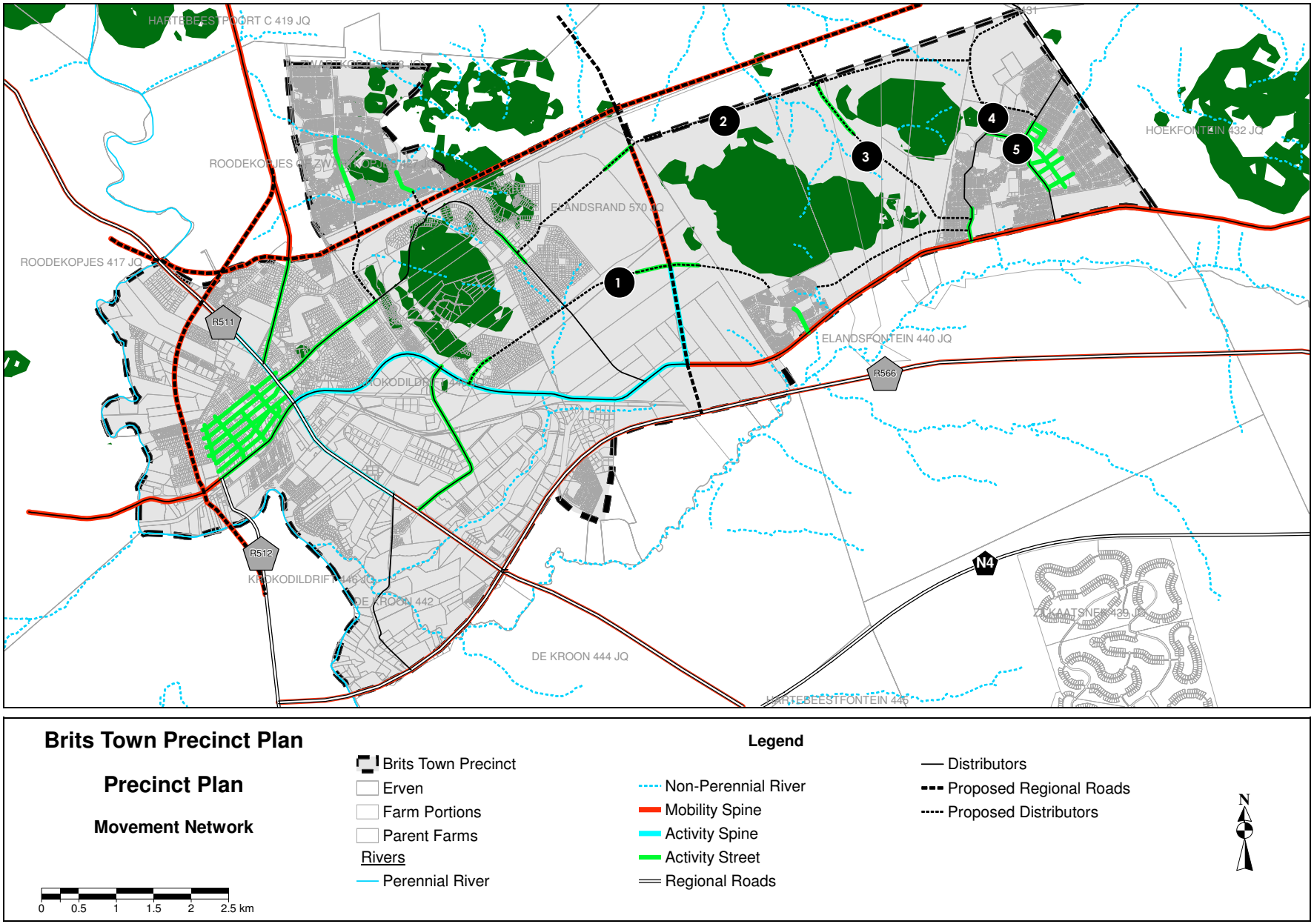

Figure 39: Movement Network

5.3.2 Movement Network

The Movement Network refers to the network of roads, public transport systems, non-motorised transport systems and rail in a particular area. The movement network provides:

- External access to the precinct from areas outside the development and linkages and connectivity to the larger region;
- Internal movement networks that provide access to different parts of the precinct and individual land parcels; and
- Visibility to development.

5.3.2.1 Vehicular Movement

The function of the movement network ranges between mobility (moving vehicles to and through the site with the greatest ease and speed possible) and accessibility (providing access to individual land parcels, requiring lower speeds and regular access points). The by-product of this relationship between mobility and accessibility is the establishment of a network of points and places in the precinct that provide different opportunities in terms of nature and intensity of development.

One of the key constraints in the area is the lack of movement integration and linkages between the established Brits town and the outlying newer low income residential areas. It is therefore important to ensure that new townships are linked to existing areas by means of a continuous and open movement network. Figure 39 indicates a proposed network of local distributors that will ensure linkages between existing and new neighbourhoods areas. New township developments in these areas should at least adhere to the principle of ensuring continuity and linkages, even if the road layout does not strictly adhere to the layout indicated in this precinct plan (i.e. more detailed local investigations may indicate an alternative, better alignment). The general principle that must however apply is that new developments must link up with existing developments, in particular with the distributor road network in existing neighbourhoods.

