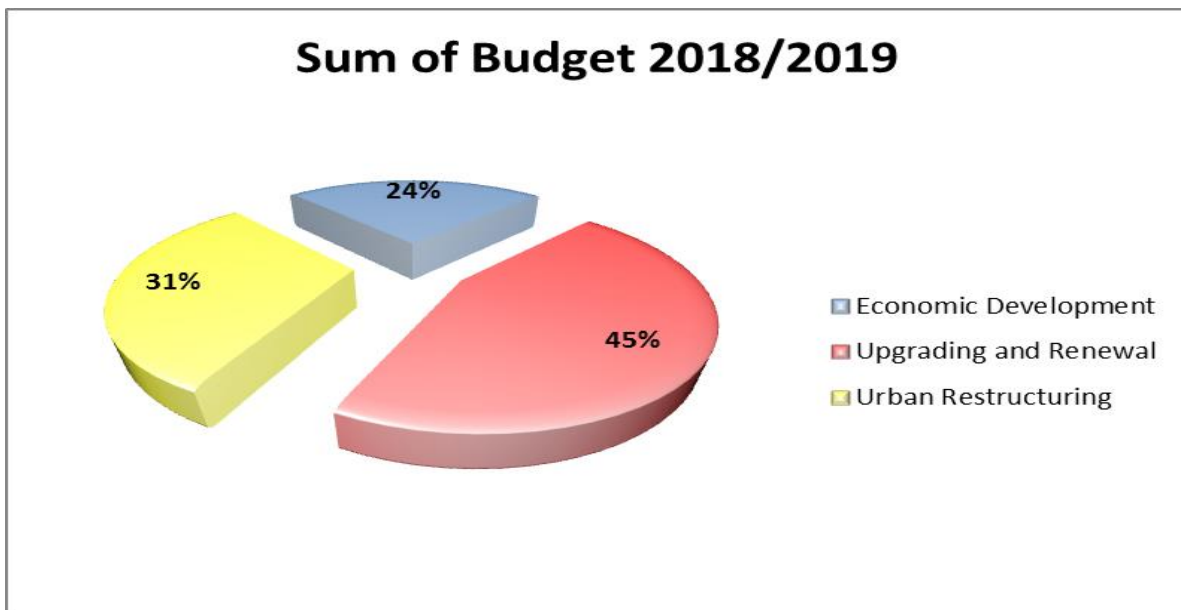
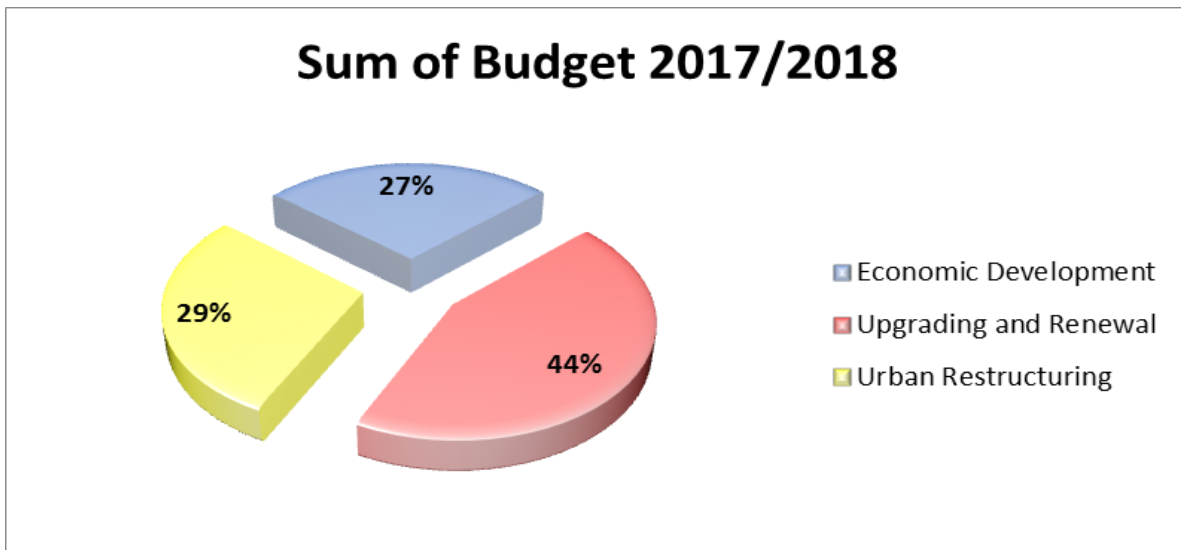


Diagram D3.5: Percentage of MTREF Budget Allocation per the Project Categories



Capital Budgeting Process

Projects selected for implementation are budgeted as accurately as possible for inclusion in the Capital Budget. The Finance Department is responsible to verify the Budget against the funds available. Budget meetings subsequently follow to facilitate the necessary adjustments and to finalise the Capital Budget. This process is explained in more detail further on. **Further detail is provided in Annexure 4.**

Revised Capital Prioritization Model Process Proposed for the 2018/19 Financial year.



Tender Evaluation

Once the budget has been approved, projects are put out to tender, aligned to the timeframes required for timeous commencement of each project. Procedures and guidelines are followed as set out in the Metro’s Supply Chain Management Policy and requirements of the



MFMA. Bid Evaluation Committee members evaluate the tenders after members of the Supply Chain Department have verified the validity of the tender submissions received from bidders. A bid evaluation report is then prepared, including a recommendation for the preferred bidder for each tender based on points scored for quality and price (phase 1) and preference points (phase2).

The Bid Evaluation Committee strives to achieve the following key objectives:

- Evaluation of tenders in an ethical, objective manner;
- Declaring conflicts of interest that may exist;
- Quality in service delivery;
- The awarding of work in a fair, equitable, transparent and professional manner;
- The accommodation of emerging service providers.

The bid evaluation report is forwarded to the Bid Adjudication Committee. If satisfied, the recommendations are sent for executive approval in terms of the delegations of authority.

Implementation of Projects

During the implementation of projects the EPMO Department is responsible for project management and quality control through the Stage Gate Model and the Project Online System. All applicable stakeholders are involved by means of technical meetings, project steering committee meetings and monthly site meetings (where relevant). Progress reports, including expenditure, challenges, job creation etc. are submitted on a monthly basis. Some of the key objectives during project implementation are:

- To complete the projects within the required timeframe's;
- To complete the projects not exceeding the budgeted amounts;
- To complete the projects to the standards required; and
- To apply labour intensive construction methods as far as possible.

The Capital Prioritisation Model (CPM), a major component of the Capital Investment Framework (CIF), forms the core of the EMM's Capital Programme Management process. The Capital Prioritisation Model is structured on, and incorporates, the following factors:

- Alignment to the budget and IDP process;
- EPMO Stage gate process – project readiness;
- Incorporation of essential strategic departmental functions related to municipal planning and project management;
- National Treasury requirements; and
- Best practices identified through engagements with neighbouring metropolitan municipalities.



SECTION E

E. IMPLEMENTATION

E1. EMM LAND BANKING AND LAND RELEASE STRATEGY

The EMM owns approximately 51,000 properties covering an area of 20,000 hectares, with an estimated market value of R13 Billion. Following is a summary of the EMM Land Banking and Land Release Strategies:

E1.2 LAND BANKING STRATEGY

Land banking is the process or policy by which local governments acquire properties and convert them to productive use or hold them for long term strategic public purposes. By turning vacant properties into community assets such as affordable housing, land banking fosters greater metropolitan prosperity and strengthens broader national economic well-being successful land banking is able to ensure (i) Efficiency in allocating land and (ii) equity in distribution of land.

Land banking is underpinned by the belief that if government has access to a valuable pool of land, they will be a responsible custodian of this resource and allocate it more equitably than if left to the market. The Land banking strategy / program comprises of the following stages:

■ Stage1: Strategic Property Planning

The strategic property planning exercise provides an outline of the City's long term property needs to fulfil its service delivery mandate. It entails the alignment of the City's property portfolio with its service delivery objectives and proactively identifying key land / properties with current and future growth nodes in line with its Growth and Development Strategy (GDS 2055). The strategic property planning entails:

■ Stage 2: Land Acquisition

After all the strategic property planning has been done, the next stage is Land Acquisition. The land acquisition process for land banking is critical. An acquisition plan will be compiled per Department detailing additional land needs that are required for service delivery objectives, the acquisition plan will consist of a summary of proposed acquisitions, as informed by land requirements. Before a final decision is done of whether or not to acquire, a prioritization process is made where the need is gauged against budget and time. Prioritised land parcels shall go to council for approval.



■ Stage 3: Land Management

The management of land will be management in line with the requirements of the respective department. In order mitigate holding costs; the following options will be explored: (a) Leaseback, (b) Normal Leasing and (c) Holding.

E1.2 PROPOSED EMM LAND RELEASE STRATEGY

In terms of the supply and release of land the following factors such as forecast population changes, household changes, demand for land and the capacity to cost effectively deliver key infrastructure and services should be taken into account by the EMM.

Focused and well planned Land Release Programs can enable the EMM to deliver on economic and social strategies through targeted spatial transformation. It also contributes to financial and environmental objectives by seeking to:

- facilitate the provision of affordable housing choices
- meet the demand for land in the Integration Zones;
- establish an appropriate inventory of serviced land;
- enable the operation of a competitive land development and construction market; and
- achieve satisfactory returns from the sale of unleased land.

There are various methods of **land release** that the Council can utilise to release its land for development and development proposals. These include:

- Outright disposal through a competitive bidding process
- Lease (whether long term, medium and short term, ranging from 3 years to 99 years. For example Parks, Public Open Spaces, recreation properties, lakes and dams would fit in this method).
- Public-private-partnerships (including formations like BOT and partnerships with other spheres of government and entities)
- Unsolicited bids in line with the MFMA and supply chain process where necessary
- Any other arrangements in compliance with any other statutory provision.

E2. PROCUREMENT APPROACH

» COMPLIANCE

The EMM has a Supply Chain Department in line with the internal Supply Chain Management Policy and requirements of the MFMA. The head of the unit is a general manager, who reports to the Chief Financial Officer.



