

# **SECTION 5**

# **OPERATIONAL STRATEGIES**

## 5. INTEGRATED SPATIAL DEVELOPMENT FRAMEWORK

### 5.1 SPATIAL DEVELOPMENT TRENDS AND ISSUES

Lesedi is a predominantly rural area with two urbanized nodes, namely Heidelberg/Ratanda and Devon/Impumelelo. Development during the last decade has been concentrated in these two nodes, especially in Heidelberg/Ratanda. The overall rate of development was however slow.

The main spatial and land use issues, which should guide future development in Lesedi, have been identified as follows:

- Lesedi is situated on the edge of Gauteng and significant development cannot be expected here in the foreseeable future.
- The two national roads [N3 and N17] running through the area may however present some opportunities for development in the areas adjacent to them.
- The vast area of Lesedi and the low prevailing population densities combine to make the provision and maintenance of infrastructure and other municipal services very costly. Future urban development should thus be concentrated in a few locations where bulk infrastructure is already available and where services can be maintained in as cost-effective a way as possible.

- The Lesedi area can be regarded as 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.
- Future spatial planning in Lesedi should protect the natural resources in the area and promote tourism/recreational development in those areas, which have potential for it [e.g. the areas adjacent to the Suikerbosrant nature reserve and the numerous watercourses, pans, dams and wetlands in the area].

#### 5.1.1 DEVELOPMENT PRINCIPLES AND GUIDELINES

Future development in Lesedi should adhere to the main principles of the DFA and the Land Use Management Bill as set out in Section 3.2.1 of this Report. The following localized spatial guidelines have been identified for Lesedi:

- **CORRECTION OF HISTORICALLY DISTORTED SPATIAL PATTERNS**
  - Integration of Ratanda with Heidelberg, and Devon with Impumelelo.
  - Promotion of development in the rural areas.
- **PROMOTION OF SPATIAL INTEGRATION**
  - Promote urban infill development.
  - Establish mixed-use areas.
  - Create multi-functional rural service nodes [e.g. at Vischkuil].

- **DISCOURAGEMENT OF URBAN SPRAWL AND THE PROMOTION OF MORE COMPACT TOWNS**
  - Densification and urban infill development in Heidelberg/Ratanda and Devon/Impumelelo.
  
- **PROMOTION OF A DIVERSE COMBINATION OF LAND USES, ALSO AT A DETAILED LEVEL.**
  - Create activity nodes and spines.
  - Create mixed-use areas, e.g. Heidelberg Zone of Opportunity and selected areas along N17.
  - Promote value-adding activities in the agricultural areas.
  
- **OPTIMIZATION OF THE USE OF EXISTING RESOURCES, INCLUDING BULK INFRASTRUCTURE**
  - Concentrate development in those areas with spare capacity [e.g. Devon/Impumelelo and Heidelberg/Ratanda].
  
- **SUSTAINABLE LAND DEVELOPMENT PATTERNS AND PRACTICES**
  - No development to be allowed in ecologically sensitive areas, e.g. along watercourses, water bodies and wetlands.
  - Promote the creation of self-sustaining communities.

- **DISCOURAGEMENT OF LAND INVASIONS AND ENSURING EQUITABLE ACCESS TO LAND**
  - Housing development in Heidelberg/Ratanda and Devon/Impumelelo.
  - Land reform projects in the rural areas.

### **5.1.2 THE SPATIAL DEVELOPMENT CONCEPT, PROPOSED DEVELOPMENT PATTERN AND MAJOR LAND USES**

The spatial development concept for Lesedi is shown on **Map 18** and refined in **Map 19**.

The spatial proposals are based on the following:

- Future development should be concentrated in the existing urban areas, emerging nodes and in selected areas along the N3 and N17. The agricultural areas should essentially be utilized for agricultural and, in certain locations, eco tourism and recreational purposes.
- The three urban nodes in the sub-region are Heidelberg/Ratanda, Nigel and Devon/Impumelelo, while Vischkuil/Endicott can be regarded as an emerging node.
- Two major development corridors are proposed, along the N17, linking Devon/Impumelelo and Vischkuil with the East Rand conurbation towards the west and Mpumalanga towards the east, and along the N3, linking Heidelberg/Ratanda with Johannesburg and Durban. Potential development energy along these routes should be harnessed.
- A secondary development corridor is proposed along Route R42, linking the Heidelberg/Ratanda, Nigel and Vischkuil nodes. Some development is already taking place along this corridor, e.g. Jameson Park.