The following key distributors are proposed for the precinct area (refer to Figure 39):

- Proposed local distributor that routes north of the railway line north of the large Industrial area towards the south of Elandsrand and past Damonsville towards the low cost housing section of Mothutlung. 1
- Routes from the centre of Elandsrand eastwards towards Mothutlung. 2
- Proposed local distributor located in the eastern section of the precinct area. This route connects the western part of Mothutlung to the proposed regional road to the north. 3
- Local Distributor that routes through the north of Mothutlung. 4
- The development of a much finer grained road network in the proposed Mothutlung node. The large land parcels/street blocks in the central part of Mothutlung should be subdivided into smaller street blocks (ideally no more than 120m in length) with regularly spaced streets in order to ensure a more permeable, pedestrian friendly and vibrant area. 5

From a functional perspective, the movement network can be divided into four main categories, namely (refer to Table 20):

- Mobility Spines
- Activity Spines
- Activity Streets
- Local Access Streets

Table 19: General Development Guidelines for the Vehicular Movement Network

Guidelines
• The design and layout of internal movement in the municipality should promote an open, permeable and legible movement network that allows for ease of vehicular and pedestrian movement. • Well-located and well-managed road based public transport facilities, linked to the business and employment areas, must be available and accessible throughout town. • Development of linkage roads between residential areas to enhance integration and accessibility

Table 20: Functional Road Classification

Functional Road Classification	Definition and Function	Typical Land Use	Design
Mobility Spine	An arterial along which through traffic flows with minimum interruption (optimal mobility). It serves the purpose of inter-regional movement.	Mixed land uses	Little (exception) or no direct access to land uses adjoining the spine. Access is usually through side roads and service roads. No on-street parking permitted Limited pedestrian movement
Activity Spine	Activity spines are found along major distributor roads, usually between two important destinations. Activity spines are often also aligned with major public transport routes. These routes are characterised by high accessibility and visibility. Although such a route is characterised by through traffic, concentration of mixed-use developments can be found alongside.	Medium to high density residential Nodal development with a mixed use character (developments concentrated around intersections) Corridor development (either mono-functional or mixed-use)	An activity spine must achieve a balance between promoting access, creating pedestrian friendly environments, and accommodating traffic mobility Limited direct access permitted (not frequent) Service roads to enhance access opportunities Pedestrian movement along the route in various parts Provide public transport facilities
Activity Street	Local streets characterised by slower moving traffic due to the nature of activity along the street (activity is of paramount importance, mobility is compromised to allow the activity). High accessibility to land uses	Mixed uses along the activity street High density development Mostly neighbourhood-oriented activities (with the exception of the CBD) Land uses tend to be retail and service-orientated	Fast moving traffic through an activity street must be avoided. Pedestrian/cyclist oriented environment with traffic calming for cars where appropriate On-street parking where appropriate Interface with adjoining lower intensity residential developments to be treated sensitively High accessibility to land uses
Local Access Street	A local street providing access to individual erven and land parcels.	Depending on the character of the area (e.g. residential, industrial)	

5.3.2.2 Pedestrian Movement

Table 21 below sets out the guidelines for the development of an integrated and efficient pedestrian movement network in the precinct:

Table 21: General Development Guidelines for the Pedestrian Movement Network

Guidelines

• Pedestrian movement in the precinct must be accommodated in the following manner:
  • Pedestrian movement along roads and streets on sidewalks;
  • Dedicated pedestrian streets (e.g. in the Central Business District);
  • Walkways through buildings such as malls and arcades; and
  • Across and through any public open space such as a square or park.
• Pedestrian links must be as short and direct as possible, allowing generally unrestricted pedestrian movement to all main activity areas and public transport facilities.
• Pedestrian sidewalks should where possible be placed adjacent to public, extroverted buildings to increase surveillance over and the safety of pedestrians.
• Pedestrian safety should be increased by providing (where possible) a landscaped buffer zone between the road and the sidewalk through landscaping.
• On roadways experiencing relatively high traffic flows, appropriate pedestrian crossings (i.e. either on-grade, raised or subway) should be provided at regular intervals, and should be located at points where pedestrian desire lines cross the roadway.
• Pedestrian routes that are likely to be used at night should be well-lit, open and visible.

