

Sedibeng District Municipality

Doornkuil Rural Precinct Plan

2014



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Abbreviations:

CBD	Central Business District
CRDP	Comprehensive Rural Development Programme
CoJ	City of Johannesburg
CWP	Community Work Programme
DBSA	Development Bank Of South Africa
DEAT	Department Of Environmental Affairs and Tourism
DFA	Development Facilitation Act
DRDLR	Department Of Rural Development And Land Reform
DWAF	Department of Water Affairs and Forestry
EMF	Environmental Management Framework
EPWP	Expanded Public Works Programme
EXT	Extension
GAUTRANS	Gauteng Department Of Transport And Public Works
GCR	Gauteng City Region
GDARD	Gauteng Department of Agriculture and Rural Development
GDP	Gross Domestic Product
GEDA	Gauteng Economic Development Agency
GEGDS	Gauteng Economic Growth and Development Strategy
GITP	Gauteng Integrated Transport Plan
GSDF	Gauteng Spatial Development Framework
GVA	Gross Value Added
ITPMP25	Integrated Transport Master Plan 2025
IDP	Integrated Development Plan
Kv	Kilo Volts
LED	Local Economic Development
LGDP	Local Gross Domestic Product
LUMS	Land Use Management System
LM	Local Municipality
ML	Milli Litre
NDP	National Development Plan
NEMA	National Environmental Management Act
NGO	Non-Governmental Organisation
PLAS	Pro-active Land Acquisition Strategy
RPP	Rural Precinct Plan
RSDF	Regional Spatial Development Framework
SANRAL	South African National Roads Agency Limited
SDF	Spatial Development Framework
SEZ	Special Economic Zone
SPLUMA	Spatial Planning and Land Use Management Act
STATS SA	Statistics South Africa
ToR	Terms of Reference
UDB	Urban Development Boundary



1. INTRODUCTION

1. Appointment & Terms Of Reference

On 14 May 2013, P Dlodla Development cc (Dlodla Development) working together with Settlement Planning Services (Setplan) was appointed by the Department of Rural Development and Land Reform (DRDLR) on behalf of the Sedibeng District Municipality (The Client) to develop, “a Rural Precinct Plan for Doornkuil in the Sedibeng District Municipality” (The Project).

The Terms of Reference (ToR) of the Project included the “**Aims**” of the Project and the ideal “**Steps**” to be taken in fulfilling the aims of the Project.

The Aims of Rural Project Plans, as specified in the Terms of Reference, are illustrated in Figure 1 alongside.

The Start Up Phase of this project included the drafting, presentation and acceptance of an Inception Report, which outlined the common understanding between the Client and the Project Team of the process, methodology, public participation, project team, proposed contents, programme and budget of the Doornkuil Rural Precinct Plan.

The primary aim of the Rural Precinct Plan is the arrangement of land use and infrastructure associated with the needs of specific communities within administrative regions. It integrates transportation, environment, education, economic development, social, residential development and other developmental requirements. Development needs, opportunities and priorities are identified. It is a process that is community-based and driven

Figure 1: Aims of A Rural Precinct Plan

The “Steps” used in the development of the RPP for Doornkuil, as specified in the ToR, including the milestones agreed to in the “Start Up Phase” of the project with the Client, are illustrated in Figure 2 below:

Figure 2: Project Steps & Milestones

STEPS		MILESTONES	
1.	Inception Report	1.	Inception Report
2.	Data Collection & Analysis	2.	Status Quo Report
3.	Draft Precinct Plan	3.	Vision, Mission, Objectives & Draft Precinct Plan Report
4.	First Review		
5.	Incorporation of Amendments / Requirements		
6.	Public Notification		
7.	Consideration of Submission	4.	Doornkuil Rural Precinct Plan
8.	Final Submission & Approval of RPP		

This document is the Doornkuil Rural Precinct Plan Report, which is the final Milestone as illustrated in Figure 2 above.

This Report consists of four parts that correspond to the Project milestones, namely:

Part 1: Inception Report

Part 2 Status Quo

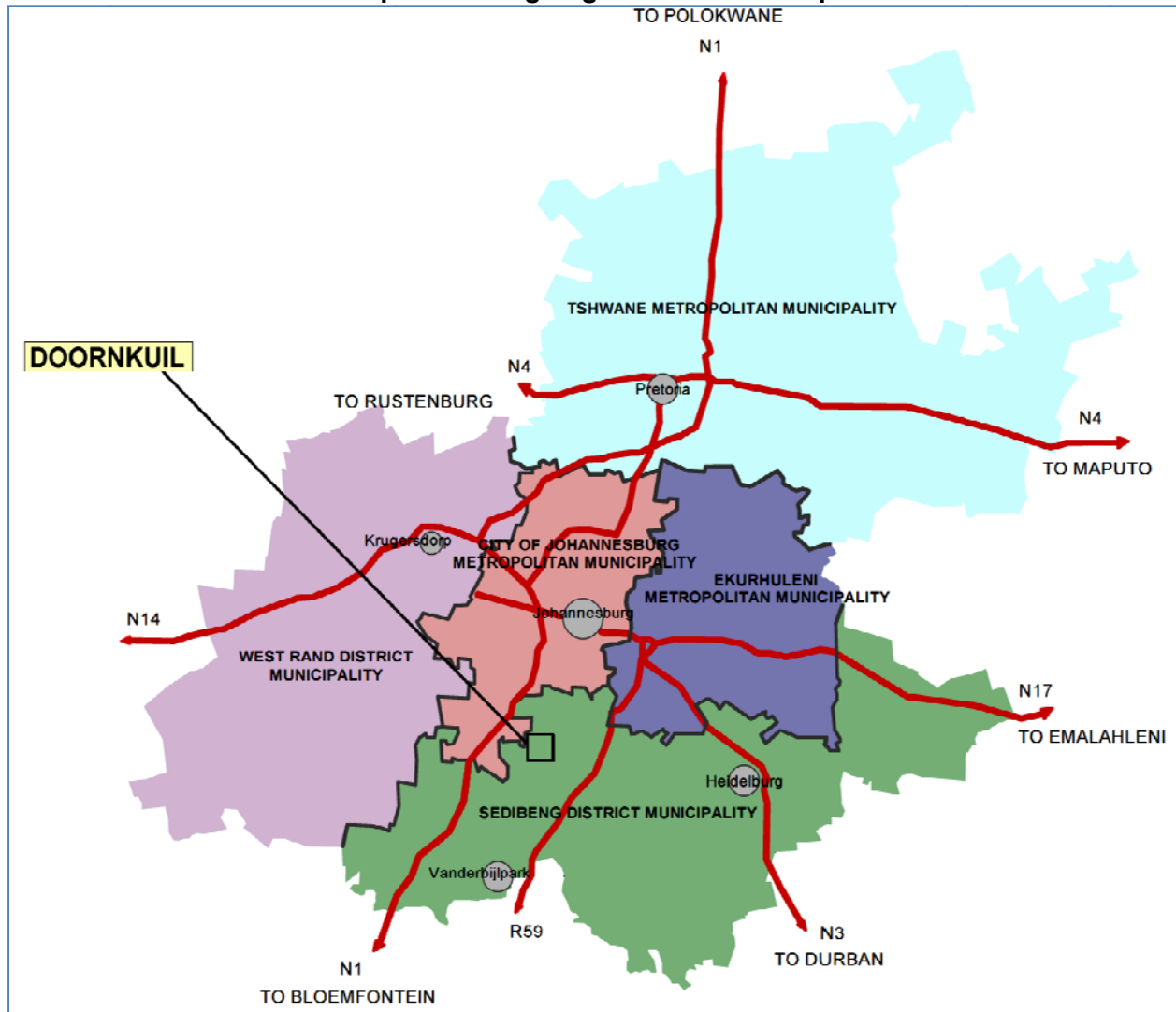
Part 3: Vision, Mission & Objectives

Part 4: Doornkuil Rural Precinct Plan

2. Location

Doornkuil is located in the Sedibeng District Municipal area within the Midvaal Local Municipality, south of the Johannesburg Metropolitan area in Gauteng, as illustrated on the Gauteng Regional Locality Map below.

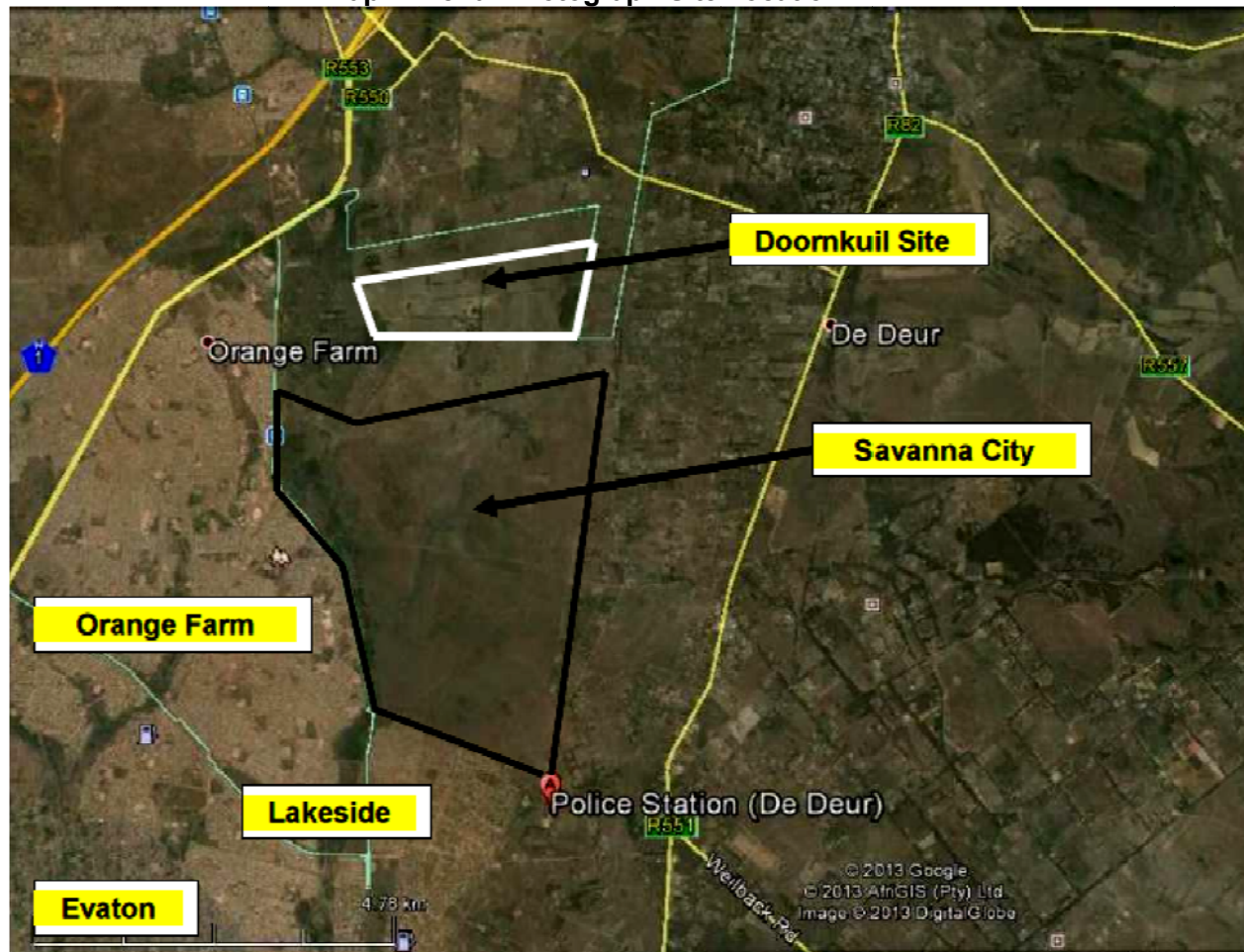
Map 1: Gauteng Regional Location Map



The site area is Portion 3 and 4 of the farm Doornkuil 369 IQ as shown on the Locality Map overleaf and in the SG Diagrams attached as Annexure 1. Information available indicates that each of the portions of the study area is in the order of 173 hectares, resulting in a total site size of approximately 346 hectares.

The site is well located north of the proposed Savanna City, Evaton and Sebokeng in the Midvaal Municipal Area, east of Orange Farm in Johannesburg Metropolitan Municipality and west of De Deur in the Midvaal Municipal area. All of these areas form a “cross boundary functional area”, as identified in the Sedibeng District Spatial Development Framework. These areas are indicated in the Aerial Photograph below and on the Map overleaf.

Map 2: Aerial Photograph Site Location



In addition, Doornkuil forms part of the proposed future conurbation for the Sedibeng District, which will be a major strategic component of the future Sedibeng Metropolitan Municipality.

Part 1: Inception Report

2. Inception Report

The purpose of an Inception Report is to ensure a common understanding with the client on all aspects of the project.

The Inception Report was first submitted in June 2013, and then updated in August 2013. The reason for the updating was the initial concern regarding the definition of the site boundaries and location and the nature of the site. The site is a single, open, largely undeveloped parcel of land and it was initially debated whether an RPP was appropriate for the site.

As documented in the Inception Report, while the RPP is for the Doornkuil area, which is located in the Midvaal Local Municipal area of the Sedibeng District, the Department of Rural Development and Land Reform is responsible for the appointment and payment of the service provider. The development process included consultation with the Midvaal Local Municipality as well as the Sedibeng District Municipality in order to ensure acceptance and support of the Precinct Plan. In addition, relevant officials from the City Of Johannesburg were also consulted as Orange Farm forms part of the site's functional area. The process also included five workshop/feedback sessions and a large public forum that was advertised in the local media to ensure adequate opportunity for input from the public. Provision was also made for the transferring of skills and mentoring of Midvaal Local Municipality staff in the development of the RPP.

During the "Start Up" Phase of this project, it became apparent that a conventional Rural Precinct Plan for Doornkuil may not be appropriate. The reason for this is that the area is largely vacant and undeveloped and, as a result, detailed urban design guidelines and controls normally associated with Precinct Plans for controlling and guiding current and future development would be of little practical value. Further, the undeveloped nature of the area and its strategic location provide the opportunity to ensure that future use of the area takes advantage of this strategic location within the proposed conurbation and provides land uses for the benefit of the broader region and the District and potential future Metropolitan area. The site presents a unique opportunity in that it is seldom that a large undeveloped parcel of land that is public sector owned becomes available. It was agreed that the opportunity for planning for the provision of "regional facilities", for which land is often difficult to acquire at economically viable prices, must be addressed.

As a result, the Client confirmed that the Rural Precinct Plan for Doornkuil would provide urban design and planning guidelines, but not at the finer detail normally associated with Rural Precinct Plans. The process to be followed would remain in accordance with the Terms of Reference (ToR) for the project. Further, it was agreed that the Doornkuil RPP will be undertaken in accordance with the ToR supplied, in particular, the Key Issues identified for development of the Rural Precinct Area, as outlined in the ToR, which state that the following need to be considered:

"Physical Aspects

- Land use (residential development, industrial and commercial development, office and retail development, Transport networks impacting on land development).
- Infrastructure – Roads and Transport infrastructure
- Infrastructure Services – Water
- Infrastructure Services – Waste Water
- Infrastructure Services – Solid Waste
- Infrastructure Services – Electricity

- National, provincial and major metropolitan roads
- Public Transport (freight and passenger)
- Natural Environment – Soil, geology, vegetation, hydrology and topography
- Natural Environment – Pollution sources including industrial areas and mines
- Parks and Open Spaces
- Context of the study area
- Spatial Development patterns and dynamics (spatial structure)
- Take into account the disaster risks
- Disaster management risk reduction strategies
- Demographics
- Education
- Religion
- Health
- Social Development
- Safety and Security
- Sport and Recreation
- Art, Culture and Heritage
- Cemeteries
- Libraries and halls
- Public space
- Housing
- Social infrastructure
- Social needs and trends
- Socio-economic data and growth rates
- The impact of HIV/AIDS

Economic Aspects

- Local Economic Development
- Economic Trends and gaps
- Retail (formal and informal sectors)
- Development Corridors
- Urban Renewal
- Tourism
- Land Development trends
- Land take-up rates
- National and provincial economic forecasts
- Analysis of sectoral challenges and opportunities
- Economic strengths and weaknesses of the area
- The role and function of land development and investment

Institutional Aspects

- Political structure
- Local Authority organisational structure
- Wards
- IDP Priorities and public input
- Legislation (including the Town Planning Scheme, policies and by-laws)
- Maintenance
- Existing Local Plans
- Land ownership of significance”

Based on the above, the Inception Report (Milestone 1) was approved by the Client in August 2013.

3. Status Quo Report

The purpose of the Status Quo Analysis is to collect all pertinent information for the development of the RPP, in particular the Key Issues that will inform the plan.

3.1 Data Collection, Analysis Methodology & Purpose

The Data Collection and Analysis is the second step of developing the RPP. During the Data Collection and Analysis, all relevant data and mapping, as well as views on the integration of this information for developing the RPP, was collected and analysed. This includes data and information to ensure “horizontal” integration with adjacent areas including the City of Johannesburg as well as “vertical” integration with the Local Municipal Precinct Plans, Spatial Development Frameworks of the Local Municipality and the District policies, where these exist.

The above was undertaken through a combination of methodologies, as documented in the Inception Report. These include interviews, discussion groups, workshops, socio-environmental scan and desktop analysis of the relevant documents and existing information, including previous planning exercises, such as strategies, policies, Structure Plans and Spatial Development Frameworks, in particular the Sedibeng Spatial Development Framework that is in the final stages of completion. Existing studies are integrated into the RPP strategy, where appropriate. All relevant legislation is taken into account in the production of this RPP.

The output of the Data Collection and Analysis Step was documented in a Status Quo Report. This report is not intended to provide a detailed set of information on Midvaal Local Municipality or the Sedibeng District Municipality nor is it intended to reproduce information already documented in the Midvaal IDP and other documentation. It is a “means to an end”, identifying key spatial issues to develop the Doornkuil RPP.

The Status Quo Report included the following main sections:

- 1. Introduction**
- 2. Legislative & Policy Context**
- 3. Location & Contextual Perspective**
- 4. Economic Perspective**
- 5. Environmental Perspective**
- 6. Infrastructure Perspective**
- 7. Status Quo Conclusion**

A summary of the above follows:

3.2 Legislation & Policy Context

There are a number of Legislation and Policy documents that have a direct influence on the compilation of the RPP. The following legislative and policy documents were taken into account in this project:

Local Government: Municipal Systems Act, (Act 32 of 2000)

This Act stipulates that all Municipalities prepare an Integrated Development Plan (IDP), which is the principal strategic planning instrument guiding and informing all planning and development. Chapter 5, Section 26 (e) of the Act specifies the requirement that a Spatial Development Framework (SDF)

be a component of the IDP. A comprehensive IDP has been prepared for Sedibeng for 2012 to 2017 and the Sedibeng District SDF is in the final stages of completion. Through these processes, the need for the more detailed planning of the Doornkuil Precinct was identified. Any further planning of this precinct will, as a result, need to conform to the requirements of this Act.

Local Government: Municipal Structures Act, (Act 117 of 1998)

Section 84 (i) of this Act provides for the division of functions and powers between Districts and Local Municipalities. The relevant section of the Act, dealing with functions of the District, is reproduced below:

“A District Municipality has the following functions and powers:

- a) Integrated development-planning for the District municipality as a whole, including a framework for integrated development plans of all municipalities in the area of the District municipality.
- b) Potable water supply systems.
- c) Bulk supply of electricity, which includes for the purpose of such supply, the transmission, distribution and, where applicable, the generation of electricity.
- d) Domestic waste-water and sewage disposal system.
- e) Solid waste disposal sites, in so far as it relates to:
 - i. the determination of a waste disposal strategy;
 - ii. the regulation of waste disposal;
 - iii. the establishment, operation and control of waste disposal sites, bulk waste transfer facilities and waste disposal facilities for more than one local municipality in the District.
- f) Municipal roads which form an integral part of a road transport system for the area of the District municipality as a whole.
- g) Regulation of passenger transport services,
- h) Municipal airports serving the area of the District municipality as a whole.
- i) Municipal health services
- j) Fire fighting services serving the area of the District municipality as a whole, which includes:
 - i. planning, co-ordination and regulation of fire services;
 - ii. specialized fire fighting services such as mountain, veld and chemical fire services;
 - iii. co-ordination of the standardization of infrastructure, vehicles, equipment and procedures;
 - iv. training of fire officers.
- k) The establishment, conduct and control of fresh produce markets and abattoirs serving the area of a major proportion of the municipalities in the District.
- l) The establishment, conduct and control of cemeteries and crematoria serving the area of a major proportion of 5 municipalities in the District.
- m) Promotion of local tourism for the area of the District municipality.
- n) Municipal public works relating to any of the above functions or any other functions assigned to the District Municipality”.

The first of the functions of the District, as listed above, is Integrated Development Planning, a key component of which is the District Spatial Development Framework. This, together with the “bottom up” participation process, identified the need for the Doornkuil Precinct. As a result, it is a function of the District to ensure that the planning of the Doornkuil Precinct is undertaken.

Spatial Planning and Land Use Management Act, August 2013 (Act 16 of 2013)

The recently published Spatial Planning and Land Use Management Act (SPLUMA) provides an overall framework for spatial planning, as outlined in the introduction to the Act reproduced below:

Figure 3: Spatial Planning and Land Use Act (SPLUMA) Introduction

To provide a framework for spatial planning and land use management in the Republic; to specify the relationship between the spatial planning and the land use management system and other kinds of planning; to provide for the inclusive, developmental, equitable and efficient spatial planning at the different spheres of government; to provide a framework for the monitoring, coordination and review of the spatial planning and land use management system; to provide a framework for policies, principles, norms and standards for spatial development planning and land use management; to address past spatial and regulatory imbalances; to promote greater consistency and uniformity in the application procedures and decision-making by authorities responsible for land use decisions and development applications; to provide for the establishment, functions and operations of Municipal Planning Tribunals; to provide for the facilitation and enforcement of land use and development measures; and to provide for matters connected therewith.

Spatial Planning and Land Use Management Act (Act 16 of 2013)

Municipal Planning and Performance Management Regulations (Government Gazette No. 2605, 24 August 2001)

These Regulations specify that a Spatial Development Framework (SDF) reflected in a municipality's IDP must:

- a) Give effect to the principles contained in Chapter 1 of the Development Facilitation Act (DFA), Act 65 of 1995.
- b) Set out objectives that reflect the desired spatial form of the Municipality.
- c) Contain strategies and policies regarding the manner in which to achieve the objectives.
- d) Set out basic guidelines for a land use management system in the municipality.
- e) Set out a capital investment framework for the municipality's development program.
- f) Contain a strategic assessment of the environmental impact of the spatial development framework.
- g) Identify programmes and projects for the development of land within the municipality.
- h) Be aligned with the spatial development frameworks reflected in the IDPs of neighbouring municipalities.
- i) Provide a visual representation on the desired spatial form of the municipality.

As a direct result of the District IDP and SDF for Sedibeng, the Doornkuil RPP will need to explicitly align with and support the above listed points.

The Gauteng Spatial Development Framework, 2011

The Gauteng Spatial Development Framework has a number of aspects that need to be taken into account when developing the Doornkuil RPP. In particular, this framework is "premised on building Gauteng as a City Region that allows agriculture to provide a link between rural and urban economic development, shaped by infrastructure led investment". The framework seeks to:

- a) Provide a clear future provincial spatial structure that is robust to accommodate growth and sustainability.
- b) Specify a clear set of spatial objectives for municipalities to achieve in order to ensure realisation of the future provincial spatial structure.
- c) Propose a set of plans that municipalities have to prepare in their pursuit of these objectives.

- d) Provide a common language and set of shared planning constructs for municipalities to use in their planning processes and plans.
- e) Enable and direct growth.

In line with the Gauteng SDF, the Doornkuil RPP must take into account all of the above. In particular, its strategic location must be taken into account for development, not only for the Municipalities within which it is located (Midvaal and Sedibeng) but for the Gauteng Province.

National Environmental Management Act (NEMA) (Act 107 of 1998), Environmental Conservation Act (Act 73 of 1989) & National Environmental Management Air Quality Act (Act 39 of 2004)

The above environmental legislation requires that due cognisance be taken of environmental factors in any proposed development. The Acts, in particular NEMA, outline the procedures for environmental authorisation including that, where required, Environmental Impact Assessments are to be undertaken for approval by the responsible department. The Doornkuil RPP must take into account the protection of environmentally sensitive areas some of which are currently under pressure.

Mineral and Petroleum Resource Development Act (Act 28 of 2002)

The Act requires that consent to mineral rights be granted by the Department of Minerals and Energy before land is developed.

Water Services Act (Act 108 of 1991)

This Act allows the municipality to divert a river course for the construction of structures within a flood line. No development on affected land can take place without the approval of a municipality.

National Land, Transport Act (Act 22 of 2000)

The Act authorizes the Department of Transport to proclaim road alignments for national and provincial roads. No development may occur on land earmarked for such road development. A number of main routes pass through the Doornkuil functional area.

Subdivision of Agricultural Land Act (Act 70 of 1970)

The Act restricts subdivision of land proclaimed as agricultural in terms of the Act. Ministerial consent must be obtained for subdivision of such land.

National Heritage Resources Act (Act 25 of 1995)

The Act does not allow any developments to occur on land proclaimed as a heritage resource without prior approval of the responsible authority (Provincial Heritage Resources Agency).

National Parks Act (Act 57 of 1976)

The Act sets aside areas to be proclaimed as national parks. These lands may not be developed at all.

The Housing Act (Act 107 of 1997)

This Act, through the Department of Housing, provides for the development of a housing programme and the identification of areas for low income housing. The act promotes the establishment of high density areas. As part of the proposed conurbation for Sedibeng, Doornkuil may be directly affected by the provisions of this act

3.3 Legislative and Policy Key Issues

From an analysis of the legislative and policy context, the emerging key issues for the Doornkuil RPP can be summarized as follows:

1. Doornkuil is strategically located both for the Sedibeng District and the Gauteng Province. As a result, planning needs to take into account policies that support inherent strengths and intrinsic potentials of the area across municipal and provincial boundaries which will require adherence to a range of policy and legislative frameworks.
2. Current disjointed policies need to be reformulated to address the development of this strategically located area as a functional entity.
3. Law enforcement needs to be improved, particularly with regard to environmental legislation.
4. Policy and strategy is required to reinforce this area as a strategic part of the Sedibeng District, a “functional area” within Gauteng Province and an integral part of the Conurbation as part of the proposed Sedibeng Metropolitan area.

4. Location Contextual Perspective

4.1 Doornkuil Location Context

Doornkuil is situated in the Sedibeng District Municipality, which is one of two District municipalities in Gauteng. The other is the West Rand District Municipality, which is situated directly north west of Sedibeng.

Sedibeng is located on the southern boundary of Gauteng and links Gauteng Province to the Free State Province. The District consists of three local municipalities, namely Lesedi in the east, Midvaal (which extends from the Vaal Dam in the south to the boundaries of Ekurhuleni and Johannesburg Metropolitan Municipalities in the north) and Emfuleni Local Municipality in the south west.

Sedibeng covers the entire southern area of Gauteng Province, extending along a 120 km axis from east to west. The District land mass is 4 630km² of which Emfuleni measures 1 276km² (27.6%), Midvaal measures 2 312km² (49.9%) and Lesedi 1 042 km² (22.5%).

The total population of the District is 916 484 (Census 2011, STATS SA). Lesedi has a population of 99 520, Midvaal 95 300 and Emfuleni 721 663. The population density of the District as whole is at 198 people per km². The population density of Emfuleni is the highest in the District at 565 people per km² with Midvaal population density at only 41 people per km² and Lesedi with 95.5 people per km².

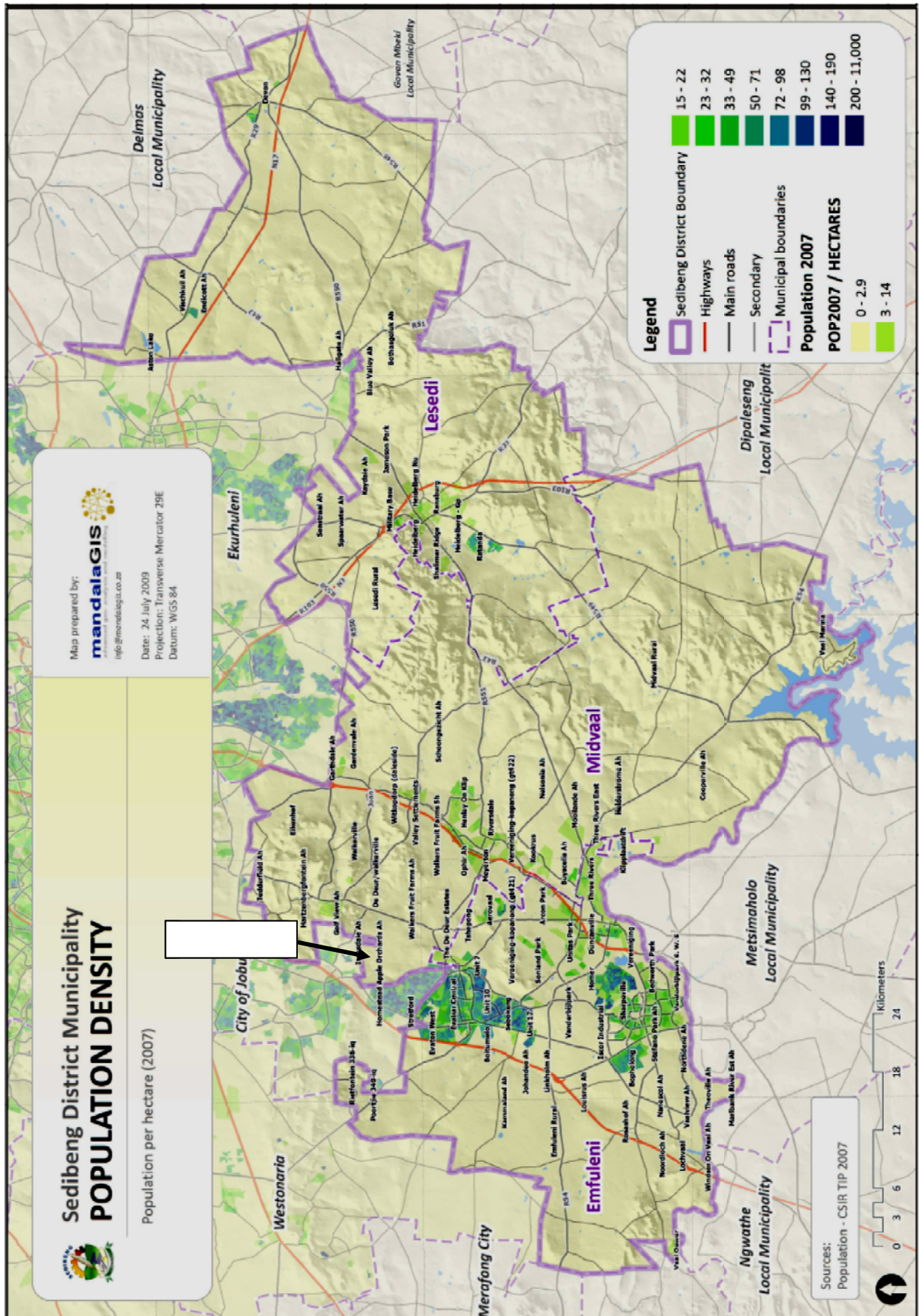
Approximately 78.7% of the District population resides in Emfuleni, with Lesedi having only 10.9% and Midvaal 10.4% of the population of the District.

In excess of 90% of the population of Emfuleni resides within the triangle formed by Vereeniging, Vanderbijlpark and Sebokeng/Evaton. Only 30 percent of the District's population resides outside of this triangle. The Sedibeng District SDF, currently being finalised, proposes that this triangle be extended to form a conurbation for the proposed Metropolitan Municipality and that Doornkuil form part of this Conurbation.

The Contextual Key Issue with regard to population is that while Doornkuil currently has a very low population density, it is in an area that will grow rapidly within the next few years. This is due to its location within the proposed conurbation of the Sedibeng Metropolitan area, being immediately north of the proposed Savanna City and east of Orange Farm.

The map overleaf illustrates the three local municipalities in the District and the population density, followed by further information on roads and Savanna City.

Map 4: Population Density



Doornkuil is well connected via road to the rest of Gauteng and nationally.

Major national and provincial roads traversing the municipal area include:

- The R59, a north/south route that links Vereeniging with Alberton and the N12 in Johannesburg. This route is situated in the central part of Midvaal Local Municipality area.
- The N1, which is the major national north/south National Road linking Messina, on the northern border of South Africa, to Cape Town in the south and which passes the Midvaal area adjacent to the western boundary of the municipality.
- The N3, which is the major transport link between Gauteng Province and Ethekewini (Durban) and which passes through the Midvaal area a few kilometres to the north-east border of the municipality;
- The R82, a secondary north/south route linking Vereeniging and Johannesburg via Walkerville, situated in the western parts of Midvaal.
- The M61, a secondary north-south route running parallel to the R59 linking Vereeniging and Alberton via Meyerton, Randvaal and Klipriver.
- The R42, which runs east/west through Midvaal and links Meyerton with Heidelberg and the N17 in the Lesedi Local Municipality.
- The R551, an east/west route between the N1 and the Suikerbosrand Nature Reserve. This road merges with the R42 at the Nature Reserve.
- The R550, an east-west link between the N3, R59 and R82 in Midvaal.
- The R54, which links Vaal Marina to the R82 in Midvaal

A notable factor regarding the above roads is the predominance of north/ south routes and the lack of major east/ west routes.

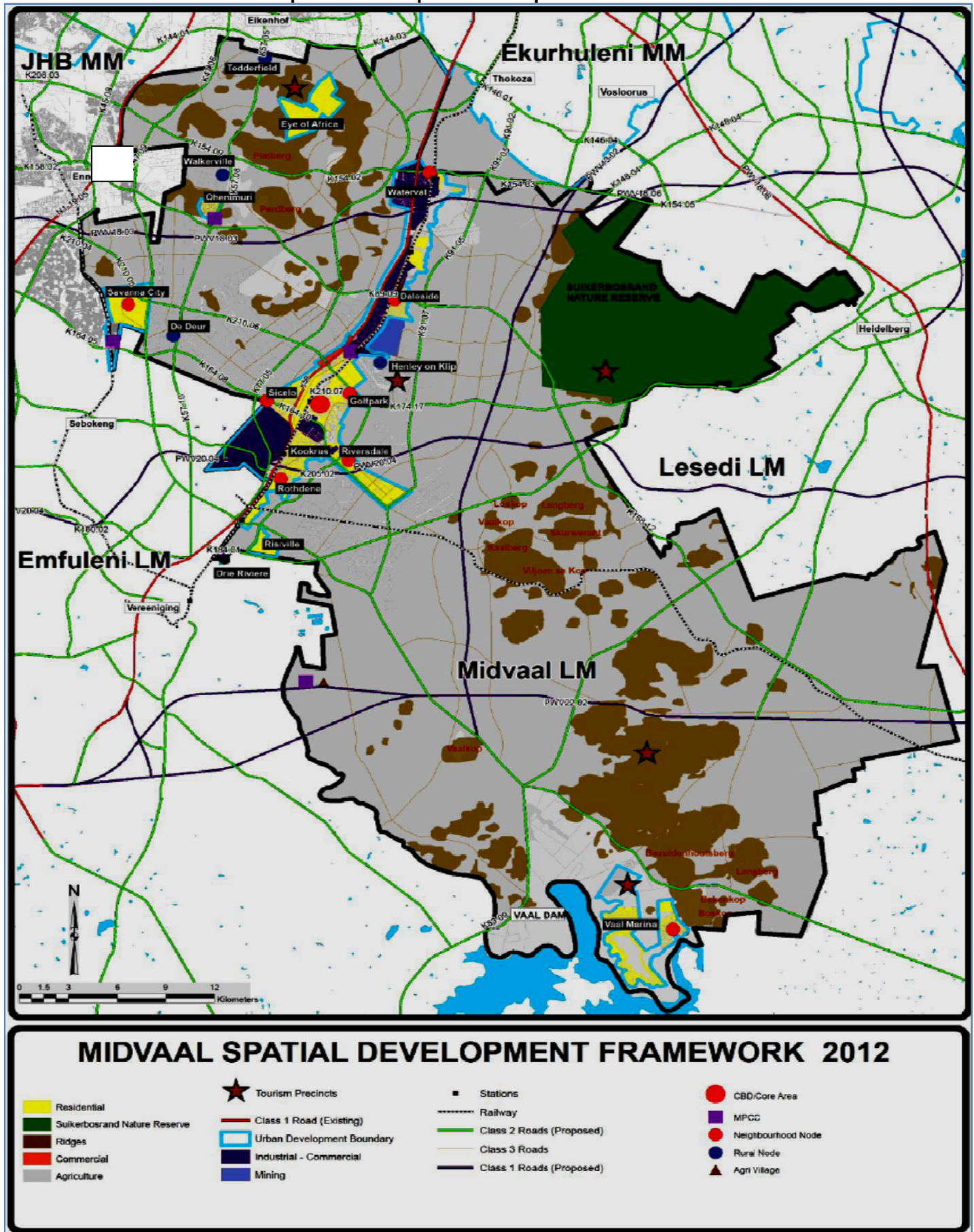
Of particular importance for the development of Doornkuil is the planned R47, which will be on the eastern boundary of Doornkuil, linking Doornkuil to Savanna City to the south and other parts of Gauteng via the R82 to the North.

The Gauteng Spatial Development Framework has identified the importance of the R59 corridor to link Johannesburg, Ekurhuleni, Meyerton and Vereeniging in the south. The close proximity of Johannesburg to Midvaal, linked by the R59, R82, M61 and N1, has contributed to the development of residential areas in the north of Midvaal as dormitory areas for people working in Johannesburg. Recently, industrial/commercial areas have also developed in the northern part of the Midvaal Municipality adjacent to the R59 route, which takes advantage of the accessibility, low land costs and proximity to the Johannesburg, Tshwane and Ekurhuleni Metropolitan areas.

Even though Doornkuil is technically in Midvaal, it is functionally linked to the Johannesburg Metropolitan area because of its proximity to Orange Farm and it is functionally linked to Emfuleni due to its proximity to Sebokeng and Evaton.

The spatial structure of the Midvaal Area, extracted from the Midvaal SDF, is illustrated overleaf.

Map 5: Midvaal Spatial Development Framework



Savanna City is a major new development planned for the area south of Doornkuil. Savanna City. It will occupy 142 hectares and will have over 18 000 residential units.

The key land use components of Savanna City, as outlined in the Savanna City Development Report Executive Summary, are reproduced below:

- 18 399 Housing units consisting of a minimum of 70% housing units that will meet the Government's "Breaking New Ground" Strategy and the Financial Sector Charter/Finance Linked (GAP market). The remaining 30% will be the open bonded market.
 - 5517 Fully subsidised units;
 - 5518 FLISP units;
 - 4729 Bonded units
 - 2635 High density, sectional title units.
- 16 Schools (12 erven); 61.89 ha
- 32 Institutional sites including Clinics, crèches and churches:
 - 14 Institutional (general community facilities), 19.14ha;
 - 1 Special (Community facility & municipal), 1.68 ha;
 - 9 Institutional (crèche), 4.59 ha; and
 - 8 Institutional (Church), 5.34 ha
- 9 Municipal facilities and municipal service (substation) sites, 18.35 ha
- 9 Business and retail facilities (mixed use facilities, including modal transfer sites). Maximum development floor area (including possible residential units) 115.14 ha (subject to detail design on site);
- 21 Parking and access control (Special zoning),
- 28 Private Open Space erven (including servitude and pond areas)
- 111 Public Open Space erven (parks, servitude areas, ponds)
- 7 Conservation areas
- 3 Railway reserves zoned "Special", 8.85 ha; and
- 16 private road sections.

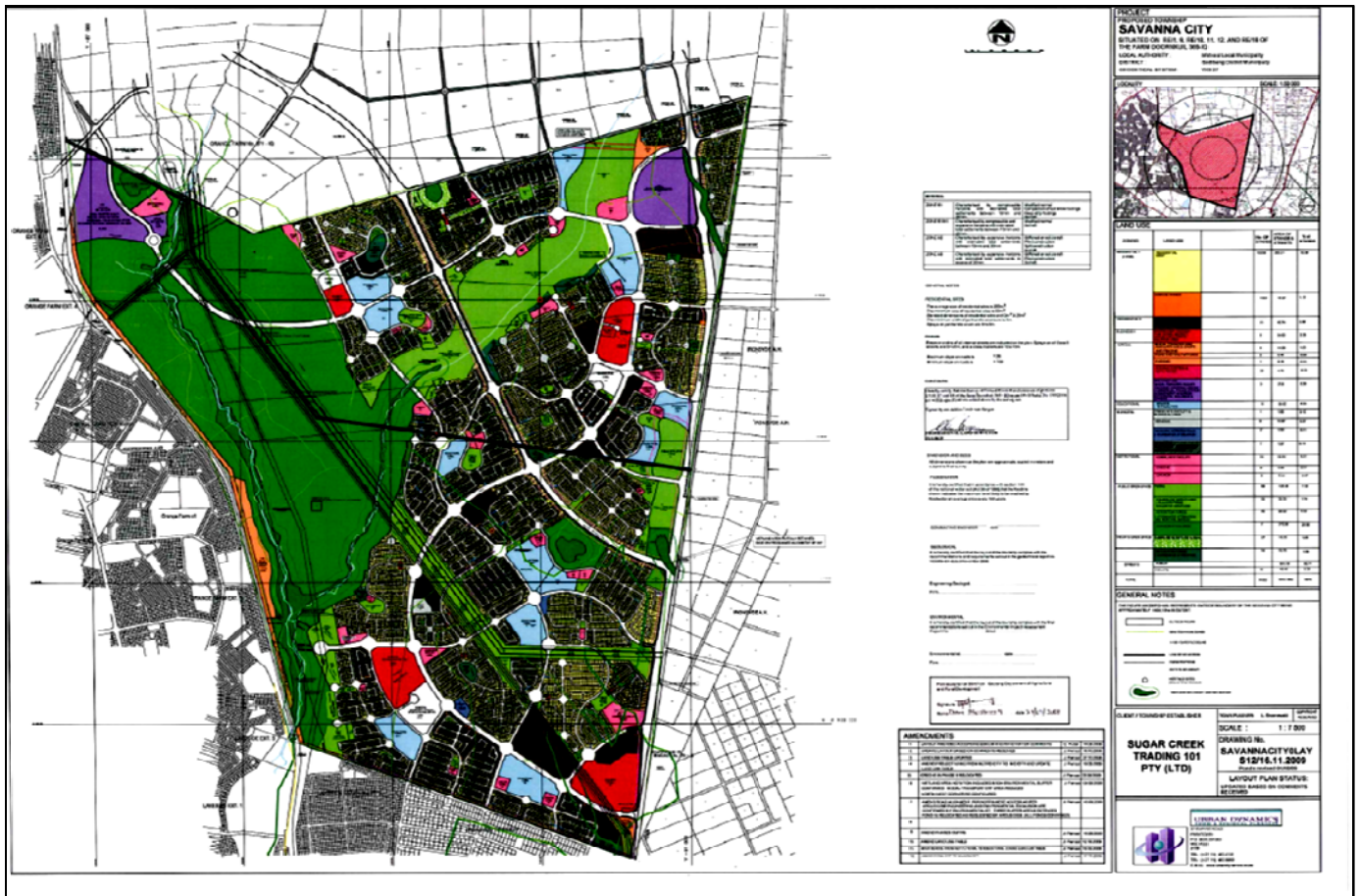
Doornkuil will effectively function as part of Savanna City in terms of physical infrastructure, public sector institutional arrangements and social and economic linkages.

This major development, together with the high populations of Orange Farm directly to the west of Doornkuil and Evaton and Sebokeng to the south, place Doornkuil in the midst of a high population area.

This fact, together with its location within the conurbation described in the Sedibeng District SDF, reinforces Doornkuil's strategic location and need for a Precinct Plan

The approved Township Layout for Savanna City immediately south of Doornkuil is illustrated overleaf:

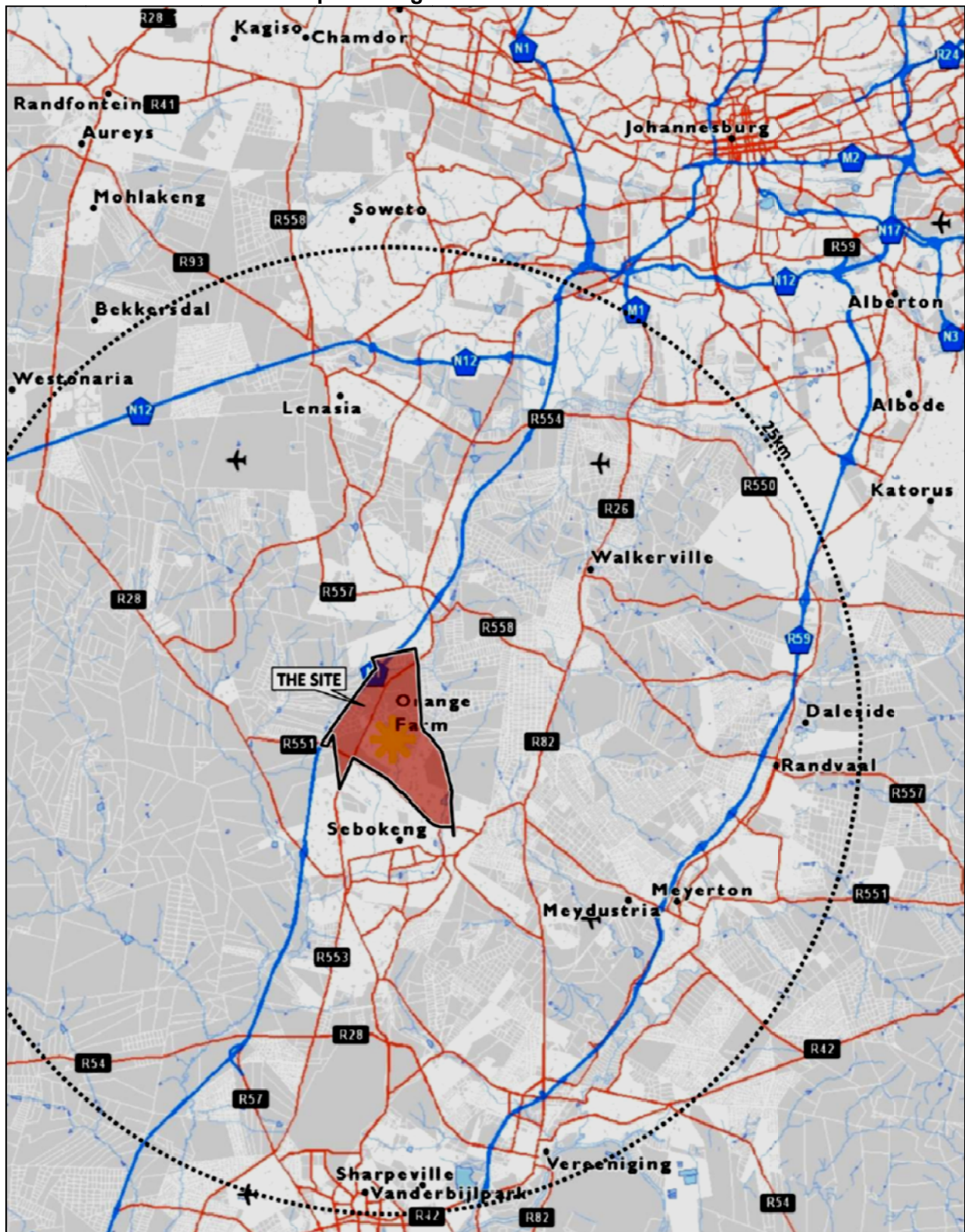
Map 6: Savanna City



Doornkuil also falls within the “Gauteng City Region” as proposed by Gauteng Provincial Government and documented by the National Planning Commission in the Gauteng 2055 Discussion Document of May 2013.

Orange Farm is a partially formalized area with a major concentration of over 200 000 people on approximately 3 000 hectares immediately west of Doornkuil, about 38km south of the urban areas of Johannesburg. An “Integrated Development Framework and Comprehensive Business Plan” has been prepared for Orange Farm by the Johannesburg Development Agency (JDA) in collaboration with the Department of Development Planning and Urban Management (DPUM) of the City of Johannesburg. This project confirmed that Orange Farm is part of the Evaton Sebokeng functional area of which Doornkuil forms part. The functional area identified by the project is illustrated on the following plan from the report.

Map 7: Orange Farm Functional Area



The location of Doornkuil within the conurbation, forming the urban core of the proposed Metropolitan area, as contained in the Sedibeng District SDF, is illustrated overleaf.

Work



4.2 Contextual Key Issues

The majority of the population of Sedibeng (79%) is concentrated in the Emfuleni urban nodes of Vanderbijlpark, Vereeniging, Sedibeng and Evaton, which will be part of the new conurbation for the proposed Metropolitan Municipality. Doornkuil is located within the “infill” area of this new conurbation. In addition, Doornkuil is immediately south of the planned new Savanna City, east of Orange Farm and north of Evaton and Sebokeng, placing it in the midst of existing and planned high population areas. Doornkuil is also easily accessible, being close the R82 movement corridor linking Johannesburg Metropolitan Municipality and the primary nodes of Sedibeng with the project area. In addition, the planned R47 will be on the eastern boundary of Doornkuil.

Key Issues

- 1. Doornkuil is in the middle of a planned high population region.**
- 2. The project area is functionally linked to areas within the Johannesburg Metropolitan Municipality, in particular Orange Farm, as well as Midvaal and Emfuleni Local Municipalities.**
- 3. The project area has good accessibility through existing transport infrastructure, in particular the R82, N1, R59 and the planned R47. The site is also adjacent to stations on the major north south rail line linking the area to the centre of Johannesburg and the other parts of Gauteng**
- 4. Due to location and accessibility, the area is ideal for the provision of regional services and amenities.**
- 5. Doornkuil is within the new planned urban conurbation of the proposed Sedibeng Metropolitan Municipality.**
- 6. The project area is undeveloped yet provided with development infrastructure such as water, electricity and major road networks.**

5. Economic & Social Perspective

5.1 Economic Performance

Despite being within the planned conurbation, the Doornkuil area is largely undeveloped and typical of a “peri-urban” area. The local economy is directly linked to the economy of Gauteng Province and the Sedibeng District.

Various studies have predicted different economic growth rates for Gauteng ranging from 2.5% to 6% per year, as illustrated in the extract from the final draft of the Gauteng 25 Year Integrated Transport Master Plan (ITMP25) of 5 August 2013.

Similar to the population projections, various studies were referenced on economic growth forecasts. These references are further unpacked in the GTIP5. Economic forecasts are more complicated than population forecasts because of the exposure to the global economy. The fact is the economic outlook changes almost on a daily basis and is substantially more volatile than the movement of people. However, although the short-term outlook changes quickly, the longer term growth outlook is substantially more stable and this is important from a planning perspective.

The GTS study predicted a somewhat slower economic growth ranging between 2 and 5 percent, where the baseline outlook was 2.5 percent. This study was conducted in the years remembered for its pessimism; huge data revisions, and lack of capacity at StatsSA. The NATMAP study a few years later was conducted during the economic boom years and had a baseline economic growth rate of 6 percent. Since then a global recession was experienced. A base-line forecast at March 2012, forecasted a moderate growth rate of 5 percent, which corresponds with the 2011 Gauteng Provincial Economic Review and Outlook (PERO).

ITMP25 August 2013

Based on the above, the expected average growth rate for Gauteng over the next few years will be in the order of 5%. While the economic growth of Sedibeng District, in which Doornkuil is situated, has lagged behind the rest of Gauteng, as documented below, **it can be expected that with the increased focus on the Doornkuil area and the very low base from which it is starting, a growth rate of between 2.5 to 6% is achievable.**

5.2 Population

As indicated previously, there are currently very few people within the Doornkuil project area. However this is expected to change dramatically over the next few years.

The Sedibeng District Municipality has an overall population of 916 484 (Statistics South Africa Census 2011), made up of three local municipalities, namely:

- Emfuleni Local Municipality with a population of 721 663
- Lesedi Local Municipality with a population of 99 520
- Midvaal Local Municipality with a population of 99 300

The gender and age breakdown of the population is as follows:

Figure 4: Table of Population Age Groups

AGE	MALE	FEMALE	TOTAL
0 - 19	155907	156281	312 188
20 - 34	137866	128035	265 901
35- 59	106856	134653	241 509
60 – 85+	32667	42159	74 826
TOTAL	455 358	461 126	916 484

(Source: Statistics South Africa Census 2011)

According to the current statistics, Emfuleni has 79% of the total District population. The population breakdown indicates a young population, in which people under 19 years of age constitute 34% of the total population. People under the age of 34, constitute 63% of the population of the District. The dependent population, (0-19 and 60-85 +) constitutes 42% of the total District population, which is a very high dependency ratio. The very young population has both advantages and disadvantages in that it does provide for a large potential work force. However, given the low level of the economy and poor education levels, this could lead to increased levels of poverty. The gender breakdown is split almost equally between males and females, with the males constituting 49.7% and females 50.3%. The higher percentage of females is generally an indicator of a weak economy in which males leave family homes to seek work elsewhere.

Figure 5: Levels of Education

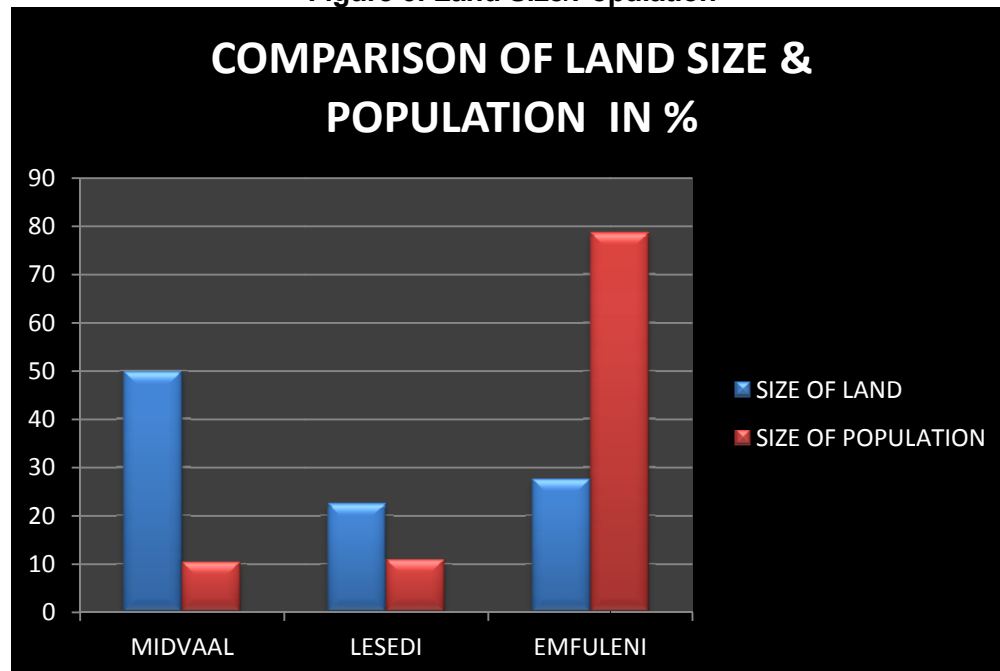
EDUCATIONAL LEVEL	MALE	FEMALE	TOTAL
Grade 0 – 7	104544	105466	210010
Grade 8 – 11	137321	140051	277372
Grade 12	98817	104165	202982
N1 – N3	6041	2974	9015
N4 – N6	5782	3841	9623
Certificate with less than Grade 1	835	849	1684
Diploma with less than Grade 12	889	941	1830
Certificate with Grade 12	5060	6118	11178
Diploma with Grade 12	7117	8512	15629
Higher Diploma	6738	7827	14565
Post Higher Diploma	1505	1078	2583
Masters			
Bachelors Degree	4860	5102	9962
Bachelors Degree and Post Graduate	2544	1739	4283
Honours Degree	2100	2328	4428
Maters and PhD	1785	1150	2935
Other	1444	1240	2684
No schooling	15723	17942	36349
TOTAL	403102	411327	814429

(Source: Statistics South Africa Census 2011)

The above table indicates the following:

- 4.46% of the population has no schooling at all.
- 25.7% of the population may be functionally illiterate as it has less than grade 7 schooling.
- Far more males have technical education than females.
- The presence of people with a postgraduate qualification (1.75%) is high due to the presence of two universities in Emfuleni.

Figure 6: Land Size/Population



(Source: Statistics South Africa Census 2011)

Midvaal constitutes approximately 50% of the land mass with only 10.8% of the population. Lesedi has 10.85% of the population with Emfuleni having 79% of the total District population.

The implications for Doornkuil is that the Precinct Plan must take into account the regional need for accommodation for a young population with a high dependency ratio.

5.3 Income and Employment

The Income per Month table below indicates very low incomes for the District.

Figure 7: Income Per Month

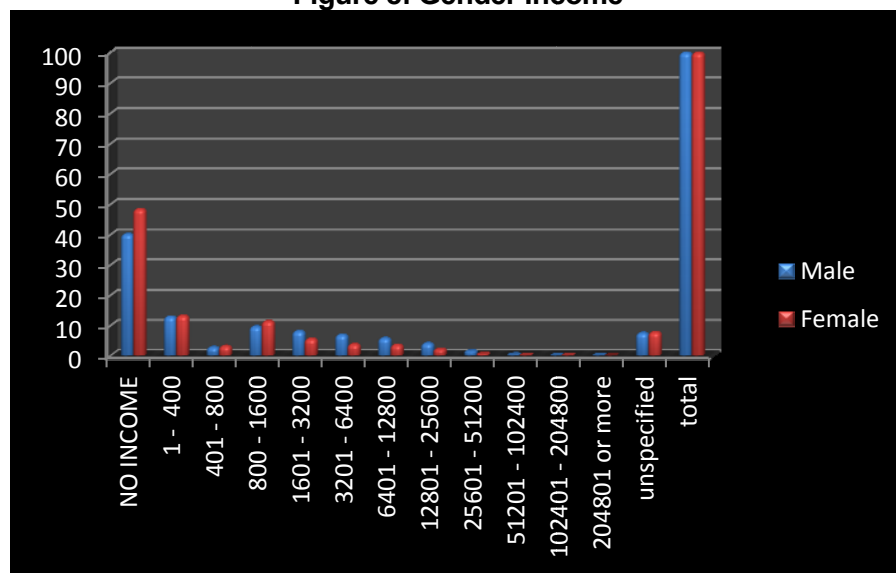
MONTHLY INCOME	MALE	FEMALE	TOTAL
NO INCOME	23080	64606	87 686
1 - 400	57571	60315	117 886
401 - 800	12726	14519	27 245
801 - 1600	43086	52125	95 211
1600 - 3200	36144	25378	61 522
3201 - 6400	31048	17138	48 186
6401 - 12800	26027	16585	42 612
12801 - 25600	18372	9933	28 305
25601 - 51200	7088	2721	9 809
51201 - 102400	1895	512	2407
102401 - 204800	587	339	926
204801 or more	440	190	630
unspecified	33724	35410	69 134
Total	299 450	305 301	60 4296

(Source: Statistics South Africa Census 2011)

The above table indicates that 54% of the economically active population either does not earn an income or is paid less than R1 600 per month. Further, 11.4% of the active population is described as unspecified, which generally means these people are mainly engaged in the informal sector of the economy.

From the bar chart below, derived from the 2011 national census for areas within the Sedibeng District, 40.1% of males and 48.4% of females have no income in Sedibeng District. Further, 15.7% males and 16.4% females earn less than R800 per month, with 9.6% of the males and 11.4% the females earning between R801 to R1 600 per month. Approximately 65.4% males and 76.2% earn less than R1 600 per month. This indicates low income levels and functionally high poverty levels.

Figure 8: Gender Income



The implication for Doornkuil based on the income statistics for Sedibeng is the high demand, particularly by females, for basic employment and skills development. This demand is reinforced further by the proximity of Orange farm, which forms part of the functional area.

5.4 Economic Sectors

The Sedibeng IDP section on the Economy notes that the largest economic sector is the Services Sector (57.2%), followed by manufacturing (30.8%), as illustrated in the extract below.

More than half of the economy is in the services sector (57.2% in 2010). The biggest contributors are: manufacturing (30.8%), Government (17.8%), Business Services (17.8%), and trade (13.7%). The largest sector, manufacturing shrunk by R1.374 million (6%). The following sectors experienced the greatest growth respectively; Government, business services, construction and mining. The figure below shows the change in GVA per sector for 2006 and 2010.

Of concern is that the major growth has occurred in the Government Sector and that trends present since 2006 are continuing.

A breakdown of the major economic sectors and their relative contributions to the Sedibeng District economy from 2006 to 2009 illustrated below.

Figure 9: Sedibeng District Economic Activity Per Sector Per Year 2001-2009

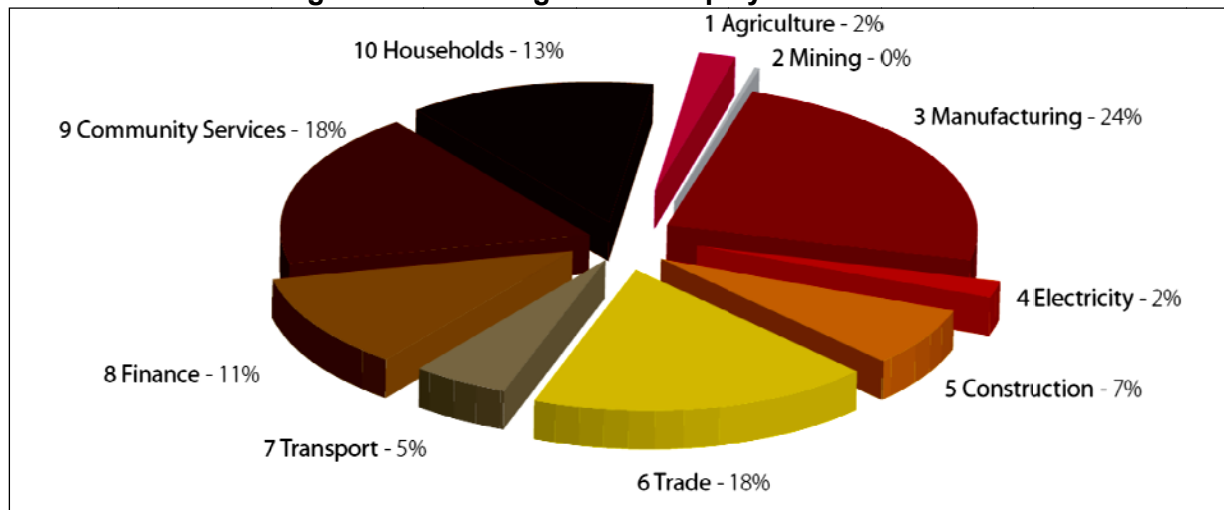
	2001	2002	2003	2004	2005	2006	2007	2008	2009
1 Agriculture	1.6%	2.3%	1.9%	1.6%	1.3%	1.4%	1.5%	1.6%	1.8%
2 Mining	0.3%	0.3%	0.2%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%
Primary Sector	1.8%	2.6%	2.2%	1.9%	1.7%	1.8%	1.9%	2.0%	2.1%
3 Manufacturing	43.2%	46.0%	44.5%	44.0%	43.7%	43.7%	45.5%	46.0%	40.8%
4 Electricity	3.8%	3.8%	3.8%	3.6%	3.7%	3.6%	3.3%	3.2%	3.3%
5 Construction	2.2%	2.1%	2.3%	2.4%	2.5%	2.8%	2.9%	3.1%	3.5%
Secondary Sector	49.2%	51.9%	50.6%	50.0%	49.8%	50.0%	51.7%	52.3%	47.7%
6 Trade	8.7%	8.0%	8.1%	8.2%	8.1%	8.0%	7.5%	7.1%	7.4%
7 Transport	5.2%	4.9%	4.9%	5.1%	5.1%	4.7%	4.4%	4.2%	4.4%
8 Finance	12.3%	11.9%	12.2%	12.9%	13.3%	14.5%	14.9%	15.0%	16.0%
9 Community Services	22.7%	20.7%	22.0%	21.9%	22.0%	20.9%	19.6%	19.4%	22.3%
Tertiary Sector	48.9%	45.5%	47.2%	48.1%	48.5%	48.2%	46.4%	45.7%	50.2%
Total Industries	100	100	100	100	100	100	100	100	100

Source: Global Insights 2009

Despite a large portion of the Sedibeng District being high potential agricultural land and in close proximity to major markets, the Primary Sector (agriculture and mining) does not play a significant role in the District, with agriculture contributing less than 2% to the economy and, together with the mining sector, employing less than 2% of the workforce over more than the last 10 years.

This lack of performance in the agricultural sector is despite high potential agricultural land in the area. Figure below shows less than 2% of the jobs in the district are in the agricultural sector.

Figure 10: Sedibeng District Employment Per Sector



A small amount of farming, in particular commercial chicken hatcheries, occurs in and around the Doornkuil area. Prior to Orange Farm becoming a major residential area, it was used predominantly for commercial chicken farming. Sedibeng has high agricultural potential land and is an important agricultural resource for Gauteng. The area under commercial farming in the District has decreased from 33% to 32.6% from 2004 to 2010. This decrease has been attributed to many factors, including previous droughts and veld fires in that same period, which reduced the productivity of the land. However, this does not explain the continued decline in this sector as a contributor to the District Economy and why the percentage of land under commercial farming has remained at approximately 33% for over 10 years. The majority of current farming is large scale commercial farming across a range of agricultural products.

Of relevance to Doornkuil is the significant potential that exists for increasing farming activities and agricultural product beneficiation, which is dependent on, amongst other factors, access to finance, markets, and water and waste water sanitation services and, in particular, appropriate institutional arrangements, support and strategy.

The existence of large areas of high potential agricultural land in the District, together with the National Development Plan and Gauteng Economic Growth and Development Strategy focus on Rural and Agricultural Development and Food Security, requires that this sector receives special attention particularly in new projects with agricultural potential such as Doornkuil.

The Sedibeng District IDP has recognised the need for a focus on agriculture and has proposed a number of Agricultural Hubs. **While Doornkuil falls outside of the identified Agricultural Hubs, opportunity still exists to benefit from agricultural product beneficiation and other activities related to agriculture.**

The District is well known for its animal production with some animal farming taking place in and around Doornkuil. Agricultural activities that take place within the District are crop production, including maize, grain, ground nuts, dry beans, sunflower seeds, wheat, sorghum, soya and vegetation. The GVA of the agricultural industry has decreased by 20.3% between 2006 and 2010.

The Gauteng Department of Agriculture (GDARD) has also identified Emfuleni as a Provincial Agricultural Hub close to the Doornkuil site, which reinforces the proposed hubs in the Sedibeng IDP.

There is a limited number of agricultural projects currently in operation within the District that could be a catalyst for further development of this sector, such as:

- The Bantu Bonke project, which is supported by Rand Water
- The Vereeniging Fresh Produce market

Food security is a national priority, the addressing of which is possible in Doornkuil but will require creative approaches that benefit all parties involved.

Appropriate empowered institutional structures, funding and strategy are needed to drive the development of this sector.

5.5 Vacant Non Productive Land within the Urban Boundary

Doornkuil currently forms part of approximately 98 000 hectares of developable land that is vacant in the Sedibeng District, of which 6 200 hectares (including Doornkuil) are within the current Urban Development Boundary. Even though Doornkuil is currently undeveloped, it is located such that it will develop in the short term.

Land ownership remains a very emotive and serious issue and current land reform mechanisms are viewed by many as slow and ineffective. Mechanisms need to be sought for creating benefits for all parties in making this land available for development. This could, for example, include skilling people in the agricultural sector, while allowing owners to develop parts of the land parcels with high development rights with conditions relating to development of the balance of the land.

5.6 Relative Economic Sector Performance

Gross Value Added (GVA), as an economic indicator, is defined as the value of goods produced and services rendered within the boundaries of a region over a period of a year. The GVA reflects the value added by each producer in the production chain.

From the GVA tables for the District, it is clear that manufacturing is the most important contributor to the Sedibeng District economy, followed by the services sector, with Emfuleni Municipality being the strongest Local Authority in the District, contributing in the order of R6 Billion in 2009. However, this contribution has continued to decrease marginally each year since 1996, while the contribution of manufacturing to the local economy in other areas in Gauteng, such as the City of Johannesburg Metropolitan Municipality, has increased each year from R31 billion in 1992 to R45 Billion in 2009.

The strongest sector of the economy declining or remaining the same for an extended period of time is cause for serious concern. The lack of infrastructure capacity, in particular sanitation services, appears to be a contributing factor.

The “Annual Average Growth by Economic Activity” and the “Sector Contribution to GVA” tables reinforce the above concerns, indicating that relative to adjacent local authorities, and compared to the Province as a whole, all sectors of the economy are underperforming and, in many cases, declining. However, what is clear from the Local Contribution to GVA is that Emfuleni Local Municipality makes the strongest contribution to the Sedibeng District Economy.

The “Location Quotient (LQ)” is a measure that provides insight into a region’s sector strengths and development prospects relative to its location. If a region has a location quotient greater than 1.0, it

indicates a potentially self sufficient economy, which exports goods and services of that particular sector/industry. Also, a sector with a Location Quotient greater than one 1.0 is potentially an employment generator. On the other hand, a Location Quotient of less than 1.0 suggests that the economy is a net importer of goods and services from other regions. The Location Quotient for Sedibeng indicates a total Gross Value Added Location Quotient for Sedibeng Local Authorities of 1, which is the same as for other Local Authorities in Gauteng. This suggests that, from a location point of view, Sedibeng is on par with other areas of the Province.

A “Tress Index” is used to quantify diversification/concentration in an economy. A Tress Index of zero represents a totally diversified economy, while a number closer to 100 indicates high levels of concentration or vulnerability to exogenous variables. The Tress Index for the Local Authorities in Sedibeng is substantially above the national average, indicating a “vulnerable economy”.

The lack of diversification of the economy, underutilisation of resources and poor services, in particular sanitation and clean water, contribute to the poor performance of the economy, which in turn contribute to the high levels of poverty in the District.

No matter how poverty is defined, the District has high levels of poverty. At the UN's World Summit on Social Development, the ‘Copenhagen Declaration’ described poverty as “...a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information.” This generally correlates with the World Bank’s “Absolute Poverty Line”, which corresponds to an income equivalent to \$2 a day or less, and Extreme Poverty at \$1 a day or less. This Poverty Line was first defined by the World Bank in the World Development Report of 1990. The population of Sedibeng District is considered to be poor, with just over 34% to 40% of the population living in poverty, depending on which definition is used.

From the Location Quotient of 1, it is clear that Sedibeng, and in particular the Doornkuil area, does not have a location disadvantage compared to other Municipalities in Gauteng, yet the high Tress Index indicates an economy that is not sufficiently diversified and is highly vulnerable.

An important part of the Doornkuil RPP must be to provide regionally relevant economic activities and facilitate diversification of the economy away from the high reliance on the manufacturing and service sectors, which, at this stage, consist largely of low paid workers.

5.7 Economic Key Issues

There is currently no local economic activity of significance in and around the Doornkuil area and the economy of the Sedibeng District is not performing well relative to other areas of Gauteng. This is despite no locational disadvantage, available developable land, high potential agricultural land and tourism facilities and amenities and relatively well developed road and other infrastructure.

A major constraint for the economic growth of the area is the lack of sanitation capacity.

The development of the Doornkuil area is dependent, to a degree, on the expansion of both the Gauteng and the District Economy. However, a well structured Rural Precinct Plan can create locational and other advantages for economic growth.

Key economic issues relevant to Doornkuil for the expansion of the economy include:

- 1. Diversifying the economy to reduce reliance on the manufacturing and services sector prevalent in the District. Building on the underperforming sectors such as agriculture.**
- 2. Building on the intrinsic location advantages of Doornkuil to provide services for the region and across municipal boundaries.**
- 3. Addressing the lack of sanitation services.**
- 4. Considering Doornkuil as an integral part of both the Sedibeng and Gauteng economies as a component of the Gauteng City Region.**
- 5. Providing infill development within the envisaged urban conurbation. (ie not planned as a rural area)**
- 6. Utilising private sector and public sector resources for the development of the area.**
- 7. The development of Savanna City is expected to provide opportunities for and a boost to the local construction industry in and around Doornkuil.**
- 8. Building on the functional economic relationships with the surrounding areas.**

6. Environmental Perspective

6.1 Environmental Areas

The District as a whole is currently facing serious pollution challenges that include air, soil and water pollution. The District is generally characterised by poor air quality, particularly within the western and central parts. The river systems and water bodies are polluted by the mining and industrial activities and often by sewage spills/overflow. The Kliprivier is one of the most polluted rivers in Sedibeng, as a result of mining and industrial activities in the upper catchments, outside the borders of Sedibeng. (Strategic Environmental Focus, 2008). The Kliprivier provides a habitat to birds and other small animals. The Vaal Dam is affected by pollution from urban and industrial run-offs that drain into the dam. The Vaal Dam is currently the most important water source in Gauteng, with a capacity of 2 536 million cubic metres. The water from the Vaal Dam supplies the mining, industrial, agricultural and other activity sectors within the Region, in Gauteng as well as in Rustenburg. Pollution is mostly found within the industrial areas of Vanderbijlpark/Vereeniging, the Heidelberg industrial area, informal settlements, slimes dams and close to waste water treatment works and on landfill sites.

Numerous Red Data species have been identified in the District and are considered to be in danger of being negatively affected. These species include bird, bullfrog, and invertebrate and plant species.

A very serious concern is the lack of effective environmental law enforcement, which allows the pollution of the air, water and soil in the District to continue.

Doornkuil has a river that runs across the site on the western side of the property and transverses the site diagonally from south to north east. In addition, there are four dams, two larger ones along the river in the south west of the site as illustrated in the Site features Map (Map 10). There is also an area that has been stripped of top soil to access material for brick making which has been marked as “quarry” on the Site Features Map overleaf.

The area within the flood plain of the river on the western side of the site and the two larger dams along this river are expected to be environmentally sensitive.

Doornkuil does not appear to have any highly sensitive environmental areas incorporating red data species.

Prior to development, normal procedures in terms of the National Environmental Act (NEMA) will have to be followed to obtain environmental authorisation. It is believed that there may be coal deposits in the Doornkuil area, which, if mined, could have major environmental implications for the site and surrounding areas.

Should the potential for coal mining in the Doornkuil area be pursued, special care needs to be taken to ensure compliance with environmental legislation and additional planning controls should be incorporated into the Doornkuil RPP to ensure that the area is not negatively impacted.

6.2 Environmental Key Issues

The Key Environmental Issues for the Doornkuil area as follows:

1. The need for the effective management of pollution.
2. Ensuring compliance with the proposed Environmental Management Frameworks (EMF) for the Local Municipality and the District.
3. Protection of sensitive areas, flora and fauna, should these be identified within Doornkuil.
4. Ensuring environmental law enforcement and compliance in terms of the National Environmental Management Act and other relevant legislation.
5. Inclusion in the proposed RPP planning guidelines and controls to ensure that the area is not negatively affected aesthetically or in other ways from development activities, in particular heavy industry, coal mining and open cast quarries.

7. Infrastructure Perspective

Currently Doornkuil is poorly serviced in term of availability of bulk services. However, with the planned development of Savanna City, plans have been made to bring services to the area.

This section addresses the following:

1. Water and Sanitation
2. Transportation
3. Planned roads and corridors
4. Electricity
5. Infrastructural key issues.

7.1 Water & Sanitation

The Sedibeng District Municipality's water and sanitation services are distributed by the Municipalities at the local level. However, bulk water is supplied to each Municipality by Rand Water.

The sanitation infrastructure in the Sedibeng District is old and requires high maintenance. It is working at capacity and will not be able to deal with future planned development. It is estimated that by 2025, the region will have to be able to process 398 Ml/day, of which 150 Ml/day would have to be provided by a new waste water works. (Sedibeng District Municipality Proposed Regional Sanitation Scheme: Technical Report, Arcus Gibb & Iliso Consulting, 2009)

Based on the above, the Sedibeng Regional Sanitation Scheme (SRSS) was proposed, for which the first phase which is the upgrading of components of the current system has commenced.

The Midvaal Local Municipality of which Doornkuil forms part, water is supplied by Rand Water. The main supply points are Meyerton, Oheni Muri and Vaal Marina. The Midvaal's water and sanitation supply is currently under pressure and may not be sufficient to provide adequate supply to the currently envisaged developments, unless services are accessed from the adjacent municipalities.

7.2 Road Transport Network

The road network in the vicinity of Doornkuil is well established, being in close proximity to the major N1 national route and close to the R82 north south access corridor, which is

currently being upgraded. The proposed R47 along the eastern boundary of the site will enhance the already good accessibility of the site.

The Sedibeng District Municipality has infrastructure for 3 modes of transportation, namely road, air and rail.

Sedibeng District Municipality has a relatively well developed road transport network and public transport system, which currently lacks east/west routes. However, this is addressed in the proposed strategic road and rail network of ITMP 25.

A Bus Network operates on the following routes:

- 1) Vereeniging to Sebokeng, along the K59 and the K45 routes.
- 2) Vereeniging to Meyerton.
- 3) Evaton to Meyerton

Mini-bus taxi networks operate between the CBDs throughout the municipal areas. These routes run mostly between the CBDs into residential and industrial townships.

National Roads

National roads in the District are:

1. The N3 national freeway, which connects Gauteng, Free State and KwaZulu Natal.
2. The N17 national road, which links Gauteng, southern Mpumalanga, KwaZulu Natal and Swaziland.

Although technically not within the District, the N1 is very close to Doornkuil and provides a major access route for commuter and freight transport.

Provincial and Municipal Roads

The provincial and municipal roads for Midvaal Local Municipality, within which Doornkuil is situated, are listed below:

1. The R59, north/south route links Vereeniging with Alberton and the N12 in Johannesburg
2. The R82 north/south route links Vereeniging and Johannesburg via Walkerville
3. The M61 north/south route runs parallel to the R59, linking Vereeniging and Alberton via Meyerton, Randvaal and Kliprivier.
4. The R42 east/west route through Midvaal, links Meyerton with Heidelberg.
5. The R551 east/west route between the N1 and the Suikerbosrand Nature Reserve
6. The R550 east/west route between the N3, R59 and the R82
7. The R54 route linking the Vaal Marina to the R82

7.3 Air Transportation

There are a number of private air transport services that operate through the following airfields:

1. The Aeroval Airport, situated on the boundary between Midvaal and Emfuleni, has two runways and accommodates approximately 64 aeroplanes.
2. The Tedderfield Airport, situated in Midvaal, is privately owned and is used mostly for recreational purposes. It also provides an training academy for pilots.
3. The Vanderbijlpark airport is located in Bophelong in Emfuleni.
4. There is a proposed new regional airport near the proposed Freight Hub near Vanderbijlpark, however this airport may not be developed.

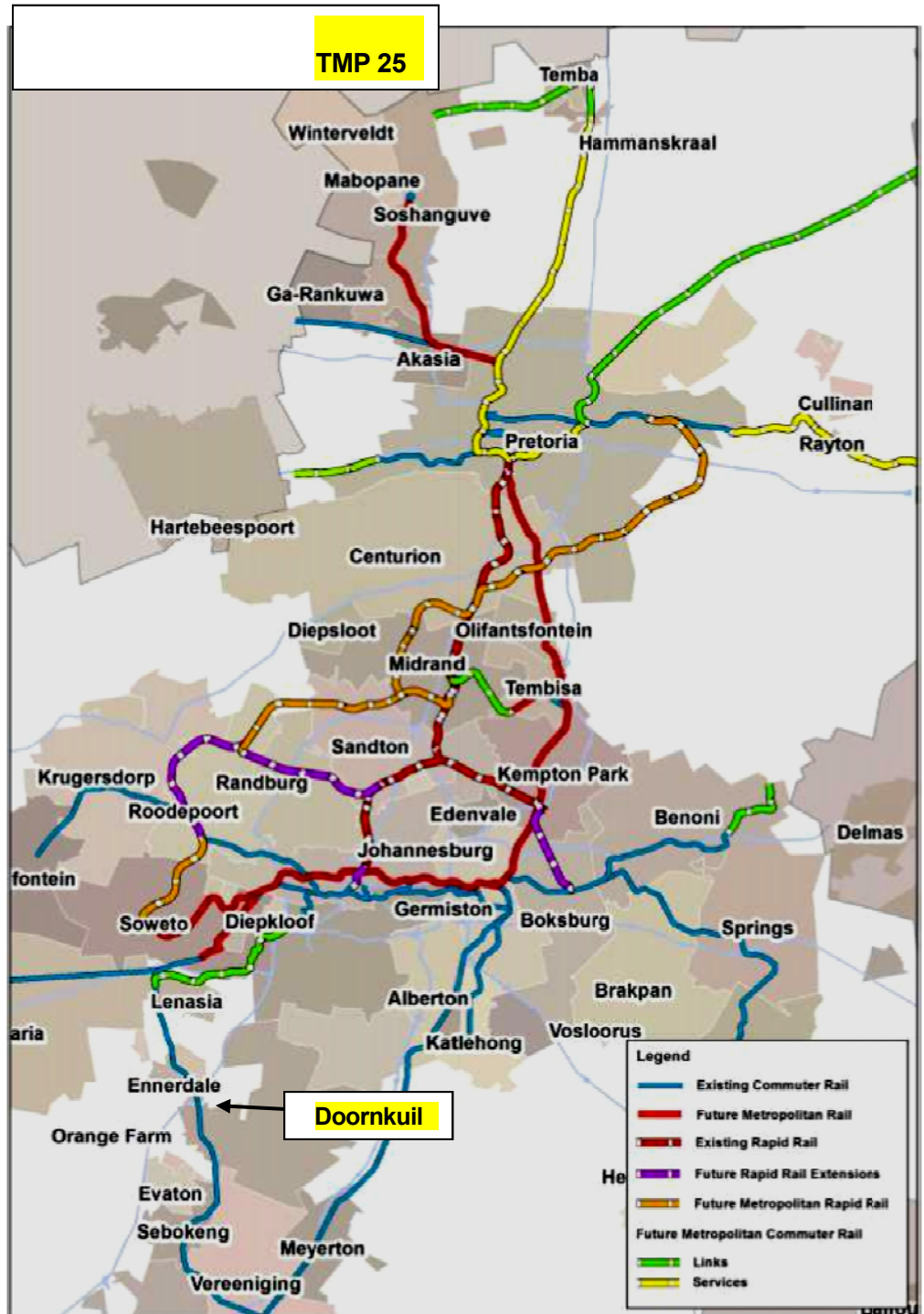
7.4 Rail Transportation

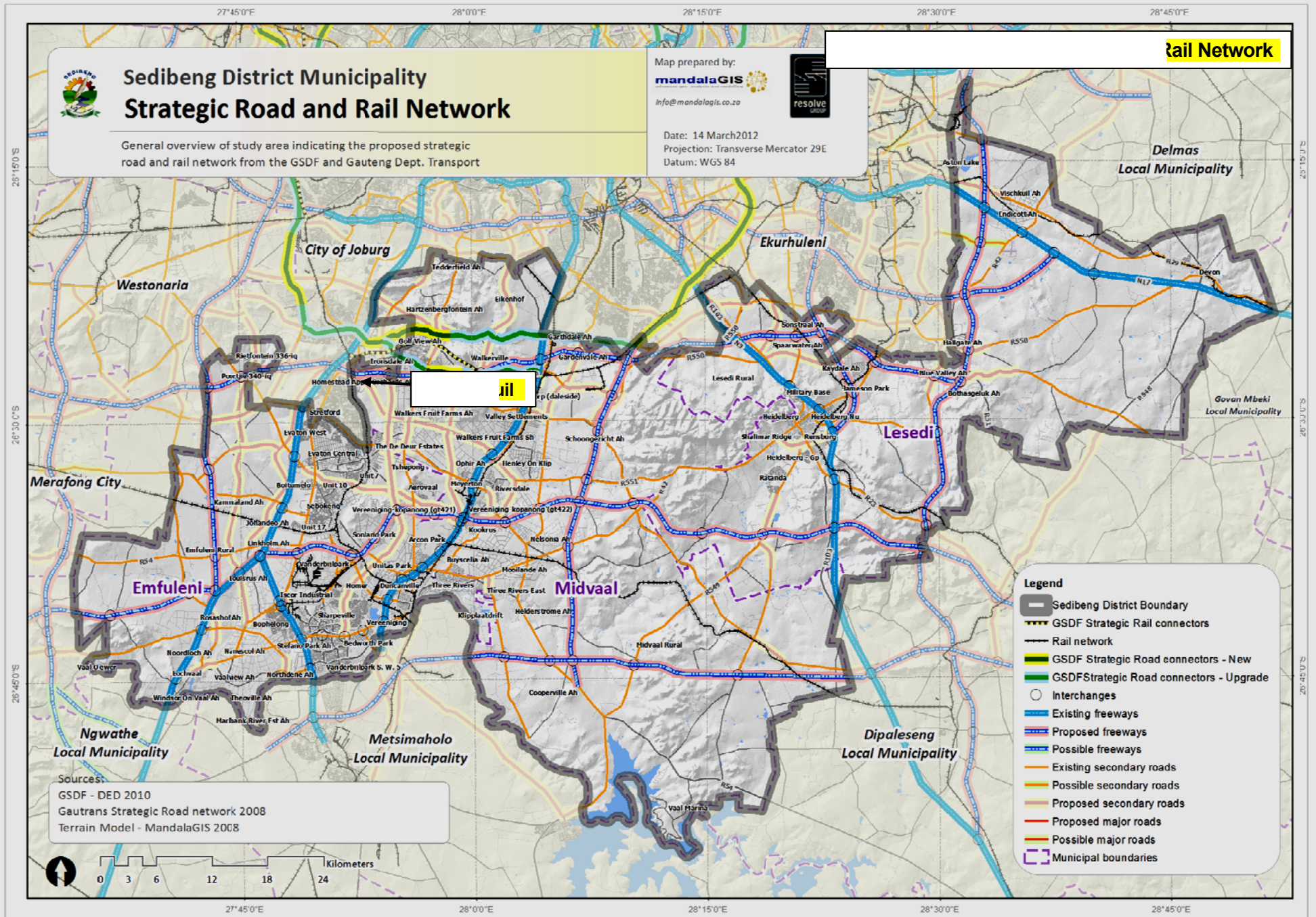
The main railway line in Midvaal runs parallel to the R59 from north to south. It connects Vereeniging with Germiston and Johannesburg.

In Midvaal there is an east/west line which is used for freight only. In addition, there is a commuter rail line that runs from Vereeniging through Sebokeng and Orange Farm very close to Doornkuil, which connects into the rail commuter system for Gauteng, as illustrated on the map alongside.

Close to the Doornkuil site are two stations in the Orange Farm area between which direct linkages could be created.

The strategic Road and Rail Network of the District are illustrated overleaf.





7.5 Electricity

From information currently available, it is evident that sufficient electrical capacity is available for current and planned developments. The Sedibeng District Municipality's electricity is mainly supplied by ESKOM, with a few areas supplied by the relevant local authorities.

7.5 Infrastructure Key Issues

The Key Infrastructure Issues can be summarised as follows:

- 1. While currently lacking bulk services, Doornkuil is well located, adjacent to areas planned for connection to bulk services.**
- 2. The Doornkuil area is well connected with road and rail infrastructure for both commuters and freight.**

Doornkuil is strategically well located within Gauteng, in a planned conurbation, close to high density residential areas of Orange Farm to the west, Sebokeng and Everton to the South and the planned Savanna City in Midvaal to north. It is also very accessible, being well located close to major road and rail transport networks. In addition, it is in an area for which the development of infrastructure is planned. These factors provide a unique opportunity for the development of Doornkuil.

Part 3: Vision, Mission, Objectives & Principles

8. Vision, Mission & Objectives

The purpose of a Vision is to provide a “Snap Shot” of the ideal future to which all planning and actions can be orientated.

The Mission specifies “What” is to be done in achieving the Vision.

The Objectives are action statements, generally starting with the words “To”, specifying the “how” of achieving the Vision.

The Vision of the Doornkuil Rural Precinct plan is based on the aims of Rural Precinct Plans which was stated in the ToR as reproduced in the box below:

Figure 11: Rural Precinct Plan Aims

The primary aim of a precinct plan is the arrangement of land use and infrastructure associated with the needs of specific communities within administrative regions. It integrates transportation, environment, education, economic development, social, residential development and other developmental requirements. Development needs, opportunities and priorities are identified. It is a process that is community-based and driven.

It is evident from the aims of Rural Precinct Plans that the plan needs to be focused on identification of and arrangement of land uses to meet the needs of local communities while addressing integrated development requirements at a local and regional level.

Utilising the above, the following vision was developed through participation and input by stakeholders.

VISION

Spatially Integrated Use Of This Strategic Land Parcel To Facilitate Sustainable Use Of Resources For The Benefit Of All Residents Of The Functional Area.

The functional area primarily consists of Orange Farm (located in the City of Johannesburg) Sebokeng/Evaton, De Deur, Savanna City (to be developed shortly) Lakeside, Ironside, Finetown (City of Johannesburg) and secondary areas of the wider Emfuleni and Midvaal Municipal areas.

MISSION

The Provision Of Sustainable Services To The Entire Region.

The Rural Precinct Plan for Doornkuil needs to be able to facilitate the meeting of the following identified objectives.

OBJECTIVES

- To provide a high standard of regional medical facilities to individuals;
- To provide high standard burial areas;
- To enhance land development by developing critical facilities within a close proximity to user communities;
- To create training opportunities for individuals within the agricultural and medical fields;
- To invest in food security;
- To create employment opportunities during and after construction;
- To provide an economic impact on the area as a whole by creating a rates and tax base for the municipality as well as creating economic activities in the precinct;
- To provide good passive and active recreational activities;
- To protect areas that have been identified as sensitive and conserve them.

The above objectives were informed by the following critical needs that can be addressed through the precinct plan and its development.

- The need for more regional facilities, in particular medical facilities, in light of the demand for a regional hospital within the district;
- The need for agricultural training which will enhance investment in food security for the district;
- Protection of conservation areas from being destroyed and harmed;
- The development of long term regional facilities in particular a cemetery.
- The need to create job opportunities.

9. Principles

The following principles derived from Section 7 of the Land Use Management Act 2013 are applicable to this RPP.

Section 7

a. The principle of spatial justice, whereby –

i. past spatial and other development imbalances must be redressed through improved access to and use of land;

The precinct plan will enhance access and use of land which is currently unused.

b. the principle of spatial sustainability, whereby planning and land use management systems must-

iv. promote and stimulate the effective and equitable functioning of land markets

The proposed uses and facilities to be introduced onto the site will be accessed by residents of surrounding areas.

vi. promote land development in locations that are sustainable and limit urban sprawl

The precinct site is located centrally within the high density surrounding areas of Ennerdale, Orange Farm, Savanna City, De Deur and Sebokeng/Evaton. The proposed development provides long term and sustainable centrally located regional facilities as a regional service centre to the Sedibeng District as well as areas within the City of Johannesburg to the west.

vii. *result in communities that are viable.*

This RPP will provide needed services, facilities and amenities that will enhance and support the viability and development of surrounding communities. These facilities and amenities planned for Doornkuil RPP are generally not provided by the private sector such as those envisaged in the adjacent Savanna City.

c. *The principle of efficiency, whereby-*

i. *land development optimises the use of existing resources and infrastructure;*

The availability of land and electricity enables this development to take place. The water and sanitation supply are still to be determined.

d. *the principle of spatial resilience, whereby flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks*

The proposed land uses will provide opportunities for sustainable livelihoods and the infrastructure is adaptable to changing situations.

Part 4: Doornkuil Rural Precinct Plan

The aims, vision, objectives and principles of the RPP have been outlined in Part 3.

Part 4 outlines the RPP for Doornkuil and contains the following sections:

- 1. Site Features**
- 2. Concept Plan**
- 3. Site Components**
- 4. Doornkuil RPP Guidelines**

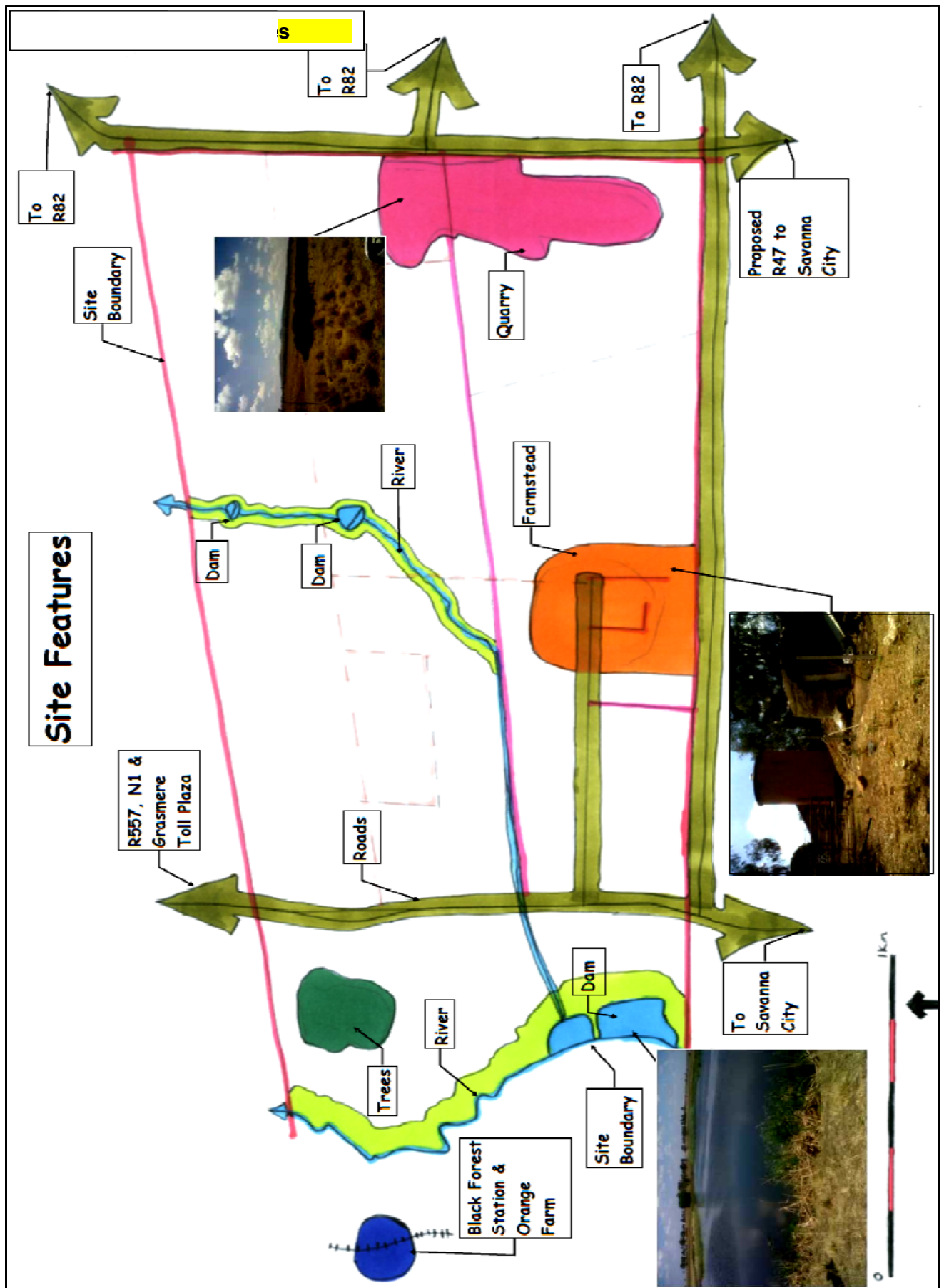
10. Site Features

The Site is largely relatively flat with very few features.

The key site features are illustrated on the plan overleaf, and include:

- Four irrigation dams, two of which are relatively large.
- A river forming the western boundary and a river cutting diagonally across the site from the north to the south west feeding the site dams.
- A sensitive environmental area in the flood plain along the river forming the western boundary of the site.
- A grove of trees in the north west of the site.
- A relatively extensive shallow open excavated area in the south eastern sector of the site.
- A farmstead and farm related buildings in the south of the site.
- Two roads forming the eastern and southern boundaries of the site linking to the R82 to Johannesburg and Vereeniging and a north/south road through the site linking to the R557, the Grasmere Toll Plaza and the N1.

Very close to the site is the Black Forest rail station in Orange Farm. In addition, the proposed R47 route from Savanna City will run along the eastern boundary of the Site.



11. Concept Plan

For the purposes of developing a concept plan, the site has a number of **unique advantages**, which include the following:

1. The land is owned by the Public Sector
2. The site is in the midst of an area that will potentially have over 300 000 people within the area in the medium term.
3. The site is within the planned conurbation for the proposed Sedibeng Metropolitan area.
4. The Orange Farm and Savanna City Development Plans have identified numerous projects, but these have not included a number of regional facilities that are typically planned and provided by the public sector.
5. The site has very good regional access from existing and planned road and rail networks.
6. The site is largely flat and undeveloped.
7. The site has good agricultural potential.
8. The site is close to markets, educational facilities, and infrastructural services.

11.1 Approach & Structuring Elements

The approach adopted to give structure and form to the precinct is based on an urban design that gives **identity**, **legibility**, **originality** and the **avoidance of repetition** while building on the site features and the nature of the site as well as the **unique advantages** listed above.

The precinct focuses on integrating the development of Doornkuil with the surrounding townships of De Deur (small holdings), Savanna City a mixed use development which mainly focuses on residential development and Orange Farm a residential township. The proposed uses serve as facilities that will be utilised by residents of all these areas and further afield. The provision of a regional hospital serves as a medical centre for residents from these areas and the wider region. Similarly, the regional cemetery serves as a burial area for residents from within the area as well as from further afield.

The precinct provides a mixed use development incorporating regional facilities and supplementary uses. The precinct functions as a service centre which focuses primarily on providing:

- ❖ Medical amenities;
- ❖ Burial amenities;
- ❖ Training amenities;
- ❖ Recreational amenities; and
- ❖ Jobs opportunities.

The location of land uses within the Doornkuil Precinct has not only been based on functionality but also on compatibility, as demonstrated in the Concept Plan. (Map 11)

11.2 Site Components

Utilising the unique advantages of the site, the research and findings of the Status Quo Report and the Development Plans for Orange Farm, Savanna City and the relevant planning and policy documents, including the Sedibeng District Spatial Development Framework, the need for three “core components” has been identified.

These are:

- 1. A Regional Cemetery**
- 2. Regional Medical Facilities and Training**
- 3. Agricultural Activities and Skills Development.**

Base on the above, the following site components have been identified for the Concept Plan:

- Regional Cemetery
- Regional Hospital / Medical Research
- Agricultural Training and Education
- Intensive Agriculture
- Extensive Agriculture
- Industrial Area (related to medical research, cemetery and agricultural activities)
- Conservation Area
- Low intensity CBD and Secondary Nodes

Working in consultation with relevant stakeholders, the following Concept Plan was developed. The above uses have been placed on the Concept Plan overleaf, the Legend and Notes for which are in the text box alongside.

Further detail on each of the proposed land uses follows after the Concept Plan overleaf.

Legend & Notes

- 1 Central Business District (21ha)**
- 2 Secondary Node (15.2ha)**
- 3 Regional Hospital, Medical Research & Training (16.8ha)**
- 4 Industrial Area 1 (packaging , distribution and warehousing) (15.4ha)**
- 5 Industrial Area 2 (manufacturing and light industrial) (12.2ha)**
- 6 Regional Cemetery (24.7ha)**
- 7 Agricultural Product Processing (1.9ha)**
- 8 Intensive Agriculture, Hydroponics (28.2ha)**
- 9 Extensive Agriculture and Skills Development (101.4ha)**
- 10 Conservation & Regional Park (24.6ha)**
- 11 Agricultural training centre (5.8ha)**
- 12 Transport Node (2.8ha)**

300 400 600 800 1000m

Plan

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R577, N1 &
Grasmere
toll plaza

To R82

To R82

To R82

To
Savanna
City

Proposed
R47 to
Savanna
City

DOORNKUIL CONCEPT PRECINCT PLAN

11.2 Regional Cemetery

Demand for Graves and Land Requirements

From the research undertaken, it is evident that no regional cemeteries are planned within the catchment area of the site. Ongoing research being undertaken on cemetery provision in the Western Cape (Setplan, 2013) indicates that the ideal size for a regional cemetery is 20 to 25 hectares.

Within the immediate catchment area of the proposed regional cemetery site, there is a potential 150 000 households, resulting in a derived population of approximately 600 000 people. At an average grave demand of 0.34% of population per annum, this would result in a demand of 2 040 grave sites per annum in the region. With a cemetery planning horizon of 20 years, taking into account those factors for reduction of land needed for graves (2nd burial, burial reduction, grave re-use, increased cremation), the optimal cemetery footprint for Doornkuil, based on a 20 year grave demand of 40 800 sites is 20 to 25 hectares, depending on other facilities placed within the proposed cemetery.

Crematoria

Traditionally, crematoria have been established within cemeteries (e.g. Maitland, Durbanville Memorial). This trend should be supported given the following:

- Multiple-use of cemetery facilities (e.g. toilets, parking, civic forecourt, public shaded seating, drinking fountains, comfort rooms, chapel, etc.).
- Shared development and use of niche walls (storage of ashes) and walls of remembrance.
- Buffering of crematoria from surrounding land use given emissions, movement and storage of corpses, etc.

The ability of a crematorium to share cemetery infrastructure (e.g. parking, chapel, public facilities) and its operating capacity is to a greater degree a function of the number of ovens rather than its building extent. As a result, crematoria can be easily accommodated in the the standard cemetery footprint of 20 to 25 hectares.

Mausolea

As with crematoria, mausolea developments in South Africa have traditionally been located in cemeteries. The current emergence of mausolea developments is following this trend, with examples in Maitland and West Park in Johannesburg.

However, in Italy and elsewhere, mausolea have also been located as stand-alone facilities outside of cemeteries, usually in public places.

The above-ground development of mausolea also allows for siting on a high water-table and poor ground conditions (e.g. rock, clay) usually not suitable for in-ground burial. In “greenfield developments”, such as Doornkuil, mausolea would be included within the proposed new cemetery as one of the interment options. Due to the high interment density of mausolea, facilities such as crematoria can be easily accommodated within the optimal cemetery footprint.

Based on the need for regional cemeteries to be close to arterial roads, the ideal location would be to the east of the site close to the current R82 and adjacent to the planned R47. In addition, given that the south eastern area of the site has already been impacted with the removal of the top layer of soil, this would be an appropriate area in which to locate the cemetery. The Geo- hydrological condition of the proposed location will need to be assessed, in terms of the site’s suitability for graves.

The cemetery is located on the north-eastern side of the precinct. The cemetery is located in an area that is not affected by any flooding. The hydrological conditions of the proposed site will be assessed in terms of suitability for graves and their depth.

The cemetery is located adjacent to the industrial area, where gravestone/tombstones, grave vases, coffin/caskets can be manufactured.

11.3 Regional Hospital & Medical Research

The potential population of the functional area requires forward planning for the provision of a regional hospital and medical research facility. Such a facility would not only be required for the health care needs of the expected population but as a learning and training facility for skills development in the medical sector. Such a facility could possibly be linked to existing education facilities that already exist within the planned conurbation. Discussions will be held with the Gauteng Provincial Health Department with regard to the proposed facility. Based on research conducted, the ideal size for a Regional Hospital and Medical Research Facility is 15 hectares. The ideal size for the subject area may be adjusted after discussions have been held with relevant parties.

The hospital is located in an area that is ideal for the health and safety of patients. The hospital needs to be located in an environment that is not affected by air and noise pollution. The environment surrounding the hospital should be one that is well taken care of and clean at all times. There should not be any dumps or noxious industries around the hospital. The hospital is located away from noxious industries.

The hospital requires easy access and is therefore located alongside two major internal access roads. These roads connect directly to the R557, the R82 and the proposed new R47 which are major regional routes.

The hospital's location, in close proximity to an agricultural area on its south east, enables the hospital to receive fresh fruit and vegetable for the patients and employees.

11.4 Agriculture & Agricultural Training Facilities

The Sedibeng District has amongst the highest potential agricultural production land in South Africa as well as two Fresh Produce markets (Vereeniging and Johannesburg) within relatively close proximity to the site. Based on the need for food security and the development of skills in the agricultural sector, a multi faceted approach is suggested for Doornkuil, including:

- Intensive Agriculture: Hydroponics, Tunnel Farming and food lots.
- Extensive Agriculture: Crop production
- Agricultural Product Processing: packaging, processing and beneficiation
- Agricultural Skills Development: Secondary and Tertiary education facilities for the development of agricultural skills.

Discussions should be continued with the Gauteng Department of Agriculture to align the above with the forward planning and funding programmes of the Department.

Food security for the local communities was identified as one of the highest priorities and hence the need to use a portion of the farm for food security and train community farmers.

The skills development training centre will not only focus on theoretical training but also practical training. Students will be trained in farming techniques, such as crop production, animal husbandry and other related activities. The skills development and training centre is ideal for this area as the entire Sedibeng District is located in an area that has good agricultural potential. The agricultural skills training centre will assist in strengthening food

security within the district. The area identified for agricultural farming is ideal as some pockets are already used for extensive agriculture. This area is has access to water from irrigation dams on its south-western boundary. It is proposed that agricultural food processing will be located within this area so that the produce will not have to travel long distances to be processed and packaged.

11.5 Industrial Area

The industrial area is intended to service the needs of the proposed regional cemetery, medical and agricultural activities within the immediate area. It is not intended for large factory or industrial activates and noxious industries which would be better located in industrial nodes

11.6 Central Business District & Secondary Nodes

As with the Industrial component, the proposed Central Business District (CBD) is not intended to compete with existing and proposed larger retail facilities but rather to support local needs. The proposed CBD is part of the concept of developing multiple CBDs within the Conurbation, as outlined in the Sedibeng District SDF.

11.7 Conservation Area

No large regional parks have been planned to accommodate the expected large population of the functional area.

The larger water bodies on the site, namely the two dams in the south western part of the site, may be able to accommodate non motorised water craft. The environmentally sensitive flood plain area along the river on the western boundary of the site,, together with the above mentioned dams, make an ideal linear regional park.

The conservation park has been located on the western boundary of the precinct due to the presence of a river, two dams and sensitive environment. This area will be protected from all types of pollution and will be used for both passive and active recreational purposes.

A park will be developed for people to relax alongside the river and dams. Other development will not be allowed in this area as it is environmentally sensitive in nature.

12. Rural Precinct Plan

Building on the approved concept, the final Doornkuil Rural Precinct Plan was developed, as illustrated overleaf.

Legend & Notes

- 1 Central Business District (21ha)
- 2 Secondary Node (15.2ha)
- 3 Regional Hospital, Medical Research & Training (16.3ha)
- 4 Industrial Area 1 (packaging, distribution and warehousing) (15.4ha)
- 5 Industrial Area 2 (manufacturing and light industrial) (12.2ha)
- 6 Regional Cemetery (24.7ha)
- 7 Agricultural Product Processing (1.9ha)
- 8 Intensive Agriculture, Hydroponics (28.2ha)
- 9 Extensive Agriculture and Skills Development (100.4ha)
- 10 Conservation & Regional Park (24.8ha)
- 11 Agricultural training centre (8.9ha)
- 12 Transport Node (2.8ha)



To R82

To R82

To R82

R577, N1 & Grasmere toll plaza

To Savanna City

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13. Development Guidelines

These guidelines are provided in table form below, per land use structuring element. The intent of these guidelines is to provide a description of each of the proposed land uses, its purpose and the land uses supported and those not supported within defined areas. All terms used are as defined in the Spatial Planning and Land Use Management Act (SPLUMA), 2013. Terms not defined in the SPLUMA are as per the definitions in the applicable Town Planning Scheme. Numbers used in the guidelines correspond with those in the Doornkuil Rural Precinct Plan (Map 12).

No. 1	Central Business District
Purpose	To create an area for office, commercial and business uses
Uses Supported	Office, business & commercial parks, funeral undertaking offices, retail centres, public garages, car wash and places of refreshments
Uses Not Supported	Noxious industries, restricted service industries, scrap yards,
Notes	The CBD is of limited size and should not include many retail centres to avoid competition between the precinct and other surrounding areas.
By Consent	As per scheme
Coverage	60% with basement parking 40% with ground floor parking
Floor Area Ratio	Maximum 1,2
Parking	To the satisfaction of the local authority
Height	3 storeys with sufficient ground parking on site 4 storeys with basement and ground parking
Special Conditions	- Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) - No on-street parking. Side parking may be located adjacent the road, but only in specified areas. - A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. - An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. - No manufacturing or industrial activities shall be permitted and no industrial goods shall be publicly displayed for sale. - No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 2	Secondary Nodes
Purpose	For commercial, service activities and business uses outside the CBD
Uses Supported	Commercial, Business and other related uses
Uses Not Supported	Noxious and non-noxious industries.
Notes	These nodes give convenience as they are located outside the CBD.
By Consent	As per scheme
Coverage	70% for single storey 60% for two storeys

	• 50% for three to five storeys
Floor Area Ratio	1,2 maximum
Parking	To the satisfaction of the local authority
Height	• 1 – 2 storeys with ground parking • 3 - 4 storeys with basement and ground floor parking
Special Conditions	• Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No manufacturing or industrial activities shall be permitted and no goods shall be publicly displayed for scale. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 3	Regional Hospital, Medical Research & Training
Purpose	The Regional Hospital will be admitting residence from neighbouring townships, from within the municipality as well as outside the municipality. The medical research and training will be for skills training and development within the medical sector as well as for medical research.
Uses Supported	Hospital (consisting of offices, emergency rooms, theatres, patients' wards, ,maternity wards, cafeteria, kitchen and staffrooms) research centre, laboratories, classrooms and residential units for hospital employees
Uses Not Supported	Noxious industries, polluting industries and all uses that are not compatible with medical uses.
Notes	The hospital will be developed in terms of the norms and standards for Regional Hospitals.
By Consent	As per scheme
Coverage	• 60% for 2 – 3 storeys (with basement and ground parking) • 50% for 3 – 6 storeys (with lifts, basement and ground parking)
Floor Area Ratio	• 1,2 maximum
Parking	• 1 parking per 5 beds and • 6 parking spaces per consulting room.
Height	• Maximum of 6 storeys (additional storeys may be acquired with a application to the local authority)
Special Conditions	• Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the

	road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No manufacturing or industrial activities shall be permitted and no goods shall be publicly displayed for scale. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.
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No. 4	Industrial Area 1 (packaging, distribution and warehousing)
Purpose	For packaging, distribution and warehousing
Uses Supported	Warehousing, Non-Noxious Industrial Uses, Public Garage, Car Wash, Business, Commercial, Places of Refreshments for employees, Retail Trade, Warehouses and Offices and Commercial uses.
Uses Not Supported	Noxious industries, residential buildings.
Notes	There should not be any noxious industries of noise generating and polluting workshops.
By Consent	As per scheme
Coverage	• 70% for single storey • 60% for two storeys
Floor Area Ratio	1,2 maximum
Parking	2 parking spaces per 100m ²
Height	Maximum 2 storeys with: • The ground floor may not exceed a height of 10,5m and 6m for subsequent storeys; • The total height of a building shall not exceed 15m.
Special Conditions	• Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 5	Industrial Area 2 (manufacturing and light industrial)
Purpose	For uses that are not allowed in Industrial Area 1 but limited as per uses supported.
Uses Supported	Light Industries, manufacturing, places of refreshments for employees only and warehouses
Uses Not Supported	Heavy industries and all land uses that are not compatible with industrial uses.
Notes	Only uses in this area that will not harm the surroundings adversely.
By Consent	As per scheme
Coverage	70% for single storey 60% for two storeys
Floor Area Ratio	1,2 maximum
Parking	2 parking spaces per 100m ²
Height	Maximum 2 storeys with: - Ground floor may not exceed a height of 10,5m and 6m for subsequent storeys; - The total height of a building shall not exceed 15m.
Special Conditions	- Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) - No on-street parking. Side parking may be located adjacent the road but only in specified areas. - A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. - An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. - No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 6	Regional Cemetery
Purpose	Development of a regional cemetery to serve the broader region..
Uses Supported	Cemetery, crematoria, mausolea, ablution areas, civic forecourts, comfort rooms, chapel and memorial walls.
Uses Not Supported	All land uses not compatible with cemetery activities.
Notes	The regional cemetery will be developed and operated as per the norms and standards of regional cemeteries.
By Consent	As per scheme
Coverage	To the satisfaction of the municipality
Floor Area Ratio	To the satisfaction of the municipality
Parking	To the satisfaction of the municipality
Height	To the satisfaction of the municipality
Special Conditions	- Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) - No on-street parking. Side parking may be located adjacent the

	road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans.
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No. 7, 8, 9 & 11	Agricultural Product Processing, Intensive Agriculture, Hydroponics, Extensive Agriculture and Skills Development & Agricultural training centre
Purpose	To conserve the high potential agricultural areas, to promote food security and for agricultural skills development
Uses Supported	Agriculture, agricultural product beneficiation, agricultural skills development and training centre, agro-processing, farmer's market, commercial farming, hydroponics and related uses.
Uses Not Supported	All land uses not compatible with agricultural activities
Notes	Uses compatible with agricultural areas that do not comprise the agricultural productivity of the land may be allowed subject to the discretion of the municipality.
By Consent	As per scheme
Coverage	To the satisfaction of the municipality
Floor Area Ratio	To the satisfaction of the municipality
Parking	To the satisfaction of the municipality
Height	To the satisfaction of the municipality
Special Conditions	• Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No manufacturing or industrial activities shall be permitted and no goods shall be publicly displayed for sale. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 10	Conservation & Regional Park
Description	Consists of 2 dams that are located on the south-western part of the precinct and area adjacent to the main watercourse.
Purpose	To conserve and appropriately develop special environmental areas for

	conservation, active and passive recreational areas as well as related uses.
Uses Supported	Conservation uses, regional park, active and passive recreational areas, research and conferencing with clear conservation controls.
Uses Not Supported	Industrial uses, office parks, commercial parks, noise generating and polluting workshops, scrap yards and all other uses not indicated
Notes	Sensitive environmental areas can be designated by the municipality or identified through the EMF or the environmental authorisation process in terms of the National Environmental Management Act (NEMA)
By Consent	As per scheme
Coverage	To the satisfaction of the municipality
Floor Area Ratio	To the satisfaction of the municipality
Parking	To the satisfaction of the municipality
Height	To the satisfaction of the municipality
Special Conditions	• Access to the satisfaction of the Local Authority at planned access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No manufacturing or industrial activities shall be permitted and no goods shall be publicly displayed for scale. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.

No. 12	Transportation Node
Purpose	To create convenience and accessibility to the precinct and other surrounding areas
Uses Supported	Taxi rank, bus stops, places of refreshment, licensed and sheltered street trading markets, and offices.
Uses Not Supported	All other uses not compatible with uses the main use.
Notes	The transportation node will be regularised as per transportation regulations.
By Consent	As per scheme
Coverage	To the satisfaction of the municipality
Floor Area Ratio	To the satisfaction of the municipality
Parking	Parking to the satisfaction of the "Municipality", at a ratio to be determined by the "Municipality", in conjunction with the relevant agency (eg. PRASA, Gautrans, etc.)
Height	To the satisfaction of the municipality
Special Conditions	• Access to the satisfaction of the Local Authority at planned

	access points. (This may require right of way access servitude across erven for mid block or other appropriate access routes.) • No on-street parking. Side parking may be located adjacent the road but only in specified areas. • A Site Development Plan must be submitted and approved prior to the approval of building plans. Site Development Plans (SDPs) to contain all requirements stipulated by the Local Authority, as well as landscaping of pavements incorporating paved pedestrian paths on pavements. • An Environmental Management Plan indicating specifically management of the environment during and after construction must be approved prior to the approval of building plans. • No manufacturing or industrial activities shall be permitted and no goods shall be publicly displayed for sale. • No advertising, other than in accordance with the Local Authority's regulations, shall be permitted. Storage space and subservient retail (where applicable) shall not exceed 20% of the gross office floor area.
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14. IMPLEMENTATION PROGRAMME

In order to implement the Doornkuil Rural Precinct Plan, the identified lead projects, as summarised below, and the Precinct Plan Guidelines outlined above, will need to be implemented.

14.1 Lead Projects

The following lead projects have been identified:

1. Preparation of the Township Establishment Application.
2. Regional Cemetery Plan
3. Regional Hospital Plan
4. Conservation and Regional Park Plan
5. Industrial Park Plan
6. Transportation Node Plan
7. Agricultural Implementation Plan

14.2 Implementation Plan & Cost Estimates

The proposed Implementation Plan, indicating time period, estimated costs and responsibility, is summarised in the table below.

Figure 12: Implementation Plan

Project Name	Time*			Est. Cost (R)	Responsibility
	S	M	L		
Approval of the Doornkuil Precinct Plan	√			No cost	Midvaal Local Municipality
Preparation of the Township Establishment Application	√	√		300 000	Midvaal Local Municipality
Regional Cemetery Plan	√			250 000	Midvaal Local Municipality
Regional Hospital Plan	√	√		250 000	Gauteng Dept. of Health
Conservation and Regional Park Plan	√	√		300 000	Gauteng Department of Agriculture and Rural Development
Industrial Park Plan	√	√		250 000	Midvaal Local Municipality
Transportation Node Plan	√			250 000	Gauteng Dept of Roads and Transport
Agricultural Implementation Plans	√	√	√	500 000	Gauteng Department of Agriculture and Rural Development

Time* - S: <Year 1; M: Year 2 to 3; L: Year 3>

Note: The Gauteng Department of Agriculture and Rural Development and the Department of Health have been approached with regard to the above lead projects with a view to perusing further discussions with the Sedibeng District Municipality.

14.3 Governance & Review

This Rural Precinct Plan for Doornkuil should be used as a strategic forward planning tool to guide land development decisions towards achieving the Vision for Doornkuil. The Rural Precinct Plan should be used by Developers, Officials, Investors and others involved in land and integrated development to guide all investment and development decisions. It provides the Private Sector with the spatial logic to facilitate investment in the area. For the Public Sector, it aligns with National and Provincial Planning Policy and provides policy and guidance on where different forms of development should be supported and where public sector investment should be directed in the short to medium term. Through the provision of guidelines, the Doornkuil Rural Precinct Plan promotes the social, economic, environmental and agricultural sustainability of the area.

Annexure 1: SG Diagrams

SIDES.	ANGLES.	CO-ORDINATES.
A B 204.72	A 96.39.30	A 537.10 663.69
B C 814.61	B 76.48.10	B 714.84 561.84
C D 123.00	C 71.30.40	C 749.42 1327.91
D A 233.96	D 115.1.50	D 847.15 1327.91

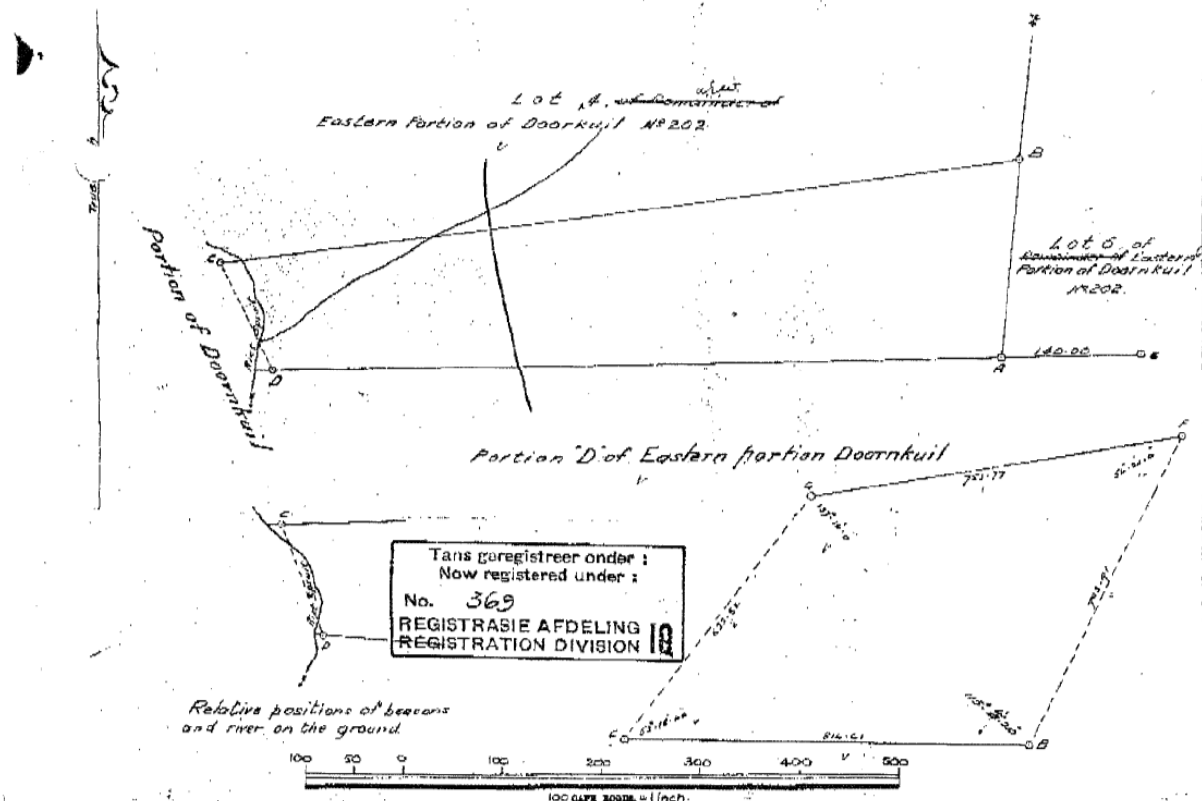
8966
No. 7903 Examined. The numerical data of this Diagram are sufficiently consistent.
Approved _____
Surveyor-General's Office, Pretoria. 21 MAR. 1906

I, _____ Registrar of Deeds, certify that this Diagram belongs to the Deed Transfer No. _____ issued this day in favour of _____
Deeds Office, Pretoria, _____ Registrar of Deeds.

↓
Meter
AB 773,43
BC 3077,59
CD 460,91
DA 2772,90

A	→ 127.37 = 588.21
B	→ 304.78 = 690.36
C	→ 539.32 = 89.74
D	→ 417.42 = 86.01
E	→ 829.46 = 1159.41
G	→ 910.32 = 410.19

Recd. Area = 202 mor 546.59 airds
Total Area = 202 " 144 " "



The above Diagram lettered A B C, centre of river to D represents 201 Morgen 172,7993 Ha Square Rods of Land, being ~~Lot 3~~ (a portion of ~~Lot 5 of the Eastern portion 1)~~ of the Farm 28 1914/16

Doornkuil No 202 36
situate in the District of Heidelberg Verreënig Ward Klipriver Transvaal Colony, as Surveyed by Surveyor H. F. J. Spandan, in February 1894, Transferred to Andries Petrus Barville by Deed of Transfer No. 1241 dated 21st day of February 1891.
Bounded as indicated above.

The Beacons were pointed out by G. S. Grayling and A. E. Hayland erected according to Law.

and have been properly

SIDES.	ANGLES.	CO-ORDINATES.
A B 170.01	A 103.11.50	A + 716.54 + 551.54
B C 940.87	B 73.14.10	B + 861.07 + 476.70
C D 137.01	C 54.53.30	C + 1076.21 + 7292.82
D A 811.41	D 128.40.30	D + 469.12 + 1341.64

Rect. Area = 200 mor

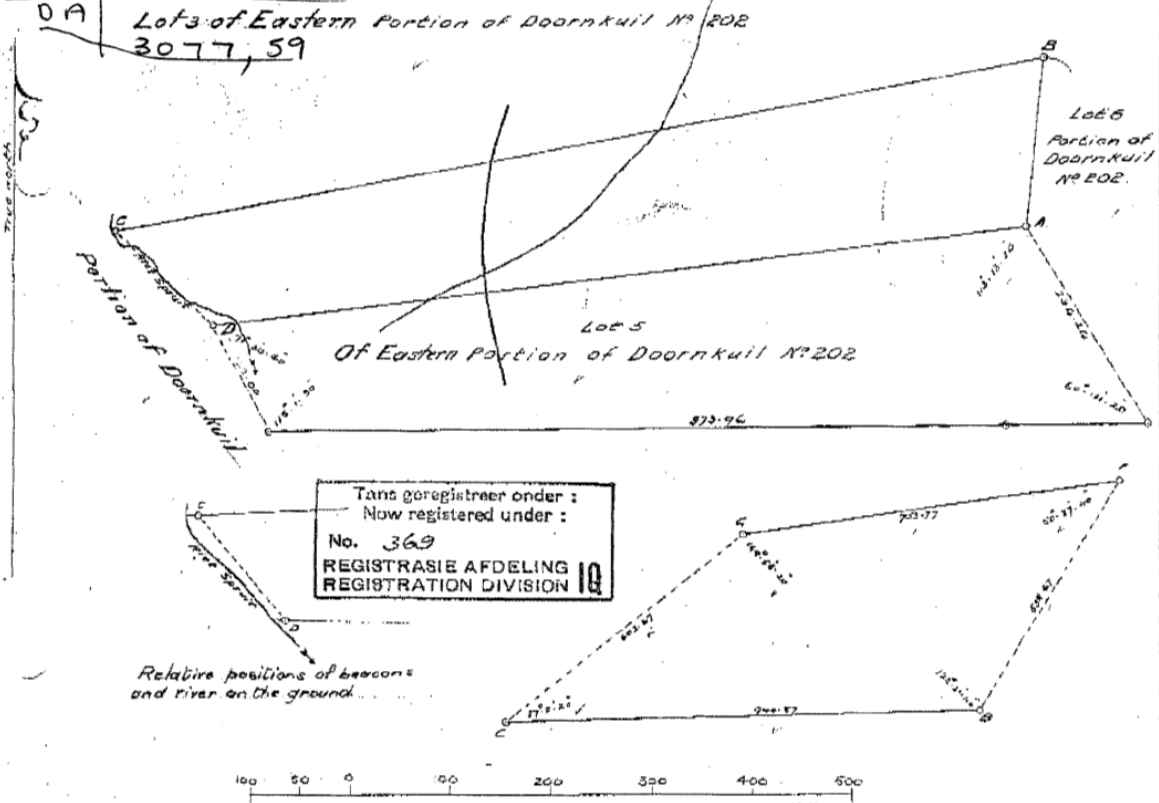
6062
No. 1903 Examined. The numerical data of this Diagram are sufficiently consistent, M.C.
Approved
Surveyor-General's Office,
Pretoria. 27 MAR. 1905

I, Registrar of Deeds, certify that this Diagram belongs to the Deed Transfer No. 110076/08 issued this day in favour of Registrar of Deeds.
Deeds Office, Pretoria,

CO-ORDINATES.
A + 504.78 - 894.36
B + 452.11 - 755.20
C + 666.46 + 140.90
D + 539.36 + 89.74

Rect. Area 200 Mor. 146 Sq. rods
Total 203 346

metres
AB. 642, 29
BC. 3551, 58
CD. 517, 62
DA. 3077, 59



The above Diagram lettered A B C, centre of river to D represents 201 Morgen 440 Square Rods of Land, being Portion 4 (a portion of the Eastern portion 1) of the Farm Doornkuil No 202 36

situate in the District of Heidelberg, Vereeniging Ward Klippriver Transvaal Colony, as Surrendered by Deed of Transfer No 7247
by H.F.J. Spandaw in February 1894. Transferred to Andries Pelrus Botha
dated 27th day of February 1897.
Bounded as indicated above.

The Beacons were pointed out by G.S. Greyling and A.E. Wayland and have been properly erected according to Law.

S.G. OFFICE COPY

S.G. No. A. 6212/54

SERVITUDE DIAGRAM

Approved

Surveyor-General

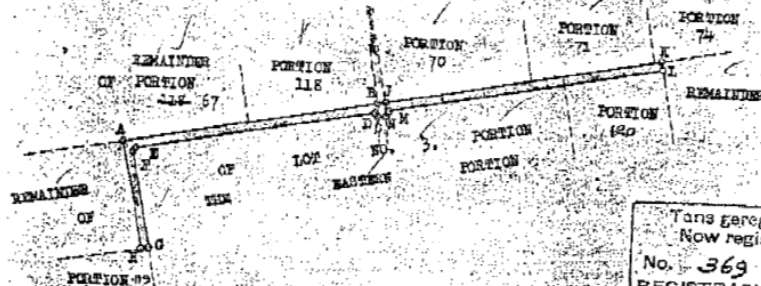
DESCRIPTION OF BEACONS

ABSCUTED BY : 1/2" IRON PEGS AND GALVNS
OR : STANDARDS

2-12-1954

SIDES	ANGLE	SYSTEM	CO-ORDINATES
Cape Feet	OF DIRECTION		
AB	1519.03	CONSTANTS	A - 250000.00 + 925000.00
BC	70.09		B - 29405.24 + 14075.18
CD	27.44		C - 30902.79 + 13014.82
DE	1425.96		D - 30909.71 + 43834.46
EF	28.26		E - 30887.75 + 43868.02
FG	591.33		F - 29487.86 + 44112.42
GH	50.00		G - 29466.63 + 44135.56
HA	661.67		H - 29566.11 + 44717.94
			I - 29519.91 + 44726.84
JK	1542.47		J - 30951.14 + 43806.23
KL	50.01		K - 30859.29 + 43524.78
LM	1624.20		L - 32576.67 + 43574.18
NI	29.11		M - 30976.50 + 43820.57
NJ	70.09		N - 30959.06 + 43875.67

T N

The figures ABSCUTED and JKLM

A Servitude of Right of Way

over PORTION LOT NO. 3, PORTION OF THE EASTERN PORTIONsituate in the DISTRICT of VERRECHTINGof the farm DOORNIKUIL NO. 36

Morgen-of-land, being

Surveyed in JULY - AUGUST 1954 by me

PROVINCE of TRANSVAAL

DRAWN FOR THE PURPOSE OF A SERVITUDE

This is annexed to Deed of ScrvNo. 466/575

noted at

The original diagram is No. A 107/05annexed to Deed of TransferNo. 10075/05S.G. File No. 210/10/13501,54Survey Records No. 2014/54Compilation No. IQ-A-D-13-

Register of Deeds,

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