

### 3. REGIONAL SPATIAL DEVELOPMENT FRAMEWORK

#### 3.1 INTRODUCTION

Spatial Development Framework (SDF) is one of the main tools which is utilized by Government and Local Government to ensure the eventual realization of the spatial vision and spatial objectives of the Growth and Development Strategy and the Integrated Development Plan of the municipality. Reference must be made to capital investment programmes, Government and Local Government's spending on infrastructure, public works, community facilities, housing and the like. The location of these public projects should obviously strengthen and support the spatial philosophy, principles and vision as set out in the Spatial Development Framework.

The Spatial Development Framework (SDF) is a key legislative mechanism to address the numerous developmental challenges of the District. A number of these challenges considered and interpreted by the SDF include:

- Integrating the urban spatial form created under apartheid to separate townships from economic areas;
- Addressing the services backlogs for the poorest of the poor and the market-related residential development property boom;
- Providing an effective and affordable district-wide public transportation network that takes into account the reliance of the low-income communities on public transport (at a greater relative monthly cost) and conversely, the dependence of middle income communities on private modes;
- Balancing and facilitating market and public sector development in an effective and co-ordinated manner; optimising the use of existing resources;
- Determining and communicating reasonable and effective development policies and strategies;
- Investing in infrastructure in a cost-effective and proactive fashion whilst ensuring that historical backlogs are addressed; and

Within these challenges, the GDS development paradigms also raise spatial questions; how do we proactively absorb the poor and restructure settlements whilst balancing growth? How do we facilitate social mobility and ensure environmental justice.

#### 3.2 LEGISLATIVE COMPLIANCE

In terms of Chapter 5 of the Municipal Systems Act each local authority in South Africa is required to compile in Integrated Development Plan for its area of jurisdiction and Section 26 of the Municipal Systems Act it is furthermore stated that the SDF forms core components of an Integrated Development Plan. Other legislative frameworks that will be taken into account are:

- The Municipal Systems Act 32 of 2000
- Government Gazette No. 22605 dated 24 August 2001
- The Gauteng Planning and Development Act 3 of 2003
- Development facilitation Act 67 of 1995
- Gauteng Urban Edge Delineation Policy of 2007

**3.3 SDF COMPONENTS**

In addressing these questions and other challenges the SDF provides a policy directive for the spatial development of the District in a manner that will expand opportunities and contribute towards the tangible upliftment of all communities in the District.

Conceptually, the SDF includes:

- District wide Spatial Plan comprising development principles, strategies and guidelines indicating spatial responses to these challenges;
- Local interpretation of the District-wide Spatial Plan – the Municipal Spatial Development Frameworks (MSDF) and Precinct Plans;
- Supporting spatial/non-spatial instruments – incentives/disincentives packages e.g. Urban Development Zone, Special Development Zones.

**3.3.1 PRINCIPLES AND OUTCOMES**

Principles	Outcomes
Sustainability	<ul style="list-style-type: none"> <li>■ Responsible use of the District’s natural resource</li> <li>■ Safe and secure urban environments through safety and design principles</li> <li>■ Protection and conservation of the District’s cultural heritage</li> <li>■ Sustainable economic growth and job creation</li> </ul>
Efficiency	<ul style="list-style-type: none"> <li>■ An efficient and robust urban form and structure</li> <li>■ Managed growth facilitated within the constraints of infrastructure provision</li> <li>■ Major open space systems that are Interconnected</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>■ Facilitating physical access to opportunities for all communities and citizens</li> <li>■ Diversity of opportunities – economic, social and institutional afforded by the District</li> <li>■ All modes of transport supporting good access to opportunities</li> </ul>

The re-structuring and re-engineering of the existing urban form and function of the whole District without defined direction and intervention will take generations to accelerate the delivery of developments that support the SDF’s principles of Sustainability, Accessibility and Efficiency, medium- to long-term objectives and strategies have been supplemented by specific instruments that are used on a daily basis to address recurring development issues and assess the appropriateness of a development proposal or initiative.

**3.4 DISTRICT-WIDE INTEGRATED OBJECTIVES**

The spatial objectives and the spatial development principles need to be promoted. In the current IDP, the seven main spatial objectives have been formalized for the district as follows:

- A **continuous and sustainable open space network** has been created throughout Sedibeng District, utilizing the natural features within the area, such as the ridges, rivers, nature reserves, etc. The

two major elements within this system will be the greater Suikerbosrand area, as well as the Vaal river area.

- A **system of functionally defined activity nodes** has been promoted within the district. The main activity node will be Vereeniging/Vanderbijlpark, while two secondary nodes already exist, namely, Meyerton in Midvaal and Heidelberg/Ratanda in Lesedi. In addition to these nodes a number of rural service nodes should be promoted throughout the district.
- **Linkages** between the identified nodes in the district have been **optimized**, as well as linkages between the disadvantaged communities and the main employment centres. In this regard a number of main road linkages have been identified, including Routes R29, R42, R59, R82, R54 and R553. Mixed-use high-density development should be promoted along the routes. The current commuter rail linkages still needs to be promoted as the main public transport system within the district.
- **An urban development boundary/ urban edge** has been demarcated and enforced in order to strengthen the existing urban areas and nodes, to contain urban sprawl, to promote more compact urban development and to protect the agricultural and ecological potential of the rural hinterland within the district. Future urban development should consist primarily of infill and densification within the current urban edge.
- The **existing major development opportunities** in the district should be **maximized through tourism development opportunities** around the Suikerbosrand and along the Vaalriver, and economic development opportunities along Provincial Routes R59. The area abutting Route R59 is seen as a major future economic development corridor.
- **Corridors** should be enhanced by promoting **High-density development** along main public transport links.
- Upgrading of services should be focused primarily on previously disadvantaged township areas.