Dedicated pedestrian and cycling lanes

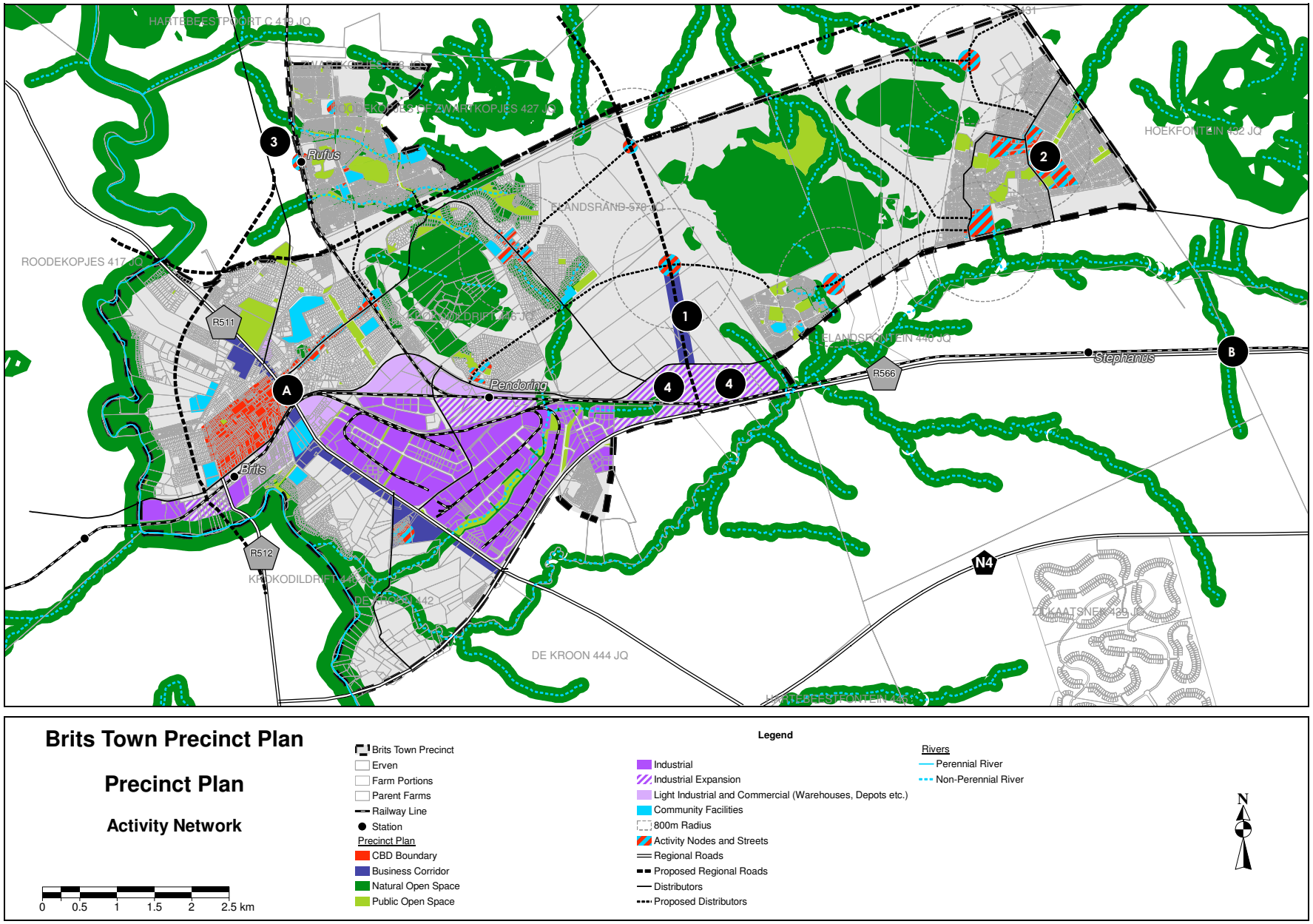

Figure 40: Activity Network

5.3.3 Activity Areas

Refer to Figure 40

Activity Areas area those predominantly non-residential areas that comprise business developments, employment opportunities, social and community facilities and transport facilities. The Activity Areas in the precinct comprises the following categories:

- Central Business District;
- Business Corridors;
- Neighbourhood Nodes and Activity Streets;
- Industrial areas; and
- Specialised Activity Areas such as Medical Clusters, Institutional Clusters etc.

5.3.3.1 Central Business District

The Brits Central Business District (CBD) is roughly demarcated by Ludorf Street, Hendrik Verwoerd Avenue, Rutgers Way and Spoorweg Street. The CBD is the highest order activity node with the greatest mix and intensity of non-residential activities in the precinct, and also has an important regional business and governance function. The CBD should be a well-defined and legible urban environment where highly accessible, mixed and compatible land uses are concentrated in a high quality, safe, diverse 24-hour activity centre for the region.

Due to its important function as employment area, governance centre and general business area, the Central Business Area should be protected against the oversupply of business developments in other parts of the precinct (which will have a negative impact on the long-term viability of the CBD). All higher order or regional land uses/ developments should also as far as possible be located in the CBD in order to reinforce the importance and status of the CBD.

The CBD can be divided into five (5) sub-precincts, namely:

- The Business Corridor along Hendrik Verwoerd Avenue that forms part of the larger development corridor along this route (for detailed description of this sub-precinct refer to paragraph 5.3.3.2);
- The CBD Core;
- The Civic Core;
- A CBD Periphery to the west and north of the CBD Core; and
- A Commercial/Light Industrial Zone in the southern part of the CBD.

Refer to Figure 41

Although these sub-precincts together form the larger CBD, each of these areas are distinct in character, the land-use mix that is typically present in each as well as the desirable environmental character of each.

CBD Core

The CBD Core represents the heart of the retail and business environment in the CBD. This area should be as compact as possible in order to enhance the walkability and accessibility of this area. It is therefore proposed that the core be restricted to an area of roughly 800m wide, which is considered to be a 10min walking distance.[1]

This is the part of the CBD, together with the Civic Core, where the highest standard of public environment, urban design and land use management should be achieved. The emphasis should be less on what type of land uses are permitted and more on the type of environment that these land-uses result in.

From an investment perspective, the municipality should focus on the upgrading of the sections of Maclean Avenue, Murray Avenue, Van Velden Street, Kerk Street and Pienaar Street that run through the CBD Core. These upgradings should focus on sidewalks, landscaping, on-street parking, trading areas and general streetscape. The focus should be on creating vibrant pedestrian friendly environments that can support a healthy business environment on street level.