» DELEGATED AUTHORITY

Section 79 and 106 of the MFMA empower the Accounting Officer of EMM to delegate decision-making powers to officials. The following applies to the acquisition of goods and services and the disposal and letting of assets:

- All delegations must be in writing;
- No supply chain management duties or powers may be delegated or sub-delegated to a person who is not an official of the Municipality or to a committee which is not exclusively composed of officials of the Municipality.

» SCM PROCEDURE

The calling for tenders to secure supplies of goods and services is an integral part of supply chain management, as legislation compels public institutions to procure goods and services through this process. A thorough knowledge of the different phases of the tendering process and the accompanying procedures is therefore necessary to ensure that public officials procure goods and services timeously and according to their requirements.

In line with the MFMA, the Accounting Officer has approved the Bid Committees. The Metro ensures that the tender process is fair, transparent and equitable and cost effective to all parties. More specifically it will:

- Clearly separate its role as a purchaser from that of a provider of services;
- Produce tender documents, which clearly specify EMM's required services to allow bidders to bid for and price their work accurately;
- Package work put to tender in a manner which encourages competition and the best outcome for residents and ratepayers;
- Actively discourage improper tendering practices such as collusion, misrepresentation, and disclosure of confidential information;
- Require any conflict to interest to be disclosed immediately.

Procurement: Capital Projects including Catalytic Projects

The Metro's Supply Chain Department is based in Benoni and maintains a comprehensive Multi-Year Demand Plan linked to the Capital Budget. Each item in the Demand Plan has its own Demand Plan reference number which is in turn linked to a Vote number, corresponding to the same vote number emanating from the CIF process. The Demand Plan also indicates the applicable department and gives a description of the project to be out on tender / items to be procured, as well as the current procurement progress status. A monthly Supply Chain Management forecasted Procurement Plan is also compiled,



giving details of the various projects to be put out on tender and items to be procured, estimated deadlines for submission of relevant documents to the BSC, advertising of tenders, dates of planned Bid Evaluation Committee and Bid Specification Committee meetings, and details of any challenges and other relevant information.

The Demand Plan is summarised and stratified in various ways in order to provide insights from different perspectives. It can be summarised per Department, giving the total value of projects to be procured and being procured for each Department and the exact number of projects already secured and those to be procured. Infrastructure related departments such as Roads and Stormwater, Transport, Energy, Water and Sanitation and Human Settlements typically constitute the highest value of required procurement due to the long-term nature, complexity and capital nature of the projects applicable to these departments. The Demand Plan is also classified into various categories depending on the nature of the items to be procured, such as civils, buildings real estate, energy, professional services, vehicles and specialised equipment, information technology, facilities management and other.

The SCM Department Produces a monthly progress report which is presented to the CFO and at Finance Committee meetings in order to ensure active monitoring and taking of corrective action where necessary on aspects such as deviations between targeted and actual procurements deadlines, over-expenditure compared to tendered / quoted prices etc. Included in the above Demand Plan and procurement forecasts are projects linked to the BEPP. It can also be seen that the Tender Initiation Unit within the SCM Department plays a very important role, because until the procurement process is begun here for a project, nothing else in the complex process of project procurement can start, which can lead to various challenges such as project delays and underspending.

»» PROCUREMENT PLAN

The following schedule provides a summary of a sample of some of the Metro's major capital projects, together with the procurement status of the project and other applicable information.



Table E2.1: EMM Major Capital Projects and Procurement

Department	Parent Project Name	Budget 2017/2018	Budget 2018/2019	Budget 2019/2020	MTREF TOTAL	Procurement Status	Comments
Council General	Land Banking & Property Acquisition(Corporate)	R 65 500 000	R 60 000 000	R 68 000 000	R 193 500 000	Implementation	Key project for significantly unlocking growth and development for the Metro. Project is related to and supports the Aerotropolis flagship catalytic project.
Information Communication	DCS: Broadband Fibre(Corporate)	R 63 000 000	R 66 650 000	R 33 325 000	R 162 975 000	Contracting	Tender for contractor to be re-advertised
Transport	Construction of MVRA/DLTC Kwatsaduza(Tsakane)	R 2 000 000	R 45 000 000	R 35 000 000	R 82 000 000	Pre-Feasibility	
Transport	Establishment of new MVRA and Transport Offices Kempton Park (Kempton Park)	R 2 000 000	R 40 000 000	R 60 000 000	R 102 000 000	Feasibility	
Transport	IRPTN: Bus Depots	R 110 000 000	R 110 000 000	R 107 000 000	R 327 000 000	Feasibility	On tender for Planning Designs
Transport	IRPTN: Industry Transition	R 80 000 000	R 20 000 000	R -	R 100 000 000	Construction / Implementation	Continuous negotiations important
Transport	IRPTN: Infrastructure	R 70 000 000	R 50 000 000	R 50 000 000	R 170 000 000	Construction / Implementation	Project is part of the Aerotropolis. Could possibly result in eradicating constraints, thereby resulting in growth and development
Transport	IRPTN: Infrastructure and Implementing (PTNG)	R 110 000 000	R 187 000 000	R 220 000 000	R 517 000 000	Construction / Implementation	Key project for significantly unlocking growth and development for the Metro
Transport	IRPTN: ITS (External Loans)	R 20 000 000	R 20 000 000	R 10 000 000	R 50 000 000	Construction / Implementation	Procurement completed. Built and commissioning in progress.
Transport	IRPTN: ITS (PTNG)	R 52 000 000	R 50 000 000	R 50 000 000	R 152 000 000	Construction / Implementation	Implementation in progress
Transport	IRPTN: Project designs, Planning and Management	R 78 000 000	R 83 000 000	R 73 000 000	R 234 000 000	Pre-Feasibility	
Transport	IRPTN: Road Infrastructure (External Loans)	R 77 000 000	R 77 000 000	R 87 000 000	R 241 000 000	Implementation	Part of the Aerotropolis Flagship Project
Transport	IRPTN: Road Infrastructure (USDG)	R 63 718 000	R 34 906 000	R 73 650 000	R 172 274 000	Construction in progress	Part of the Aerotropolis Flagship Project
Waste Management	Specialised Vehicles (less than 2 seats)(Operational Equipment)	R 38 000 000	R 40 000 000	R 40 000 000	R 118 000 000	Implementation	Key project for significantly unlocking growth and development for the metro
		R 831 218 000	R 883 556 000	R 906 975 000	R 2 621 749 000		

E3. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

POST ANALYSIS AND REFINEMENT OF THE CAPITAL BUDGET AND CIF PROCESS

The purpose of the analysis is to assess the outcome of the CIF evaluation process in identifying achievements in the alignment of the multi-year capital budget with the CIF project categories derived from the Capital Prioritisation Model and the geographic priority areas (GPAs) that give directive to the spatial strategy of the EMM. The analysis therefore outlines the impact of the CIF on the multi-year budget based on the outcomes results, which in turn highlights constraints, weaknesses and successes as compared to meeting determined targets set out in the CIF.

Step 9: Testing of the scoring system on the multi-year budget

In determining to what degree targets set out in the CIF have been met for the multi-year budget the analysis is geared towards answering the following questions as related to benchmarking the impact of the CIF with respect to the multi-year capital budget:

- i. The budget percentage split between the CIF project categories compared to the previous year's budget;
- ii. The budget percentage split between the CIF geographic priority area categories for the current Budget;
- iii. The budget percentage split between the CIF geographic priority areas as calculated per project category;
- iv. Performance of the CPM prioritisation weighting system based on:
 - a. Which departmental projects on the draft multi-year budget placed in the top 20 of the prioritisation as compared to the 20 lowest scoring projects (comparison made per scoring scenario);
 - b. The number of capital projects that did not score highly within the projects allocated project category;
 - c. The level of information provided by departments as part of the scoring criteria.

The analysis yields very important information which assists in future refinement and improvement of the Capital Budget and CIF process



E.3.1 Financial and Projection Modelling Work Conducted on the CPM Project Category Percentage Split

Step 10: Modelling work on the impact of the budget allocation split

Consultants Demacon Market Studies have conducted financial and projection modelling studies against the CIF and CPM with the objective of providing economic and backlog projections to feed into strengthening the direction and determination of targets for the CIF to feed into the budget of the EMM.

The purpose of the modelling for the CPM is to illustrate the modelling scenarios with respect to Backlog Eradication and Economic Growth within the EMM, so as to identify the optimum budget split between the Capital Investment Framework categories (i.e. economic development, urban restructuring and upgrading and renewal).

Three modules have been identified to serve as input in determining the ideal economic growth scenario for the EMM, namely:

- 1) Economic growth module;
- 2) Population growth module; and
- 3) Labour absorption / employment module.

Capital Projects Policy

In implementing the above, the objectives of the EMM Capital Projects Policy are taken into consideration, for example ensuring that capital projects are only budgeted for if feasibility has been proven, ensuring the optimum allocation of resources to projects that can be implemented within the timeframes budgeted for etc.

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 consists of at least the following phases:

- Feasibility Study
- Basic Planning
- Environmental Impact Assessment
- Detail Planning and Design
- Implementation

It is also a requirement of the policy 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 of implementing the



project within the proposed budget and time frame (multi-year projects), and that all proposed budgets for projects be approved only if the evaluation is positive.

The Metro participates in a number of National, Provincial and local Intergovernmental Forums in order to ensure that the EMM is kept abreast of important developments in the various areas of its responsibilities. Through these forums, the EMM is able to exchange ideas, influence legislative and policy direction, and benchmark with other spheres of Government.



Table E3.1: National Intergovernmental Structures

Department	Meeting / Forum	Purpose, Responsibilities and Significance
Transport	SIP 2 Steering Committee	Co-ordination on the Durban, Free State and Gauteng Freight and Logistics Corridor, including the Tambo Springs Inland Port Project.
Water and Sanitation	Intergovernmental Steering Committee on the Management of Mine Water	To ensure that proper AMD mine water drainage and processes are addressed, as well as to understand the long-term objective possibilities to 'clean' AMD to potable standards.
	Environmental Forum (DWA/ GDARD)	All Infrastructure departments' EIA applications are co-ordinated and progress reported by DWA & GDARD. This forum assists the Metro's Water and Sanitation Department immensely in obtaining Records of Decision and Water Use Licences.