### 3.5 PACKAGE OF SDFS

The SDF report will be structured in a hierarchical manner to provide plans that will guide the municipality with guidance for development and land use control. The plans will be the following:

- The District Spatial Development Framework, which should be regarded as a strategic tool, providing broad spatial direction and context to development in the district as a whole.
- Local Municipality Spatial Development Frameworks, which are detailed plans and aligned with the district SDF and which will contain the local spatial objectives and strategy.
- Precinct Development Plans, which are development policies/land use plans for specific areas within local municipality, and are refinements of the SDF proposals and policies. A number of areas within the local municipalities, which are subject to development pressure and are of strategic importance, requiring detail planning.

### 3.6 EXISTING LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORKS

The Gauteng Spatial Development Framework identifies the Johannesburg/Pretoria axis as the main development focus in Gauteng. Sedibeng District is regarded as somewhat of a rural hinterland in this plan. The Sedibeng SDF proposals that show that the majority proposed land use in the district would be rural.

The plan provides for some future urban development between Vereeniging/Vanderbijlpark and Sebokeng/Evaton, and along the R59 as well as in Heidelberg (Zone of Opportunity).

It is significant to note that there are currently no Blue IQ or other high profile projects situated within Sedibeng District, except the 20 Prioritized Township Projects (20PTP) funded by the Gauteng Department of Public Transport, Roads and Works (GDPTRW), the Precinct Development under the Neighbourhood Development Partnership Grant (NDPG) funded by the National Treasury Department.

All three local municipalities in the district have prepared spatial development frameworks as part of their IDP's are briefly discussed hereunder:

#### ■ Emfuleni

The Emfuleni SDF is a detailed plan, indicating a variety of future proposed land uses, as well as development corridors, activity nodes and rural service centres.

#### ■ Midvaal

The Midvaal SDF indicates other areas of strategic development where the plan is mainly focusing on future development along the R59 corridor, minor adjustments to the Gauteng urban edge, to include Henley-on-Klip, Vaal Marina/Mamello, De Deur and Walkerville are proposed.

#### ■ Lesedi

The Lesedi SDF makes broad proposal relating to strategic development areas. It is proposed that future urban development will be concentrated mainly in Heidelberg/Ratanda and in Devon/Impumelelo, while the rest of the area will retain its rural character. The area next to the N17 has been identified as a "Zone of Opportunity", pertaining to future local economic development of rural nature. Certain adjustments to the current urban edge as demarcated by province are proposed, to include Jameson Park/Kaydale, Devon/Impumelelo, and a small area abutting Jordaan Park on the west and the R42 on the north.

### 3.7 MAIN DEVELOPMENT ISSUES

Emanating from the situational analysis, the identified main development issues in Sedibeng District can be summarized as follows:

### ■ Provincial Periphery

Sedibeng is situated on the southern periphery of Gauteng Province, away from the hub of economic activity, which is situated in the Johannesburg/Pretoria area. Because of its location, the district will find it difficult to compete with more centrally situated areas for new investment, which will hamper the economic growth rate. Development policy for the district should concentrate on maintaining and strengthening the existing linkages between the district and the economic hub to the north.

### ■ Rural Nature of the area

Sedibeng District can be categorized as a largely rural area, with low population densities, which has serious implications in terms of cost effective service delivery. The towns in the district are far apart and lack a common identity. Due to the long distance and low population densities, infrastructural and social service provision to the rural communities is very expensive, and innovative ways to provide basic services to these communities must be sought. The bulk of municipal service provision will be concentrated in the urban areas.

### ■ Good urban services Infrastructure

The existing services infrastructure in the urban areas of the district is reasonably good, and has spare capacity to accommodate further urban development. Services backlogs are experienced in certain areas, while services upgrading is also required in certain areas, notably the previous disadvantaged township areas.

Future urban development should be concentrated in those infill/densification areas where spare bulk services capacity is already available.

### ■ Economic Stagnation

Economic growth in the district during the last few decades has failed to keep pace with population growth, and this has resulted in a general decrease in the standard of living. The spatial manifestation of the growing poverty in the area will include general urban decay, growth in informal settlements, decreasing service levels, increased informal economic activity, etc.

The local economy is overly dependent on the heavy industrial sector [Sasol, Arcelor Mittal, Samancor, etc.] and economic diversification is urgently required. Economic sectors that show potential for future growth include tourism and agriculture, and investment into these sectors should be actively promoted. The economic growth rate of the three municipal areas has a high degree of correlation while that of Midvaal and Emfuleni show similar growth rates.

Economic growth for Lesedi has been the highest of all the municipal areas in the district and showed high growth between 2003/2004 to 2006/2007. Economic growth in Emfuleni is vulnerable to fluctuations in the Manufacturing sector due to the high dominance of this sector in the local economy. Since 2002/2003 the local economy gradually started to show signs of improvement while positive growth was evident in 2005/2006.