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1 *Source: CSIR. Guidelines for Human Settlement Planning and Design*

Table 22 and Table 23 set out general development and Land Use Management guidelines for the CBD Core.

Table 22: General Development Guidelines for the Central Business District Core

Guidelines
• Buildings should typically be multi-storey and fine-grained. Single storey and low-rise buildings should be discouraged. • All buildings must be extroverted in nature and vertical integration of land uses should be promoted. • Buildings must have active and public uses on street level • All developments should interact with and relate to adjacent public environments (e.g. streets, squares, parks etc.) to ensure a vibrant, attractive, convenient and safe environment. • Development must adhere to the highest standard of architectural and urban design practices • Safe and convenient pedestrian movement and public transport services are essential characteristics of the CBD Core. The layout and design of buildings must at all times focus on the integration and support of public transport and non-motorised transport (pedestrians and cyclist) as a functional part of each development individually. • Informal trading must be accommodated in well-designed and well-located market areas where the necessary facilities such as trading stalls, ablution facilities and refuse bins are available to the traders. • Incompatible land uses such as industrial developments, warehouses and wholesale should not be permitted in the CBD Core. • All buildings with architectural or historical value must be preserved. • Gateway locations (i.e. entrances into the CBD) should comprise iconic buildings.

The Central Business District must comprise high quality public environments with extroverted mixed-use development, activities on street level and pedestrian friendly environments

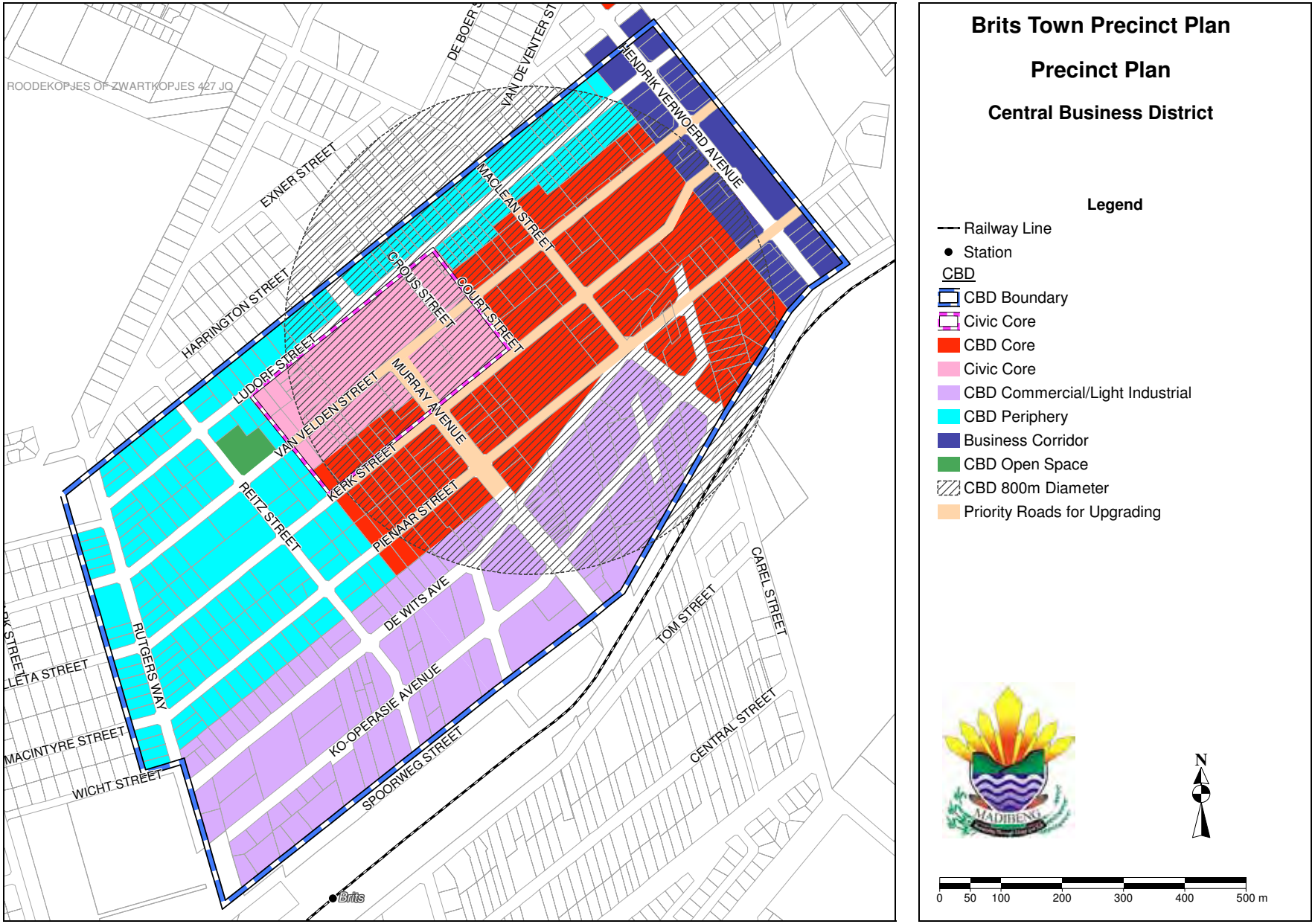

Figure 41: Central Business District

Table 23: Suggested Land Use Management Guidelines for the CBD Core

Typical Land Uses Permitted	Prohibited Land Uses	Building Scale and Intensity		
Government Offices Offices, Shops, Businesses, Showrooms, Markets Banks and Financial Institutions Public Open Space, Entertainment (e.g. cinemas, theatres) Hotels, Restaurants Car Parks, Transport Stations Blocks of Flats as part of Mixed-Use Buildings (i.e. flats only on upper floors of buildings) Hospitals, Education Institutions, Places of Worship, Child Care Centres, Ambulance, Fire and Police Stations	Industrial Development Warehouses Wholesale Dwellings at Ground Level	Floor Area Ratio	Min	1.5
			Max	-
		Height (Number of Storeys)	Min	4
			Max	-
		Coverage (%)	Min	-
			Max	Not applicable
		Density (Dwelling Units/Hectare)	Min	100
			Max	-