Table E3.2: Provincial Intergovernmental Structures

Department	Meeting / Forum	Purpose, Responsibilities and Significance
Transport	Integrated Transport Planning Steering Committee	The forum is led by the Gauteng Department of Roads and Transport, and meets quarterly. Its' purpose is to share and interrogate the Comprehensive Integrated Transport Plans and to discuss areas of integration across municipal boundaries, and to discuss progress on the development of local Integrated Transport Plans and the IRTPN.
	Rail Steering Committee	To ensure integration of rail planning and operations across all municipalities in the Province.
	Gautrain Co-ordinating Committee	Arranged and held the quarterly Gautrain / EMM Co-ordinating Committee. The Committee's purpose is the promotion of integration between Gautrain and local rail plans and operations. Promotion of integration between Gautrain and local rail plans and operations.
Environmental	MEC-MMC Intergovernmental Forum	A forum between the MEC for GDARD and the environmental MMCs of the various municipalities in Gauteng. This forum allows the Province and the Municipalities to discuss matters of mutual interests.

	EIA Forum meeting	Held between EMM, GDARD and DWA, and chaired by ERM. The meeting discusses EIA-related applications in the EMM area, to see how to fast-track EMM EIA applications in order to facilitate service delivery. The meetings are held on the first Thursday of every month.
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Table E3.3: Municipal Intergovernmental Structures

Department	Meeting / Forum	Purpose, Responsibilities and Significance
<ul style="list-style-type: none"> • City Planning • Finance • Strategy and Corporate Planning • Enterprise Project Management Office • Environmental Resource Management • Economic Development • Human Settlements • Real Estate 	<p>Capital Investment Framework Operational Task Team</p>	<ul style="list-style-type: none"> • Ensure and promote alignment with Council policies. • Bridge the gap between the CIF, GDS and IDP • Interactive contribution in the strategic direction of the CIF • Advisory – Input on projects and processes (IDP and SDBIP) • Attend and contribute to the CIF Operational Task Team meetings through the provision of necessary data and advisement on department initiatives and policies. • Note the annual CIF Programme and take cognisance of the CIFs alignment with the IDP and Budget processes as part of the implementation of the CIF. • Form part of the CIF evaluation in the budgetary process, which includes the co-ordination of project leaders input into the CAPEX populating (breakdown of projects, project category indication and mapping data), screening of projects and project Prioritisation as per the Capital Prioritisation Model evaluation criteria. • Make allowance for a transparent, accountable and interactive participatory process. <p>The CIF Operational Task Team plays a vital role in the budget evaluation of the departments draft capital budget submissions. This includes projects locality, weighting in terms of the EMMs strategic objectives, project readiness and budget amount requested per project. The Task Team through the budget evaluation process strives to provide for a prioritised budget based on strategic and spatial objectives in order to achieve a fair, realistic, co-ordinated and implementable capital budget.</p>
<ul style="list-style-type: none"> • City Planning • Finance (Chief Financial Officer) • Strategy and Corporate Planning (including IDP) 	<p>Infrastructure Strategic Task Team</p>	<p>This task team functions as a sub-committee to the City Managers Work Group. The Committee's purpose, responsibilities and values include:</p> <ul style="list-style-type: none"> • Representation of the CIF at the executive level (DFC, IBALCO and SMT) • Meeting legislative requirements

<ul style="list-style-type: none"> Enterprise Project Management Office 		<ul style="list-style-type: none"> Alignment with National Government objectives for Local Government Bridge the gap between the CIF, GDS and IDP Interactive contribution in the strategic direction of the CIF Advisory – Input on projects and processes (IDP and SDBIP) Make allowance for a transparent, accountable and interactive participatory process Establish the Operation Task team of the CIF Note the CIF project plan on an annual basis Facilitation of the bulk contribution policy process Facilitation of specific strategic development projects e.g. PRASA-Gibela, Riverfields, Glen Gory, M and T. (the strategic developments include but are not limited to the aforementioned listed developments). <p>The Committee address infrastructure policy, support and advisement at an executive level for the CIF Operational Task Team.</p>
<ul style="list-style-type: none"> City Planning (Specialist Projects, Metropolitan Spatial Planning, Operations) Finance (Budget Office, Procurement Office) Strategy and Corporate Planning Enterprise Project Management Office Environmental Resource Management Economic Development Human Settlements Water and Sanitation Roads and Storm Water Energy Health 	<p>Integration Zone 1 Project Implementation Task Team</p>	<ul style="list-style-type: none"> To coordinate the implementation and future roll out of internal and external capital projects occurring in integration zone 1. Departments will be responsible to present business plans pertaining to integration zone 1, and demonstrate support and alignment with catalytic projects proposed and budgeted for in integration zone 1. Identification of external role-players and capital projects that boast a significant impact in the development of integration zone 1. Sector alignment of departmental plans in integration zone 1. Identification and notification of potential risk factors that may hinder the implementation of catalytic and supporting projects anticipated for integration zone 1. Reporting on progress of projects phasing, this includes expenditure and forecasted budget required. Reporting on services and bulk infrastructure requirements to support catalytic projects for integration zone 1. Reporting on service level, cost, impact studies and precinct planning for projects. Reporting on progress with the implementation of capital projects and operational programmes.

<ul style="list-style-type: none">• SRAC• Customer Relationship Management (Urban Management)• Real Estate• Transport		<p>The Integration Zone 1 Task Team institutionalises the EMM Urban Network Strategy within the context of Spatial Targeting planning and budgeting which focuses on Integration Zones, thereby applying the EMM GDS concept of corridor development.</p>
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SECTION F

F. URBAN MANAGEMENT

F1. URBAN MANAGEMENT

The Urban Management Department within the EMM, has been tasked to develop a sustainability plan to address the progressive decay and reclaim the Central Business Districts to become districts of excellence. Accordingly, the Urban Management department is responsible for coordinating the work of the Integrated Service Delivery Task Teams (ISDTT) and monitoring and reporting bi-weekly on all service delivery interventions within the EMM to ensure sustainability and accountability.

The operations of Urban Management is coordinated within **Internal Municipal Districts** (Community Improvement Districts - CID). The CID's serve as Special Purpose Vehicles initiated and operationalized by the EMM Administration to get the basics rights in terms of service delivery in order to address the current state of decay experienced in the Central Business Districts of the City of Ekurhuleni. The two primary CID include: (i) Germiston Community Improvement District and (ii) Kempton Park Community Improvement District.

Community Improvement Districts


“Community Improvement Districts (CID) are essentially geographic areas in which the majority of property owners determines and agree to fund supplementary services to those normally provided by the local authority, in order to maintain and manage the public environment at a superior level”.

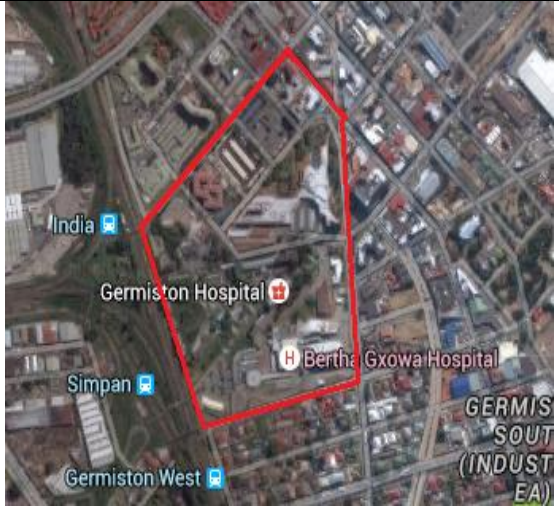

Following is a summary of the Germiston and Kempton Park Community Improvement District challenges and proposed intervention.





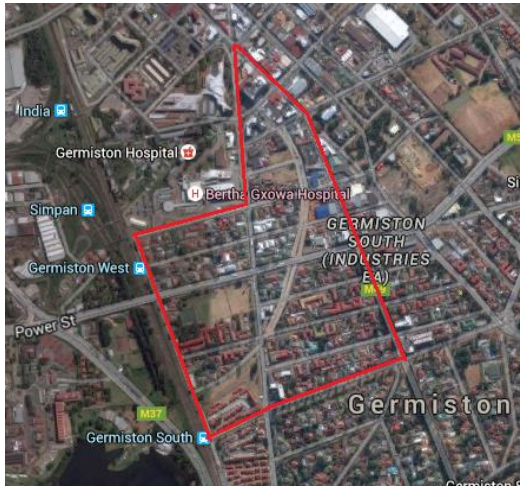

Table F1.1: Germiston CID Intervention Summary

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
1. Civic North (Civic Precinct)		<ul style="list-style-type: none"> • Area well maintained • Potholes in the street • Overgrown grass in the side walk/Vacant stand/Corridor • Hawker in the side walks • Pedestrian pathway obstructed with plantation i.e. trees • Illegal advertisement • Illegal dumping • Refuse bins not strategically placed and cleaned 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. • Management of public open spaces • Relocation/ removal of illegal informal trading on sidewalk; • Addressing state of sidewalks • Identification of bad buildings • Increased refuse removal 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • As and When – but fix the area within 21 days; • Daily; • Clean according to the Programme;
2. Library Square (High Street Precinct – North)		<ul style="list-style-type: none"> • Water leaks; • Stormwater Blockage; • Open fire used for cooking; • Illegal disposal of water in municipal sewer/ Stormwater system; • Open manhole covers; • Street marking; • Illegal car wash; • Potholes in the street • Overgrown grass in the side walk/Vacant stand • Hawker in the side walk • Bad building • Illegal advertisement • Illegal dumping • Refuse bins not strategically placed 	<ul style="list-style-type: none"> • Infrastructure Upgrading; • By-law enforcement; • Replacement of manhole covers • Introduction of street furniture's; • Road marking; • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • As and When – but fix the area within 21 days; • Daily; • Clean according to the Programme;

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
			<ul style="list-style-type: none"> Management of public open spaces Relocation/ Removal of illegal informal trading on sidewalk; 		
3. Jack Street North (High Street Precinct)		<ul style="list-style-type: none"> Water leaks; Stormwater Blockage; Open fire used for cooking; Illegal disposal of water in municipal sewer/ Stormwater system; Open manhole covers; Street marking; Illegal car wash; Potholes in the street Overgrown grass in the side walk/Vacant stand Hawker in the side walk Bad building Illegal advertisement Illegal dumping Refuse bins not strategically placed and cleaned 	<ul style="list-style-type: none"> Infrastructure Upgrading; By-law enforcement; Replacement of manhole covers Introduction of street furniture's; Road marking; Intensified cleaning operations Develop and implement way leave policy Safety & Security - Visible policing; Enforcement of Bylaws. Management of public open spaces Removal/ relocation of illegal informal trading on sidewalk; 	<ul style="list-style-type: none"> Waste Management – Clean City; Urban Management (Coordination) Engineering services; EMPD City Planning Parks 	<ul style="list-style-type: none"> As and When – but fix the area within 21 days; Daily; Clean according to the Programme;
4. Civic South (Civic Precinct – South)		<ul style="list-style-type: none"> Area well maintained Potholes in the street Overgrown grass in the side walk/Vacant stand/Corridor Hawker in the side walk Bad building inside the old Hospital Pedestrian pathway obstructed with plantation i.e. trees 	<ul style="list-style-type: none"> Intensified cleaning operations Develop and implement way leave policy Safety & Security - Visible policing; Enforcement of Bylaws. Management of public open spaces 	<ul style="list-style-type: none"> Waste Management – Clean City; Urban Management (Coordination) Engineering services; EMPD City Planning Parks 	<ul style="list-style-type: none"> Daily; As and When – but fix the area within 21 days; Clean according to the Programme; Daily maintenance of the infrastructure in the precinct.