### ■ Socio-Economic Disparities

There are huge socio-economic disparities between the different communities in the district, with high levels of poverty prevailing in the previously disadvantaged township areas. These disparities should be addressed as part of a holistic development strategy to be followed by the district and local municipalities.

Public investment initiatives should favour those projects that will result in upliftment of the previously disadvantaged communities and narrowing the gap between these communities and their more affluent neighbours.

### ■ Environmental Constraints and Opportunities

There are a number of major environmental constraints and opportunities in the district, which should be taken into account in the planning for future development in the area. Environmental constraints include the high levels of pollution, especially in the western parts of the study area, the visual unattractiveness of certain parts of the study area, adverse environmental conditions in the township areas, etc.

Environmental opportunities in the district include the existing nature reserves [Suikerbosrand and Alice Glockner], the various conservancies and watercourses through the study area, especially the Vaalriver and Vaal dam, the Suikerbosrand ridges, and the agricultural potential of the study area.

## 3.8 SPATIAL DEVELOPMENT PLAN

### 3.8.1 SPATIAL COMPOSITION AND MAJOR PRIMARY LAND USES

The District consists largely of agricultural open space with three primary residential areas located around the primary nodes of Sebokeng- Vanderbijlpark—Vereeniging, Meyerton and Heidelberg. Major commercial and industrial land uses are concentrated in Vanderbijlpark-Vereeniging area.

#### ■ Urban Residential Areas

Residential land uses include both formal and informal residential suburbs. The defined residential areas within Emfuleni include the areas of Evaton, Sebokeng, Bophelong, Boipatong, Tshepiso, and Sharpeville, which are all previously disadvantaged township areas, as well as the previous white suburbs of Vanderbijlpark and Vereeniging. A number of informal settlements occur in and around the previously disadvantaged township areas. The residential areas in Midvaal include Risiville, Meyerton and extensions and Henley-on-Klip, which are all situated along the eastern side of the R59 freeway. Some informal settlements occur along the western side of the R59 freeway in Midvaal. Residential development in Lesedi is confined to Heidelberg/Ratanda and Impumelelo/Devon.

Formal housing development in the previously disadvantaged township areas has in the past consisted almost entirely of mass housing projects driven by government with public funding, and it is not foreseen

that this trend will change in the foreseeable future. Due to the depressed local economy, private sector housing development has been slow during the last decade, consisting mostly of small housing schemes within or abutting the existing medium and high-income residential areas.

In view of the above it is submitted that the majority of new housing development in the study area over the short to medium term will be subsidy-linked housing schemes initiated with state funding – private sector housing development will play an insignificant role in respect of generating additional infrastructural and community services demands. The total area of residential development is  $\pm 13\,392$  ha., which makes up  $\pm 2,9\%$  of the total area in the district.

- **Rural Residential [Small Holdings]**

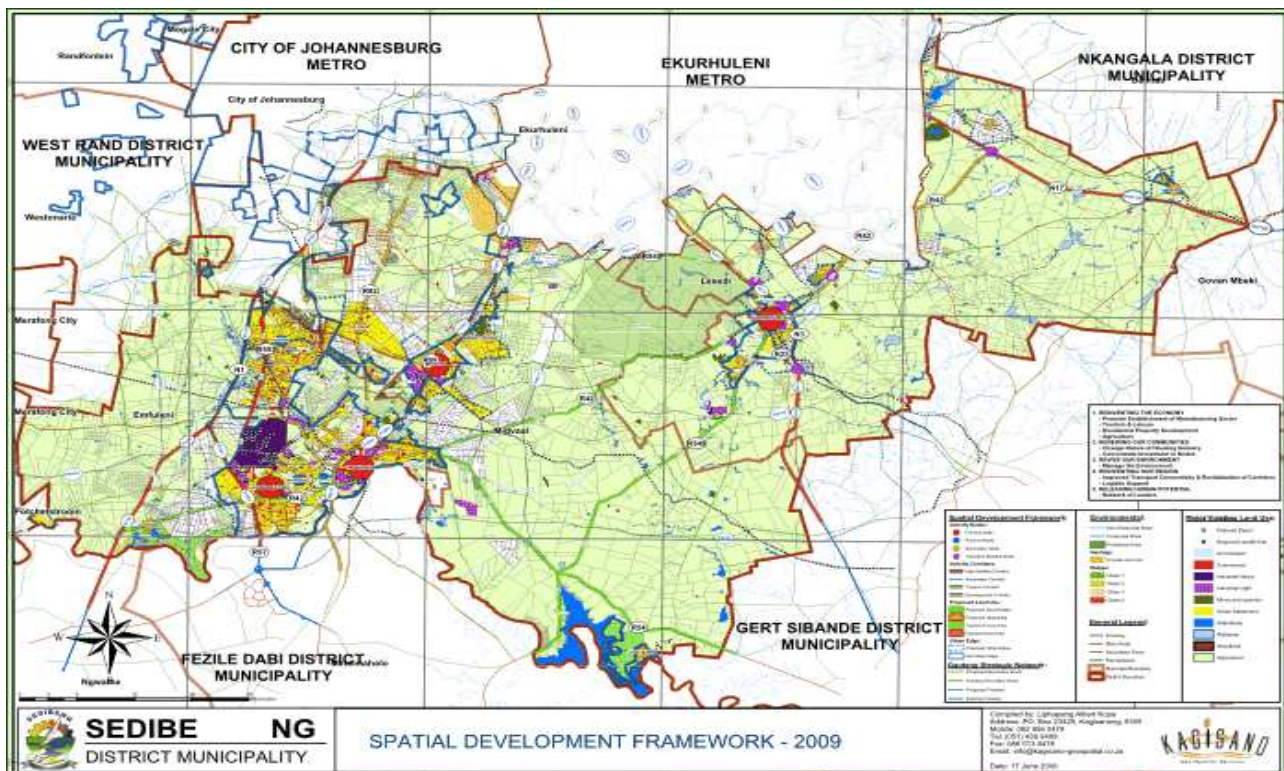
The rural settlement pattern in the district is characterized by a large number of small holdings/small farms settlements ranging from 1 – 5 ha properties located around the fringes of the urban areas, especially in the western part of the district, in Midvaal and Emfuleni. Agricultural holding areas in Lesedi are limited to the Vischkuil/Endicott area in the northern part abutting the N17 national road, and some settlements on the edges of Nigel northeast of Heidelberg/Ratanda.