Street Built-to-Line	• At least 75% of the building footprint adjacent to a street or public open space shall be placed on a 0.0m Built-to-line; Provided that the Built-to-Line may be deviated from in special instances, including:
	  • Where corners of buildings must be recessed;
	  • Where a public space or monumental feature is to be created;
	  • Where it is more beneficial from an urban design point of view to align the built-to-line with the built-to-line of an existing building on a directly adjacent property;
	  • For the purpose of widening the sidewalk, in which case buildings may be recessed a maximum of 2m and the space between the building and property line must form part of the public walkway
	  • All such deviations must be indicated on a Site Development Plan drawn by a qualified Architect/Urban Designer and such deviations may not compromise basic principles such as extroverted development, urbanity and the experiences of pedestrians.
	• All buildings must be built on the 0.0m Built-to-Line for a distance of at least 10.0m from every intersection, except where a public open space is provided on the street corner
	• Any recessed space from the built-to-line may only be used for public open space, landscaping, streetscaping and architectural features. No parking may be provided within this space.

Street Interfaces	• The whole length of the street frontage of a property, with the exception of side building lines and vehicular entrances, shall comprise buildings; provided that this condition may be relaxed where a property comprises a purposely designed and developed public open space, architectural feature or public art • The ground floor of all buildings or parts of buildings shall comprise shops windows, display windows and/or entrance doors. No blank walls longer than 5m are allowed • No fencing or walls may be allowed along the street boundary or any boundary bordering onto a public open space • Upper levels must comprise windows or balconies that look out onto the street or any other adjacent public spaces • Upper levels of tall buildings must be set back to help create a pedestrian scale at street level • With larger footprint developments, care should be taken that a monotonous street façade is not created. The building design should therefore make provision for changes in height and appearance to create an interesting street façade. These changes should occur at least every 40m • No utilities such as pipes and air-conditioning units may be visible from the street. Where these need to be provided along a street frontage of a building, it must be disguised with or incorporated as architectural features.
Parking	• On-site parking shall be provided to the back of buildings or in centrally located, well-designed and landscaped parking areas

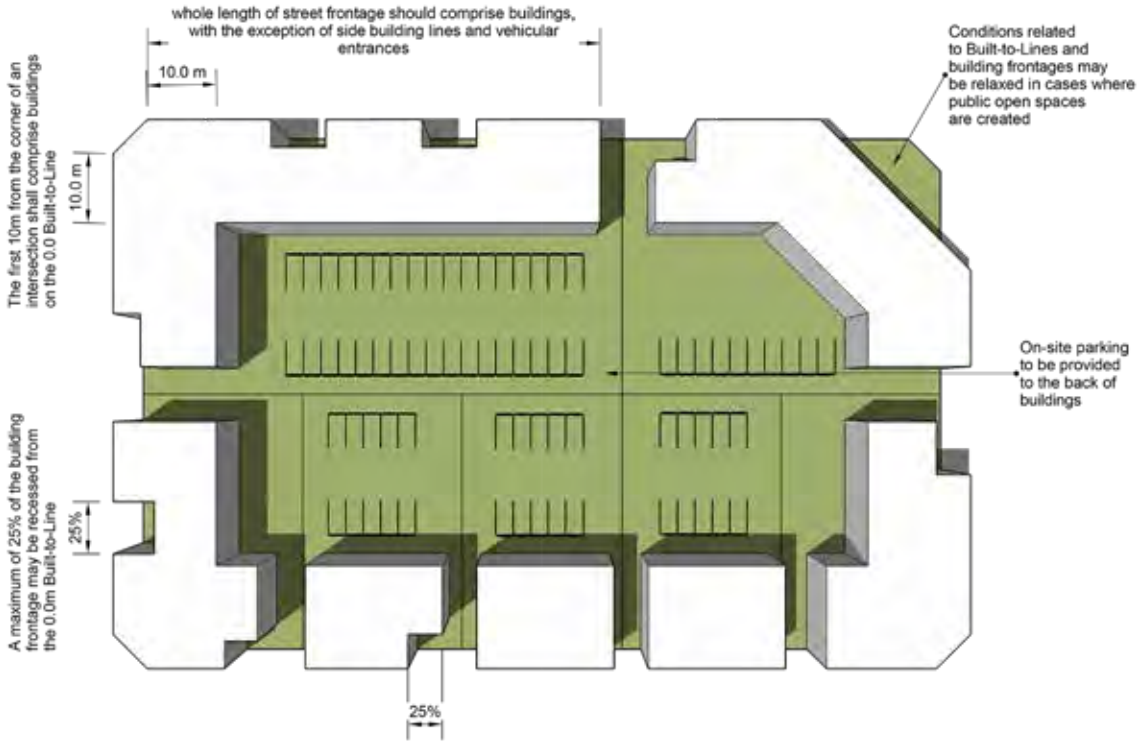

Illustration of Street Interface and Built-to-Line Development Guidelines in CBD Core

