

## TOWNSHIP ESTABLISHMENT

# MEYERSDAL EXT 31

(SITUATED ON PART OF PORTION 240 OF THE FARM  
KLIPRIVIERSBERG 106 IR)

APPLICATION FOR TOWNSHIP ESTABLISHMENT IN TERMS OF  
SECTION 38 OF THE COEMM SPATIAL PLANNING AND LAND USE  
MANAGEMENT BY-LAW, 2019 AS READ WITH THE CITY OF  
EKURHULENI TOWN PLANNING SCHEME, 2016

reading  
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## 1. INTRODUCTION

This report seeks to motivate the establishment of a proposed township Meyersdal Extension 31. This township represents the first phase of a larger mixed-use development referred to as Reading Junxion which is situated on the Meyer's farm holding in Alberton. Within this motivating memorandum, the applicant provides information with regards to this site and its surrounds, the policies supporting its development and the extensive environmental investigations undertaken to ensure environmentally sensitive development planning.

Furthermore, this memorandum contains extensive details on engineering infrastructure, the institutional framework in which the proposed land development area is situated towards a motivation in terms of the development principles as set out in Section 7(1) of Chapter 2 of the Spatial Planning and Land Use Management Act, 2013.

## 2. APPLICATION

Application is hereby made to the Ekurhuleni Metropolitan Municipality's Department of City Planning (Alberton Customer Care Centre) for the establishment of a township in terms of Section 38 of the COEMM Spatial Planning and Land Use Management By-Law, 2019. This memorandum was prepared in terms of Section 33 of the By-law which requires an applicant to obtain comments from external departments before formally advertising an application for comments / objection and submitting the application for internal circulation.

The application will therefore ultimately be advertised as prescribed in Section 10 of the COEMM Spatial Planning and Land Use Management By-Law, 2019, through the publication of a notice in the Provincial Gazette and 2 local newspapers. A notice will also conspicuously be placed on site and letters to surrounding owners will be sent out in accordance with the provisions of the by-law.

The proposed township is situated on  $\pm 71,1$  Ha which is part of Portion 240 of the farm Klipriviersberg 106 IR. The township proposes the proclamation, servicing and development of 6 (six) erven, of which 5 (five) are to be zoned "Residential 3" in terms of the Ekurhuleni Town Planning Scheme, 2014 for 'Dwelling House, Dwelling Units, Residential Buildings, Retirement Villages, and Private Roads'. Erf 6 is proposed to be zoned "Private Open Space".

## 3. PARTICULARS OF THE APPLICATION

This section of the Motivating Memorandum, relating to the establishment of Meyersdal Extension 31, contains information on all pertinent issues relating to the application and the land in question. Throughout this section, and in compliance with the requirements of COEMM Spatial Planning and Land Use Management By-Law,



2019, reference will be made to supportive documentation, such as Conveyancer's Certificates, Title Deeds and various specialist studies and technical reports.

The supportive documents are attached as annexures to this report and include the following:

<b>Annexure A</b>	<b>:</b>	<b>Title Deed and farm diagrams</b>
<b>Annexure B</b>	<b>:</b>	<b>Special Power of Attorney</b>
		<b>Authorizing company documentation</b>
<b>Annexure C</b>	<b>:</b>	<b>Conveyancer's Certificate</b>
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The objective of this section of the memorandum is to provide an overview of technical information and therefore to assimilate the information for ease of creating a better understanding of the relevant issues at hand that have been taken into consideration in the extensive planning phases of the proposed township.

This section of the Motivating Memorandum is divided into main categories relating to:

- Legal information;
- Environmental information;
- Engineering services information, and
- Information relating to the proposed land uses.



## 4. LEGAL INFORMATION

### 4.1 LEGAL INFORMATION

#### 4.1.1. Property Description

The land on which the proposed Meyersdal Ext 21 township is situated, is registered as the Remaining Extent of Portion 240 of the Farm Klipriviersberg 106-IR.

According to the **Title Deed** (T54572/2001) attached hereto as **Annexure A**, the details of the subject property is as follows:

Property Description	Deed of Title No.	Ownership	Size
Remaining Extent of Portion 240 Klipriviersberg 106 IR	T54572/2001	J G M TRUST	197.9581 HA

**Table 1: Property Details**

It is noted that the proposed Meyersdal Ext 31 township impacts on **±71,1063 Ha** of a much larger farm portion which measures 197,9581 Ha in extent.

The remainder of this farm, together with 2 (two) other farm portions (Remaining Extent of Portion 2 and Remaining Extent of Portion 136) will ultimately encompass the entire Reading Junxion development measuring a total of some 361.5856 Ha in extent.

Please note that these property sizes are subject to final survey.

#### 4.1.2. Registered Land Owner, Developer and Power of Attorney

As indicated in Section 4.2.1, the subject farm portion is registered in favour of the JGM Trust.

The JGM Trust and JG Meyer Boerdery (Pty) Ltd concluded a Joint Venture Agreement with Big Five Developments (Pty) Ltd for the development of the land holding on 23 November 2011. After years of legal challenge, the High Court, the Supreme Court of Appeal and the Constitutional Court of South Africa found this JV Agreement to be valid and enforceable.

In accordance with Clause 5.2 of the JV Agreement, Big Five Developments (Pty) Ltd ceded and assigned its rights to apply or the relevant town planning permissions to Fore St Holding (Pty) Ltd – Registration Number 2011/121822/07.

Copies of the Title Deeds and farm diagrams are attached hereto as **Annexure A**. A copy of the Special Power of Attorney, authorizing company documentation and JV



Agreement whereby Urban Dynamics Gauteng Inc is appointed as town planners for Fore St Holdings (Pty) Ltd is attached as **Annexure B**.

#### 4.1.3. Mortgage Bonds

With reference to **Title Deed** T54572/2001 which is attached as **Annexure A** to this report and the **Conveyancers Certificate** which is attached as **Annexure C**, there are no mortgage bonds registered against the property title. Consent of a bondholder is therefore not required.

#### 4.1.4. Servitudes

A professional Land Surveyors Certificate was obtained and is attached as **Annexure D** to this report. This certified certificate represents the results of research conducted by a professional land surveyor and confirms that the Remaining Extent of Portion 240 of the farm Klipriviersberg 106 IR is affected by a number of servitudes.

A total of Twenty (20) of these servitudes and conditions do not affect the proposed township due to location. There are however 3 servitudes that impact this township, namely:

- (i) A general Right of Way servitude (over a total of 1556,7209 Ha of the original farm Klipriviersberg) in favour of the City of Johannesburg for electrical powerlines as registered in terms of Notarial Deed of Servitude 167/1952S;
- (ii) A general powerline servitude in favour of Eskom as registered in terms of Notarial Deed 797/1969S, and
- (iii) An unregistered servitude 3,0m wide over the South-Western corner of proposed Erf 6 Meyersdal Ext 31 as indicated on diagram SG No. 5292/2012.

Please note that the existing (but unregistered) servitude which impacts Erf 6 will be registered with the registration of the township and is therefore be included and incorporated on the layout plan of Meyersdal Ext 31.

The other 2 servitudes are both servitudes registered in general terms which historically reserved the right of the City of Johannesburg and Eskom to registered future servitudes over the greater land holding. The consent of these organizations will be requested during the township circulation process.

#### 4.1.5. Title Conditions

With reference to the **Title Deed**, which is attached as **Annexure A** to this report and the **Conveyancers Certificate** which is attached as **Annexure C**, it is recorded that there are numerous conditions in title that will be amplified or disposed of at the Registrar of Deeds when a township register is opened for Meyersdal Ext 31.





The Conveyancers Certificate lists all servitudes, title conditions and endorsements which have since been plotted by the land surveyor (see Section 4.2.4) and which will assist the municipality to draft Conditions of Establishment for Meyersdal Ext 31.

#### 4.1.6. Current Town Planning, Environmental and Legal Status

For clarification purposes, the portion of land in question has no proclaimed development rights nor is it subject to any known application process, with the exception of this application for township establishment in terms of the Section 38 of the COEMM Spatial Planning and Land Use Management By-Law, 2019.

The following status is noted:

- **Town Planning Status** – The land represents unproclaimed land incorporated into the Ekurhuleni Town Planning Scheme, 2014 under an “Agricultural” zoning.
- **Environmental Status** – According to the information at the disposal of the applicant at the time of the drafting of this Memorandum, the entire area is classified by GDARD as a Class 3 ridge area. The land does not fall within any protected terrestrial reserve nor has it been designated as land forming part of any formal conservation related urban, rural or archaeological area. However, the proposed development corresponds to the development footprint of the previous Environmental Authorization issued by GDARD and the extent of environmental sensitivities identified in the ongoing Environmental Impact Assessment and Water Use Licenses.
- **Legal Status** – The land is registered on freehold title in favour of a registered Trust. As confirmed in the **Conveyancer's Certificate**, there are no legal matters adversely restricting the proposed development of the land.

## 4.2 PHYSICAL INFORMATION AND SITE CONTEXT

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### 4.2.1 Regional Context

The greater Reading Junxion site is situated approximately 3km west of the Alberton CBD and approximately 7km south- southwest of the Johannesburg CBD. It is located within the Ekurhuleni Metropolitan Municipality's area of jurisdiction, abutting the municipal border between Ekurhuleni Metropolitan Municipality and the City of Johannesburg Metropolitan Municipality.

Suburbs within a 5km radius from the site include:

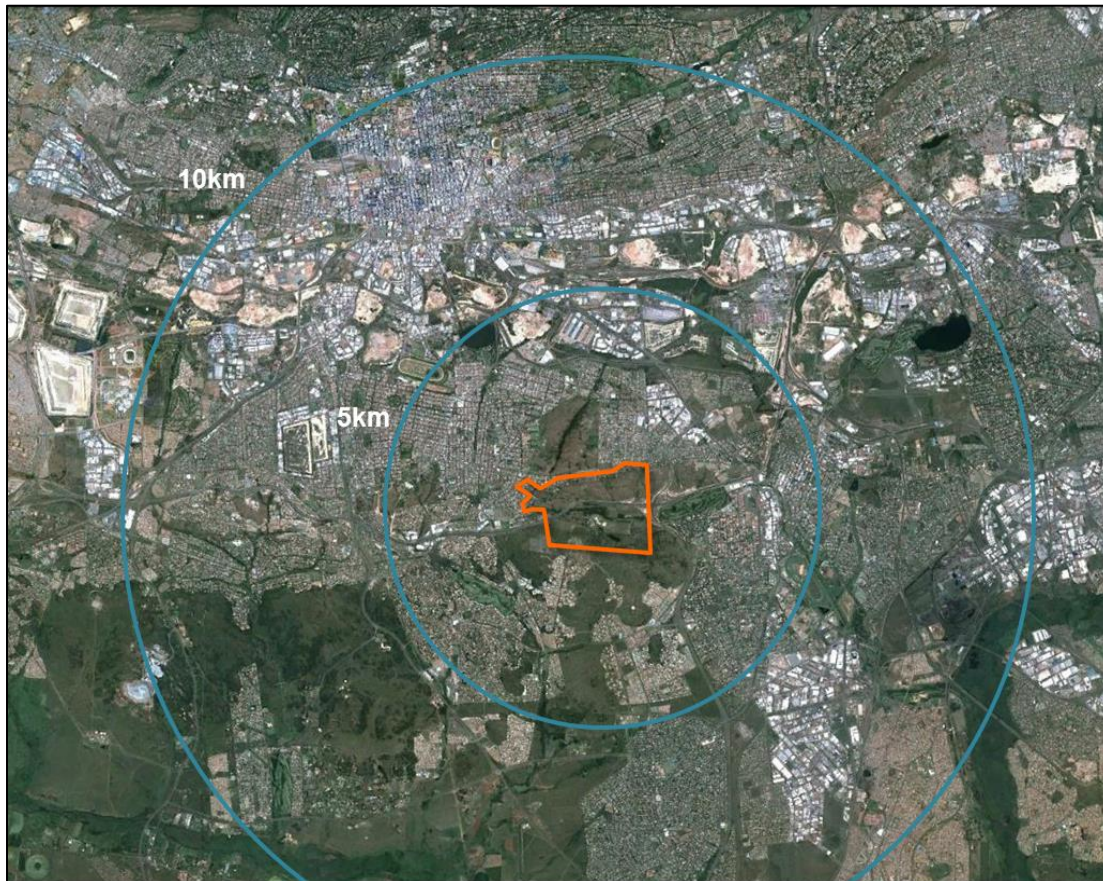
- **South** - Bassonia & Meyersdal;
- **East** - Alberton CBD, Alberante & Reading Country Club;
- **North** - Linmeyer, Moffat Park & South Hills, and



➤ **West** - further extensions of Bassonia and Glenvista.

Please refer to **Annexure E** for a copy of a **Regional Locality Plan** indicating the development area in relation to these existing suburbs.

Various access options are available to the site that link to the Alberton CBD, Bassonia, Glenanda, Glenvista & Ormonde areas. The N12 southern bypass bisects the greater site (from east to west), linking to the R59, which provides further regional access to the north and south.



**Figure 1: Aerial Locality Plan**

#### 4.2.2 Local Context

On a local context, the larger Reading Junxion / Meyers Farm site is situated to the west of the R59 Highway and the N12 southern bypass bisects the site (from east to west), linking to the R59. The freeway system (N12, R59 and the future PWV16) provide regional accessibility to the site; while the existing connectivity framework routes create a lattice of existing and future access routes feeding the site locally (M59, Comaro Street, K87, Fore Street & South Rand Road).



In conjunction with the aforementioned, the connector routes will provide access to the site from the surrounding urban fabric. These routes cut through the freeway system and provides direct access. It is therefore proposed that the natural connectivity framework be completed by allowing east-west & north- south linkages into the site (proposed connectivity framework).

Due to the nature of the site, its current access limitations, visibility from the N12 and R59 freeways and in context of the 2 ridges, its context lends itself to develop as a gateway to the City of Ekurhuleni from the west and the south. This context results in the inherent potential for this site to be associated with mixed-use development that extends from the Voortrekker offramp on the N12 westward to the Glen Shopping Centre node and Oakdene mixed-use node at the Comaro Street offramp.

A detailed traffic impact assessment was completed for both the greater Reading Junxion site and also specifically for the phase 1 development of Meyersdal Extension 31. This TIA supports the general intention to link the M12 and M19 routes (north- south) and the Fore Street and Comaro Street through the site; completing the intersecting lattice of regional connectivity. More detail with regards to traffic impact and road linkages are discussed later in this report.

#### **4.2.3 Existing Zoning**

The land is zoned "Agricultural" in terms of the Ekurhuleni Town Planning Scheme, 2014.

#### **4.2.4 Existing Land Use**

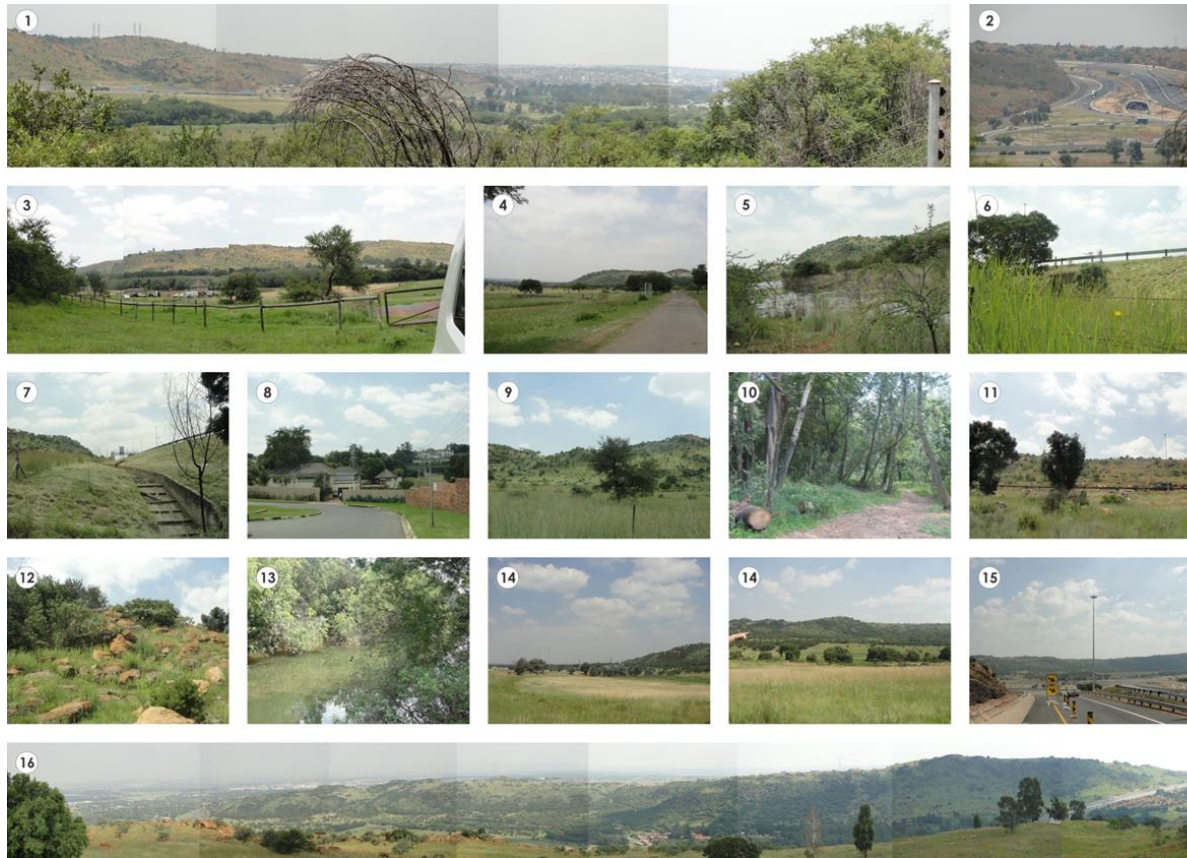
The historic Meyer's land holding measures approximately 351,6 Ha in extent with the portion to the south of the N12 freeway measuring some 242 Ha in extent. Both the northern and southern portions of the greater land holding are primary (Class 1) ridges.

The central portion was historically used for farming and equestrian activities. A tributary of the Natalspruit drains the central portion of the site (from west to east towards the Alberton CBD) and there are 2 dams located on the site.

The natural environment that will be included in the proposed urban development includes the northern and southern farm dams, the northern and southern ridge lines (development edges), the east- west tributary, and the tree clusters within the site.

The natural environment should be used as a key influential asset of the site. These natural open spaces should be interlinked and create an urban environment that is integrated with its surrounding natural environment and surrounding neighbourhoods.

The following photographs indicate existing natural features of the Meyer Farm / greater Reading Junxion site:



- View to the northwest of the site, indicating the ridge and the N12/ R59 interchange (1)
- The R59 crossing the northern ridge towards Steeledale (2)
- Equestrian Fields & Agriculture (3 &4)
- Southern farm dam (5)
- Elevated N12 freeway (6)
- Stormwater drainage south of N12 (7)
- Access road extension from Fore Street (8)
- Southern Ridge (towards Bassonia) (9)
- Invasive plants/ vegetation (10)
- Northern Ridge (11)
- Rocky outcrop, south of N12 (12)
- Northern farm dam (13)
- Disused agricultural land (14)
- View of site from R59 interchange from north west (15)
- Panoramic view of total site from northern ridge (16)

The next set of photographs indicate existing man-made features and existing land use on the site:



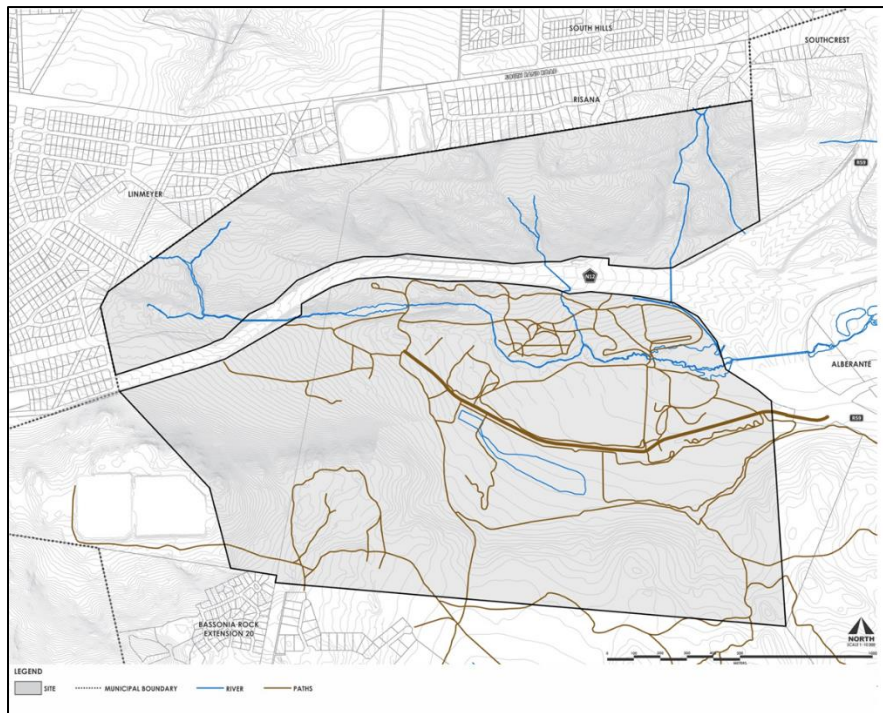
- Equestrian Centre (1)
- Historic farm house & associated buildings & outbuildings (2, 3 & 4)
- Agricultural fields (disused) (4)
- Ridges & natural surroundings (4)
- Equestrian training fields & showgrounds (5)
- Cemetery (6)

The proposed Meyersdal Ext 31 development is however situated on only a part of this site. As indicated, it measures approximately 71.1 Ha in extent and proposes to incorporate some 50Ha of the southern ridge as Private Open Space. Refer to **Annexure K: Composite Layout Plan** and **Annexure L: Proposed Layout Plan – Meyersdal Ext 31**.

#### 4.2.5 Existing Road Infrastructure

The N12 southern bypass bisects the greater site (from east to west), linking to the R59. The freeway system (N12, R59 and the future PWV16) provide regional accessibility to the site; while the existing connectivity framework routes create a lattice of access routes feeding the site locally (M59, Comaro Street, K87, Fore Street & South Rand Road).

The current paths, access roads and farm tracks are indicated on the following diagram. These paths represent the current internal circulation and movement within the greater development area.



**Figure 2: Paths, Access Roads & Tracks**

#### 4.2.6 Geotechnical Conditions

A comprehensive Geotechnical Report was prepared by Soilkraft CC for the proposed development. This report confirmed that the greater Reading Junction site is generally suitable for development based on the following findings:

- **Geology:** The property straddles the contact between quartzitic sandstone with conglomerate lenses (Turffontein Formation, Central Rand Group, Witwatersrand Supergroup) and basalt of the Klipriviersberg Formation (Ventersdorp Supergroup).
- **Soil Profiles:** The profiles on site are largely dominated by expansive soils of transported or residual origins. Limited compressible materials prevail in the soil profiles on the northern and north eastern sides of the site. Finally, bedrock outcrop and shallow bedrock dominates the northern most boundaries of the site.
- **Groundwater:** Perched groundwater was not encountered on the site but is expected to prove problematic on a seasonal basis, specifically in lower lying areas. It is likely that surface seepage and marshy conditions will also occur adjacent to the water courses.
- **Founding Conditions:** The site was divided into six geotechnical zones, namely H3, R-H/R-S/H/R, H2-H3, H1, H1/S2-H1/S-H1/S1 and S2. Foundation precautions are therefore required. Other geotechnical factors that may influence the development were identified and included areas of fill, borrow areas, areas of material dumps and areas with excessively steep slopes.



- **Conditions of Excavation:** Conditions of excavation on site are largely dominated by clayey excavation. Conditions of wet excavation are also anticipated in the lower lying areas. Corestones and coarse colluvium (i.e. talus) present some impediments to excavation, but in general the majority of soil materials encountered on site proved excavatable by backhoe. Quarzitic sandstone bedrock may be excavated by machine to a limited extent, but areas of outcrop are considered medium hard to hard rock and will not be excavatable.
- **Corrosivity:** Test results reveal that all in situ materials are extremely corrosive, mostly due to very high soil conductivity properties. Waterlogged conditions will exacerbate corrosion in lower lying areas.
- **Undermining:** The area is not subject to undermining.
- **Dolomite Stability:** The area is not subject to dolomite related instabilities.

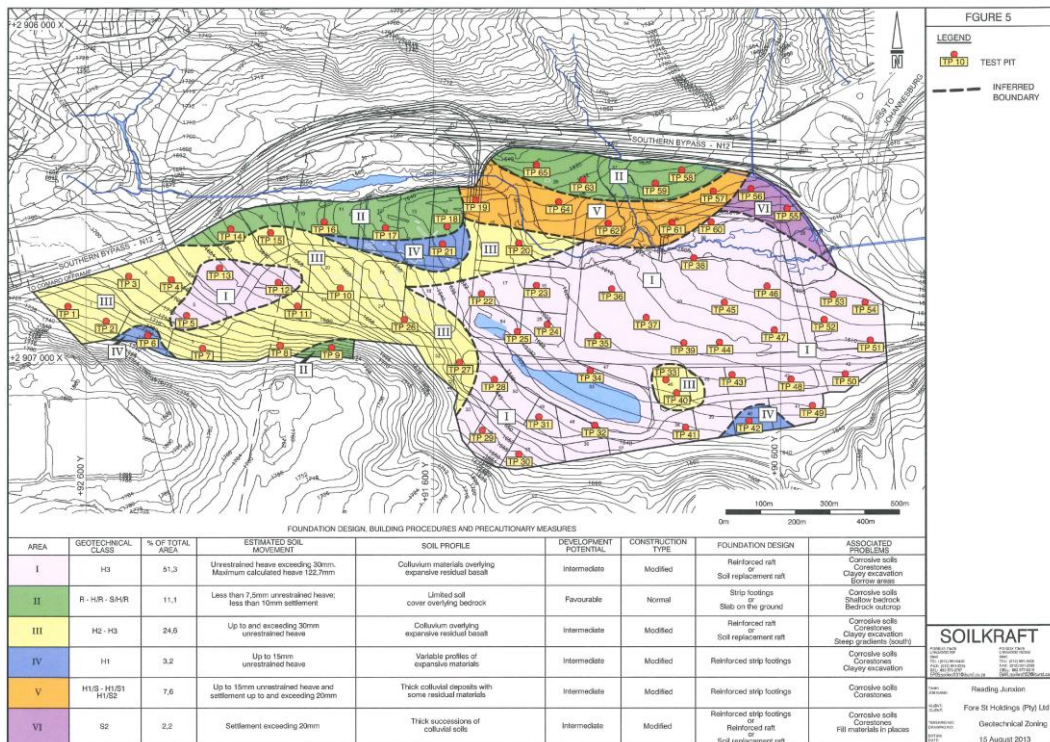


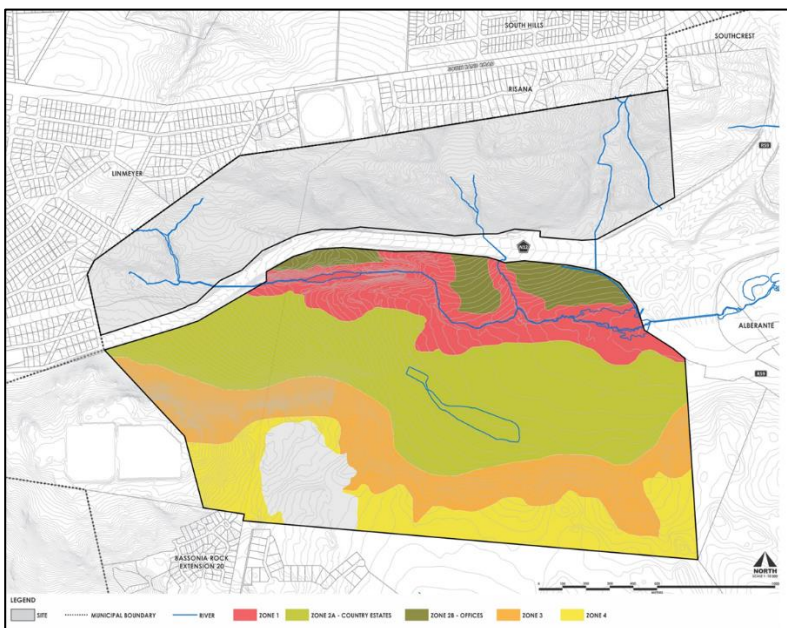
Figure 3: Geotechnical Zones

The Meyersdal Ext 31 development is situated in an area which the geologist generally classified as Zone I which represents colluvium materials overlying expansive residual basalt. There are also 2 smaller zones (Zone III and Zone IV) which are similar in composition, but with different geotechnical classifications. All of the proposed Meyersdal Ext 31 is however developable provided that the recommendations and precautionary measures for foundation design are incorporated.

### 4.3 ENVIRONMENTAL IMPACT ASSESSMENT

According to the GDARD policies (C-plan 3) there are no protected areas within the site boundary. There are, however, areas which are considered ecologically important, due to the potential occurrence of red-listed plants, orange listed plants and the presence of primary vegetation. There is also areas which is considered by GDARD to be irreplaceable in the north western portion of the greater Meyer farm, due to the potential occurrence of a red listed plant and the possible presence of primary vegetation.

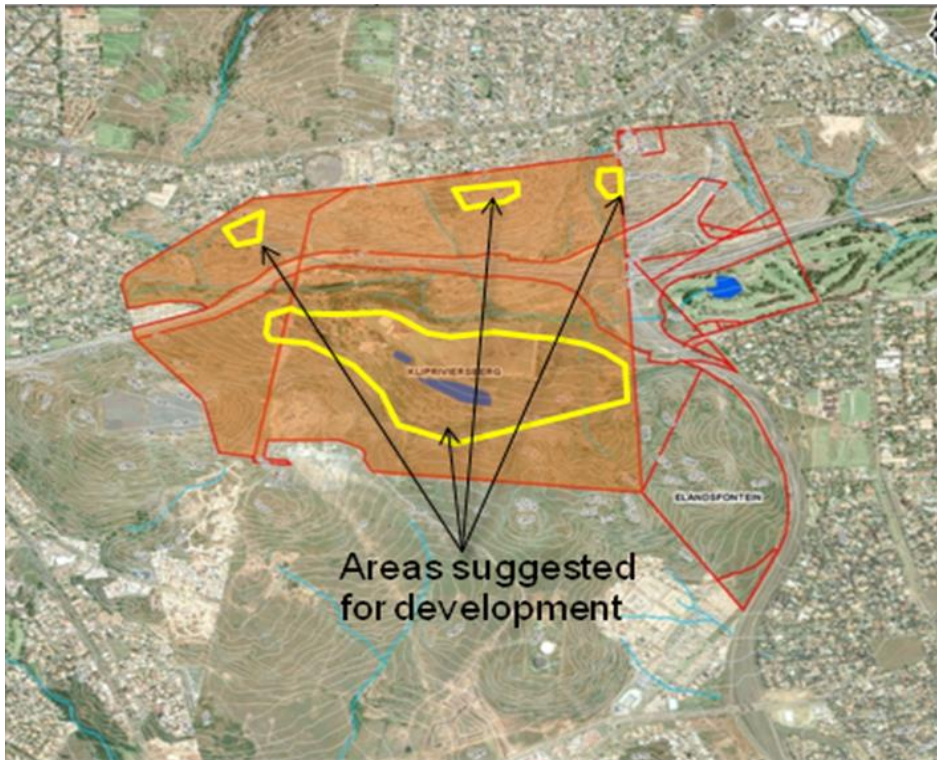
The entire area is classified by GDARD as a Class 3 ridge area. According to GAPA there is an isolated small area in the centre of the site, on either side of the N12 freeway, that has a high agricultural potential. The remainder of the site is classed as having moderate agricultural potential.



**Figure 4: Environmental Sensitivity**

The ecological study conducted by Eko Info revealed that the site has already been transformed with the construction of reservoirs, roads, residential areas and other human activities, particularly in the vicinity of the perennial stream in the middle of the site. As the cost of rehabilitation of these areas (measuring approximately 130 Ha) would be high, it was suggested that development be concentrated in these areas.





**Figure 5: Developable Areas**

Large parts of the site, largely associated with the rocky ridges, were found to be natural and highly sensitive, and should be conserved. Two wetland types were identified on the site: a riparian area towards the western boundary along the drainage line, which would require extensive restoration, concentrating on the removal of invasive species and their replacement with indigenous species; and a floodplain vlei wetland towards the eastern boundary of the site, which is in good condition and which should be conserved and managed particularly by the prevention of storm water entering the area at high speed and volume.



**Figure 6: Development Footprint of the previous ROD**



Suitable habitat was however found for five species of concern and these should be conserved within the proposed urban development.

It is also suggested that a portion of the funds raised by the proposed development be incorporated into a stewardship programme in terms of which the areas to be conserved can be managed by the land owner or any other suitable person or organisation. The image indicates that approximately 130ha of land is suitable for development. This land corresponds to the proposed Reading Junxion development footprint and the previous RoD issued by GDARD measuring 130ha in extent.

It is the intension of the developer the limit development to this original ROD footprint.

Meyersdal Ext 31 corresponds to the GDARD development footprint which will result in sensitive areas being conserved and excluded from development.

#### **4.4 ENGINEERING SERVICES AND INFRASTRUCTURE**

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##### **4.4.1. Introduction**

As required in terms of the City of Ekurhuleni Spatial Planning and Land Use Management By-Law, 2019 comprehensive studies into the availability and provision of engineering services infrastructure were conducted.

These reports are attached in the following Annexures:

**Annexure G : Bulk Civil Engineering Services Reports**

- G1 – Volume 1 Traffic Impact
- G2 – Volume 2 Roads
- G3 – Volume 3 Stormwater
- G4 – Volume 4 Water
- G5 – Volume 5 Sewer
- G6 – Volume 6 Electricity

Although these technical investigations were conducted for for the entire development, the reports are focussed on the upgrading to infrastructure that may be required for the first phase of this mixed use development – namely Meyersdal Ext 31. Extensive negotiations were held with all engineering services departments and each of these were also consulted during the pre-submission consultations as required in terms of Section 36(5) of the City of Ekurhuleni Spatial Planning and Land Use Management By-Law, 2019.

With reference to the detailed findings and recommendations, the following summary is given.



#### 4.4.2. Traffic Impact

With reference to the report attached as **Annexure G1**, both a micro-simulation model and Traffic Impact Assessment were prepared to determine the impact of the proposed residential development trips on the surrounding road network and road upgrades required.

It was determined that Meyersdal Ext 31 will generate 953 vehicle trips during the weekday morning peak hour and afternoon peak hour respectively. This, together with information on latent development rights, planned road upgradings in the region and trip reductions for public transport transit nodes and corridors resulted in analysis and recommendations for the following roads:

- Fore Street
- Voortrekker Road
- Ring Road
- Bodmin Road
- Jacqueline Street
- Michelle Avenue / R59 junction

The Traffic Impact Assessment report lists specific external road upgradings required in the sub-region to accommodate existing and projected 2025 background traffic. These upgrades will have to be negotiated between the various road authorities and the developer as to when latent road upgrades will be required and when these should be constructed.

It is clear that road upgrades and substantial traffic signal optimization are required to address peak hour congestion in the sub-region when considering the following identified latent road upgrades:

**Table 2: Road Upgrade Proposals for 2025 Background Traffic**

Junction	Proposed Lane Upgrades	Proposed Traffic Control Upgrades
Michelle Avenue & General Alberts Avenue	Introducing a one-way system on Michelle Avenue (eastbound) and General Alberts Avenue (westbound) New link between Roslyn Avenue and R554	Optimizing signal timing along the entire one-way system
R554 & Phantom Street	-	Optimize signal timing plan
R554 & Michelle Avenue	-	Optimize signal timing plan
New Junction General Alberts Avenue & R554	New Junction and 2 dedicated right turn lanes	Provide 2 phase signalling
R59 southbound off/on ramp & Michelle Avenue	Additional Left-turn slip Provide 3rd lane between Jochem Bruggen Street and R59 ramp	Optimize signal timing plan



R59 northbound off/on ramp & Michelle Avenue	Additional Left-turn lane Provide additional lane on eastern approach	Optimize timing plan	signal
Michelle Avenue & Jochem Bruggen Street	Change road markings and road signs for one-way system	Optimize timing plan	signal
Michelle Avenue & Leipoldt Street	Change road markings and road signs for one-way system	Optimize timing plan	signal
General Alberts Avenue & Jacqueline Street	Provide additional land on northern approach of Jacqueline Street Provide left turn land on northern approach of Jacqueline Street	Provide 3 phase signalling	
Jacqueline Street & Meredy Street	Additional land on northern approach and southern exit	Provide 3 phase signalling	
Jacqueline Street & Hart Avenue	Add additional through land on north approach	Provide 2 phase signalling	
R554 & Hibiscus Avenue		Optimize timing plan	signal
Hibiscus Avenue & Akasia Road	Realignment of 2 roads	Will remain stop-controlled	
R554 / Garfield Road / Jacqueline Street	Dedicated right turn land on north western approach of Jacqueline Street Change road markings for one-way pair system	Optimize timing plan & update traffic signals along these routes	signal
Alberton Boulevard & St Austell Street	-	Optimize timing plan	signal
Ring Road West & Redruth Street	-	Optimize timing plan	signal
Ring Road West & Clinton Road (at Netcare Hospital)	-	Optimize timing plan	signal
Ring Road West & Helson Road	-	Optimize timing plan	signal
Ring Road West & Padstow Street	-	Optimize timing plan	signal
Ring Road East 7 Du Plessis Road	-	Optimize timing plan	signal
Du Plessis Road & 2 <sup>nd</sup> Avenue	-	Optimize timing plan	signal
Ring Road East & Helson Road	-	Optimize timing plan	signal
Ring Road East & Voortrekker Rad	-	Optimize timing plan	signal
Ring Road West / East & R544	-	Optimize timing plan	signal

With this as background, the Traffic Impact Assessment also makes specific proposals for both the above 2025 background traffic and the Meyersdal Ext 31 development traffic:

**Table 3: Road Upgrade Proposals for 2025 Background Traffic & Development Traffic**

Junction	Proposed Lane Upgrades	Proposed Traffic Control Upgrades
R554 & Phantom Street		Traffic signal timings and phasing adjustments
R554 & Michelle Avenue		Traffic signal timings and phasing adjustments
New Junction General Alberts Avenue & R554		Traffic signal timings and phasing adjustments
R59 southbound off/on ramp & Michelle Avenue	Additional right-turn on R59 to be provided	Traffic signal timings and phasing adjustments
R59 northbound off/on ramp & Michelle Avenue		Traffic signal timings and phasing adjustments
Michelle Avenue & Jochem Bruggen Street		Traffic signal timings and phasing adjustments
Michelle Avenue & Leipoldt Street		Traffic signal timings and phasing adjustments
General Alberts Avenue & Jacqueline Street		Traffic signal timings and phasing adjustments
Jacqueline Street & Meredy Street		Traffic signal timings and phasing adjustments
Jacqueline Street & Hart Avenue		Traffic signal timings and phasing adjustments
R554 & Hibiscus Avenue		Traffic signal timings and phasing adjustments
Hibiscus Avenue & Akasia Road		Traffic signal timings and phasing adjustments
R554 / Garfield Road / Jacqueline Street		Traffic signal timings and phasing adjustments
Alberton Boulevard & St Austell Street		Traffic signal timings and phasing adjustments
Ring Road West & Redruth Street		Traffic signal timings and phasing adjustments
Ring Road West & Clinton Road (at Netcare Hospital)		Traffic signal timings and phasing adjustments
Ring Road West & Helson Road		Traffic signal timings and phasing adjustments
Ring Road West & Padstow Street		Traffic signal timings and phasing adjustments
Ring Road East 7 Du Plessis Road		Traffic signal timings and phasing adjustments
Du Plessis Road & 2 <sup>nd</sup> Avenue		Traffic signal timings and phasing adjustments
Ring Road East & Helson Road		Traffic signal timings and phasing adjustments
Ring Road East & Voortrekker Rad		Traffic signal timings and phasing adjustments
Ring Road West / East & R544		Traffic signal timings and phasing adjustments
Voortrekker Road and Ring Road West and Alberton Boulevard and St Austell Street		Traffic signal timings and phasing adjustments
Fore Street & Bodmin Road	Traffic Circle to be reconfigured	



	to a double roundabout with 2 lanes on every approach	
Jacqueline Street & Joyce Street		Traffic signal timings and phasing adjustments
Jacqueline Street & Michelle Avenue		Traffic signal timings and phasing adjustments

In conclusion, the Traffic Impact Assessment identified that local traffic congestion can generally be attributed to a lack of optimization of existing traffic signal timing on virtually all intersections. In addition, there are specific traffic lane and intersection upgrades required to the external road network to accommodate the projected 2025 latent (background) traffic. The construction timing of these upgrades must be negotiated with the various road authorities.

To accommodate Meyersdal Ext 31 specifically, it is proposed that the identified traffic signal timing and phasing adjustments be implemented by the developer (on 26 listed intersections). In addition, that the following incremental road improvements be constructed:

- Additional right-turn on R59 to be provided at R59 southbound off/on ramp & Michelle Avenue.
- Traffic Circle to be reconfigured to a double roundabout with 2 lanes on every approach at the Fore Street & Bodmin Road intersection.
- Extension of Fore Street be constructed as a 2-lane road to link with Bodmin Road to. This road will run parallel to the existing Fore Street. At its junction with Bodmin Road, Fore Street will be closed and converted to a service road.

Please refer to **Annexure G1** which contains supportive sketch plans and intersection layouts.

#### 4.4.3. Roads

Taking the recommendations of the Traffic Impact Assessment into consideration, the report on Roads in **Annexure G2** contains detail proposals related to the proposed external road upgrades, roads required to provide access to Meyersdal Ext 31, access control and the standards of roads to be constructed. The report also details the approach with regards of non-motorized transport and public transport in accordance with the policies of the City of Ekurhuleni.

The report confirms that road expropriation / land acquisition will be required for the proposed extension of Fore Street and confirms that the proposed development of Meyersdal Ext 31 is serviceable in terms of road infrastructure.



#### 4.4.4. Stormwater

The master planning of the entire Reading Junxion development was considered by the development team due to the fact that issues of Environmental Impact Assessment, Water Use Licenses and stormwater management cannot be addressed in isolation without taking the greater development into consideration. The Stormwater report appended in **Annexure J3** confirms that the greater Reading Junxion site slopes in an easterly direction.

The stormwater master plan also analyzed the sizes and impact of all R59 culverts feeding stormwater onto the site.

A regional stormwater attenuation structure is proposed on the low-point of the Meyers Farm site before the regional stream leaves the Reading Junxion development area underneath the R59 freeway towards the Reading Golf Club. From the golf course, the stream is channeled through New Redruth and eventually again becomes a natural stream on the other side of the Alberton CBD. This attenuation dam will be designed to attenuate the 1:25 year post-development runoff with an outlet to release stormwater equal to or less than the 1:5 year pre-development runoff value.

Notwithstanding the abovementioned proposed regional attenuation dam, each stand in Meyersdal Ext 31 will be designed in such a way as to release stormwater into a proposed piped stormwater network towards the regional attenuation structure.

The stormwater attentionion dam will require a dam licene as well as an integrated Water Use License Application (WULA) to be considered and approved by the Department of Water & Sanitation. This application is currently being attended to by the appointed environmental practitioner.

The stormwater report also includes calculations for the total cost of bulk stormwater for the entire development.

#### 4.4.5. Water

An Outline Scheme Report (OSR) for water infrastructure is attached as **Annexure G4**.

This OSR appends and includes the results of a GLS assessment that was conducted for the entire Reading Junxion development to determine the nature and capacity of all bulk water distribution zones surrounding the site.

While no bulk water infrastructure presently exists on the site and the site falls outside of existing Ekruhuleni water distribution zones, there is a nearby network supplying water to the Bassonia Roack and Alberante residential areas.



The configuration of the existing bulk water network from the Elandsfontein reservoir and the fact that the greater development (and Meyersdal Ext 31) will in future form part of the Elandsfontein Reservoir Zone results in the conclusion that sustainable bulk water supply will be possible.

GLS also confirmed that the bulk water network has sufficient capacity to accommodate the proposed development (greater development and Meyersdal Ext 31) and the OSR contains details of the proposed water reticulation network in accordance with the design standards of the City of Ekurhuleni Metropolitan Municipality.

The report concludes that no new servitudes will be required for the upgrading of water supply for Meyersdal Ext 31 and provides a detailed cost estimate of R5 340 000 (including professional fees and VAT).

#### **4.4.6. Sewer**

As with bulk water, Civil Concepts also prepared a OSR for Sewer services based on the aforementioned GLS Report (refer to section 4.4.5) and the Sewer report attached to **Annexure G5**.

Due to its designation as open space, the site is presently not included in the existing sewer reticulation networks of the City of Ekurhuleni. It is however proposed that the development be included in the Dekema WWTP drainage area.

Of interest to note is that there is also an existing outfall sewer of Johannesburg Water traversing the site as indicated in the Sewer OSR.

The report includes proposals for the incremental upgrade of future bulk sewer infrastructure for subsequent phases of the greater development.

The sewer demand of Meyersdal Ext 31 was calculated and it was concluded that there is sufficient bulk sewer services available for Meyersdal Ext 31 which could be accommodated in a number of sewer reticulation pipeline upgrades. The total cost of sewer upgrades for Meyersdal Ext 31 is estimated at R3 021 000 (including professional fees and VAT).

#### **4.4.7. Electricity**

Volume 6 of the Engineering Outline Scheme Reports for this application for township establishment is attached As **Annexure G6** to this memorandum. It contains an Electrical OSR completed by DJJC Electrical Engineers.





As with the other engineering investigations, the Electrical OSR was prepared to calculate demand and guide phased infrastructure planning for the greater Reading Junxion development while making specific proposals to facilitate the development of the first phase, Meyersdal Ext 31.

The report confirms that the sustainable supply of bulk electrical infrastructure is possible from the Eiger Substation provided that the upgrade to this substation include a new 33kV outdoor circuit breaker to supply Reading Junxion. It will be the responsibility of the development to apply to Eskom on behalf of the municipality to supply the new in-feed sub-station which will be taken over by Ekurhuleni.

The report deals with the proposed 33kV feeder lines from the Eiger Substation to a proposed new in-feed sub-station on site. It also proposes new 6.6 kV distribution cables, the requirement for minisubs in Meyersdal Ext 31, the provision of street lighting and broad proposals for energy efficiency and sustainability within the development.

#### **4.5 LAYOUT DESIGN AND DEVELOPMENT RIGHTS**

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##### **4.5.1. Design Principles**

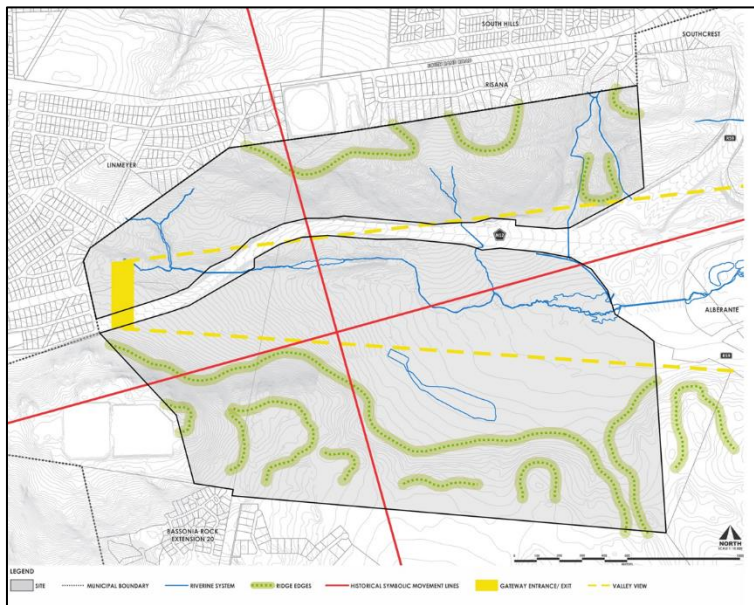
This section of the report is aimed at providing information with regards to the layout configuration and ultimately the Land Use Rights and development concept. With reference to composite layout plan annexed hereto (**Annexure K**), it is evident that the applicant proposes to establish a mixed development on the land.

The General Principles of SPLUMA support mixed land use developments and there has been a shift from homogenous townships towards creating more sustainable environments over the long term. Mixed land use townships encourage the creation of employment and economic opportunities in close proximity to residential accommodation. The proposed Reading Junxion Development is surrounded by various established neighbourhoods and a variety of land use. It only makes sense to create a mixed land use township which will complement the existing surrounding land uses.

The proposed township is planned as a mixed land use and mixed income development.



### 4.5.1.1 Protection of Ridges and Natural Features

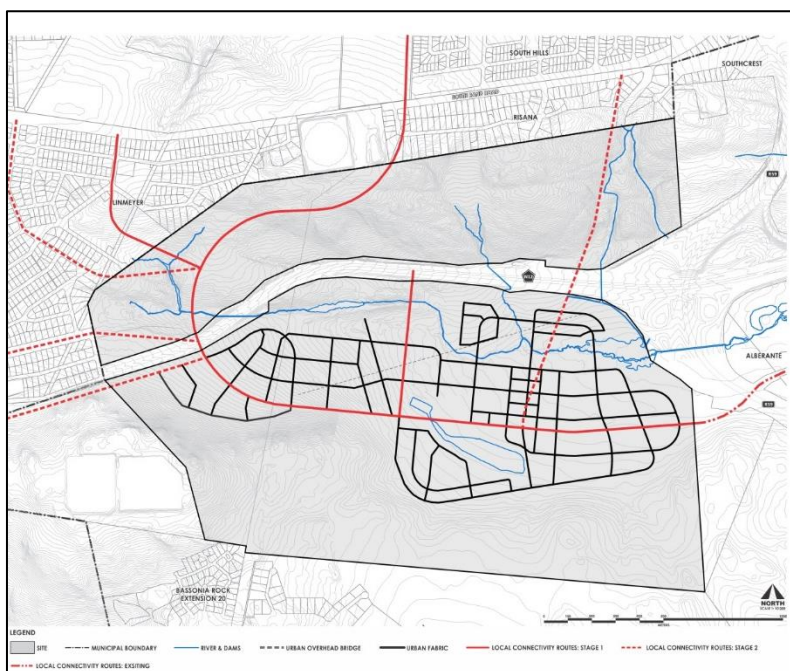


**Figure 7: Ridges and Natural Features**

The ridges and ridge edges will be protected as natural open space (with limited appropriate sensitive urban development – hotel/ restaurant/ nature center/ conference facilities).

The plan above illustrates the potential gateway and view of the valley floor. The existing historic farmhouse, historically significant outbuildings and farm installations should be protected and incorporated in the design. The historic view lines to and from the farmhouse should also be retained and inform the proposed development.

### 4.5.1.2 Creating the Frame for the Urban Fabric



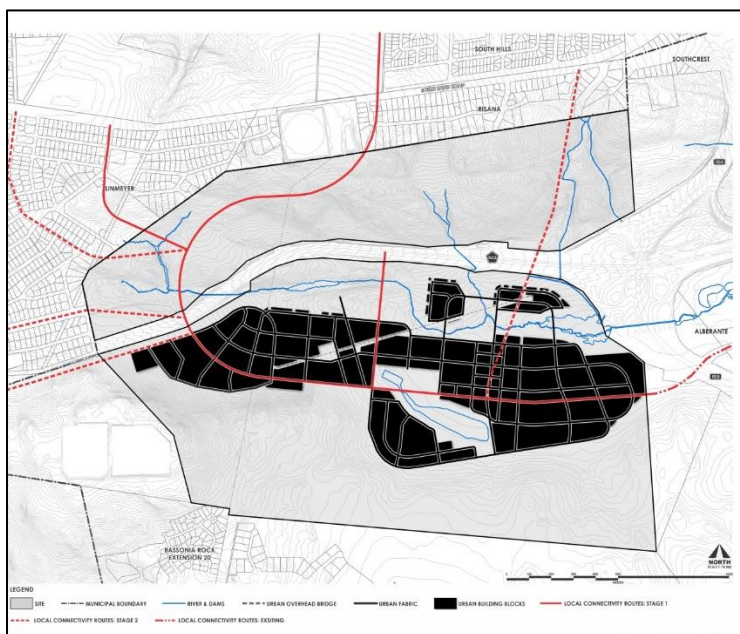
**Figure 8: Urban Fabric Frame**

The internal roads (secondary & tertiary roads) are then employed to create the frame for the urban fabric to develop within. These internal roads will include a variety of environments / street characters such as residential streets, main streets and boulevards. These internal streets will also be designed to focus movement and development towards the core, while providing equitable access to all areas and development phases. In addition the internal roads should reinforce sight lines (to the historic farmhouse & ridges) and provide for maximum north-south orientation of units.

In all internal road designs the prioritization of pedestrian movement and cycle lanes should be prioritized as primary modes of movement, thereby entrenching the principle of non-motorized transport and walkability of the urban development in support of the policies of the City of Ekurhuleni Metropolitan Municipality.

Note should also be taken that streets should also be developed and designed to function as public spaces and function as direct and safe linkages to the surrounding natural environment and social amenities.

#### 4.5.1.3 Urban Building Blocks



**Figure 9: Urban Building Blocks**

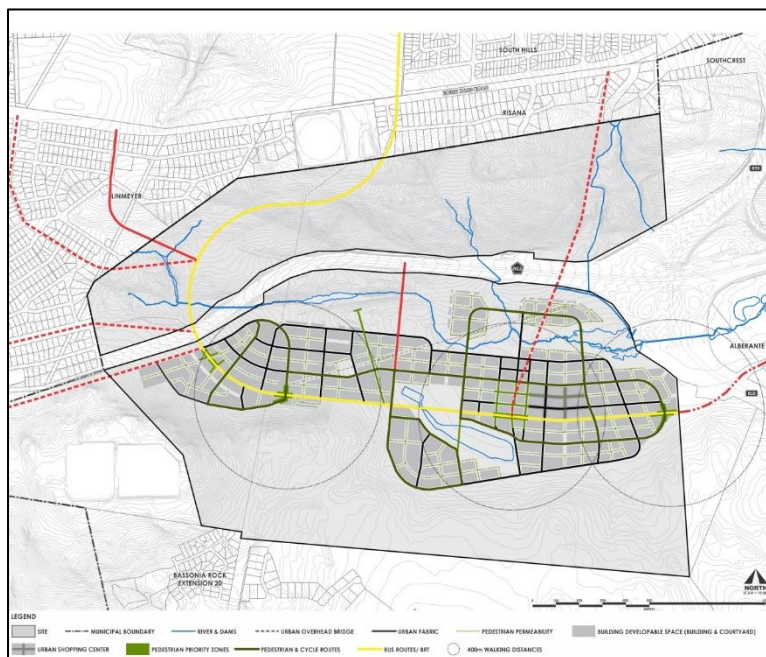
A variety of urban building blocks will be provided within the proposed development. The smaller building blocks (city blocks) will be located within the proposed urban core. This will allow for maximum permeability and support the principle of shorter walking distances and associated safety. This will also assist in the perception of this being the core, while allowing for maximum commercial retail exposure, as more city



block corners are provided. Larger urban blocks will be located further away from the proposed urban core.

#### 4.5.1.4 Promote Public Transport, Non-Motorized Transport, Pedestrian Movement & Walkability

With reference to the Outline Scheme Reports in Annexure J (specifically TIA and Roads) public transport will be focused to support the development of a central urban core (including a public transport facility / TOD), which is focused towards the town centre. The public transport road infrastructure supporting this centre is the Boulevard (east west link – BRT route). The proposed new east- west and north- south routes further focusses activity towards the core.



**Figure 10: Public Transport & Pedestrian Movement**

Through the provision of 3 primary nodes (6 in total) along the central Boulevard, the proposed urban development could promote pedestrian movement and transform the development into a walkable community. The image above, illustrates the development of walkable neighbourhoods, within a 400m radius of a node.

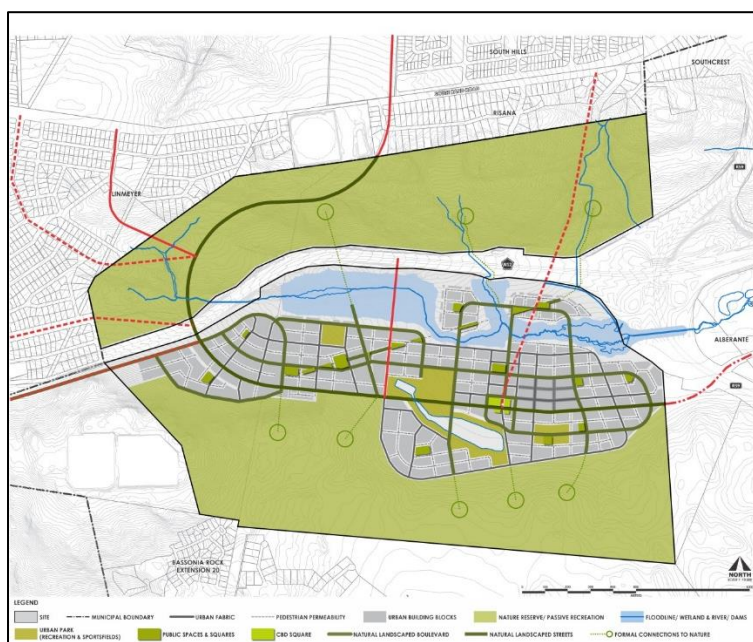
#### 4.5.1.5 Structuring the Integrated Public Open Space System

It is proposed that formal public spaces be developed that will guide pedestrian movement through the development. These public spaces should be connected and focus activity primarily to the urban core, therefore activity should be focused on public space, which then leads to the urban core.



When investing in public spaces within a nodal environment, it should be of high quality. The usability and functionality of these public spaces are promoted when good quality public spaces are linked together to create a network of public spaces. This network of public spaces will be accessed from the urban cores/ nodes and ranges from urban parks, urban public squares, markets, sports field, school fields, parks, ridges & natural open spaces - which will all contribute to the network of open space.

It is advocated that streets (particularly narrower internal streets) also be employed to create public spaces. This entails that activity be focused towards the street, overlooking of the street is promoted, active street edges are entrenched and that good quality landscaping & streetscaping is provided at appropriate scales for each hierarchy of street.



**Figure 11: Structuring Public Open Space**

#### 4.5.1.6 Creating a Vertical Mix of Land Use

It is proposed that a mix of land use be provided. The aim of this principle is to address the local needs of the community by agglomerating activity & infrastructure. However, this mixed land use approach also allows for flexibility over time which will contribute to long term sustainability. This mixture of land use also translates to the building stock design with buildings designed to accommodate land use change of use over time.

The vertical mix of land uses are advocated in the form of allowing retail (or non toxic light industrial) to develop on the ground floor, office development on the second floor and residential on the third floor and above. Other vertical mix ratios include the

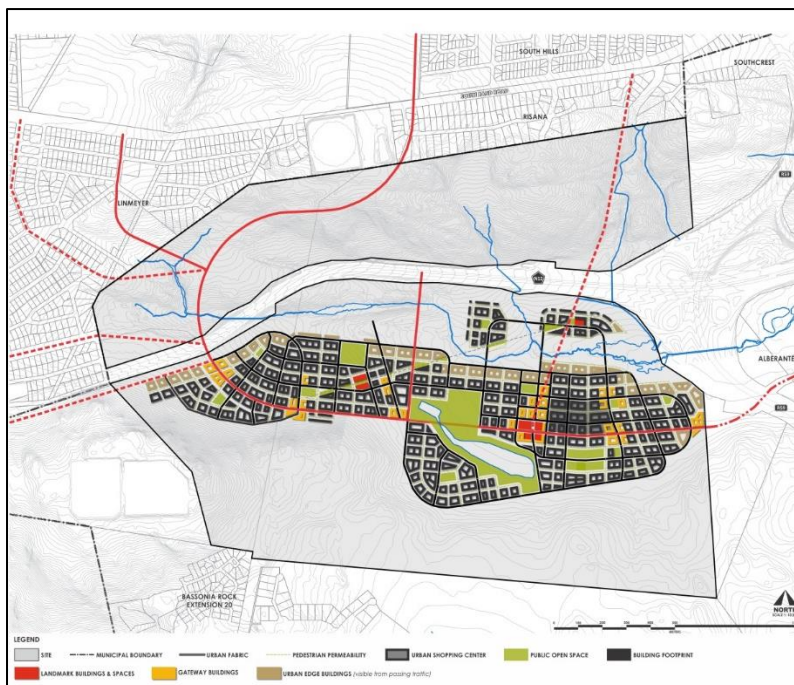


development of social facilities/ schools on the ground and second floors, with residential on top. A multitude of vertical mix ratios is proposed. This basic principle will contribute to land use variety, 24hr use of nodes and therefore long term sustainability.

#### 4.5.1.7 Creating a Legible City through Urban Form

The principle of differentiation in density, height, building type, landmark buildings, gateway buildings, landmarks, urban voids (public spaces/ parks) and development intensity is employed to create a legible city form which guides the visitor/ user/ resident through the development.

The sketch below illustrates that landmark buildings can be used to highlight important elements within the urban fabric, while gateway buildings could be used to indicate nodes or entrance points to districts/ neighborhoods. Edge buildings could furthermore be used as the developments face/ façade to external passing traffic. These buildings could therefore hold the potential of external exposure to the passing traffic.



**Figure 12: Legibility through City Form**

From the above it is quite apparent that the proposed development is not planned as another eco estate catering for a single market segment but is aimed at recreating a mixed profile neighbourhood where residents of all ages and from divergent economic standing have a place where they belong. An urban design team prepared several sketches and artistry to indicate the broad development concept.



From these plans, it is apparent that the broader land development is planned with varied densities and a variety of land uses.

**4.5.1.8 Development Vision**

With reference to the attached **Composite Layout Plan** (attached as **Annexure K**) the total development may make provision for the following proposed land uses:

**Table 4: Proposed Land Uses**

Land Use	Total Developable Area (m <sup>2</sup> )	Number of Residential Units
Offices	110 000	
Residential	513 000	7 000
Residential - Retirement Village	30 000	600
Commercial / Retail	165 000	
Hotels	69 000	
Private School	15 000 (2500 learners)	
Hospital	40 000 (400 beds)	
<b>Total</b>	<b>942 000</b>	<b>7 600 units</b>

The following composite layout plan indicating the ultimate development vision, is indicated in the following diagram (refer to the Composite Layout Plan attached as **Annexure K**).



**Figure 13: Composite Layout Plan**

The above table and plan provide a summary of the ultimate development vision for the entire Reading Junxion and is indicative of the number of units and development bulk incorporated into bulk services investigation, traffic modelling.



#### 4.5.1.9 Layout Plan – Meyersdal Ext 31

Prior to embarking on the design and planning of Reading Junction, a complete strategic planning exercise was concluded by the professional team involved. This planning exercise was conducted by the architectural, landscape, urban design and environmental consultants and was based on the approach of identifying opportunities and constraints of the site's micro and macro context. The methodology followed facilitated a process in terms of which sustainable and optimal utilization of land was identified whilst ensuring that relevant natural resources are sustained and negative environmental impacts minimized.

- The planning route followed was firstly to establish a full understanding of the development demand as expressed in the development of activities and facilities.
- The inter-relationship between various activities and facilities resulted in a process whereby various opportunities and constraints in terms of conservation, recreation, amenities and the physical environment were weighed against general layout and circulation requirements.

Based on the strategic discussion with the local authority, the applicant is of the opinion that the proposed mixed land use development represents the most suitable type of development for the area and will result in a sensible integration of the surrounding township development pattern. As far as residential densities are concerned, it remains important to provide varied densities to ensure that this development may cater for different segments of the market.

The layout was designed to be economical, with sufficient road surface area, whilst providing safe and convenient access to all erven. Sufficient private open space will be provided and integrated in an open space system that will enhance pedestrian movement throughout the development. Higher density residential development will be provided.

The layout plan of Meyersdal Ext 31 is attached as **Annexure L** to this memorandum. It is relevant to repeat that Meyersdal Ext 31 is the first phase of a much larger development. This first phase has the capacity to accommodate some 1724 residential units.



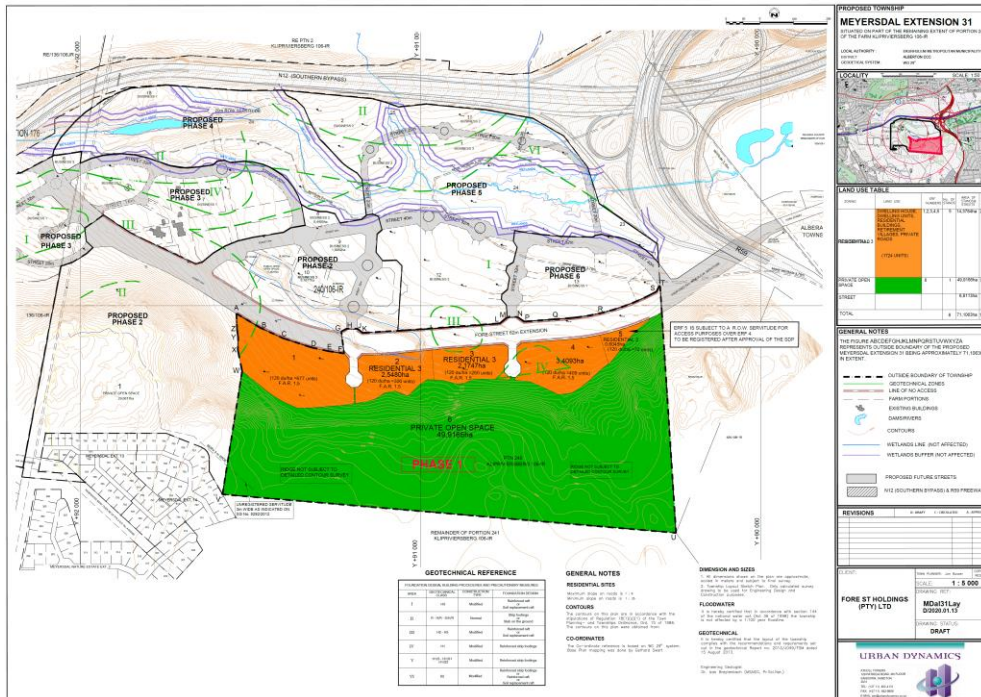


Figure 14: Meyersdal Ext 31 Layout Plan

The layout plan makes provision for the following zonings and land uses:


Table 5: Meyersdal Ext 31 - Zoning

Zoning	Land Use	Erf Number	Area (Ha)
Residential 3	Dwelling House, Dwelling Units, Residential Buildings, Retirement Villages, Private Roads	1 - 5	14,3784
Private Open Space	Open Space	6	49,9166
Street			6,8113
<b>Total</b>			<b>71,1063 Ha</b>

The development controls for the Residential 3 erven is as follows:

- **Zoning** - Residential 3
- **Land Use** - As per Scheme:



	Land Use Category	Primary Rights: Purposes for which land and/or buildings may be used	Special Consent of Municipality Land Use Application	Written Consent A and B of the Municipality	Provisos: Ancillary Uses applicable to Columns 3 & 4 (see Clause 13.2)
3	Residential 3 	Dwelling House, Dwelling Units, Residential Buildings, Retirement Villages, Private Roads	Old Age Homes, Hotels (excluding Off-Sales), Social Halls, Places of Public Worship, Places of Instruction, Institutions, Child Care Facilities, Special Uses	<p><b>Written Consent A</b></p> <p>Home Enterprises (Subject to Clauses 14.2 and 14.3)</p> <p><b>Written Consent B</b></p> <p>Day Care Facilities</p>	<p>Living Accommodation for Domestic Workers limited to 6m<sup>2</sup> per Dwelling Unit for the entire residential development</p> <p>Ancillary Offices, Laundrette</p>

**Figure 15: Extract from ETOPS, 2014**

- **Height** - 3 Storeys
- **Coverage** - as per Site Development Plan
- **Density** - 120 units per hectare

## 5. CONCLUSION

This Motivating Memorandum was prepared by Urban Dynamics Gauteng Inc. This company represents the applicant and developer, Fore St Holdings (Pty) Ltd, whose wish is to establish and develop a mixed land use township referred to as Reading Junxion.

Meyersdal Ext 31 is the first phase of this development.

This memorandum described legal, physical, environmental, engineering, layout design and institutional aspects relating to the proposed development and attached a range of specialist studies and supportive documentation as annexures to this report.

This motivation is considered sufficient to provide external departments and service providers with detailed information to comment on the application and it is hoped that its circulation will lead to expediting the establishment of the proposed development as a unique mixed land use development which will be desirable and that it will benefit the entire region.