

Zone 2 also allows for the establishment of micro enterprises with the aim to support and promote SMMEs within this zone. Concent for the establishment of micro enterprises are strictly managed by the micro enterprises management system, set out in Paragraph 6.3 below. The Table below provides guidelines for the approval of micro enterprises as part of the township establishment or rezoning application process.

Zone 3: Low-density residential zone

The aim of Zone 3 is to develop and maintain the residential character of typical suburban residential neighbourhoods. This involves the management of land use development within these residential areas and curbing the proliferation of noxious and disturbing land uses within these areas. Zone 3 does also allow for the establishment of micro enterprises with the aim to support and promote SMMEs within this zone. However, concent for the establishment of micro enterprises are strictly managed by the micro enterprises management system, set out in Paragraph 6.3 below, in order to curb the proliferation of noxious and disturbing land uses within this zone. A maximum residential density of 20 units per hectare should be supported in Zone 3. Residential supporting facilities to be accommodated within this zone include schools, social facilities and recreational facilities.

Zone 4: Central Business District

The primary aim of Zone 4 is to concentrate retail, office and residential uses to serve regional sectors within the municipal area. Entertainment uses can also form an integral part of the land use mix of Zone 4. Businesses associated with the motor trade, i.e. filling stations, showrooms, outlets and services centres, are also to be accommodated within Zone 4. The density and land use mix allowed within Zone 4 enable Transit Oriented Development (TOD) development, which is turn encourages the use of public transportation. Business uses are TOD supporting land uses and can typically include ground-level retail and second and third-storey office or residential uses. A maximum FAR of 1.8 is allowed within Zone 4 at 60% coverage.

Zone 5: Secondary / Regional node

The primary aim of Zone 5 is to concentrate retail, office and residential uses to serve a cluster of residential neighbourhoods. A regional mixed-use node is a Transit Orientated Development or TOD and therefore requires direct access to an existing or planned SPTN route and commuter railway station. The aim of Zone 5 is thus to provide the necessary land use densities and optimal land use mix to support the use of the public transportation system. Business development will be the key focus of Zone 5 and can include large shopping centres and multi-storey office buildings.

Big-box retail (such as a Macro outlet) can also form an integral part of the land use mix of Zone 6. A maximum FAR of 1.2 is allowed within Zone 5 at 40% coverage.

Zone 6: Community node

The primary aim of Zone 6 is to concentrate retail, office and residential uses to serve a single residential neighbourhood. The district mixed-use node can, but need not be, a Transit Orientated Developments or TODs that requires access to an existing or planned public transportation route. Business development will be the key focus of Zone 6 and can include large ground-level retail floor area and second-storey office uses. Medium-density residential uses must be encouraged within Zone 6. A maximum FAR of 0.8 is allowed within Zone 6 at 40% coverage.

Zone 7: Industrial

The primary aim of Zone 7 is to provide space for heavy and noxious industrial activities. Due to the noxious nature of Zone 7, only a limited range of associated land uses are to be developed within this zone. These include commercial uses, light industries and institutional uses associated with government and municipal entities. A maximum of 80% coverage is allowed within Zone 7.

Zone 8: Commercial and light industrial zone

The primary aim of Zone 8 is to provide space for commercial and light industrial activities. In particular, commercial developments, such as distribution centres, storage, wholesale and warehousing can be encouraged within this zone. Stringent development controls must be implemented within this zone to ensure an acceptable interface between this zone and neighbouring residential areas. For the same reason, heavy noxious industries are excluded from this zone. Other land uses to be encouraged within Zone 8 include offices uses associated with the commercial and light industrial uses, motor trade uses, and institutional uses, such as Government and Municipal depots. A maximum of 70 % coverage is allowed within Zone 8.

Zone 9: Open space zone

The aim of Zone 9 is to protect environmental sensitive areas and geotechnically hazardous areas from urban development. These areas are shown as a single zone, but different levels of protection and conservation can be applied to different parts of this zone, depending on the nature of the environment and its capacity to accommodate

certain open space uses. **It is important to note that the portions of Zone 9 bordering rivers and tributaries, presented on the LUMS map (Figure 31), is approximate. The final (township) boundaries of Zone 9, where it borders rivers and tributaries, will be determined by the size of the 1:100 year flood area affecting these portions of Zone 10, as determined by a certified engineer during township establishment.**

Zone 10: Agricultural zone

The primary aim of Zone 10 is to protect high-potential agricultural land associated with the Emfuleni Agricultural Hub. **To this end, NO farm or farm portion located within the Emfuleni Agricultural Hub may be subdivided.** Farms or farm portions located outside the Emfuleni Agricultural Hub may be subdivided for rural residential purposes to enable rural lifestyle living, or it may be subdivided for intensive farming purposes. Farms or farm portions located outside the Emfuleni Agricultural Hub may be subdivided for rural residential purposes to stand sizes of between 1 and 4 hectare, provided it has piped water is provided by a relevant authority, such as Rand Water. Farms or farm portions located outside the Emfuleni Agricultural Hub may be subdivided for intensive farming purposes to stand sizes of between 4 and 20 hectare, provided the owner can prove to have adequate water supply from local sources, such as boreholes. All subdivisions of farms or farm portions must not pose any pollution problems related to sanitation, and the existing road infrastructure must be able to handle the resulting increased traffic volumes. Urban agriculture, subsistence farming and commercial farming are allowed within this Zone 10, as well as industries related to animals and plants, such as nurseries.

The LUMS zones proposed aim to provide municipal planners with a tool to help assess development applications, such township establishment, rezoning or consent use applications. As far as possible, these LUMS zones have given consideration to existing land use patterns. These LUMS zones do not affect existing land use rights on properties, even if the existing rights have not been exercised or do not correspond with the land uses proposed in the relevant LUMS zone. **If there is a discrepancy between the Table above and the written text within this section of the report, the Table must receive precedence.**

It is important to note that the LUMS zones presented above do not overwrite the relevant Town Planning Scheme, but only intends to supplement it. As such, it does not attempt to address all the issues that are contained within a Town Planning Scheme, but rather addresses only those issues that are operational to the implementation of the Spatial Development Framework proposals. The LUMS zones proposed within this report can be used as a guide to review the Town Planning Scheme in future. The Table presented above only provides the broad land use types are allowed within each LUMS zone. **More detailed land use types that fall within each of these LUMS zones are presented in Annexure A.**

6.4. MICRO ENTERPRISES

The current home office/ business policy that applies to boulevards within Emfuleni is replaced by the following LUMS guideline (see Table below). **This LUMS guideline is only applicable to Zones 1, 2 and Zone 3; subject to the property being located next to and having access to a Class 4 road, or being located next to and having access to Helena Lochner Street, between Rossini Street and Conradie Street, or being located next to and having access to Assegai Street, between General Herzog Road and Umtata Street. In all these cases the residential character of the subject property shall remain in tact.** This ensures that the existing residential environment is not degraded. The Table below provides the percentage of floor area of a residential dwelling that can be used for micro enterprises.