Diverse land uses are found on the agricultural holdings, ranging from rural residential, through small scale farming to extensive, informal industrial and commercial activities. A relatively large proportion of the agricultural holdings is vacant. Rural residential areas make up  $\pm 4,0\%$  of the total area of the district [ $\pm 18\,582$  ha.].

- **Industrial/Commercial Development**

Industry in Sedibeng takes up a relatively large amount of land, which demonstrates the significance of industrial activities, especially in Emfuleni. These industrial activities are mainly around Vanderbijlpark and Vereeniging and relate to the steel and petrochemical industries. There is also a line of industrial activity along the R59 from Kliprivier to the Meydustralia area. The most important industry in this area is Samancor. Most of the industries in the Meyerton/Vereeniging/Vanderbijlpark area are heavy/noxious industries and thus potentially have a high environmental impact on the residential areas in the proximity.

The only other significant industrial activity in the district takes place in Heidelberg, consisting of the BAT cigarette manufacturing plant, the Eskort meat processing plant and some other lesser industrial concerns. Commercial activity [which can be defined as warehousing, distribution and transport businesses] is found interspersed with industries in all the major industrial areas. The total area taken up by industrial/commercial land uses in the district is  $\pm 3\,920$  ha. [0,8% of the total area].



- **Retail/ Business**

Retail/business is mostly concentrated in and around the existing CBD's of Vanderbijlpark, Vereeniging, Meyerton and Heidelberg, as well as some suburban shopping centres. This land use makes out only  $\pm 1\%$  of the total area of district. The CBD's of Vereeniging and Vanderbijlpark show significant signs of urban decay and are in need of urban renewal initiatives.

- **Commercial Agriculture**

Commercial agriculture takes up the largest area within the district and makes up  $\pm 33\%$  of the total land usage. Agricultural activity in the district is dominated by large-scale commercial farming operations [crop production including maize, grain, sorghum, wheat, soya and dry beans, ground nuts, sunflower seeds and vegetables, and animal production including milk, beef, mutton and lamb, eggs and poultry]. Sedibeng is a very important resource to Gauteng in terms of food production, and this fact should be taken into consideration in the spatial planning of the area.

The performance of the agricultural sector is very dependent on climatic conditions and may fluctuate from year to year. The agricultural sector does however present potential opportunities for downstream economic activities and job creation in terms of further processing of agricultural produce [e.g. Karan Beef, Eskort, all of which are going concerns within Lesedi].

- **Nature Reserves**

There are two proclaimed nature reserves in Sedibeng district, namely the Suikerbosrand Nature Reserve in Midvaal and the Alice Glockner Nature Reserve in Lesedi.



#### ■ The Suikerbosrand Nature Reserve

The Suikerbosrand Nature Reserve is situated on the north-eastern edge of Midvaal Local Municipality, in the Suikerbosrand hills. These hills contribute substantially to the natural beauty in and around the Sedibeng area. The nature reserve is well managed and the eco-system is fully protected in this area. The reserve has huge eco-tourism potential and is promoted as such. Economic activities within the reserve span a wide range of eco-tourism related activities, including game viewing, hiking, and mountain biking, hunting, and other types of outdoor activities.

The Suikerbosrand Reserve is under threat from urban sprawl. Low cost informal housing on the outskirts of the Katorus area has almost reached the northern boundary of the reserve and the situation is not well controlled. Communities residing in this area do not have infrastructural and other services and are impacting negatively on the local environment.

#### ■ The Alice Glockner Nature Reserve

The Alice Glockner Nature Reserve to the south of Heidelberg/Ratanda, in Lesedi Local Municipality, has been upgraded during the last year. The reserve is primarily known for the Heidelberg Copper Butterfly, which is a red data species. A number of other interesting flora and fauna and geological features can be found in the reserve, while red data plants are currently being investigated. The Alice Glockner Nature Reserve forms part of a larger area for conservation envisaged by GDACE, including linkages with the Suikerbosrand Nature Reserve and the military land to the northeast of Heidelberg.

### 3.8.2 Vacant land

The provincial eLand decision support system indicates that there is ±98000ha of developable vacant land situated in Sedibeng District. ±4900ha of this developable vacant land is situated within the urban edge as currently demarcated by Gauteng Province. A more detailed vacant land audit was undertaken within the urban edge as part of the SDF exercise, based on 2001 aerial photography augmented by physical site visits. In terms of this more detailed land audit, developable vacant land within the current provincially – demarcated urban edge amounts to ±6220 ha, of which 4544 ha [73%] is situated in Emfuleni, 1085 ha [17,5%] is situated in Midvaal and 591 ha [9,5%] is situated in Lesedi. Abovementioned figures indicate that there is enough vacant land within the current urban edge to accommodate substantial future urban development within the district.

### 3.8.3 CORRIDORS, NETWORKS, LINKAGES AND NODES

The approach that is required to support the development of the Sedibeng District Municipality needs to be well serviced by a well-established network of roads (North / South and East / West) and rail. The SDF will highlight networks of the three local municipalities and how they influence economic growth. The SDF has outlined the following objectives for corridor development within Sedibeng District Municipality:

- To determine the infrastructure needed to promote development within the corridors and nodes;

- To develop a plan to optimally capitalise on the development potential in each corridor and node;
- To promote the maximum yield in as far as job opportunities within the corridors and nodes are concerned;
- To retain and expand existing development opportunities and promote new investments;
- To determine catalytic interventions along the corridors and nodes to maximise economic development.

### EMFULENI LOCAL MUNICIPALITY

The Emfuleni Local Municipality is characterized by a number of strategically linked transportation corridors and potential development nodes (N1, R553, R57, R82, R28, R59 and the proposed K11, and R42), which need to be defined and structured to create economic opportunities. These corridors and nodes in further discussed in detail.

#### ■ Activity Nodes

Activity “nodes” are “point” developments and are most often located at intersecting or transfer points in the transfer system. They predominantly accommodate business activity combined with a high-density residential component. The identified areas are as follows:

##### (a) Sebokeng

The proposed node is situated coincidental to the hospital and taxi ranking facilities. For all intents and purposes, it shows all the characteristics of an activity node in the making. It currently comprises an agglomeration of various complementary land uses such as health, commercial, retail and light industrial activities. Further, it is located along the most important and busiest road in the area (Moshoeshoe Road), and is also close to an active rail line. If the node is to be developing as hoped, the current land use must be supplemented with formal retail and banking facilities.

##### (b) Evaton

This node is situated adjacent to the Golden Highway. Apart from providing retail and commercial facilities this node could also accommodate community facilities likes a post office, clinic and police station. The proximity of the node to the Golden highway and Moshoeshoe Roads suggest that a public transport facility would be particularly appropriate.

##### (c) Vacant land to the north of Tshepiso and Boipatong.

There is vacant land to the north of Tshepiso and Boipatong, and south of the R54. It is suitable for economic activity, which thrives on high levels of passing trade, easy access and high visual exposure. Employment and services provided by a node situated at this point will not only cater for the need of Sharpville, but will also serve the Steel Park area and its proposed extensions. The development of this activity node will probably form the best first step in the development of a development corridor along the R54.

**(d) Rust-ter-Vaal / Roshnee**

The development of an activity node on the R82 in close proximity to Roshnee and Rust-ter Vaal will serve the northern rural areas, the adjacent communities and the proposed developments.

**(e) General Hertzog / Vootrekker Street Intersection**

The development node is earmarked to the west of Mario Milan Road on both sides of railway line in the vicinity of General Hertzog road and at the Intersection of the R57 and R42 Roads (south eastern quadrant).

- **Activity Corridors**

Development corridors are urban phenomena and vary in scale. They feature a combination of transport services and supporting infrastructure in parallel and denser mixed land use integrated with the transport system, which includes land uses such as retail, residential, service industries, commercial, activities, social, agricultural related uses and recreation. The proposed development corridors are as follows:

**(a) Moshoeshoe Road,** Sebokeng Moshoeshoe Road has already been earmarked for corridor development with all the development objectives that would be associated with such development, namely, densification, transport facility and service concentration, etc. In the specific case of the Moshoeshoe Road corridor densification efforts are particularly recommended to the east of Moshoeshoe Road itself, up to and over the rail line.

**(b) R54, between Sebokeng and Vereeniging**

The R54 forms a very important link between Sebokeng, the largest residential area in the Emfuleni Local Municipality area, and Vereeniging. Being situated adjacent a relatively under-utilized rail line and numerous packets of undeveloped land, this road provides a natural spine for an activity corridor.

**(c) Along the R59 between Meyerton and Vereeniging**

The R59, and the rail line that runs adjacent to it, forms a natural opportunity for a corridor. In fact, previous studies have recognized it for this potential. However, because of the underlying geology and relative remoteness from the largest population concentrations in the area we would recommend that it only enjoy partial development. The siting of industrial activities, which are incompatible with residential land uses, would be ideal. Generally speaking, the best opportunities lie to the west of the R59, especially when one considers the industry type that is recommended. The existing local road running to the west of the R59 is ideally situated to serve as a frontage road and provide direct access to potential development sites.

**(d) R82, between Vereeniging and De Deur.**

This corridor is likely to become a prospect over the long term. The development of residential land uses should be sensitive to this eventually. The GDS recognised this corridor as a potential for small craft hubs, coffee shops, art dealers and light industry. The failure of the Gauteng Department of Transport to implement a long standing upgrade plan for this road has delayed the

potential of this corridor. The expansion of the Jacobskop Cemetery and the boom of an organised 'Flee Market' in De Deur, has seen huge increases in traffic volumes on this corridor on weekends especially.

**(e) Barrage Road, between Vereeniging and Vanderbiljpark.**

This road carries large traffic volumes between Vereeniging and Vanderbiljpark, and for such reason presents the opportunity to be developed more intensely.

**(f) K174, Extension of Barrage Road to the N1.**

Although this section of road runs through an area characterized by smallholdings it also provides access to the tourism corridor along the Vaal River south of the K174 and to the smallholdings north of the K174, which is under development pressure. Complimentary non-conflicting activities could be developed along this corridor.

**(g) General Hertzog Boulevard (Three Rivers).**

There has been a rapid conversion of residences into business sites. This has led to several new developments along this road. The lack of bulk infrastructure and sewer capacity in particular, restricts this development.

**(h) Johannesburg Road / Adams Street (Evaton)**

This link through Evaton and Ironsides to the R82 (Johannesburg) could provide an effective link over the long term.

**(i) R57 from the N1 Southwards**

With the development focus of higher income developments in a westerly direction and the development of the node (K174 and R57), activities along this road could increase to provide different development options.

## LESEDI LOCAL MUNICIPALITY

The Lesedi Local Municipality is characterized by a number of strategically linked transportation corridors and potential development nodes (N3, N17, R42 and R23), which need to be defined and structured to create economic opportunities. These corridors and nodes in further discussed in detail. In view of the extensive nature of Lesedi Local Municipality, the development and definition of the respective roads in the area is of utmost importance. Apart from the functionality of the respective roads, the linkage between the roads will be important for the following reasons:

- Accessibility to remote settlements need to be improved which will have an impact on economic growth;
- Access between respective settlements need to be improved which will facilitate improved public transport systems, efficient access to community services and the establishment of economic opportunities;
- Spatial development options will be identified; and
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- Large areas within Lesedi Local Municipality have development opportunities from an agricultural and tourism perspective. With the establishment of effective linkages, these areas could present various economic opportunities.

A development corridor can be defined as “a linear strip of land or area, connecting large activity nodes, traversing urban or inter-urban areas, surrounding a major transport facility or facilities, providing an appropriate regional level of mobility and accessibility to adjacent areas, and containing a high concentration of population and mixed land uses (job opportunities)”. The following inter-and intra regional linkages are proposed:

- **Primary Corridors (National Roads)**

The two major development corridors within the Lesedi Local Municipality are the N3 and the N17 Freeways. As the design parameters along these corridors are restrictive in terms of access and building lines, the sheer volume on these roads should be utilized to the advantage of Lesedi Local Municipality. Although the total length of these corridors within Lesedi Local Municipality will not be feasible to develop, the focus will be to attract potential investors to invest at certain focussed areas (accessibility) and to create economy of scale advantages. The development proposals along the respective Freeways are as follows:

- (a) **N3 Freeway**

The development focus along the N3 freeway should be a combination of Nodal development and corridor development in order to maximize investment opportunities. The existing accesses and entrances to the N3 with the R23, R42 and the R550 should be strengthening by nodal development. Apart from the frontage (visual impact) along the N3 between the respective nodal areas which should be utilized (subject to available areas) for “clean” service industries, the development strip between the N3 and the R103 presents the ideal opportunity for the establishment mixed land uses, with the focus on industries, office parks and manufacturing. This area could become the new locality for investors, which are dependent on the Gauteng/Kwazulu Natal and Free State link.

- (b) **N17 Freeway**

The N17 Freeway is located within the northern section of the Lesedi Local Municipality and creates a link between Gauteng and Mpumalanga Province. Although the R29 Road (between Endicott AH and Devon) runs parallel to the N17, the distance between these roads is too far to provide an effective development corridor. It is proposed that development nodes be established at the intersection of the R42/N17 and R550/N17. These development nodes could act as catalysts for the development of Endicott/ Vischkuil and Impumelelo / Devon.

- **Secondary Corridors (Provincial Roads)**

There are a number of very important inter-and intra roads within Lesedi Local Municipality that should be defined and linked to function and activities. The secondary development corridors are as follows:

(a) **R 42 Route** – This road provides an important linkage between the Lesedi Local Municipality and the remainder of the Sedibeng District Municipality towards the south and northwards through Heidelberg towards Endicott / Vischkuil. Although it would be impossible to develop the total corridor, emphasis should be given to certain sections of the road. The following areas along the R42 should receive priority:

- The section south of the Suikerbosrand Nature Reserve towards Heidelberg CBD. The type of activity should focus on tourism, arts and craft, recreational, hospitality and environmental related activities. It would also be important to provide an access point to the Suikerbosrand Nature reserve along the routes;
- Section through the Heidelberg;
- Intersection of the R42/N3 where the opportunity zone has identified and planned;
- Section between the N3 and Nigel which should focus on the establishment of service industries (mixed activities); and
- Section between the N17 and R29 that should focus on mixed land uses (service industries, housing, social and manufacturing).

(b) **R23 Route** – This road links Heidelberg with Dipaleseng Local Municipality and should be strengthened as from the intersection with the N3 Freeway towards Heidelberg and between the N3 northwards through the Spaarwater A.H.

(c) **R549 Route** – This route links the Lesedi Local Municipality with the Vaal Dam (Vaal Marina and other resorts) which is an important tourist destination. This route should be upgraded by providing proper signage. The section between Ratanda and Heidelberg should be promoted for mixed land use activities.