Streets in the CBD Core must be developed as high quality urban environments with a strong focus on pedestrian movement and activity on street level

CBD Periphery

The periphery comprises a transitional area to the north and west of the CBD Core. Much of these areas were historically single residential areas, but over time non-residential land uses have started to invade these areas. These areas should focus primarily on offices, institutional uses, showrooms and other business uses that are usually mono-functional with larger footprints than the typical development in the CBD Core and may include higher density residential buildings (either free-standing or as part of other developments). There is not such a strong focus on vertical mixed-uses in this area, but due to the proximity to the core, development should still be of high quality with a strong regard for the public environment.

Table 24: Suggested Land Use Management Guidelines for the CBD Periphery[2]

Typical Land Uses Permitted	Prohibited Land Uses	Building Scale and Intensity		
Government Offices , Offices, Home Offices Filling Stations, Showrooms Banks and Financial Institutions Public Open Space, Hotels, Restaurants Car Parks, Transport Stations Small Service Industries (excluding motor-related industries) Blocks of Flats Hospitals, Education Institutions, Places of Worship, Child Care Centres, Ambulance, Fire and Police Stations	Industrial Development Warehouses Wholesale	Floor Area Ratio	Min	1.0
			Max	-
		Height (Number of Storeys)	Min	3
			Max	-
		Coverage (%)	Min	50%
			Max	Not applicable
		Density (Dwelling Units/Hectare)	Min	80
			Max	-

Street Building Line	• Buildings should not be located further than 5.0m from the street boundary of the property.
Street Interfaces	• A large portion of the street frontage of a property, with the exception of side building lines and vehicular entrances, should comprise buildings • Buildings must have active facades along the street boundary, including windows, doors and balconies. Ideally no blank walls longer than 5m should be allowed • Fencing must be visually penetrable, including low walls, palisades or palisades with intermittent walls and may not exceed a height of 1.8m. • No utilities such as pipes and air-conditioning units may be visible from the street. Where these need to be provided along a street frontage of a building, it must be disguised with or incorporated as architectural features.

2 *Note: Development guidelines shall not apply to home office conversions*

Parking	• On-site parking shall be provided to the back or side of buildings. If parking is provided between the street boundary and the building, only a maximum of 50% of this area may be utilised for parking. The remainder of this area must be utilised for landscaping. • Parking of motor vehicles may not inhibit pedestrian or cycling movement. • Ground level parking areas between the building and the street should be broken up in small parcels. A break of at least 3 meters soft landscaping must be provided between four parking spaces. • At least one (1) tree per every two parking spaces must be provided.

CBD Civic Core

The Civic Core is intended to comprise the largest cluster of institutional and civic buildings, and as such form the governance core of the CBD precinct. The general character in this area should be one of monumental design, good quality public (civic) open spaces and access to governance services and facilities. Although private sector development may also take place within this sub-precinct, these developments should from an architectural and urban design perspective also promote and support the envisaged character of this area. Development in this precinct should therefore focus more on corporate offices, and general retail and business development should be discouraged.

Table 25: Suggested Land Use Management Guidelines for the CBD Civic Core

Typical Land Uses Permitted	Prohibited Land Uses	Building Scale and Intensity		
Government Offices and Institutions Offices Banks and Financial Institutions Public Open Space	Industrial Development Warehouses Wholesale	Floor Area Ratio	Min	1.5
			Max	-
		Height (Number of Storeys)	Min	4
			Max	-
		Coverage (%)	Min	-
			Max	Not applicable

Street Built-to-Line/Building Line	• Buildings may be set back in cases where public open spaces are created in front of buildings. Otherwise the guidelines set out for the CBD Core shall apply • Where buildings are fenced-off on the street boundary, buildings may be set back a maximum of 2.0 meters
Street Interfaces	• The whole length of the street frontage of a property, with the exception of side building lines and vehicular entrances, shall comprise buildings; provided that this condition may be relaxed where a property comprises a purposely designed and developed public open space, architectural feature or public art • Buildings must have active facades along the street boundary, including windows, doors and balconies. Ideally no blank walls longer than 5m should be allowed • Fencing must be visually penetrable, including low walls, palisades or palisades with intermittent walls and may not exceed a height of 1.8m. • Upper levels of tall buildings must be set back to help create a pedestrian scale at street level • With larger footprint developments, care should be taken that a monotonous street façade is not created. The building design should therefore make provision for changes in height and appearance to create an interesting street façade. These changes should occur at least every 40m • No utilities such as pipes and air-conditioning units may be visible from the street. Where these need to be provided along a street frontage of a building, it must be disguised with or incorporated as architectural features.
Parking	• On-site parking shall be provided to the back of buildings or in centrally located, well-designed and landscaped parking areas

CBD Commercial and Light Industrial Zone

The Commercial and Light Industrial Zone in the southern part of the CBD should be utilised for warehouses, wholesale, light industrial, service industries (in particular moto-related service industries) and small manufacturing businesses.