TABLE 39: MICRO ENTERPRISE FLOOR AREA ALLOCATION

Land Use Management Zone	Zone 2: Medium-Density Residential Zone and Zone 3: Low-Density Residential Zone		Zone1: High density Residential Zone
Number of building storeys	1 storey	2 storeys	3 storeys
Maximum % of building floor area to be allocated to micro enterprises	40%	35%	25%

Notes: Property located within Zone 1, 2 or Zone 3 must be located next to and have access to a Class 4 road, with the exception of Helena Lochner Street Assegai Street.

Micro enterprises that can be considered under this LUMS guideline are offices, professional occupation, medical rooms, places of instruction, places of worship, institutions and special uses (excluding entertainment, retail, commercial and industrial related uses); provided it can be proven that these micro enterprises do not severely impact on the surrounding residential neighbourhood in terms of air pollution, noise pollution or visual pollution. For example, high-mast towers can be considered excessive visual pollution and loud music often associated with entertainment uses can be considered excessive noise pollution.

In assessing applications for the development of a micro enterprise on a property, several circumstances in relation to each individual case and its merits need to be taken into account. These must include:

- Whether the proposal would be consistent with the general planning and specific policies for the area concerned

- Whether the proposed development could be accommodated within the existing municipal services capacity of the neighbourhood
- Whether the traffic likely to be generated by the proposed development could be accommodated adequately on the road network
- Whether adequate provision is made for parking

Based on the above, the following specific conditions are set for the approval of a micro enterprise, especially if it involves extensions to the existing dwelling unit:

a. Setbacks and interface

If the micro enterprise requires the extension of the existing dwelling unit, setbacks of the extension will be required and determined on the basis of the setbacks for the existing detached house. Greater setbacks may be required in some cases in order to ensure that neighbouring dwellings are private and retain sufficient daylight. Applicants for dwelling unit extension to house micro enterprises must be required to show what impact building or demolition proposals will have on adjacent properties. In particular, vehicle access and parking areas will need to be related to adjacent developments.

b. Architectural character

The character of a residential neighbourhood is made up of the architectural design of the houses and the landscape setting. The design of a micro enterprise building, be it an extension of the existing building or the conversion of a part of the existing building, will need to be assessed in relation to the neighbourhood character and in particular the existing house on the stand. Development of a micro enterprise must be harmonious in scale, materials, form and character with the existing house on the site and with other dwellings in the neighbourhood. If a contrasting architectural style is proposed, which contrasts the style of the original buildings (e.g. old versus new), this needs to be done by **a competent architect who understands the use of contrast to enhance the overall building design and appearance.**

c. Building height

The impact of an extension of the existing house to accommodate a micro enterprise may be most apparent in the addition of an extra storey. It is therefore considered important to limit the building height of an extension to the

conditions that neighbours could have expected under the existing design and positioning conditions of the stand in question. **The maximum height, where a micro enterprise requires the extension to an existing house, shall be two storeys.**

d. Parking

Vehicle parking spaces for micro enterprises are required to be provided at the rates depicted by the Table below. The construction of a carport or garage must comply with the design and positioning conditions of the title deed of the stand in question. Car parking spaces are to be located behind the minimum building line and at least two spaces are to have unimpeded access.

TABLE 40: PARKING REQUIREMENTS OF MICRO ENTERPRISES

Floor area of the micro enterprise	On-site parking spaces
100m ² or less	As per scheme
101m ² to 300m ²	AS per scheme
301m ² to 500m ²	As per scheme

Unless parking is controlled it will have an adverse impact on the existing residential character of a residential area. Where possible, parking should be provided at the back of the existing house, to allow the front of the properties to retain its garden and its residential character. **Where there is no option but to place the parking area in front of the house, it must be a condition of approval that the area in front of the house is landscaped and not simply converted into a 'car park'.**

e. Landscaping

The quality of a residential environment is largely determined by the street landscape (e.g. tree-lined streets), which is reinforced by the front gardens of residential properties. **It is essential that when developing a micro enterprise, that the area between the existing house and the front property boundary does not deteriorate.**

Deterioration could occur through the introduction of an additional vehicular access, parking in front of the building or through a lack of significant planting.

Applicants for a micro enterprise should be encouraged to take access from the same driveway that the existing house does, in the interests of preserving the existing streetscape. Existing street trees are to be retained where possible, especially existing mature trees on the stand. In order to achieve this, the Council can require the submission of a landscape design. Screening by using landscaping may be required to prevent overlooking of neighbouring property.

f. Operating hours

Residential environments need to be quiet during evening and night time hours. It is therefore a requirement that all micro enterprises allowed to establish under this LUMS guideline undertake to only operate between 8h00 and 17h00 on weekdays and between 8h00 and 14h00 on Saturdays. Micro enterprises may not be allowed to operate on Sundays or public holidays.

g. Municipal services

The requirements of Emfuleni to maintain municipal services capacity must apply. The cost of any augmentation of municipal services infrastructure and the cost of service connections will be borne by the applicant for a micro enterprise.

h. Signs and advertising

Signs or advertisements on the premises of micro enterprises aim to draw attention to goods or services available at the premises where the advertisement is being displayed. **The signs or advertisements of micro enterprises are not intended to permit all forms of outdoor advertising on the premises; it only permits advertisements for the goods or services available at the particular premises.** Signs and Outdoor advertisements:

- **may only be displayed on the external wall of the part of the residential dwelling that is used for the micro enterprise**
- may not be fixed at right angles to the building wall
- may not be fixed to a fence or gate of the property
- may not be fixed to poles planted in any location on the property or within the street reserve

A sign or advertisement must not exceed 1.5 square metres in area. Only a single (one) sign or advertisement is allowed per property. Signs or advertisements or sign may contain internally illuminated letters or characters on an un-illuminated background or lit by 'halo' illumination. Such an advertisement must not have any intermittent light source, moving feature, animation or exposed cold cathode tubing.

i. Community involvement

Prior to consideration of an application for micro enterprises, neighbours will need to have been informed of the proposal. Neighbours in this case are considered having a mutual boundary with the property on which the micro enterprise is considered. Where comments are received from neighbours, these comments must be used to determine whether or not the conditions for the development of a micro enterprise are satisfied and to establish conditions for approval so that the intentions of the LUMS guidelines regarding micro enterprises can be met. **The invitation to comment must apply to the impact of the micro enterprise on neighbouring properties and not to the applicant's opportunity to develop a micro enterprise.**

j. Rights granted

Ideally micro enterprises should be granted a consent use to operate their business. Such business must not be granted a rezoning of the residential property. The municipality must grant these consent uses for a limited number of years (e.g. 2 years), with the right to revoke these rights after this period, should the Municipality find that the property owners has not complied with the conditions of granting the consent use in the first place. Reasons for not renewing the consent use could be a failure of the property owner to implement the landscaping condition, or the micro enterprise not operating within the prescribed operating hours, or the micro enterprise causing excessive air, noise or visual pollution. However, current town planning schemes do not make provisions to lodge any application for a micro enterprise with a **consent use; hence the status quo prevails until the enactment of the Spatial Planning and Land Use Management Bill enable further amendments of land use management schemes.**

SECTION 7: CAPITAL INVESTMENT PROGRAMME

7.1 CAPITAL INVESTMENT PROGRAMME

A capital investment programme (CIP) was prepared for the implementation of the Emfuleni SDF proposals. This capital investment programme consists of the following components:

a. Cost estimate

Catalyst projects to be implemented by the Emfuleni Local Municipality and other governmental organizations, which are needed to unlock the development potential of Emfuleni (as set out in the Emfuleni SDF), were identified. The catalyst projects were listed and a cost estimate was prepared for each of these projects. **It is important to note that the cost estimated reflect currently prices and that inflationary effects will most likely increase these cost over time. This implies that the costs involved to implement the longer-term projects will be higher than presented in this report. Also, it is important to state that the cost presented in this report are only rudimentary costs and that more detailed calculations of these cost during implementation may result in significant changes in to the costs presented in this report.**

b. Development programme

The public and private sector projects identified in the Emfuleni SDF were phases over an 8-year period. To a large extent, this development programme aims to guide the township establishment process. In other words, this programme will enable the planning of bulk municipal services infrastructure and public transportation facilities, which needs to coincide with township development within Emfuleni. **It is important to state that this development programme is only indicative and that various unforeseen factors may ultimately cause the implementation of the various projects to deviate from the development programme proposed.**

7.1.1. COST ESTIMATE

Investment by Emfuleni Local Municipality is essential in order to create a sustainable and equitable urban environment and to provide the appropriate environment for non-municipal (public and private) investment in Emfuleni. Investment by Emfuleni Local Municipality should, amongst others, include investment in bulk municipal services infrastructure development and the provision of public transport infrastructure. This can largely be done through the implementation of catalyst projects to be implemented by Emfuleni Local Municipality and other governmental organizations. The catalyst projects identified in the Emfuleni SDF are the following:

a. Extend the bulk water network into Sonlandpark area

Development of the Sonlandpark area is critical in order to density and support the Vereeniging-Johannesburg commuter railway line and development the triangle located between the Sebokeng CBD, the Vanderbijlpark CBD and the Vereeniging CBD, as envisaged in the Emfuleni SDF. To enable this, it would most likely be necessary to extend the existing bulk water pipeline network into Sonlandpark area and construct a water reservoir to cater for urban expansion within the Sonlandpark area.

b. Extend the sewer network into Sonlandpark area

Development of the Sonlandpark area would most likely also require the expansion of the existing bulk sewer pipeline network into the Sonlandpark area. Development of the planned regional waste water treatment works will be needed to create the capacity to cater for urban development within the Sonlandpark area.

c. Extend the electrical network into Sonlandpark area

Development of the Sonlandpark area would also require the expansion of the existing bulk electrical network into the Sonlandpark area. It will most likely also require the construction of two or more electrical substations to serve Sonlandpark area.

d. Construct commuter railway station at Sonlandpark

Central to the development of the Sonlandpark area would be to construct a commuter railway station at Sonlandpark on the Vereeniging-Johannesburg commuter railway line. This station should become the central focus of the proposed Sonlandpark development, as envisaged in the Emfuleni SDF.

e. Develop public transport route along Barrage Road

Emfuleni is becoming a metropolitan area and it therefore needs to start planning of a more extensive and integrated public transportation system to serve such a metropolitan population. In addition to the Vereeniging-Johannesburg commuter railway line, it is proposed that a Strategic Public Transportation Network (SPTN) be developed, which could in future be converted to a Bus Rapid Transit (BRT) system. One such a SPTN route is proposed along Barrage Road, which would connect Bophelong, the Vanderbijlpark CBD, the Bedworthpark regional node and the Vereeniging CBD to each other.

f. Develop Sebokeng CBD higher-density housing

A higher-density housing component is required at the Sebokeng CBD to strengthen this emerging central business district. Such a higher-density housing component will provide the necessary density to support the Houtheuvel commuter railway station, as well as the retail component found and proposed within the Sebokeng CBD. These higher-density housing units can either exist of walk-ups, or more subsidy related higher-density housing options, such as duplex or row housing.

g. Develop Emfuleni CBD industrial area into industrial hives

The Sebokeng CBD comprises a small industrial area, situated on Moshoeshoe Road. This industrial area is still largely vacant, comprising only a small number of SMME-type industries. It is proposed that the vacant industrial stands within this industrial area be developed as hive-industries, which can be rented out to the local population of Sebokeng and Evaton. This will further support SMME development within this part of Emfuleni.

TABLE 41: CATALYST PROJECT COST ESTIMATE

Project	Project Detail	Implementing Agent	Unit	Unit Cost	Cost Estimate (current prices)		
					No. of Units	Municipal Expenditure	Non-Municipal Expenditure
Bulk water infrastructure:	Extend bulk water pipeline network into Sonlandpark area	ELM/ MIG	R/km	R 600,000.00	7.4	R 4,440,000.00	n/a
	Construct water reservoir at Sonlandpark	ELM/ MIG	R/unit	R 20,000,000.00	1	R 20,000,000.00	n/a
Bulk sewer infrastructure:	Extend bulk sewer pipeline network into Sonlandpark area	ELM/ MIG	R/km	R 600,000.00	3.5	R 2,100,000.00	n/a
	Development of regional waste water treatment plant	SDM/ MIG	R/unit	R 450,000,000.00	1.0	n/a	R 450,000,000.00
Bulk electricity infrastructure:	Extend bulk electrical network into Sonlandpark area	ELM/ MIG	R/km	R 800,000.00	7.2	R 5,760,000.00	n/a
	Construct substations to serve Sonlandpark area	ELM/ MIG	R/unit	R 500,000.00	2	R 1,000,000.00	n/a
Transportation infrastructure:	Construct commuter railway station at Sonlandpark	PRASA	R/unit	R 35,000,000.00	1	n/a	R 35,000,000.00
	Develop public transport route along Barrage Road	ELM/ MIG	R/km	R 17,000,000.00	16.1	R 273,700,000.00	n/a
Affordable housing:	Develop Sebokeng CBD higher-density housing	DOH	R/unit	R 84,000.00	8938	n/a	R 750,792,000.00
Economic infrastructure:	Redevelop Emfuleni CBD industrial area into industrial hive	ELM	R/m2	R 7,000.00	20600	R 144,200,000.00	n/a
Open space:	Rehabilitate Sharpeville Dam open space	ELM	R/ha	R 70,000.00	162.0	R 11 340,000.00	n/a
Road Infrastructure	Develop Sebokeng CBD pedestrian accesses	ELM	R/ha	R 1 300,000.00	13.0	R 16 900,000.00	n/a
Transportation Infrastructure	Construction of Sebe Road in Evaton	ELM/MIG	R/km	R2 000 000.00	11.8	R23 621 480.00	n/a
Road Infrastructure	Construction of Pedestrian walkways on First Avenue and a portion of Selbourne Road in Evaton	ELM/MIG	R/km	R1 300 000.00	2.3	R3 015 724.00	n/a
Road Infrastructure:	Upgrading of storm-water on Easton Road and surfacing of adjacent roads	ELM/MIG	R/km			R6 332 122.00	n/a
Road Infrastructure:	Chamberlain Road in Evaton: Construction and surfacing , kerbing sidewalks associated storm-water infrastructure	ELM/MIG	R/km			R14 500 000	n/a

Project	Project Detail	Implementing Agent	Unit	Unit Cost	Cost Estimate (current prices)		
					No. of Units	Municipal Expenditure	Non-Municipal Expenditure
Road Infrastructure:	Bodea Road in Evaton: Construction and surfacing , kerbing sidewalks associated storm-water infrastructure	ELM/MIG	R/km			R13 578 092.00	n/a
Road Infrastructure:	Milner Road in Evaton: Construction and surfacing , kerbing sidewalks associated storm-water infrastructure	ELM/MIG	R/km			R14 821 606.00	n/a
Road Infrastructure:	West Road in Evaton: Construction and surfacing , kerbing sidewalks associated storm-water infrastructure	ELM/MIG	R/km			R30 448 752.00	n/a
Road Infrastructure:	Extension of William Nicol Road up to Barrage Road	ELM/MIG	R/unit	R2 000 000	2	R4 000 000.00	n/a
Road Infrastructure:	Construction of Service Lane(on both sides) along Moshoeshoe Road (North of Erf 20225 and South of Erf 65579 SBK Zones 10 & 14).	ELM/MIG	R/km	R2 000 000	4	R8 000 000.00	n/a
Bulk sewer infrastructure:	Upgrading of bulk sewer network in Evaton	ELM/MIG		R600 000	18.4	R11 044 998.00	n/a
Social Infrastructure:	Mafatsane Community Recreation Park: Building and commissioning of a self sustaining community park in Mafatsane Government Precinct	ELM/MIG	R/unit	R3 276 174.60	1	R3 276 174.60	n/a
Social Infrastructure:	Mafatsane additional building: Further upgrading on the building to upgrade it to a Thusong Centre	ELM	R/unit	R4 163 885.00	1	R4 163 885.00	n/a
Local Economic Development	Urban Farming: Crop farming using hydroponic and organic methods on four sites in Evaton	ELM	R/unit	R857 407.00	1	R857 407.00	n/a
Local Economic Development	Construction of a Brick-Making Plant in Evaton	ELM	R/unit	R2 000 000.00	1	R2 000 000.00	n/a
Local Economic Development	Formalisation of informal trading stalls in Adams and Old Golden Highway in Evaton	ELM	R/unit	R1 500 000.00	1	R1 500 000.00	n/a
Government Precinct	Eastern Government Precinct; Commercial development (Pedestrian Mall) inclusive of formalization of	ELM	R/unit	R25 000 000	1	R25 000 000	n/a

Project	Project Detail	Implementing Agent	Unit	Unit Cost	No. of Units	Cost Estimate (current prices) Municipal Expenditure	Non-Municipal Expenditure
	informal business hives; formalization of taxis bus rank and associated facilities. Complete Urban Design Framework and other town planning related functions.						
TOTAL COST						R 645,600,000.60	R 1,235,792,000.00

Source: Spatial Planning Section, Emfuleni Local Municipality 2013

Abbreviations: ELM: Emfuleni Local Municipality, SDM: Sedibeng District Municipality, MIG: Municipal Infrastructure Grant, DoH: Gauteng Department of Housing

h. Rehabilitate Sharpeville Dam open space

The Sharpeville Dam has been polluted in the past by a neighbouring sewer works. Despite this, it remains a significant ecological area within Emfuleni that is worth protecting. The future closure of the Leeuwkuil waste water treatment works abutting Sharpeville Dam, once the planned Sedibeng regional waste water treatment works is operational, should significantly contribute to the rehabilitation of the Sharpeville Dam. Rehabilitation of the dam should include providing recreational opportunities to serve this part of Emfuleni.

i. Develop Sebokeng CBD pedestrian accesses

The Sebokeng CBD is located at the existing Houtheuwel commuter railway station. The Emfuleni SDF proposes the development of diagonal pedestrian walkways between the Sebokeng CBD land uses and the Houtheuwel commuter railway station. This will enable a direct link between the major land uses within the CBD and the Houtheuwel commuter railway station, thus facilitation land use and transportation integration.

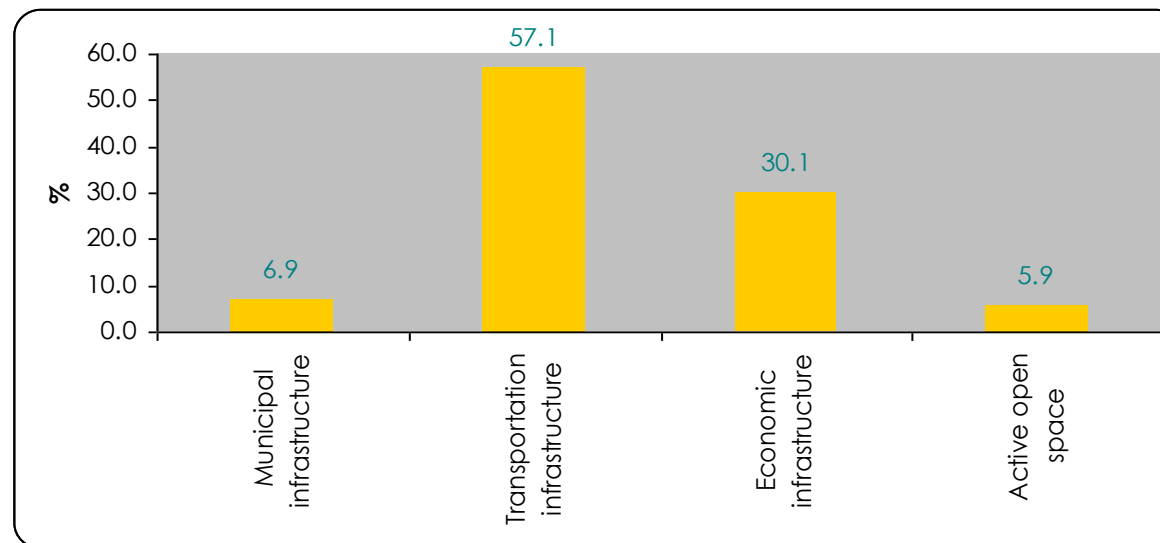


DIAGRAM 30: DISTRIBUTION OF COST PER ITEM

The Table above gives a rudimentary indication of the cost to implement the catalyst projects proposed in the Emfuleni SDF. The actual costs of these projects are subject to many other variables that can only be determined once each project is at the point of implementation. Variables such as inflation and unforeseen project detail can impact on the final cost of a project. **Consequently, Urban Dynamics Gauteng cannot be held accountable for the final cost incurred to implement the Emfuleni SDF catalyst projects. As depicted by the Table above, the total budget needed to implement the catalyst projects of the Emfuleni SDF, for which the Emfuleni Local Municipality is responsible for, amounts to approximately R479 million.**

As depicted by the Diagram above, the highest cost item is the construction of a public transportation route along Barrage Road. The development of public transportation route will require 57.1% of the budget. The provision of bulk municipal infrastructure, which is a key component to unlocking development potential within the Sonlandpark area, uses a relatively small part of the budget, amounting to 6.9% of the Emfuleni budget. **It must be noted that this is only the infrastructure require for the Sonlandpark area, as this is considered a priority area requiring catalyst projects.** Additional funds will be required to develop the municipal services infrastructure required to unlock the development potential of other areas within Emfuleni. The provision of active open space is also an important component of the budget, as it will significantly contribute to the livability or

of urban environment of Emfuleni. In total, 5.9% of the budget was allocated for this. The remaining 30.1% of the budget was allocated to the redevelopment of the industrial area at the Sebokeng CBD into an industrial hive complex.

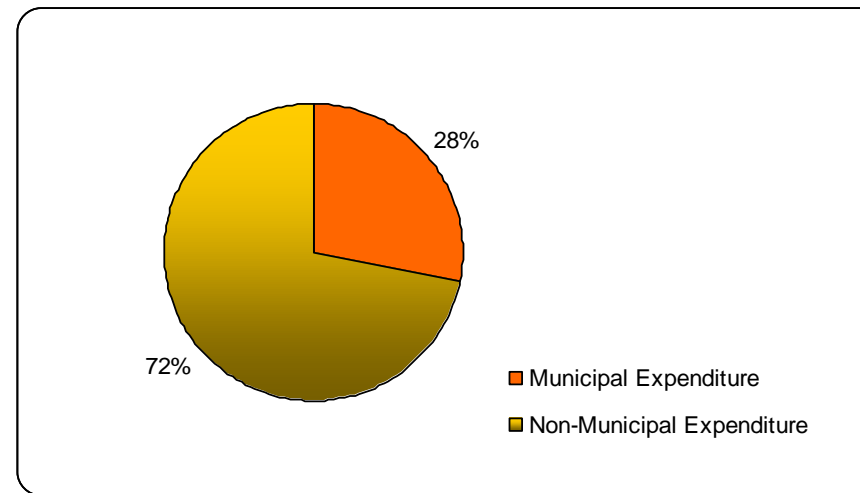


DIAGRAM 31: FINANCIAL GEARING

The Diagram above illustrates the potential gearing that the Emfuleni Local Municipality can achieve through the investment in the catalyst projects set out in the Table above. In total, the Emfuleni Local Municipality is expected to invest slightly under R0.5 billion (28%) into Emfuleni over the next 8 years. In return, approximately R1.2 billion (72%) can potentially be invested in Emfuleni by other, non-municipal governmental organizations. This non-municipal investment involves investment in, amongst other, the development of the planned regional waste water treatment works.

7.1.2. DEVELOPMENT PROGRAMME

The implementation of the catalyst projects identified within the Emfuleni SDF needs to be structured in such a way that certain targets can be met within certain timeframes and that each catalyst project contributes to the sustainable development of

Emfuleni over the long run. Short term catalyst projects should focus on immediate needs, whereas longer term projects should aim to increase standard of living within Emfuleni as a whole.

The projects proposed for the development of Emfuleni was divided over a 9-year period (2012-2020), as set out in the Table below. This will ensure the logical implementation of the catalyst projects, spread implementation funds over a period to relieve funding pressures on any given time, ensure that catalyst projects are developed prior to non-catalyst project, and ensure the viable implementation and operation of each project. These projects can be divided into groups based on the following rationale:

Group 1: Residential expansion into the Sonlandpark area

- The densification of the Vereeniging-Johannesburg commuter railway line is a primary objective of the Emfuleni SDF. To enable this, requires residential expansion into the Sonlandpark area.
- Expansion into the Sonlandpark area will require investment in bulk infrastructure, such as extending the bulk electrical network into the Sonlandpark area, and developing the planned regional waste water treatment works to provide the necessary sewer capacity necessary to develop the Sonlandpark area.

TABLE 42: PROJECT PROGRAMME

Project	Project Detail	Implementing Agent	Year								
			2012	2013	2014	2015	2016	2017	2018	2019	2020
Bulk water infrastructure:	Extend bulk water pipeline network into Sonlandpark area	ELM/ MIG		•							
	Construct water reservoir at Sonlandpark	ELM/ MIG			•						
Bulk sewer infrastructure:	Extend bulk sewer pipeline network into Sonlandpark area	ELM/ MIG		•							
	Development of regional waste water treatment plant	SDM/ MIG					•				
Bulk electricity infrastructure:	Extend bulk electrical network into Sonlandpark area	ELM/ MIG		•							
	Construct substations to serve Sonlandpark area	ELM/ MIG			•						
Transportation	Construct commuter railway	PRASA						•			

infrastructure:	station at Sonlandpark										
	Develop public transport route along Barrage Road	ELM/ MIG							•		
Affordable housing:	Develop Sebokeng CBD higher-density housing	DoH			•						
Economic infrastructure:	Redevelop Emfuleni CBD industrial area into industrial hive	ELM				•					
Open space:	Rehabilitate Sharpeville Dam open space	ELM		•							
	Develop Sebokeng CBD pedestrian accesses	ELM			•						
TOTAL COST											

Source: Urban Dynamics Gauteng, 2012

Group 2: Development of the Sebokeng Municipal Node (CBD)

- The development of the Sebokeng Municipal Node (CBD), as proposed in the Emfuleni SDF, in order for this node to better serve the Sebokeng-Evaton region.
- Key to the development of the nodal area includes the development of higher-density housing units, such as walk-up units. This will help establish a CBD environment and provide the necessary residential densities to support the Houtheuwel commuter railway station.
- The construction of pedestrian accesses and pedestrian bridges, which links the housing and retail land uses within the Sebokeng Municipal Node (CBD) to the Houtheuwel commuter railway station, is critical to the development of this node.
- The redevelopment of the industrial area located within the Sebokeng Municipal Node (CBD) will help develop the northern gateway to this node and it will provide floor area for the establishment of SMME's within Sebokeng. The latter can be done by developing industrial hives, which can be rented out to local SMMEs.

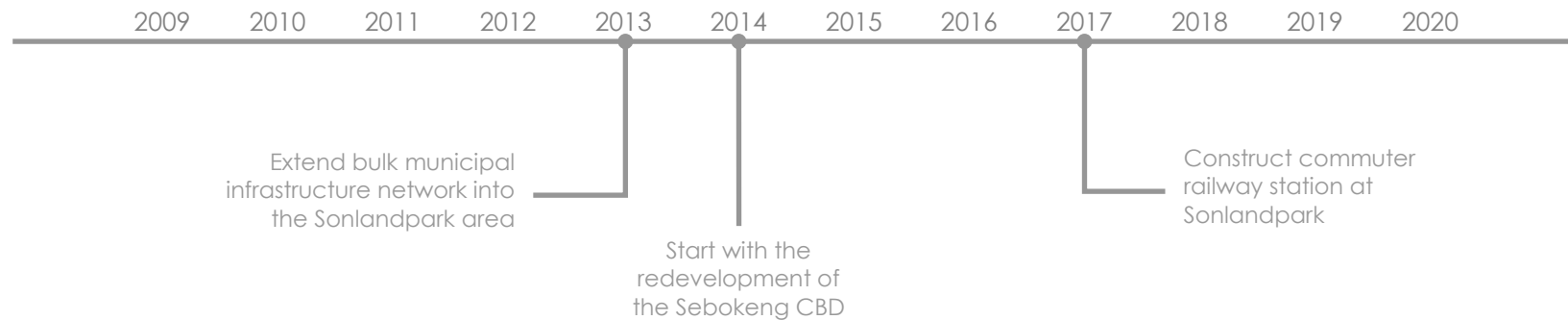


DIAGRAM 32: IMPLEMENTATION TIMELINE

Group 3: Development of public transportation infrastructure

- The development of public transportation within the Emfuleni is necessary to support residential expansion within Emfuleni. The development of public transportation becomes of particular importance as Emfuleni becomes a metropolitan area, because providing integrated public transportation is a key function of metropolitan areas.
- With regard to commuter rail transport, it is necessary to construct a new commuter railway station of the Vereeniging-Johannesburg commuter railway line at Sonlandpark. This station will provide the focal point to establish the regional node proposed by the Emfuleni SDF at this station.
- A number of SPTN routes were proposed within the Emfuleni SDF. The development of a public transport route along Barrage Road is considered the highest priority. Such a route will link Bophelong, the Vanderbijlpark Municipal Node (CBD), the Bedworthpark Regional Node, Sharpeville and the Vereeniging Municipal Node (CBD) to each other.

Group 4: Protection of the natural environment

- The Sharpeville Dam has been polluted in the past by a neighbouring sewer works. Despite this, it remains a significant ecological area within Emfuleni that is worth protecting, requiring the rehabilitation of this dam.
- Rehabilitation of the Sharpeville Dam should include developing recreational opportunities to serve this part of Emfuleni, in particular the Sharpeville area.

The Diagram above provides a timeline for the development of selected catalyst projects. However, it has to be noted that the implementation of these projects, as well as the other projects noted in the report, will be a dynamic process that may change as the implementation process dictates at the time of implementation. The programme for the implementation of Emfuleni proposals should therefore only be considered a guide and should not be considered a fixed or rigid programme to adhere to.

7.2. INSTITUTIONAL ARRANGEMENTS

A key issue regarding the implementation of the Emfuleni SDF will be how to ensure that the implementation of the Emfuleni SDF proposals is aligned at the different spheres of municipal government. This will require an implementation process that will enable alignment, but it will also require the different spheres of municipal government to manage their interrelationships effectively. An effective process requires that resource allocation is aligned with strategic development priorities, as is set out in the Emfuleni SDF. This can largely be done by absorbing the Emfuleni SDF proposals into the Integrated Development Plan (IDP). Based on the above, the following guidelines need to be adhered to in order to manage the relationships between the different spheres of municipal government with regard to the implementation of the Emfuleni SDF proposals:

- All spheres of municipal government must support coordinated and integrated planning
- All spheres of municipal government and other stakeholders must reach a shared understanding and agreement on the tasks required to implement the Emfuleni SDF
- Each sphere of municipal government needs to take responsibility for its own planning-related task of the Emfuleni SDF
- Alignment between spheres of municipal government will require cooperation, whereby the plans of one sphere supports the plans of another
- All spheres of municipal government and other stakeholders must commit to the prioritization and an implementation schedule for the implementation of the Emfuleni SDF proposals
- The catalyst projects proposed within the Emfuleni SDF must be absorbed into the IDP and into each update of the IDP document
- A mutual assessment framework must be used to monitor the extent to which the Emfuleni SDF proposal are implemented by each sphere of municipal government

7.2.1. SECTOR INTEGRATION

The Emfuleni SDF bridges the gap between the developmental issues facing Emfuleni and the allocation of a budget within the IDP to address these developmental issues. The Emfuleni SDF also facilitates integration and coordination between the different spheres of municipal government to address these development issues. The Table below illustrates how the Emfuleni SDF aligns the responsibilities of the different spheres of municipal government to addresses the developmental issues facing Emfuleni.

Recognition must be given to the fact that the different spheres of municipal government will each play a vital role in achieving the overall strategic objectives of the Emfuleni SDF. This will include putting in place processes to implement the Emfuleni SDF proposals, allocating the appropriate human resources and skills to implement the proposals, alignment all actions with other spheres of municipal government, and diligently monitoring performance in order to ensure projects are realized.

In addition to the above, the implementation of the Emfuleni SDF will most likely require participation and partnership building amongst the different spheres of municipal government, the Emfuleni community and private business. Such partnerships are needed to address the variety of spatial, environmental, social and economic issues that are faced within Emfuleni. This collaboration between these parties must be a deliberate action by all parties involved.

TABLE 43: SECTOR ALIGNMENT AND INTEGRATION

Spatial Guidelines	Affordable Housing Development	Municipal Services Development	Integrated Transport Development	Environmental Management	Local Economic Development	Health and Education Development	Issues
Settlement and housing	•	•	•	•		•	<ul style="list-style-type: none"> Decent affordable housing must be provided to households that cannot afford formal housing Alternative housing options ought to be investigated Municipal service of a sufficient quality must be provided to settlements

Spatial Guidelines	Affordable Housing Development	Municipal Services Development	Integrated Transport Development	Environmental Management	Local Economic Development	Health and Education Development	Issues
							<ul style="list-style-type: none"> Settlement must have access to well planned and managed public transportation to ensure sufficient accessibility Development should be sustainable by addressing needs relating to health, education and recreation Settlement development must not degrade environmental sensitive areas
Social services	•		•			•	<ul style="list-style-type: none"> All households must have reasonable access to health and educational facilities Public transport must provide communities access the health and educational facilities Avoid the duplication of community facilities or the oversupply of community facilities through proper planning
Municipal and transportation infrastructure	•	•	•		•		<ul style="list-style-type: none"> Municipal service infrastructure investment must be provided to enable the expansion of settlements, but must not enable urban sprawl or urban leapfrogging Municipal service infrastructure investment must support and be aligned with the timing of the Urban Development Boundary Public transportation should service existing and planned settlements Mobility and accessibility are important principles that need to influence the planning and design of settlements, such as the use of Transit Orientated Design (TOD) principles
Economic development		•	•		•		<ul style="list-style-type: none"> The development nodal areas must comply with a set of development and design guidelines. Service provision should be geared towards the development of the nodal areas

Spatial Guidelines	Affordable Housing Development	Municipal Services Development	Integrated Transport Development	Environmental Management	Local Economic Development	Health and Education Development	Issues
							<ul style="list-style-type: none"> o Nodal areas must to be served by a well-planned and maintained road network and public transportation system that connects the nodes to surrounding communities o Encourage the development of retail facilities in accordance with the economic carrying capacity of the Emfuleni population o Enable the development of a range of industrial and commercial areas that provide for the varied and specific needs of different businesses
Agriculture and open space conservation	•	•	•	•	•		<ul style="list-style-type: none"> o High-potential agricultural soils need to be protected at all costs. o Respect and support the Gauteng Agricultural Hub initiative. o Protect the environmental sensitive areas and water bodies against degradation and pollution. o Settlements must have access the full municipal services infrastructure to avoid pollution of water sources o Settlement expansion and development must adhere to clear environmental management guidelines

Source: Urban Dynamics Gauteng, 2012

7.2.2. EVALUATION AND MONITORING

The performance of the implementation process, whereby the Emfuleni SDF proposals are implemented, needs to be measured against a clear and comprehensive set of indicators. The Table below provides possible indicators that can be used to measure the Emfuleni SDF implementation process.

TABLE 44: EVALUATION AND MONITORING

Theme	Outcome	Indicators
Economic	To encourage sustainable economic development	<ul style="list-style-type: none"> Establishment of nodal areas and retail development Establishment of industrial and commercial activities Protection of high-potential agricultural soils
Housing	To develop sufficient and suitable housing	<ul style="list-style-type: none"> Number of informal housing units Number of affordable housing units Range of housing typologies applied
Social	To ensure all households have access to basic health and education opportunities	<ul style="list-style-type: none"> School to population ratio Clinic to population ratio Physical access to health facilities
Recreation	To ensure that adequate space is provided for recreational purposes	<ul style="list-style-type: none"> Provision of suitable recreational facilities Physical access to recreational facilities or parks Use of landscaping in nodal areas
Environment	To promote a sustainable natural environment	<ul style="list-style-type: none"> Conservation of watercourses and environmentally sensitive areas Levels of water, air and visual pollution
Access	To ensure accessibility and choice of travel modes	<ul style="list-style-type: none"> Availability and frequency of public transport Levels of modal interchange Use of private vehicles as opposed to public transport Public transport availability to access nodal areas, community facilities and employment opportunities

Source: Urban Dynamics Gauteng, 2012

A key performance indicator is the level of access to quality social and economic facilities. This information can be obtained by simply counting the number of facilities constructed in comparison to the number of housing units that are developed within a particular part of Emfuleni. Counting the number of affordable housing units developed and counting the reduction in the number of informal shacks for satellite photography, is a means of determining progress in housing development. Other information, such as the availability and frequency of public transport, can be obtained from the Integrated Transport Plan (ITP). Information not available from ready sources can be collected using community surveys or having consultative meeting with key community stakeholders. Ensuring that the collection of information is accurate and well maintained will be essential. This is not only relevant for land use data, but also for information pertaining to transportation, infrastructure and municipal services provision.

7.2.3. BEST PRACTICES

The implementation of the Emfuleni SDF must be based on municipal statutory powers, as well as on appropriate administrative measures. The statutory powers provides the framework for the approval or rejection of applications for land use change, as embodied in the Land Use Management System of the Emfuleni SDF. The administrative measures can include best practices to encourage sustainable urban development within Emfuleni. There are a number of good planning practices and approaches that can be considered:

a. Highlight public involvement

Good community relations are part of any successful development or initiative. The local community and interested individuals and organizations should be invited to participate in the planning of new developments or initiatives. A variety of methods can be used to this end, which can include involving the community in information meetings and workshops, or distributing information newsletters or website links.

b. Recognize and address misconceptions

It is important to realize that any new development or initiative can substantially change the spatial environment of an urban area and will therefore affect its residents. Consequently, there is often understandable public apprehension surrounding new development proposals or initiatives and the perceived impacts of these proposals or initiatives. For example, establishing a new industrial area near an existing settlement may be met with considerable community apprehension. Such fears need to be address through open and flexible community consultation, whereby misconceptions are explained and issues are addressed.

c. Innovate and seek alternative funding

Funding should always be central to development, especially in areas where both public and private funding is limited. Different funding sources do exist that can be considered. For example, the redevelopment of the Sebokeng Municipal Node (CBD) could qualify for special grant funding from the Neighbourhood Partnership Development Grant (NPDG). Alternatively, it may be possible to get private developers involved in the development of facilities, such as developing a public transportation facility, as part of the shopping centre development. Infrastructure concessions, such as the Municipal Infrastructure Grant (MIG), are often used to develop infrastructure and services in selected areas in response

to urban development pressures. Such funds could potentially be used to finance the residential expansion into the Sonlandpark area.

d. Approval Process

Facilitating prompt decision making relating to the Emfuleni SDF, such as the approval of building plans, township establishment applications and rezoning application, can help facilitate development within Emfuleni. In fact, it is one of the most basic means of incentivising development within Emfuleni. Prospective investors will lose interest in Emfuleni if the local authority delays in approving building plans, township establishment applications and rezoning application. The establishment of a one-stop municipal town planning centre, if such a centre does not exist, could facilitate the efficiency of the approval process.

ANNEXURE A

LAND USE DEFINITIONS

Broad Land Use Category	Land Use Category	Land Use Definition	Typical Land Uses
Residential	Very low-density	Land use allowing rural living on agricultural holdings using single dwelling units	Single dwelling unit
	Low-density	Land use allowing traditional suburban living using single dwelling units	Single dwelling unit
	Medium-density	Land use allowing the horizontal and vertical grouping of dwelling units up to 3 storeys in height	Group housing Second dwelling unit Backyard rental unit Semi-detached housing Commune Retirement village Children's home
	High-density	Land use allowing the horizontal and vertical grouping of dwelling units up to 4 storeys in height	Row housing Walk-up apartments Flats
	Accommodation	Land use for the purpose of letting individual rooms for residential accommodation	Boarding house Hotel Guest house Resort Hostel
Community	Educational	Land use where child-care service are provided and where children, adolescence and adults receive formal education	Crèche Pre-primary school Primary school Secondary school Technical school Technical college Skills training centre Satellite campus Adult education centre

Broad Land Use Category	Land Use Category	Land Use Definition	Typical Land Uses
	Medical	Land use where patients are given medical treatment or advice	Clinic Community hospital Day hospital Medical consulting rooms
	Religious	Place of worship and religious education	Church Mosque Temple
	Social	Land use that provides municipal or social services to local communities	Community hall Library Post office Pension pay-point Customer care centre Police station Fire brigade Emergency services
	Cemetery	Land use that allows burial of human remains	Cemetery
	Landfill	Land use that allow for the disposal of non-hazardous solid waste	Landfill site
Business	Retail	Land use that allows the trading of retail goods	Hypermarket Supermarket Specialist retailers (e.g. clothing and furniture) Banking branches
	Big box retail	Land use that allows the trading of wholesale goods	Wholesale warehouses
	Office	Land use for the performance of administrative or professional functions	Professional offices Conference facility
	Entertainment	Place of entertainment that is usually associated with the retail industry	Entertainment centre Restaurant Fast food outlet Tavern
	Motor trade	Land use that allows the retail, repair and maintenance of motor vehicles	Filling station Vehicle service centre Vehicle showrooms
	Micro enterprise	Business or enterprise attached to and supplementing a residential component. The residential component remains the primary land use associated with the property.	Home office Home-based medical consulting room Non-disturbing home enterprise (e.g. hair dresser or day care centre) Farm stall

Broad Land Use Category	Land Use Category	Land Use Definition	Typical Land Uses
Institutional	Municipal	Land use associated with the daily operation and functioning of the municipality	Administrative offices Parking garage Minibus taxi holding and or parking area Municipal training facilities Bus depot Electrical purpose Equipment stores
	Government	Land use associated with the daily operation and functioning of the national or provincial government	Administrative office Railway reserves and stations Telecommunication
Industrial	Light	Land use for <u>non</u> -pollution industries used for manufacturing purposes	Non-noxious factories Maintenance and repair workshops Engineering works Builders yard
	Heavy	Land use for pollution industries used for manufacturing purposes	Noxious and polluting factories Scrap yard
	Commercial	Land use for the handling and storage of cargo and the wholesale of goods	Distribution centre Wholesale trade Warehousing Cartage and transport services
	Mining	Land use associated with mining and mining operations	Mine shafts Slimes dams Mine dumps Mineral processing plants Mine hostels
Open space	Active	Open space that has a recreational function linked to it	Public park Play ground Sports field Sports club Cultural heritage site Amusement park Recreation area
	Passive	Open space that has a hazard avoidance or natural resource conservation function	Private open space Conservancy Protected area River flood areas Geological unsuitable land Topographically unsuitable land Hazardous zones (e.g. pollutions areas)

Broad Land Use Category	Land Use Category	Land Use Definition	Typical Land Uses
Agriculture	Agriculture	Land use that is intended of subsistence of commercial farming purposes and uses generally associated with plants and animals.	Subsistence farming Commercial farming Communal agriculture Agriculture skills training facilities Nursery Vetenary clinic Animal kennel