(d) **R103 Route** – This route runs parallel to the N3 and would provide the ideal access road for development between the N3 and R103. Development should only occur to the south of the R103.

(e) **R550 Route** – This route provides an east /west link throughout the Lesedi Local Municipality area. Sections on this road where nodal or corridor development should be considered, include, corridor development within the Hall Gate AH and between the N17 and the R548 intersection.

(f) **Heidelberg Road (Ratanda)**– Heidelberg Road functions as the primary transportation spine (buses and taxis) traversing Ratanda. This road based public transportation spine can be considered the most valuable asset contributing to the development potential of Ratanda, enabling the development of higher-density and mixed land uses. To ensure land use and transportation integration, it will be necessary to construct a Taxi Rank at the intersection of Heidelberg Road and Protea Road, within the Ratanda CBD, which need to be integrated with the surrounding land uses.

Although specific areas have been identified for corridor development along the respective routes, some tourism activities could be established along the routes, subject to legislative and technical requirements.

### ▪ Tourism Corridors

With the locality of Heidelberg/Ratanda centrally along the N3, the Suikerbosrand Nature Reserve, cultural and historical assets; the linkage to-and from other urban concentrations and areas of natural significance

should be strengthened as tourism corridors. The following roads have been identified to provide some tourism focus:

- (a) **R42 Road** – Linking Heidelberg with Vereeniging (Vaalriver) and Meyerton past the Suikerbosrand Nature Reserve;
- (b) **R549 Road** – Linking Heidelberg with the Vaal Dam and associated resorts. It is not the intention to develop the total corridor, but rather to focus at establishing tourism related activities (hospitality, arts and craft; and eco-tourism) along the route at certain areas.

### ▪ Development Nodes

The Lesedi Local Municipality Spatial Development Framework proposes a nodal structure within the area with the purpose to concentrate similar and supporting uses in a particular area, thereby stimulating economic forces. Activity nodes are most often located at intersections between important roads, within strategically located land in urban areas or at intermodal transfer activities. The predominantly accommodate business activities, associated with a number of complimentary land uses (higher density residential, social / recreational activities and public transport activities).

Within the Lesedi Local Municipality area, the following development nodes have been identified:

- (a) Primary Activity Node: Heidelberg CBD.
- (b) Secondary Activity Node: Ratanda CBD and Devon CBD.
- (c) Transport Related Activity Nodes:
  - R23/N3 (Commercial and Service Industries)
  - R42/N3 (Mixed Activities)
  - R42/R29 (Mixed)
  - Tertiary Activity Nodes: Jameson Park, Shalimar Ridge

## MIDVAAL LOCAL MUNICIPALITY

The Midvaal Local Municipality is characterized by a number of strategically linked transportation corridors and potential development nodes (R82, R59, R54, R549, R42, R557, and R551), which need to be defined and structured to create economic opportunities. These corridors and nodes in further discussed in detail.

The development of nodes along the R59 and parts of the R82 is clear. Development **corridors and development spines** are characterised by mixed land use patterns of complexity and diversity. Movement flows along these corridors and attracts the establishment of various activities along them. The accessibility associated with the linear nature of activity spines is particularly important in the restructuring of the urban system. Foot-bound populations will be able to gain ready access to the facilities and activities

located along these spines and public transport routes along these spines will provide them with ready access to the wider system. Midvaal is in the process to promote and market the R59 Corridor. Support from Sedibeng District Council and the Provincial Administration need to assist in the development of the R59 Corridor.

Activity spines also have the potential to act as “tendrils of development” combining the diverse parts of the urban fabric together by stimulating infill development around them. A large agricultural area exists between Meyerton and Vaal Marina in the south next to the Vaal Dam. This vast agricultural area makes the provision of services for small communities living in the area expensive and difficult. Settlements in the Midvaal area are dispersed, implying that many communities have to travel long distances to reach basic social services.

The Strategic Development Rationale for the Midvaal Municipality is therefore to develop the area with **hierarchy of nodes**. These nodes will form the focal points for development and service provision, to ensure access to social and economic opportunities for the entire sub-region. The concentration of activities in and around nodes will stimulate a higher order of activities and development, particularly in former dormant residential areas. A nodal system supported by linkages between nodes will provide impetus for an effective movement network and passenger transport system at sub-regional level. This nodal system will ensure functional integration of the area and create connectivity, which Sedibeng District Municipality stimulates economic and social interaction. The principle of concentrating activities in nodes recognises that access enables empowerment.

The following hierarchy of nodes is proposed:

- Primary Node: Meyerton/Sicelo.
- Secondary Nodes: Henley-on-Klip, Walkersville, De Deur, Vaal Marina.
- Tertiary Nodes: Mamello and Kliprivier.

Existing concentrations of non-residential development, particularly industrial and commercial in Randvaal, Highbury and Valley Settlements are also recognised as growth points along the R59 Highway. The Secondary and Tertiary Nodes are seen as the prime areas for intensification of business and commercial uses. The high population densities just outside the western boundary of Midvaal in Orange Farm were also considered in the Spatial Development Framework. The development of commercial/industrial uses on this boundary (supplemented by the provincial road and Stretford station) is supported. Heavy industrial and commercial uses should be promoted to locate in this district, while light industries and secondary economic activities should be promoted in the Economic Spine along the R59.

Retail, commercial, business, secondary industries and light industrial uses are further promoted in the Sub-regional Nodes, to limit travel distances between place of residence and place of employment and reduce dependency on a very costly transport system. Retail outlets and tourism related activities are promoted in the District Nodes.

- **Promotion of a strong movement network**

A strong movement network is required to create regional and local linkages and promote connectivity between nodes. The R59 is the most prominent road in the Midvaal area. This road should be promoted as an Economic Spine, with economic uses along the road, as well as the promotion of public transport and



transport facilities along the road. The R59 should be promoted as a movement corridor within the Midvaal area and a link with surrounding nodes, service centres and tourism attractions.

The location of the R59, Morris Road and the railway line as parallel movement networks in close proximity to each other lends itself to corridor development; therefore the Economic Spine is promoted along this potential corridor. Ribbon development along other roads is however not promoted, as these impacts on the mobility of the movement network. The R82 also provides for movement in the western part of the area.

- **Corridor Development Framework**

The proposals and guidelines along the R59 Road are expanded below:

The Johannesburg /East Rand Complex and Vaal Triangle will remain the **major nodes** in the development corridor. Development should aim to capitalise on the inherent economic energy associated with Johannesburg and specifically the City Deep and Wadestown / Alrode Blue IQ projects. Economic regeneration of the Vaal Triangle is very important to the success of the development corridor.

Four nodes were earmarked as designated development areas along the corridor (beads on a string). Each of these nodes was earmarked for a specific purpose, to allow for the clustering of uses. These nodes and the proposed uses are detailed below:

- (a) **Meyerton:** This will be the primary node along the corridor, with a mix of land uses. This area can accommodate heavy industries, large-scale manufacturing, commercial uses, retail, general business and urban residential uses.
- (b) **The Nampak/Everite area:** This node is situated at the gateway of the corridor and should therefore be protected in terms of the type of uses and aesthetic appearance. Light industrial uses, mini-factories, offices, warehouses and commercial uses are proposed for this node.
- (c) **Daleside/Witkop:** This is an existing node, in need of upgrading and renewal. Commercial uses (such as transport uses), manufacturing, industrial uses and service industries for agriculture are proposed.
- (d) **Henley-on-Klip:** This node has strong residential and tourism development potential. Residential uses and hospitality uses in support of the tourism industry are proposed.

Specific **development guidelines** will be applicable to land uses fronting onto the R59, to protect the aesthetic appearance of the Corridor. These guidelines will be applied through the approval of site development plans, addressing aspects such as access, landscaping, signage and fences.

The development of a **road network** to support the development corridor and nodal structure is essential. The R59 fulfils the function of a Mobility Spine, while the K89 acts as an Activity Spine. To complete the

road network, the implementation of an Activity Street east of the R59 is required, to provide direct access to land uses and unlock the potential of this area. The construction and upgrading of roads west of the R59 is not supported in the short to medium term, or at least until the area east of the R59 is fully developed.

The development of the four nodes should be strongly focused on the stations to support passenger transport. This implies that there should be a concentration on non-residential uses and higher residential densities in and around stations.

In the short to medium term the area west of the R59 should be reserved for **agricultural purposes and rural residential uses**, to strengthen the development corridor. Emphasis should be placed on exploring the opportunities in the agricultural sector, through production and local processing of products for the export market. Non-residential uses in these areas should only be permitted with the consent of the local municipality, subservient to the residential use. Incentives should be provided to encourage non-residential uses to upgrade and relocate to formal business/industrial premises on vacant and in Meyerton. In the long term it is envisaged that this area will also come under pressure for development and this should be supported once the area east of the R59 becomes saturated.

The rural character of the area and proximity to the major economic opportunities in the province, make the area attractive for residential and tourism development. Rural residential estates, equestrian centres and hospitality uses would be supported throughout the area and especially in Henley-on-Klip. These developments should however be sensitive towards the rural character and appeal of the area. The Klip River is earmarked as the main open space system through this area. The river should be protected, especially from effluents from industrial development and should be incorporated as a design feature in developments. Agricultural and rural residential uses should be promoted along the river, to protect it from pollution.

#### **(e) R82 Development Framework**

The following principles were applied in deciding on desirable and permissible land uses along the R82 Activity Spine:

- Protect the existing major nodes in the region, specifically the CBDs and industrial areas of Meyerton, Vereeniging and Vanderbijlpark;
- Protect the corridor status of the R59 and prevent competition between the R59 and R82;
- Limit and manage development permitted along the R82 to:
  - Firstly ensure that the road is upgraded to improve safety and service standards; and
  - Secondly protect the mobility function of the route;
- Protect the existing rural character and associated tourism potential of Midvaal;
- Limit land use changes for business purposes to properties directly fronting onto the R82 Activity Spine. The highest order land uses should be directly adjacent to the road, with a decline in the intensity and scale of uses away from the road;
- Protect the farms and agricultural holdings in the area for agricultural and rural residential purposes; and

- Promote the development of alternative north/south routes, which could compliment the R82 and R59, specifically the K47 and K7.

**(f) Freight & Logistics Hubs**

- The manufacturing industry in the District has a great need for a Freight & Logistics hub that would facilitate business in and through the District.
- Rail is a high priority for heavy industry as opposed to road. Roads are being increasingly damaged by heavy carriers of steel and other heavy cargo.
- An airport for small capacity cargo has great potential in the area.