5.3.3.2 Business Corridors

Two business corridors are proposed, one along the R511 to the south of the Central Business District and the other along the southern part of the K16. The demarcation of these corridors on Figure 40 indicates the locational parameters of the corridors, but not necessarily the spatial extent (i.e. width) of the corridor.

The current entrance into town from the south along the R511 is starting to display trends related to a business corridor, with the two shopping malls that have already been developed along this section of the road. Due to the proximity of the CBD to the corridor, future retail development should however preferably be restricted to the CBD Core in order to protect the sustainability of the CBD as the main commercial node. Future office and business (e.g. showrooms) along this road should be of a high standard that will improve the general visual quality of this major access into Brits.

One of the proposed focus areas along the R511 corridor is the development of a medical cluster around the new Brits Hospital (refer to A on Figure 40). The medical cluster should support the hospital, and includes all medical related uses such as medical consulting rooms, medical laboratories and ambulance stations.

A future Business Corridor is proposed for the future development area located between Damonsville and south of Elandsrand. The proposed Business Corridor extends from Spoorweg Street north towards the proposed local distributor that connects the industrial area with Elandsrand, Damonsville and Mothutlung. (1 on Figure 40). The intention of this Business Corridor is to allow for a concentration of non-residential development, predominantly retail and offices, to support future large scale residential development in this area. As such, this corridor should not be allowed to develop until such time as residential development occurs in the area. Without residential expansion and an increased population size, there is no rationale for this Business Corridor.

Good quality office and business development should be promoted along the Business Corridors

Table 26: Suggested Land Use Management Guidelines for Business Corridors

Typical Land Uses Permitted	Prohibited Land Uses	Building Scale and Intensity		
Commercial Offices and Government offices Showrooms, Motor Sales, Filling Stations Laboratories, Hospitals, Medical Consulting Rooms Hotels Tertiary Education Institutions Ambulance, Fire and Police Stations Research and Development Institutions Higher Density Residential Development Retail Development (excluding additional retail development along the R511)	Industrial Development and Warehouses New filling stations along Road R566, between the R511 and B on Figure 40)	Floor Area Ratio	Min	1.0
			Max	3.0
		Height (Number of Storeys)	Min	2
			Max	4
		Coverage (%)	Min	50%
			Max	Not applicable
		Density (Dwelling Units/Hectare)	Min	80
			Max	120

Street Built-to-Line	5.0m; Provided that the Built-to-Line may be deviated from in special instances, including: • Where corners of buildings must be recessed; and/or • Where a public space or monumental feature is to be created.
Street Interfaces	• At least 60% of the street frontage of a property along the street boundary shall comprise buildings, while properties situated adjacent to an intersection with an arterial shall comprise buildings for at least 30% of the side street frontage closest to the arterial. • Buildings must have active facades (i.e. windows, doors and balconies). • All parts of a property that lie between buildings and any arterial or major collector and are visible from such an arterial or collector shall be landscaped. • Fencing must be visually penetrable, including low walls, palisades or palisades with intermittent walls and may not exceed a height of 1.8m. • No utilities such as pipes and air-conditioning units may be visible from the street. Where these need to be provided along a street frontage of a building, it must be disguised with or incorporated as architectural features.
Parking	• On-site parking shall be provided to the back or side of buildings. If parking is provided between the street boundary and the building, only a maximum of 50% of this area may be utilised for parking. The remainder of this area must be utilised for landscaping. • Parking of motor vehicles may not inhibit pedestrian or cycling movement. • Ground level parking areas between the building and the street should be broken up in small parcels. A break of at least 3 meters soft landscaping must be provided between four parking spaces. • At least one (1) tree per every two parking spaces must be provided.

5.3.3.3 Neighbourhood Activity Nodes and Streets

Neighbourhood Activity Nodes and Streets refer to those areas within residential neighbourhoods that are focused on providing local business opportunities, social and community facilities and transport facilities to local communities. These areas should however only focus on providing day-to-day convenience goods and services, and should not compete with the Central Business District, in particular insofar retail and offices developments are concerned. Home Offices (i.e. the conversion of dwelling houses into offices) in residential neighbourhoods should also be restricted to demarcated Neighbourhood Activity Nodes and Streets.

The spacing of these clusters should be such that they are located within walking distance from the majority of residential units in a particular neighbourhood (i.e. within 10min of 800m walking distance).

From a sustainability and functionality perspective, the clustering of commonly used community, social and local business facilities in and around points of highest accessibility is important. The advantages of clustering services and facilities (as opposed to dispersing them throughout the neighbourhood) are:

- A neighbourhood focus area is created that can serve as the heart of communities and promote social interaction;
- Multiple neighbourhoods can be served by social services in central points;
- The sharing of facilities between various services (e.g. buildings, office machinery etc.) can take place;

Figure 42: Schematic Neighbourhood Cluster

- Central clusters ensure enhanced accessibility and convenience for residents, in particular pedestrians and users of public transport; and
- Clustering allows several errands to be accomplished during a single trip, helps create the critical mass of public transport riders needed for quality service, and encourages public transport commuting by locating more services near work places for employees to use during breaks.

Two interventions emanating from the precinct plan are (i) the development of a proper neighbourhood node in Mothutlung and the development of a Transit Oriented Node around Rufus Station in Oukasie (refer to 2 and 3 on Figure 40). To enable this, it is important to draft Urban Design Framework and Implementation Plan for these nodes.