- The strip of land between Route R29 and Route N17 is demarcated as a “Zone of Opportunity” where future development opportunities linked to these two routes, as well as agricultural-based LED initiatives, should be pursued.
- Two ecological focus areas occur in the sub-region, namely the Blesbokspruit wetlands north of Nigel and west of Vischkuil/Endicott, and the Suikerbosrant Nature Reserve west of Heidelberg. These areas should be conserved and promoted as major eco-tourism and recreational centers. Ecological transition areas should be created around these resources.
- The Blesbokspruit, Suikerbosrant River and their various tributaries should also be regarded as ecologically sensitive areas and provide the potential for regional open space links throughout Lesedi.
- The Suikerbosrant hills are not utilized for cultivation of crops and the natural beauty of these areas make them suitable for eco-tourism and recreational activities, which can be undertaken in conjunction with grazing.

### 5.1.3 THE PROPOSED URBAN EDGE

The urban edge as proposed by Gauteng Province is indicated in Yellow on **Map 19**. Only Heidelberg/Ratanda has been included as an urban area in Lesedi, while the other urban areas [Devon/Impumelelo and Jameson Park/Kaydale] have been ignored. Proposed extensions of the urban edge are indicated in orange on **Map 19**, and are motivated as follows:

#### • HEIDELBERG/RATANDA

It is proposed that the provincially demarcated urban edge be extended to include the area west of Jordaan Park, between the Suikerbosrant Nature Reserve in the north and the Blesbokspruit in the south. It is envisaged that this area will be utilized for future up market housing development. There are no vacant areas with potential for this type of future development situated within the currently demarcated urban edge, while there is a clear demand for such development. The Municipality has received a number of development proposals in the area within the proposed extension of the urban edge. Obviously any such future development should be sensitive to the various environmental features in the area, e.g. the Nature Reserve, the river and the various natural open space linkages between the two.

#### • DEVON/IMPUMELELO

Devon/Impumelelo is a well-developed urban node on the eastern edge of Lesedi, abutting various major transportation routes. The proposed subsidy-linked township of Impumelelo x 2 is situated on the vacant land between Devon and Impumelelo and is on the verge of proclamation. This township is intended to house the current informal settlement in Impumelelo – as in the case of Jameson Park/Kaydale; Housing Dept. will not fund the project if it is outside the urban edge.

### 5.1.4 PRIORITY INTERVENTION ZONES

The priority development intervention zones are shown on **Map 20** and have been identified as follows:

- **HEIDELBERG/RATANDA**  
See the detail proposals of the Greater Heidelberg Spatial Development Framework [contained in Section 5.4.7 hereunder].
- **JAMESON PARK**  
Development here should be primarily focused on the upgrading of existing services and facilities, and the facilitation of formal housing.
- **VISCHKUIL/ENDICOTT**  
This agricultural holding area is regarded as an emerging node. Detailed planning is required here, to address aspects such as LED opportunities, land use, possible densification, etc.
- **DEVON/IMPUMELELO**  
Detail planning of this area is required to address aspects such as detail land use, integration between Devon and Impumelelo, local nodes and spines, densification and infilling, etc.
- **THE N17 ZONE OF OPPORTUNITY**  
As stated in Section 5.4.3 above this zone has potential for future development. A detail study of the development potential and opportunities in this zone is required.

### 5.1.5 MAJOR LOCATIONS OF PROJECTS

As can be seen on **Map 21**, the identified IDP projects are mostly concentrated in the priority intervention zones:

### 5.1.6 GREATER HEIDELBERG SPATIAL DEVELOPMENT FRAMEWORK

The Greater Heidelberg Spatial Development Framework, which was formulated as part of the Greater Heidelberg LDO's, is included here as a refinement of the Lesedi Spatial Development Framework.

#### • STRATEGIC DEVELOPMENT ZONES

The Greater Heidelberg area can be classified into four broad zones as illustrated on the Development Framework Plan, each with its own unique circumstances requiring different development emphases.

The southern part of the study area can be classified as a zone of upliftment and intervention. This includes physical, social and economic upliftment and requires:

- Upgrading of the total environment,
- Changing the character of the area from mono-functional to multi-functional with improved access to a range of opportunities and facilities,
- Relating the area to development opportunities to the north of it.

- The sparsely developed vacant land between Ratanda and Heidelberg provides opportunities for integration and in this zone the emphasis should be on:
- The provision of subsidy-linked housing to address the existing housing backlog;
- The creation of a wide range of land use opportunities adjacent to the proposed development corridor.
- In the zone of stability, which comprises most of the established urban development in the central and northern parts of the study area, the following should be paramount:
  - To maintain existing service levels and environmental quality;
  - To promote and improve the CBD as a major activity node;
  - To improve linkages with Heidelberg Kloof to the north and with Ratanda to the south;
- To provide for mixed use and higher density residential development along the identified development corridors.

The eastern part of the study area butting the N3 freeway south of the SANDF land, and including Bergsig, Heidelberg Extension 11 and the substantial pieces of vacant land, is classified as a zone of opportunity, where the accessibility and visibility conferred by the freeway can be used as a catalyst for development.

In this zone the emphasis should be on:

- Attracting private development through marketing initiatives,
- Establishing a climate of certainty by means of formulating more detailed development strategies and plans for the area,
- Providing bulk engineering services when required;
- Improving access.

- **CREATING COMPLEXITY**

Given the socio-economic profile of urban dwellers in a developing society and the need for ease of access to employment opportunities and other urban amenities, it is believed that an urban system which is complex in its structuring and compact in its spatial extent offers a model that yields maximum opportunity and choice, greatest ease of use, maximum efficiency and optimal effectiveness. It is fundamentally this model that could assist in redressing spatial and structural inequities.

The Spatial Development Framework must thus seek out the urban logic that returns the system to complexity and its attendant opportunities. Regardless where one locates in the urban system, complexity, diversity, opportunity and choice must be inherent in its fabric. In addition one must be part of and have ready access to a wider urban system in which the broader range of day-to-day needs can be met.

It is submitted that the goal of a complex, compact urban area can best be achieved by introducing three structuring elements, namely:

- The promotion of activity nodes;

- The promotion of development corridors;
- The creation of mixed-use activity zones.

These elements, as well as the other spatial proposals contained in the Development Framework Plan, are discussed in more detail hereunder.

- **ACTIVITY NODES**

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

Being points of maximum economic, social and infrastructural investment, as well as representing established patterns of settlement and accessibility, these nodes must be regarded as a primary device on which to anchor the structure of the urban system.

One existing node, two emerging nodes and one potential future major node have been identified in the study area and are shown on the Development Framework Plan.

- **Heidelberg CBD**

Heidelberg CBD can be regarded as the only existing major activity node in the study area at present. This node is characterized by a wide range of

land uses co-existing in relative harmony and offers most of the services and amenities sought by the local community.

In tandem with a policy to preserve the unique historic character of this node, further diversification and densification should be actively promoted, including the promotion of higher density residential opportunities. Furthermore, a functional linkage between the CBD and the Heidelberg Kloof resort directly to the north of it should be created, across Route R23.

- **Shalimar Ridge Business Centre**

Although this node can be regarded as a largely mono-functional shopping area, it is strategically located adjacent to the proposed Heidelberg Ratanda Development Corridor, the main open space linkage system, some institutional and sports facilities and the industrial development on the eastern side of Route R23. Albeit of a limited nature, further diversification of this node can be expected and should be promoted.

- **Ratanda Administrative Centre**

An analysis of the land use pattern in Ratanda clearly demonstrates that the majority of existing community facilities and the greatest activity are concentrated around the intersection of Heidelberg and Protea Roads, between the old community hall on the north and the Ratanda sports stadium on the south. This node is centrally located to the surrounding community and substantial vacant land is available for densification and further development.

The further development of this node is of crucial importance to the Ratanda community and should be actively pursued, inter alia by means of canvassing RDP funding. Special attention should be given to the unique needs of the Ratanda community in the development of this node, e.g. the provision of facilities for informal trading and small-scale business, utilizing labour-based construction methods, etc.

➤ **Route R42/N3 Intersection**

This location has been identified as a potential future major node, which could take advantage of the visibility conferred by the N3 freeway and the accessibility conferred by the existing intersection with Route R42. This site has potential for the location of various regional facilities, e.g. a casino, hotel, filling station/truck stop development, etc.

The local authority's role here should be confined to actively marketing the site to potential investors and to provide bulk infrastructural support when required.

• **DEVELOPMENT CORRIDORS**

Development corridors or activity spines are characterized by the same mixed-use patterns of complexity and diversity as activity nodes. Movement corridors which "pick-up" exotic land uses can be regarded as major structuring elements within the urban environment. Movement flows along these corridors attract the establishment of various activities along them.

The accessibility characteristics associated with the linear nature of activity spines is particularly important in the re-structuring of the urban system given the ease with which broad sectors of the population can be drawn into the urban mainstream. Foot-bound populations will be able to gain ready access to the facilities and activities structured along these spines and the public and taxi transport routes along the spines will provide them with ready access to the wider system.

Activity spines also have the potential to act as "tendrils of development" stitching diverse parts of the urban fabric together by stimulating infill development around them. This potential is of particular relevance in the southern part of the study area, where Ratanda and Heidelberg need to be integrated.

Only two development corridors/activity spines are foreseen in the study area at this stage, namely a spine towards the south linking the CBD and Ratanda activity nodes and a spine towards the west linking the CBD with the proposed node abutting the R42/N3 intersection. It should be accepted that development around these spines will not happen overnight, but provision for them should nevertheless be made within the context of development over the longer time frame. In this regard it should also be noted that the proposed southern corridor already exhibits the characteristics of a rudimentary activity spine between the CBD and Shalimar Ridge.



- **MIXED-USE ACTIVITY AREA**

This area is proposed in the Opportunity Zone abutting the N3 freeway to capitalize on possible development opportunities next to this major national route. It is envisaged that those businesses traditionally dependent on a high visibility profile, as well as concerns involved and linked to transport between Durban and Gauteng may wish to locate here. A wide range of land uses should be allowed in this area.

- **MAJOR EMPLOYMENT AREAS**

The major employment areas indicated in Greater Heidelberg will include the existing industrial areas and the mixed - use area proposed in the Opportunity Zone.

- **PRIORITY AREA FOR JOB CREATION**

Growth in the formal economic sector will not adequately provide the growing number of job opportunities needed in the study area and the promotion of informal and small-scale business/industrial development should be pursued vigorously. In this regard a priority area for such development is set aside north of Ratanda abutting Route 549 on the western side, between this road and the northern link road between Ratanda and Heidelberg.

Development in this area should be specifically aimed at the creation of opportunities for the Ratanda community and should be undertaken in

partnership with this community, while business and skills training should form an integral part of it. RDP funding should be canvassed, while organizations such as the SBDC should also be approached.

- **PRIORITY AREA FOR HOUSING PROVISION**

As stated previously, substantial land will be required for the provision of subsidy-linked housing during the next five years. It is proposed that this development should take place in the integration zone between Heidelberg and Ratanda, as indicated on the Development Framework Plan.

- **MAJOR RECREATION NODES**

As far as the major recreational nodes indicated on the Development Framework Plan are concerned, the emphasis should be on:

- Upgrading of the Ratanda stadium,
- Providing a functional linkage between the Heidelberg Kloof estate and the CBD.

- **OPEN SPACE LINKAGE SYSTEM**

It is proposed that the open space system illustrated in the Development Framework Plan be approved as the main open space system of Greater Heidelberg and that all efforts be made to conserve this system in such a way that it supports the urban environment. A partnership between the local authority and the community to share the responsibility of conserving this system is deemed of the utmost importance.

The development of an urban trail within this system linking the conservation area, the major recreational facilities and the historic buildings and tourist attractions in Heidelberg should be considered. Such a trail will not only fulfil a recreational function, but will also be of educational value, e.g. to the school children of the various communities in the study area.

- **CONCLUSION**

The development framework indicated on the plan and discussed above provides a spatial rationale for sustained and integrated future development within the study area. It is however general in nature and provides broad guidelines only.

Detailed planning will have to be done for specific areas prior to the implementation of the proposals.