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
		<ul style="list-style-type: none"> • Illegal advertisement • Illegal dumping • Refuse bins not strategically placed and cleaned 	<ul style="list-style-type: none"> • Relocation removal of illegal informal trading on sidewalk; • Addressing state of sidewalks • Identification of bad buildings • Increased refuse removal 	<ul style="list-style-type: none"> • 	
<p>5. Central Park Street – High Street – Precinct Central)</p>		<ul style="list-style-type: none"> • Potholes • Trenches • Illegal activities on the open spaces i.e. informal traders operating, parking of cars • Open spaces not maintained • Illegal activities on the sidewalk i.e. informal salons, informal traders, display of goods • Sewer blockages • Sidewalk obstructed • Buildings not maintained • Illegal dumping • Incomplete works on the pavement by contractor 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. • Management of public open spaces • Relocation/ removal of illegal informal trading on sidewalk; • Addressing state of sidewalks • Identification of bad buildings • Increased refuse removal 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
6. Golden Walk (Commercial Precinct)		<ul style="list-style-type: none"> • Potholes • Trenches • Illegal activities on the open spaces i.e. informal traders operating, parking of cars • Open spaces not maintained • Illegal activities on the sidewalk i.e. informal salons, informal traders, display of goods • Sewer blockages • Sidewalk obstructed • Buildings not maintained • Illegal dumping • Incomplete works on the pavement by contractor • Illegal advertisement 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. • Management of public open spaces • Relocation/ removal of illegal informal trading on sidewalk; • Addressing state of sidewalks • Identification of bad buildings • Increased refuse removal 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested
7. Pirrowville (Transport and Market precinct)		<ul style="list-style-type: none"> • Shortage of refuse bins • Incomplete works on the pavement by the contractor • Illegal advertisement • Informal traders • Buildings not maintained • Obstruction on the pavement i.e. display of goods • Public health nuisance • Mechanic and repairs activities on the sidewalk • Constant blockages of storm water drains • Illegal dumping on the pavement • Rodent infestation • Open spaces not maintained • Open manholes 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing • Management of Taxis rank and facilities • Management of Informal Trade. • Enforcement of Bylaws. • Management of public open spaces • Intensified cleaning operations 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
<p>8. Queen Street (Residential Precinct)</p>		<ul style="list-style-type: none"> • Incomplete works on the pavement by the contractor • Illegal advertisement • Informal traders • Illegal dumping on the pavement • Open spaces not maintained • Open manholes; • Street marking; • Tree pruning • Cleaning of pavements 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Enforcement of Bylaws. • Management of public open spaces • Intensified cleaning operations 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested
<p>9. Fire Station Square (High Street Precinct – South)</p>		<ul style="list-style-type: none"> • Open spaces not maintained; • Illegal activities within the parks i.e. illegal parking of cars • Illegal dumping • Illegal advertisement • Water leaks • Informal traders • Open space maintenance • Cleaning of pavements • Stolen manhole covers 	<ul style="list-style-type: none"> • Intensified cleaning operations • Develop and implement way leave policy • Enforcement of Bylaws. • Management of public open spaces • Intensified cleaning operations • Replacement of manhole covers; • 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested





Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
10. Golden Walk South (Commercial Precinct)		<ul style="list-style-type: none"> • Potholes • Trenches • Illegal activities on the open spaces i.e. informal traders operating, parking of cars • Open spaces not maintained • Illegal activities on the sidewalk i.e. informal salons, informal traders, display of goods • Constant sewer blockages • Sidewalk obstructed • Buildings not maintained • Illegal dumping • Incomplete works on the pavement by contractor 	<ul style="list-style-type: none"> • Infrastructure maintenance • Management of public open spaces • Relocation/ removal of illegal informal trading on sidewalk; • Addressing state of sidewalks • Identification of bad buildings 	<ul style="list-style-type: none"> • Engineering services; • City Planning • Parks • Urban Management (Coordination) 	<ul style="list-style-type: none"> • Daily; • As and When – but fix the area within 21 days; • Clean according to the Programme; • As and when reported or requested

Table F1.2: Kempton Park CID Intervention Summary

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
1.Transport Precinct (Two Taxi ranks and Train station)		<ul style="list-style-type: none"> • Water leaks; • Stormwater Blockage; • Open fire used for cooking; • Illegal disposal of water and oil in municipal sewer/Stormwater system; • Open manhole covers; • Illegal electrical connections • Street marking; • Pavements not rehabilitated after work done • Broken pavements • Overgrown grass in the taxi rank • Informal traders on the side walk • Bad buildings (only facades and not structures) • Illegal advertisement • Illegal dumping • Refuse bins not strategically placed • Broken/missing refuse bins • Lack of traffic management along main road – Pretoria road • Slow collection of waste • Crime (pickpocketing) • Drugs and prostitution 	<ul style="list-style-type: none"> • Infrastructure Upgrading; • By-law enforcement; • Replacement of manhole covers • Introduction of street furniture; • Road marking; • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. • Management of public open spaces • Removal/relocation of illegal informal trading on sidewalk and issuing of trading permits on approved trading sites • Providing bins (sustainable material) • Rehabilitating walkways/pavements • Impounding of vehicles and issuing of traffic fines 	<ul style="list-style-type: none"> • Waste Management – Clean City; • Urban Management (Coordination) • Engineering services; • EMPD • City Planning • Parks • Energy • SARS • Immigration Office • Home Affairs 	<ul style="list-style-type: none"> • As and When – but fix the area within 21 days; • Daily; • Clean according to the Programme;

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
2.Civic Precinct		<ul style="list-style-type: none"> • Bad buildings • Incomplete works on the side walk by the contractor • Illegal dumping • Illegal advertisement • Illegal informal traders • Illegal mechanics • Broken/missing refuse bins • Broken Stormwater drains • broken pavements • Leaking water meters • Land use contraventions 	<ul style="list-style-type: none"> • Infrastructure Upgrading; • By-law enforcement; • Replacement of manhole covers • Introduction of street furniture; • Road marking; • Intensified cleaning operations • Develop and implement way leave policy • Safety & Security - Visible policing; • Enforcement of Bylaws. • Management of public open spaces • Removal/relocation of illegal informal trading on sidewalk and issuing of trading permits on approved trading sites • Providing bins (sustainable material) • Issuing notices for unsightly building façades • Site inspection prior to payment of contractor by Roads department • Issuing notices to contraveners 	<ul style="list-style-type: none"> • Building Control • Roads & Storm water Department • Solid Waste & Urban Management • Outdoor Advertising • Local Economic Development Department • City Planning (Land Use Management) 	<ul style="list-style-type: none"> • As and When – but fix the area within 21 days; • Daily; • Clean according to the Programme;

Precinct	Maps	Challenges	Proposed Interventions	Lead Department	Timeframe
3. Medical Precinct		<ul style="list-style-type: none"> • Area well maintained but areas leading to precinct are affected by the scourge of • illegal dumping • illegal informal traders • Drugs and prostitution • Potholes • Leaking water infrastructure • Rodents • Open drain covers • Drugs and prostitution • Broken pavements • Broken Stormwater drainage system • Blocked kerb inlets • Illegal advertising • Overgrown grass on walkway areas 	<ul style="list-style-type: none"> • Safety & security • Permit issuing for legal and approved trading sites 	<ul style="list-style-type: none"> • EMPD & SAPS • Immigration office • SARS • Home Affairs • Solid Waste • Local Economic Development Department • Environmental Health Department • City Planning 	<ul style="list-style-type: none"> • As and When – but fix the area within 21 days; • Daily; • Clean according to the Programme;

F2. TRANSPORT MANAGEMENT

EMM transport infrastructure includes air services, railway and road networks catering for both passenger and freight travel purposes. The public transport services offered in the municipality are a combination of airplanes, trains, bus services, minibus taxi's and metered taxi's. **Figure F2.1 to Figure F2.3** indicate the railway lines, bus routes and taxi routes within the municipality.

EMM has embarked on the development of a more sustainable transport management approach which include an integrated public transport network namely IRPTN (Integrated Rapid Public Transport Network). This initiative is planned in order to meet urban mobility needs and make Ekurhuleni a more liveable city. The long-term plan is constantly reviewed, to align with new developments or changes in strategic policy.

The IRPTN project integrates various modes of transport including mini-bus taxis, buses, rail and non-motorised transport to improve the quality of public transport by improving accessibility, commuter security, reducing journey times and making public transport more affordable to more commuters. The IRPTN also focuses on enabling the existing affected bus and taxi operators in Ekurhuleni to participate in the development of and operation of new vehicle operating companies (VOCs) which will be involved with operational activities of the IRPTN.

The IRPTN comprises of trunk routes along the major mobility spines in line with its Metropolitan Spatial Development Framework (MSDF), with branch and feeder routes, ensuring significant area-wide coverage. These routes link the existing (and proposed) major residential and economic nodes of Ekurhuleni, enabling equitable access to opportunities for all of EMM's citizens, regardless of their location within the district. Taking cognisance of DOT's Guidelines and Requirements, the following principles have been incorporated into the design:

- EMM intends to establish an all-encompassing IRPTN Management Team (also known as the IRPTN Unit) that, from inception, will provide management oversight over the BRT and the existing municipal-owned bus transport services. This will also prepare the way for taking over the rail subsidy functions at an appropriate point in time;
- in addition, the IRPTN Transport Management Centre (TMC) has been planned, from inception, to integrate with other scheduled modes of transport including municipal busses and rail, in particular, and thereby place the passenger at the centre of the service delivery regardless of which mode they select;
- the feeder routes are being designed to take passengers to and from both IRPTN stations and stops, as well as selected railway stations, providing as far as possible a door-to-door service;
- the NMT sidewalks and bicycle ways will link directly to rail and IRPTN stations as well as service local commuter foot traffic;



- the proposed branding of the BRT has been aligned with EMM's branding, and established as a sub-brand of EMM's. Public announcements, public relations and other communication activities are all designed to interact with EMM's existing Marketing and Communications Department;
- the fare systems will include the requirement to operate across multiple modes of transport and will be fully operational once the other modes migrate from their legacy systems;
- discussions are already underway with City of Johannesburg to integrate with their Phase 1C route to address the large cross-municipal-border traffic demands, with PRASA regarding integration with rail, and discussions with City of Tshwane are also being considered; and
- all IRPTN planning activity builds on the integrated development theme contained in the Comprehensive Integrated Transport Planning (CITP) report (prepared in 2013/14), Modal Integration Strategy Action Plan (Jun 2009), MSDF, Growth and Development Strategy 2040 and Capital Investment Framework.

Route 2 is identified as the priority route due to the following transportation and urban design principles:

- Population density;
- Modal integration;
- Existing public transport passengers;
- Improving access to underserved areas (Tembisa and Vosloorus);
- Potential for future densification along the route;
- Improvement in travel times;
- Existing roadway width and potential impact on traffic;
- A reduction in carbon emissions, and
- Municipal input.

The full network of the BRT IRPTN routes is illustrated in **Figure F2.4**.

The Municipality's current budget per transport infrastructure is indicated in **Table F2.1** and **Diagram F2.1**:

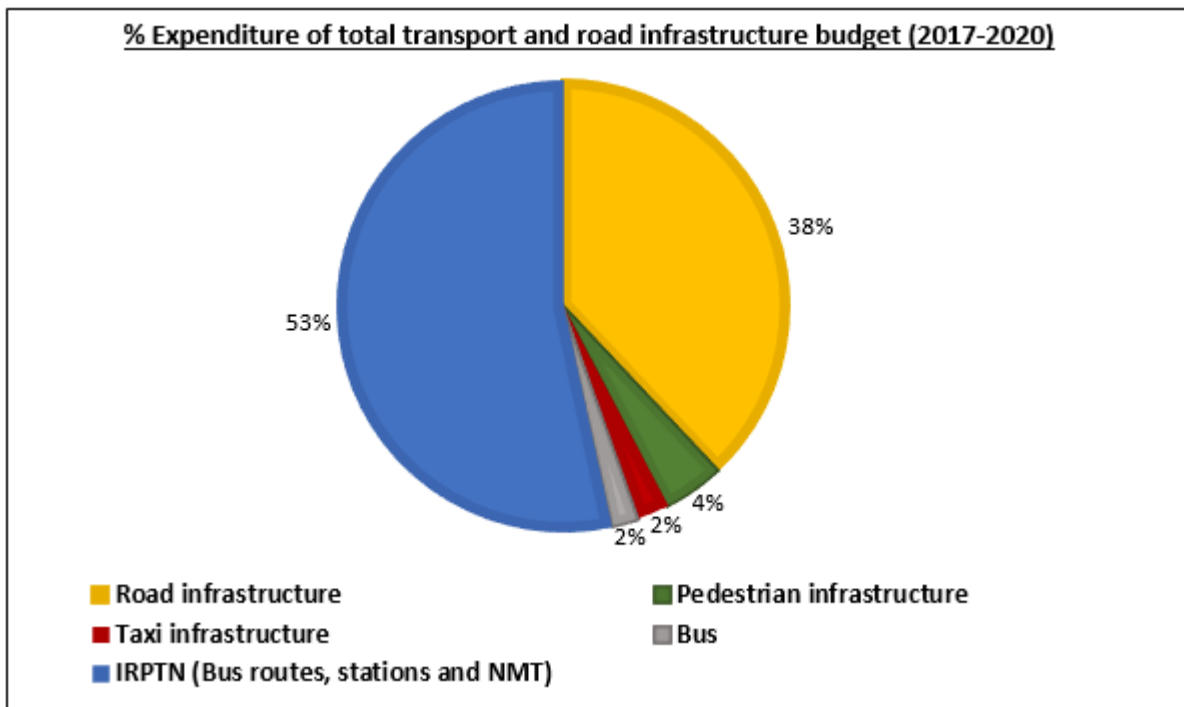
Table F2.1: Percentage Expenditure of Total Transport and Road Infrastructure Budget

Description	% Expenditure of total Transport and Road infrastructure budgets			
	2017/18	2018/19	2019/20	Total
Road infrastructure	38%	36%	40%	38%
Pedestrian infrastructure	5%	5%	3%	4%
Taxi infrastructure	1%	3%	2%	2%
Bus	0%	3%	2%	2%
IRPTN (Bus routes, stations and NMT)	56%	52%	52%	53%

⁴ Source: EMM CITP 2013-2017



Diagram F2.1: Percentage Expenditure of Total Transport and Road Infrastructure Budget



F3. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

The table below shows the Metro’s anticipated future operating expenditure for a sample of high-value capital projects, focusing on the Metro’s major transport related catalytic project, the IRPTN. The table shows the same projects as reflected in the procurement plan above, with the future expected annual operating expenditure subsequent to completion reflected. Please see Section G below for details of further important institutional and operating budget arrangements.



Table F3.1 Anticipated Future Operating Expenditure

Department	Parent Project Name	Funding Source 2017/2018	Budget 2017/2018	Budget 2018/2019	Budget 2019/2020	MTREF TOTAL	Expected Annual Operating Expenditure
Council General	Land Banking & Property Acquisition(Corporate)	Borrowings	R 65 500 000	R 60 000 000	R 68 000 000	R 193 500 000	-
Information Communication	DCS: Broadband Fibre(Corporate)	Borrowings	R 63 000 000	R 66 650 000	R 33 325 000	R 162 975 000	-
Transport	Construction of MVRA/DLTC Kwatsaduza(Tsakane)	Borrowings	R 2 000 000	R 45 000 000	R 35 000 000	R 82 000 000	R0.5 million - R1.0 million
Transport	Establishment of new MVRA and Transport Offices Kempton Park (Kempton Park)	Borrowings	R 2 000 000	R 40 000 000	R 60 000 000	R 102 000 000	R0.5 million - R1.0 million
Transport	IRPTN: Bus Depots	Public Transport	R 110 000 000	R 110 000 000	R 107 000 000	R 327 000 000	R0.5 million - R1.0 million
Transport	IRPTN: Industry Transition	Public Transport Infrastructure Grant	R 80 000 000	R 20 000 000	R -	R 100 000 000	> R5.0 million
Transport	IRPTN: Infrastructure	Public Transport Infrastructure Grant	R 70 000 000	R 50 000 000	R 50 000 000	R 170 000 000	R1.0 million - R5.0 million
Transport	IRPTN: Infrastructure and Implementing (PTNG)	Public Transport Infrastructure Grant	R 110 000 000	R 187 000 000	R 220 000 000	R 517 000 000	> R5.0 million
Transport	IRPTN: ITS (External Loans)	Public Transport Infrastructure Grant	R 20 000 000	R 20 000 000	R 10 000 000	R 50 000 000	R1.0 million - R5.0 million
Transport	IRPTN: ITS (PTNG)	Public Transport Infrastructure Grant	R 52 000 000	R 50 000 000	R 50 000 000	R 152 000 000	R1.0 million - R5.0 million
Transport	IRPTN: Project designs, Planning and Management	Public Transport Infrastructure Grant	R 78 000 000	R 83 000 000	R 73 000 000	R 234 000 000	-
Transport	IRPTN: Road Infrastructure (External Loans)	Public Transport Infrastructure Grant	R 77 000 000	R 77 000 000	R 87 000 000	R 241 000 000	> R5.0 million
Transport	IRPTN: Road Infrastructure (USDG)	Public Transport Infrastructure Grant	R 63 718 000	R 34 906 000	R 73 650 000	R 172 274 000	> R5.0 million
Waste Management	Specialised Vehicles (less than 2 seats)(Operational Equipment)	Council Funding	R 38 000 000	R 40 000 000	R 40 000 000	R 118 000 000	R0.01 million - R1.0 million
			R 831 218 000	R 883 556 000	R 906 975 000	R 2 621 749 000	

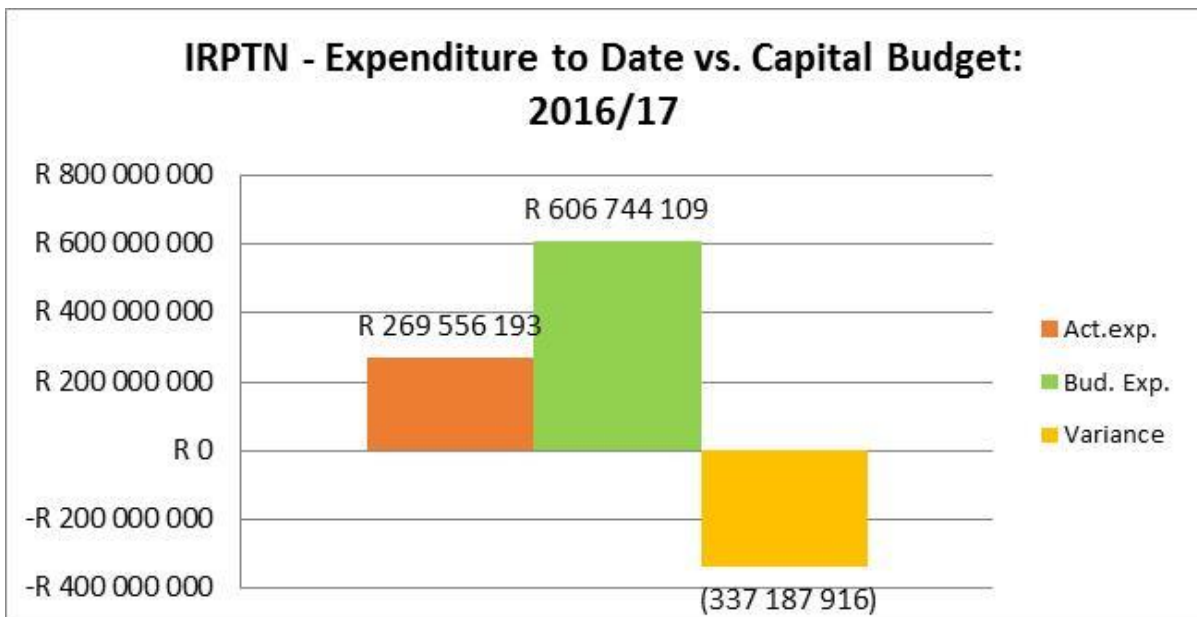
As detailed in Section E above, the Metro is a member of the Integrated Transport Planning Steering Committee. The forum is led by the Gauteng Department of Roads and Transport, and meets quarterly. Its' purpose is to share and interrogate the Comprehensive Integrated Transport Plans and to discuss areas of integration across municipal boundaries, and to discuss progress on the development of local Integrated Transport Plans and the IRTPN.

Please refer to section G2 regarding the future operationalisation of BEPP component city structures and Urban Management structures and their impact on the Operating Budget.

Operating challenges

The Metro experienced challenges with regards to capacity in its SCM and EPMD Departments and as a result project implementation is sometimes behind. This has had an effect on the operational side of project implementation, apparent when comparing the actual expenditure and achievements to budgeted expenditure and achievements. As an example, the following chart, showing actual expenditure to date for the IRPTN up to April 2017 vs the related Capital Budget for this project, illustrates this effect.

Diagram F3.1: IRPTN – Actual Expenditure vs Capital Budget 2016/17



The above chart shows that for the IRPTN, a total of R 269.6 million (44.4%) of the total year capital budgeted amount of R 606.7 million for the project has been spent as at April 2017. This means that R 337.2 million (55.6%) still needs to be spent within the remaining two months of the financial year in order to meet the achievements and avoid underspending on the project.

The Metro is aware of this problem on certain projects and is actively attending to the SCM and project implementation challenges and in the process of appointing the



required capacity. Extensive SCM training is also taking place. There are also panels of contractors and project professionals which have been created and will be utilised going forward to significantly facilitate project initiation, implementation, and delivery. The Metro has taken significant steps to improve project implementation, as explained below.

Steps to enhance Implementation of Capex Programmes by the Metro

EMM has established an Enterprise Project Management Office (EPMO) whose vision is to create an environment that enables successful implementation of projects and programmes to ensure that the EMM's vision of being a smart, creative and developmental city is attained. To date the following has been implemented to introduce best practices in Project Management that will ensure the improvement in Capex expenditure and service delivery:

1. Approved Project Management Framework

This framework was approved by the Mayoral Committee and its main objective is to define the EMM Project Management Environment. Known as "EMM WAY OF IMPLEMENTING PROJECTS".

2. Establishment of Professional PMOs

Professional PMOs were established within the 16 key service delivery oriented departments.

3. Training of Project Managers

About 100 Project Managers have been trained on various areas of Project Management including International Certification.

4. Introduction of Project Management Software

This tool was introduced to ensure quality planning, tracking and reporting on the Capex programmes. This project management tool will be enhanced by a dashboard that is accessible through mobile devices.

The implementation of the above stated mechanisms has resulted in the Metro earning level 3 in terms of Project Management Maturity. EPMO has also established a 'war room' model where the 16 PMOs meet on monthly basis to discuss the projects status and highlighting the challenges of the projects especially those that are crosscutting within the PMOs. EPMO does mentoring and coaching of Project Managers within EMM.



SECTION G

G. INSTITUTIONAL ARRANGEMENTS AND OPERATING BUDGET

G1. CROSS CUTTING INSTITUTIONAL ARRANGEMENTS

Inter-departmental and external institutional arrangements of the Metro were detailed in Section E, and specifically in Tables E3.1, E3.2 and E3.3. Institutional arrangements within the Metro may also be summarised in a 'cross-cutting' manner linked to the BEPP, showing the various responsible parties and departments as well the outcomes and implications. Some of these arrangements are still being operationalised in terms of responsibilities.

Table G1.1 Summarised Cross-cutting Institutional Arrangements

BEPP Requirements	Institutional Arrangements / Responsible	Implications / Outcomes
<ul style="list-style-type: none"> Spatial Planning Project Prioritisation 	<ul style="list-style-type: none"> IDP process City Planning Dept. Infrastructure Services Depts. Human Settlements Dept. Real Estate Dept. Economic Development Department 	<ul style="list-style-type: none"> IDP Municipal Spatial Development Framework Regional Spatial Development Frameworks USDG, HSDG, PTNG and other Business Plans
<ul style="list-style-type: none"> Spatial Targeting Integration Zone Prioritization 	<ul style="list-style-type: none"> IDP process Infrastructure Strategic Task Team City Planning Economic Development 	<ul style="list-style-type: none"> IDP Urban Network Strategy Policy on prioritisation of Integration Zones
<ul style="list-style-type: none"> Urban Management Precinct Planning Models 	<ul style="list-style-type: none"> City Managers' Office Cities Support Programme City Planning Finance Community Services 	<ul style="list-style-type: none"> Urban Network Strategy Special Rating Zones Precinct Plans Precinct Models
<ul style="list-style-type: none"> Project Preparation for key catalytic urban development projects 	<ul style="list-style-type: none"> City Managers' Office Strategy Department EPMO Economic Development 	<ul style="list-style-type: none"> MoU to facilitate project preparation



<ul style="list-style-type: none"> • Intergovernmental Planning and Sector Alignment • Achieving interactive joint planning and budgeting in terms of alignment planning and delivery of Municipal, Provincial and National infrastructure 	<ul style="list-style-type: none"> • Intergovernmental Forums • Integration Zone Task Team • City Managers' Office • Cities Support Programme 	<ul style="list-style-type: none"> • IDP and Budget • Intergovernmental Strategy towards Project Implementation • Intergovernmental Pipeline of Projects
<ul style="list-style-type: none"> • Capital Funding • Long term financing and strategy for spatial transformation 	<ul style="list-style-type: none"> • Finance Department • Capital Investment Framework Operational Task Team • City Managers' Office • Asset Management 	<ul style="list-style-type: none"> • Investment Strategy • Capital investment Framework • Long Term Financial Strategy • Asset Management Plans
<ul style="list-style-type: none"> • Implementation of capital projects • Procurement Approach • Risk Mitigation Implementation Arrangements 	<ul style="list-style-type: none"> • EPMO • Supply Chain Management • City Managers' Office • Risk Management Office • Performance Management 	<ul style="list-style-type: none"> • Procurement Plans for capital projects • Monthly project monitoring and management • Implementation strategies • Public Private Partnerships
<ul style="list-style-type: none"> • Cross cutting institutional Arrangements 	<ul style="list-style-type: none"> • Detailed above • City Planning 	<ul style="list-style-type: none"> • Integration of BEPP into IDP
<ul style="list-style-type: none"> • Reporting and Evaluation • BEPP Indicators 	<ul style="list-style-type: none"> • City Planning • EPMO • Performance Management Department 	<ul style="list-style-type: none"> • BEPP indicators • Progression Evaluation Instrument

Budget related external institutional arrangements impacting the Metro

The National budget process is led by a number of political structures, which report to Cabinet for final approval of all budget decisions. Cabinet exercises oversight over the budget and its related processes to ensure that key government priorities are achieved. Cabinet reviews the proposed allocation of national resources and provides final approval for them to be tabled in the Budget. The political structures involved in the budget process include:

Ministers' Committee on the Budget (MINCOMBUD): The Minister's Committee on the Budget is constituted as a Cabinet Committee. Its mandate includes consideration of budget allocations to be included in the national budget, the MTEF and the Division of



Revenue Framework. It also considers issues related to the determination of expenditure allocations, including the economic assumptions underpinning the budget, fiscal policy objectives and tax proposals. The MINCOMBUD is convened and chaired by the Minister of Finance. Its members are appointed by the President on recommendation from the Minister of Finance.

Budget Council: The Intergovernmental Fiscal Relations Act (97 of 1997) establishes a Budget Council consisting of the Minister of Finance (who is chairperson) and the Members of Executive Council (MEC) for Finance of each province. The Budget Council is the statutory body where national and provincial governments consult on any fiscal, budgetary or financial matter affecting the provincial sphere of government. Any proposed legislation or policy which has a financial implication for the provinces are also discussed in the Budget Council, as is any other matter concerning the financial management, and the monitoring of the finances of provinces.

Joint MINMEC: A Joint MINMEC is comprised of the Minister of Finance, Members of Executive Council of Finance from nine provinces, head of departments of provincial treasuries, representatives from departments within a particular sector, and senior officials from National Treasury. Joint MINMEC will consider recommendations from the Function 10x10 relating to the resourcing of relevant policy outcomes and make proposals to MINCOMBUD.

Local Government Budget Forum: The Intergovernmental Fiscal Relations Act (97 of 1997) establishes a Local Government Budget Forum comprising of the Minister of Finance (who is the chairperson), the MEC for Finance of each province and five representatives of South African Local Government Association (SALGA) at National level, as well as one representative of SALGA from each province. The Act defines the Budget Forum as a body in which the national government, the provincial governments and organised local government consult on any fiscal, budgetary or financial matter affecting the local sphere of Government.

G2. CONSOLIDATED OPERATING BUDGET

Overview

The built environment performance planning process places an emphasis on Integration Zones forming the core prioritised areas that link to the primary township hubs, key informal settlements, marginalised areas and then to strategic areas of current and future employment or economic nodes. These spatially targeted areas should form the focus areas for intergovernmental planning, co-ordination and investment, resulting in a significant amount of public funds being well planned, co-ordinated and allocated in these areas. At the same time, operating expenditure on items such as infrastructure repairs and maintenance, salaries, depreciation and other operating costs needs to be budgeted for.

At present, the Metro's Operating Expenditure Budget is mainly informed by the following:



- The asset renewal and the repairs and maintenance requirements as identified in backlog studies
- Balanced budget constraint (operating expenditure should not exceed operating revenue) unless there are existing, uncommitted, cash-backed reserves to fund any deficit
- Funding of the budget over the medium-term, as informed by Section 18 and 19 of the MFMA
- The capital programme is aligned to the asset renewal needs and backlog eradication goals
- The prioritisation of capital needs is based on the Capital Investment Framework
- Operational gains and efficiencies will be directed to funding the Capital Budget and other core services
- Strict adherence to the principle of 'no project plans, no budget'. If there is no business plan no funding allocation can be made
- Applying the guidance from National Treasury of doing more for less.

Other aspects informing the Metro's current approach to the Operating Budget include:

- Repairs and maintenance comprise of items such as the purchase of materials for maintenance, staff cost of dedicated maintenance personnel and the appointment of external contractors to perform maintenance works. In line with the metro's repairs and maintenance plan this group of expenditure has been prioritised to ensure sustainability of the metro's infrastructure.
- The capital programme is aligned to asset renewal needs and backlog eradication goals and approximately 45% of the total capital amount is utilised for asset renewals. Projects already approved and already commenced with that have to be completed during the current financial period were allocated funding as per the approved MTREF.
- Projects previously approved in the previous financial periods but not yet planned nor commenced with, were subjected to departmental project prioritisation taking changed priorities and service delivery pressures into account.

Operating Budget and Expenditure related to Built Environment Performance Plan projects

As the requirements of BEPP spatial planning and targeting and the corresponding infrastructure and project requirements is a fairly recent development formulated by Government, the main emphasis within the Metro to date has been on capital budgets and capital expenditure in order to plan, set up and construct the various catalytic, Integration Zone and spatial targeting projects and infrastructure within the Metro as informed by the BEPP and to get them ready for implementation. Therefore, up to now, the Operating Budget of the Metro has not had large amounts of operating expenditure budgeted in relation to most of the BEPP projects. As noted, most of the expenditure and budgeting to date for these projects is capital related.

Going forward, as these projects are implemented and become operationalised, the new facilities to be created for Urban Management and BEPP component city implementation structures such as Precinct Management Structures will have some of the greatest impact on the Metro's future Operating Budgets as a result of the increased human resource, repairs and



maintenance, depreciation and other applicable costs associated with the facilities. Therefore, in upcoming BEPP submissions, a lot more detail will be applicable and presented with regards to this aspect of the Metro's budgeting and expenditure process and outcomes. An example in this regard is a catalytic project such as the IRPTN, which is being implemented in phases and whose capital budget and expenditure is in the hundreds of millions of Rand. Once a specific phase is completed, it needs to be operationalised through appointment of staff and systems to administer and manage the various structures set up to collect tariffs, manning of bus terminals, ensure security, monitor passenger volumes, train staff working in the structures and facilities set up, etc . As only Phase1A has been completed and is operational at present, the project does not have as material an impact on the Operating Budget as it will in future.

The sustainability of the BEPP component and Urban Management facilities being created and planned for future is also of critical importance. The Metro is looking carefully so as to ensure that future tariffs are not unaffordable to the Metro's communities, whilst at the same time ensuring these facilities are self-sustainable through sufficient revenue generated by them to cover their operating expenditure as much as practically possible once implementation begins.

Despite the above, the Metro does estimate and has a very good idea of its future expected Operating Expenditure on key projects. Please refer to Table F3.1 for details of the Metro's future anticipated Operating Expenditure in this regard.

The Metro's current Consolidated Operating Budget is shown below, and should be viewed in the context of the above remarks.



Table G2.1 Operating Expenditure Budget per Service

Functional Classification Description R thousand	2017/18 Medium Term Revenue & Expenditure Framework		
	Budget Year 2017/18	Budget Year +1 2018/19	Budget Year +2 2019/20
Expenditure - Functional			
Governance and administration	3 704 919	4 262 547	4 808 879
Executive and council	886 327	942 853	1 002 325
Finance and administration	2 394 896	2 870 853	3 331 616
Internal audit	423 695	448 841	474 937
Community and public safety	3 951 306	4 174 102	4 472 187
Community and social services	848 523	907 343	969 536
Sport and recreation	893 821	956 886	1 022 409
Public safety	54 849	59 182	63 841
Housing	712 189	701 335	758 121
Health	1 441 924	1 549 355	1 658 279
Economic and environmental services	4 248 275	4 484 722	4 783 268
Planning and development	588 913	580 306	618 360
Road transport	3 561 807	3 800 221	4 053 649
Environmental protection	97 555	104 194	111 258
Trading services	22 879 370	24 894 303	27 030 141
Energy sources	14 295 434	15 639 408	17 072 074
Water management	6 325 412	6 812 572	7 342 977
Waste water management	519 790	560 981	605 415
Waste management	1 738 734	1 881 342	2 009 674
Other	237 743	254 228	271 619
Total Expenditure - Functional	35 021 613	38 069 902	41 366 093

Table G2.2 Operating Expenditure Budget per Department

Vote Description R thousand	Current Year 2016/17			2017/18 Medium Term Revenue & Expenditure Framework		
	Original Budget	Adjusted Budget	Full Year Forecast	Budget Year 2017/18	Budget Year +1 2018/19	Budget Year +2 2019/20
Expenditure by Vote to be appropriated						
Vote 1 - Executive and Council	431 579	457 639	440 748	528 324	561 543	596 466
Vote 2 - Finance and Corporate Services	2 757 653	2 700 292	2 625 256	3 199 174	3 725 069	4 238 042
Vote 3 - Energy	13 423 497	13 395 756	13 368 300	14 265 233	15 607 141	17 037 634
Vote 4 - Water and Sanitation	6 352 528	6 359 010	6 199 108	6 825 054	7 351 972	7 925 287
Vote 5 - Waste Management	1 618 389	1 613 375	1 591 441	1 738 734	1 881 342	2 009 674
Vote 6 - Human Settlements	684 257	698 186	686 725	712 201	701 347	758 134
Vote 7 - City Planning	264 947	269 925	264 703	318 755	341 019	364 587
Vote 8 - Economic Development	301 296	369 913	362 746	273 734	243 209	258 070
Vote 9 - Disaster and Emergency Management Services	798 160	808 313	791 130	873 091	933 903	998 171
Vote 10 - Sports, Recreation, Arts & Culture (SRA)	625 671	608 590	598 093	684 793	731 907	780 386
Vote 11 - Health and Social Development	881 501	911 908	891 735	1 017 671	1 095 631	1 173 471
Vote 12 - Environmental Resource Management	727 625	700 952	687 485	790 542	846 959	906 852
Vote 13 - Ekurhuleni Metropolitan Police Department	1 370 515	1 369 192	1 341 034	1 502 371	1 603 073	1 709 018
Vote 14 - Transport Planning & Provisioning	612 283	525 021	484 604	603 433	642 007	682 739
Vote 15 - Roads and Stormwater	1 528 295	1 570 106	1 562 971	1 688 502	1 803 779	1 927 561
Total Expenditure by Vote	32 378 197	32 358 177	31 896 079	35 021 613	38 069 902	41 366 093

From the above two tables it can be seen that over the 2017/18 – 2019/20 MTREF period the Metro's total Budgeted Operating Expenditure is R 114 457 607. Of this,



operating expenditure budgeted on Energy sources is the most, at R 46 190 008 or 40.4% of the total operating budget. Energy, Water and Sanitation and Waste Management together comprise R 86 028 347 or 75.2% of the total operating budget expenditure over the MTREF.

Table G2.3 Operating Expenditure Budget per Expense type

Description	Current Year 2016/17		2017/18 Medium Term Revenue & Expenditure Framework		
	Original Budget	Adjusted Budget	Budget Year 2017/18	Budget Year +1 2018/19	Budget Year +2 2019/20
R thousand					
Expenditure By Type					
Employee related costs	6 515 448	6 244 842	6 980 917	7 389 616	7 861 306
Remuneration of councillors	126 553	126 553	129 169	138 082	147 471
Debt impairment	1 468 871	1 468 871	1 583 845	1 694 714	1 813 344
Depreciation & asset impairment	1 805 346	1 805 346	2 088 279	2 415 453	2 766 226
Finance charges	662 383	663 333	753 661	986 116	1 125 824
Bulk purchases	12 489 022	12 488 950	13 307 785	14 565 012	15 942 078
Other materials	2 934 165	2 975 641	3 391 572	3 652 057	4 014 262
Contracted services	1 074 371	1 132 380	1 349 885	1 422 754	1 503 534
Transfers and subsidies	1 941 318	2 125 735	2 216 689	2 384 903	2 565 728
Other expenditure	3 345 719	3 326 524	3 219 811	3 421 195	3 626 320
Loss on disposal of PPE	15 000	–	–	–	–
Total Expenditure	32 378 197	32 358 177	35 021 613	38 069 902	41 366 093

Table G2.3 shows that depreciation and asset impairment amount to R 7 269 958 or 6.4% of the Operating Budget over the MTREF. Employee costs comprise 19.4% and bulk purchases 38.3%.

Table G2.4 shows the Metro's current and future budgeted depreciation and repairs and maintenance on its assets, with repairs and maintenance on Electrical infrastructure constituting the largest amount, followed by Roads infrastructure and then Water supply infrastructure.



Table G2.4 Depreciation & Repairs and Maintenance

Description	Current Year 2016/17		2017/18 Medium Term Revenue & Expenditure Framework		
	Original Budget	Adjusted Budget	Budget Year 2017/18	Budget Year +1 2018/19	Budget Year +2 2019/20
R thousand					
Depreciation	1 805 346	1 805 346	2 088 279	2 415 453	2 766 226
Repairs and Maintenance by Asset Class	2 934 165	2 975 641	3 391 572	3 652 058	4 014 262
<i>Roads Infrastructure</i>	593 533	646 628	706 788	777 467	855 214
<i>Storm water Infrastructure</i>	–	–	–	–	–
<i>Electrical Infrastructure</i>	948 415	918 480	1 025 661	1 128 227	1 241 050
<i>Water Supply Infrastructure</i>	398 543	401 087	431 515	474 666	522 133
<i>Sanitation Infrastructure</i>	161 305	160 654	168 905	185 795	204 374
<i>Solid Waste Infrastructure</i>	61 142	61 142	55 035	60 539	66 593
<i>Rail Infrastructure</i>	–	–	–	–	–
<i>Coastal Infrastructure</i>	–	–	–	–	–
<i>Information and Communication Infrastructure</i>	–	–	–	–	–
Infrastructure	2 162 937	2 187 990	2 387 904	2 626 694	2 889 364
Community Facilities	108 038	94 241	132 317	145 549	160 104
Sport and Recreation Facilities	3 571	3 652	3 496	3 846	4 230
Community Assets	111 609	97 892	135 813	149 395	164 334
Heritage Assets	252 238	283 115	385 850	347 772	382 000
Revenue Generating	–	–	–	–	–
Non-revenue Generating	31 942	31 942	34 178	37 596	41 355
Investment properties	31 942	31 942	34 178	37 596	41 355
Operational Buildings	–	–	–	–	–
Housing	25 374	30 357	59 110	63 461	67 807
Other Assets	25 374	30 357	59 110	63 461	67 807
Biological or Cultivated Assets	–	–	–	–	–
Servitudes	–	–	–	–	–
Licences and Rights	–	–	–	–	–
Intangible Assets	–	–	–	–	–
Computer Equipment	108 200	108 200	142 229	156 452	172 097
Furniture and Office Equipment	27 263	28 780	30 201	33 182	36 493
Machinery and Equipment	–	–	–	–	–
Transport Assets	214 602	207 364	216 286	237 506	260 812



SECTION H

H. REPORTING AND EVALUATION

H1. REPORTING AND EVALUATION

Consolidation of Individual BEPP sections into a Theory of Change

Background and Context

One of the fundamental goals of the Built Environment Performance Plan is to catalyse spatial transformation through a spatial targeting approach at a sub-metropolitan level, with specific focus on identifying, planning for, and accelerating the implementation of a pipeline of catalytic urban development projects within the integration zones. The built environment outcomes and impacts, and the related indicators to measure spatial transformation are also a critical aspect of this process. Several important steps, following in a logical sequence, have been required in order to bring about the about the above spatial transformation objectives. These steps have had the effect, and indeed are having the effect of reversing apartheid spatial planning and bringing about real positive change in the metros and its inhabitants.

Included in the progressive sequence of bringing about the above changes has required a number of important focus areas and strategic imperatives, namely the formulation of spatial targeting goals and objectives, the identification and planning of Urban Networks and Integration Zones, the refinement and consolidation of the planning of Urban Networks and Integration Zones, and the identification, planning and implementation of a pipeline of catalytic urban development projects within the Integration Zones, as well as special focus on the upgrading and development of informal settlements and other marginalised areas. The information in this BEPP document above reflects the effect of the Ekurhuleni Metros' progress in this regard to date.

The spatial planning methodology adopted by the BEPP is based on integrated, transit oriented development as detailed in the Urban Network Strategy. Critical concepts in this regard are outcomes-led planning, the Built Environment Value Chain, prioritisation and preparation, and progression.

Measuring Change

The ultimate success of any Theory of Change lies in its ability to demonstrate progress on the achievement of outcomes. These outcomes must therefore be coupled with indicators that guide and



facilitate measurement. The indicators have the effect of operationalising the outcomes and make the outcomes understandable in observable and measurable terms.

The BEPP planning process is outcomes-led, in that it responds to agreed indicators of and targets for improved built environment performance. This performance is being assessed through reporting and evaluation of urban transformation outcome and impact indicators (see following section for further details regarding Reporting and Evaluation).

An integral component of the BEPP is the Built Environment Value Chain (BEVC); more specifically, the BEPP is the plan and process that is informed by the Built Environment Value Chain. It is an intergovernmental process or set of activities aimed at achieving the built environment objective in cities. The BEVC activities are linked together in a logical sequence, and form part of a cyclical process rather than a linear process. The above requires a behavioural change at the institutional level within the metros because committing to how cities measure results is intrinsic to the planning approach.

The result of the planning approach is the identification and planning of Integration Zones that include an intergovernmental project pipeline containing catalytic Metro, Provincial, National and State-Owned Companies urban development projects with three specific targeted spaces: Integration Zones, marginalised areas such as informal settlements, townships and inner city areas, and growth nodes (commercial and industrial nodes). This planning approach strongly influences the allocation of capital funding (as can be seen from the preceding sections of this BEPP), result in service delivery implementation, which then requires urban management to protect and sustain public and private investment.

Benefits

- The successful implementation of BEPPs relies on effective institutional arrangements and budgeting for ongoing operational expenditures. Moreover, sustained implementation and urban management should result in services delivery and spatial transformation that positively contributes to inclusive economic growth and the reduction of poverty and inequality over the long term;
- Prioritisation of Integration Zones, informal settlements, marginalised areas and areas for growth relative to other areas within the metro, and the resultant intergovernmental project pipeline will collectively support the achievement of targets associated with building more productive, inclusive and sustainable cities.

Evaluation and Monitoring

An important task for monitoring and evaluation is to gather enough knowledge and understanding so as to be able to fairly predict how an initiative and set of activities might work in a different situation, or



how it needs to be adjusted to get similar or better results. Evidence from a number of studies also needs to be combined in order to build a stronger picture of what is taking place, how it is unfolding, and how context influences the initiative.

In future a progression model, as recommended by the Cities Support Programme, is planned for implementation by the Ekurhuleni metro. The aim of the progression model will be to monitor the maturity and ongoing development of the metro and to enable the metro, as a city, to progress in terms of its capacities and skills. It is envisaged that the model will also encourage clear accountability for the ongoing strengthening of the BEPP process and outputs over time.

Current status and future objectives

The EMM is striving towards implementation of all the above and incorporating it into its operations and strategic actions. Urban Management is not fully implemented yet as the structures are still being developed and put in place. The Progression Model is to be implemented in future.

H2. INDICATORS - REPORTING ON THE ACTUALS FROM THE PREVIOUS BEPP

As was highlighted above, the ultimate success of any Theory of Change lies in its ability to demonstrate progress on the achievement of outcomes. Reporting, evaluation and monitoring of the outcomes, coupled with relevant indicators that guide and facilitate measurement is therefore of fundamental importance - the indicators have the effect of operationalising the outcomes and making them understandable in observable and measurable terms. This in turn enables the Metro to quantify the progress it has made regarding its built environment objectives and performance in relation thereto and to help take required corrective action where and when necessary.

The Performance Indicators Matrix at the end of this document in the Annexures contains output indicators in the current prescribed reporting format. Where possible, the Metro has provided answers for the various indicators. It should be noted that due to capacity constraints the Metro is still in the process of collecting and collating some of the data and is also developing its baselines and targets in this round of the BEPPs. The attached **Annexure 1** gives the Performance Indicators for the current actual and comparative year actuals and achievements. These indicators reflect the Metro's performance and current status regarding important aspects such as financial health, infrastructure finance, leadership and governance, inclusiveness, mobility, growth, productivity, environmental sustainability etc. in the context of the Built Environment.

Following is a brief summary of the following indicators: IC2 / IC3 / IC7 / WG13



» IC2

Gross residential unit density per hectare within integration zones:

Table H2.1: Indicator IC2

Integration Zone	Gross residential unit density per hectare within integration zones
IZ 1	96 154 : 3 878
IZ 2	34 975 : 4 736
IZ 3	72 641 : 5 209
IZ 4	32 522 : 4 544
IZ 5	67 903 : 5 662
Grand Total	304 194 : 24 028

» IC3

Ratio of housing types in integration zones:

Table H2.2: Indicator IC3

Integration Zone	Number of Formal Households in Integration zones	Number of Traditional Households in Integration zones	Number of Informal Households in Integration zones	Number of Other Households in Integration zones
IZ 1	39,752	3,943	52,430	30
IZ 2	18,449	2,244	14,244	38
IZ 3	34,451	6,486	31,691	12
IZ 4	18,551	1,946	11,932	93
IZ 5	32,924	2,889	32,060	30
Grand Total	144,126	17,508	142,357	203

The above table translates into the summary table below.

Table H2.3: Indicator IC3 Summary

Integration Zone	Ratio of Housing Types in Integration zones
IZ 1	39 752 : 3 943 : 52 430 : 30
IZ 2	18 449 : 2 244 : 14 244 : 38
IZ 3	34 451 : 6 486 : 31 691 : 12
IZ 4	18 551 : 1 946 : 11 932 : 93
IZ 5	32 924 : 2 889 : 32 060 : 30
Grand Total	144 126 : 17 508 : 142 354 : 203



» IC7

Number of all dwelling units within Integration Zones that are within 800 metres of access points to the integrated public transport system as a percentage of all dwelling units within Integration Zones:

Table H2.4: Indicator IC7

Integration Zone	Number of households within 500m from the integrated public transport system	Number of units	Number of households within 500m from the integrated public transport system (%)
IZ 1	40,915	96,154	43%
IZ 2	26,736	34,975	76%
IZ 3	36,345	72,641	50%
IZ 4	13,345	32,522	41%
IZ 5	19,287	67,903	28%
Grand Total	136,627	304,194	45%

» WG13

The budgeted amount of municipal capital expenditure for catalytic projects contained in BEPP, as a percentage of the municipal capital budget:

Table H2.5: Indicator WG13

Integration Zone	Value of properties owned in Year 1	Value of properties owned in Year 3	% change in the value of properties
IZ 1	R 546,045.34		
IZ 2	R 556,790.28		
IZ 3	R 585,127.26		
IZ 4	R 495,796.14		
IZ 5	R 356,184.92		
Grand Total	R 503,749.06		

**Baseline information captured (Year 1), % change can only be calculated when year 3 information is captured.*