Table 27: General Development Guidelines for Neighbourhood Nodes and Activity Streets

Guidelines
• The majority of social and community facilities and local businesses should be clustered together in neighbourhood nodes or spines (as opposed to being dispersed throughout a neighbourhood). • The size of the neighbourhood cluster may differ depending on the size of the community it will be serving. However, the general principle is that the node should be as compact as possible to support pedestrian movement around the node. • The general character of the neighbourhood activity nodes and streets should be public, extroverted environments, with an open street pattern, relatively short street block lengths (to facilitate pedestrian movement), on-street parking, public spaces and the clustering of compatible land uses. • Emphasis must be placed on safe and convenient pedestrian movement and access to public transport facilities. • Informal trading must be accommodated in well-designed and well-located market areas, where the necessary facilities such as trading stalls, ablution facilities and refuse bins are available to the traders.

Table 28: Suggested Land Use Management Guidelines for Neighbourhood Activity Nodes and Streets

Typical Land Uses Permitted	Prohibited Land Uses	Building Scale and Intensity		
Public Open Space, Public transport facility Small local business centre, Market Small businesses focused on convenience (day-to-day) goods and services and which serves only the local neighbourhood Home offices Schools, Child Care Facilities Community centres, Police Stations, Welfare Offices, Clinics Places of Worship Medium-density residential developments	Other developments	Floor Area Ratio	Min	-
			Max	0.6
		Height (Number of Storeys)	Min	-
			Max	2
		Coverage (%)	Min	-
			Max	Not applicable
		Density (Dwelling Units/Hectare)	Min	40
			Max	60

Street Built-to-Line/Building Line	• Buildings should not be located further than 5.0m from the street boundary of the property
Street Interfaces	• High, continuous boundary walls are not permitted. A maximum of one-quarter of the length of the street boundary barrier may be solid, with the balance being a palisade fence and/or landscaping. • Fencing must be visually penetrable, including low walls, palisades or palisades with intermittent walls and may not exceed a height of 1.8m. • No vibrecrete walls may be used. • No utilities such as pipes and air-conditioning units may be visible from the street. Where these need to be provided along a street frontage of a building, it must be disguised with or incorporated as architectural features. • Outdoor storage areas shall be screened from the public view by a solid wall, provided that such a wall may not take up more than one-quarter of the street front of the property and may not exceed a height of 1.8 metres. Storage may not exceed the height of the wall.
Interface with Adjoining Residential Properties	• The privacy and amenity of adjoining residential developments must be respected, and measures must be incorporated into the design of buildings to ensure that the development will have no negative impact in terms of visual quality, sightlines, noise, light pollution or obnoxious smells. • Buildings should be situated at least 5.0m from the boundary adjacent to a residential development, provided that this area may be used for parking. • A non-transparent screen wall with a minimum height of 2.1m shall be erected on the erf boundary adjacent to residential erven. The design, height and finish shall be to the satisfaction of the municipality. • A landscaped buffer zone, at least 2.0m wide, shall be provided along erf boundaries adjacent to residential erven for visual and noise screening purposes, in accordance with an approved landscape development plan. • No air-conditioning units or compressors that emit noise may be placed next to residential buildings. • No waste collection yard or skip may be placed adjacent to residential buildings.
Parking	• All parking must be provided on-site, preferably at the side or to the back of the building. • If parking is provided between the street boundary and the building, only a maximum of 50% of this area may be utilised for parking. The remainder of this area must be utilised for landscaping. • Parking of motor vehicles may not inhibit pedestrian or cycling movement. • Ground level parking areas between the building and the street should be broken up in small parcels. A break of at least 3 meters soft landscaping must be provided between four parking spaces. • At least one (1) tree per every two parking spaces must be provided.

5.3.3.4 Industrial Areas

The precinct has a large industrial component along the southern part of the R511, with light industrial activities in the southern part of the CBD. New industrial or commercial areas (i.e. warehouses, depots, distribution etc.) development is proposed in the following areas:

- Small area west of Primindia in the western section of the precinct (infill and rounding-off of existing industrial uses);
- Industrial and commercial expansion between the Brits Industrial township in the southern part of the precinct and the railway line to the north; and
- An industrial and commercial expansion area directly east of the Brits Industrial area. Due to the proximity of this area to proposed new residential development, no noxious industries should be allowed in this area. Development in this area should therefore be restricted to light industrial and commercial uses (refer to 4 on Figure 40).

In order to promote industrial development, it is important to ensure that:

- Existing and proposed industrial areas are developed and serviced in such a manner that they are able to attract and sustain industrial development; and
- The physical condition of and services in the industrial area are improved to facilitate new industrial development and retain existing development.

5.3.4 Residential Development

5.3.4.1 Residential Typologies

Residential neighbourhoods comprise those areas that are exclusively used for residential development, with supporting community facilities and small home offices. Future residential development in the precinct comprises the following two proposals:

- Low (single) density residential expansion around the periphery of the precinct;
- The extension of the Mothutlung, Damonsville and Oukasie areas towards the centre of the precinct in order to achieve infill and integration; and
- Densification -
  - Within and around the Central Business District
  - Along the R511 and along the proposed central development spine to the east of Elandsrand; and
  - Around neighbourhood activity nodes and streets.

The densification of these area will ensure a higher concentration of residential population within walking distance from the main business and employment areas as well as major movement routes (in particular public transport routes).

Table 30 indicates the recommended residential densities and typologies that should be permitted in various residential areas: