



REVIEW OF THE RICHARDS BAY
CBD FRAMEWORK PLAN
STRATEGIC FRAMEWORK REPORT



DRAFT REPORT
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1 INTRODUCTION

The Umhlathuze Municipality initiated a process to review the Richards Bay CBD Framework Plan. They accordingly enlisted the services of Isibuko Development Planners to undertake this project. This document presents the strategic framework for the project.

1.1 BACKGROUND

Richards Bay initially developed around a makeshift harbour that was set up by Commodore of the Cape, Sir Frederick Richards during the Anglo-Zulu War of 1879. In 1935 the Richards Bay Game Sanctuary was created to protect the ecology around the lagoon and later by 1943 it expanded into the Richards Bay Park. The town was laid out on the shores of the lagoon in 1954 and proclaimed a town in 1969.

In 1965, the South African Government decided to build a deepsea harbour at Richards Bay. Construction work began in 1972 and four years later, on 1 April 1976, the new harbour was opened with a railway and an oil/gas pipeline linking the port to Johannesburg.

The founding of Richards Bay and the development of the harbour, railway lines, electricity and water supply, township establishment and the construction of the first industrial plants (Alusaf and Triomf Fertilizer) brought an influx of not only temporary construction teams, but also the permanent settlement of highly skilled professionals (industrial, civil,

chemical and electrical engineers, technicians, medical professionals and industrialists as well as teachers).

In response to the influx of people, the residential area of Richards Bay developed north of the harbour. Meerensee started in 1970 and was followed by Arboretum in 1975 and VeldenVlei in 1980.¹

Today, Richards Bay and Empangeni are the most significant economic centres in the Municipality and in the District Municipality. As such, the Umhlathuze SDF identifies Richards Bay as primary node, while the KZN Provincial Growth and Development Strategy (PGDS) identifies Richards Bay as a secondary node (that is and urban centre with good existing economic development and the potential for growth and services to the regional economy). As a harbour and industrial town, Richards Bay, attracts people from surrounding towns, rural settlements and from beyond the district and plays a significant role in the growth of the region.

The proposed project should thus be located within the context of a broader development vision, outlined in the Municipality's Integrated Development Plan (IDP), the Spatial Development Framework (SDF) and other development plans developed for the area. It must, in essence, advance the spatial transformation agenda and contribute to the developmental municipal outlook of the Umhlathuze Municipality. In addition, it must enhance the performance of Richards Bay and contribute

¹ https://en.wikipedia.org/wiki/Richards_Bay

to meeting the development needs of those who work, live and/or use Richards Bay as the core social and economic node of the municipality.

1.2 SCOPE OF WORK

The scope of work is well outlined in the terms of reference and need not be repeated in this document, suffice to mention that it should cover the following:

- Preparation of a base map, indicating and updating new developments that have taken place within the study area.
- Identification and analysis of existing development trends (internal and external), based on, inter alia, the existing studies.
- Consideration of various aspects of development that defines the structure, function and efficiency of the CBD in the performing its functions.
- Identification of a development vision for the CBD and preparation of a framework plan.
- Preparation of 3D concept, with an urban design plan and guidelines.
- Stakeholder mobilization towards a common vision for the future of the town.

The project should be undertaken with due cognizance of the existing information and studies undertaken in the areas and current strategic planning initiatives of the Umhlathuze Municipality, particularly those dealing with spatial and economic development issues. It should also align

with the district, provincial and national spatial and economic development initiatives with implications for the Umhlathuze Municipality.

1.3 PROJECT AIMS AND OBJECTIVES

The overall aim of this project is to lay the foundation of the development of the city by achieving a more attractive urban environment with improved functionality, better urban management, creation of new investment and economic opportunities, efficient transport system and improved safety and security. The following should be achieved through the plan:

- improve functionality;
- create a more attractive urban environment;
- improve the environment;
- provide efficient transport;
- improve urban management;
- improve safety and security;
- promote social inclusion/ equity;
- reduce traffic congestion;
- provide efficient and sustainable transport systems;
- create investment and economic opportunities;
- regenerate the CBD; and

- protect the area from competing developments in out of town locations.

The objectives of the plan should be:

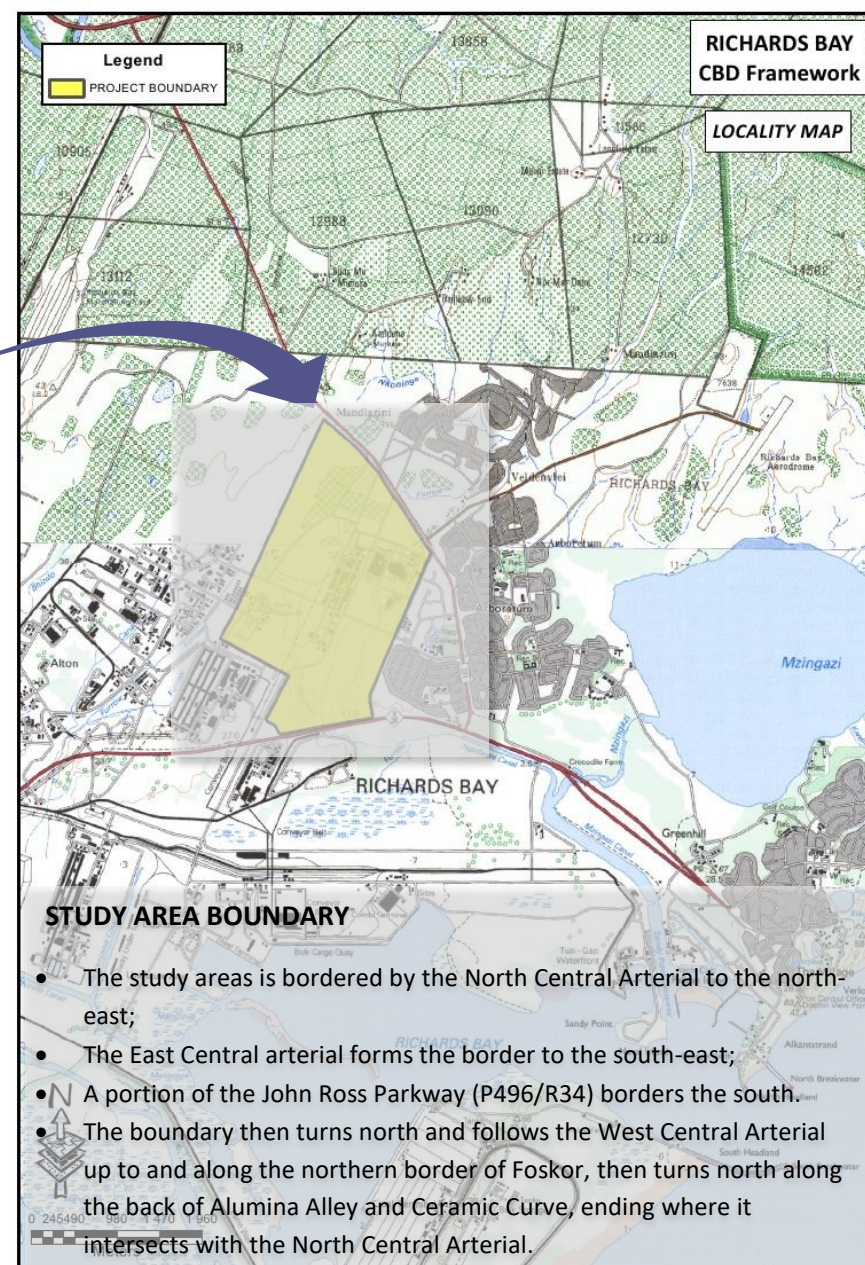
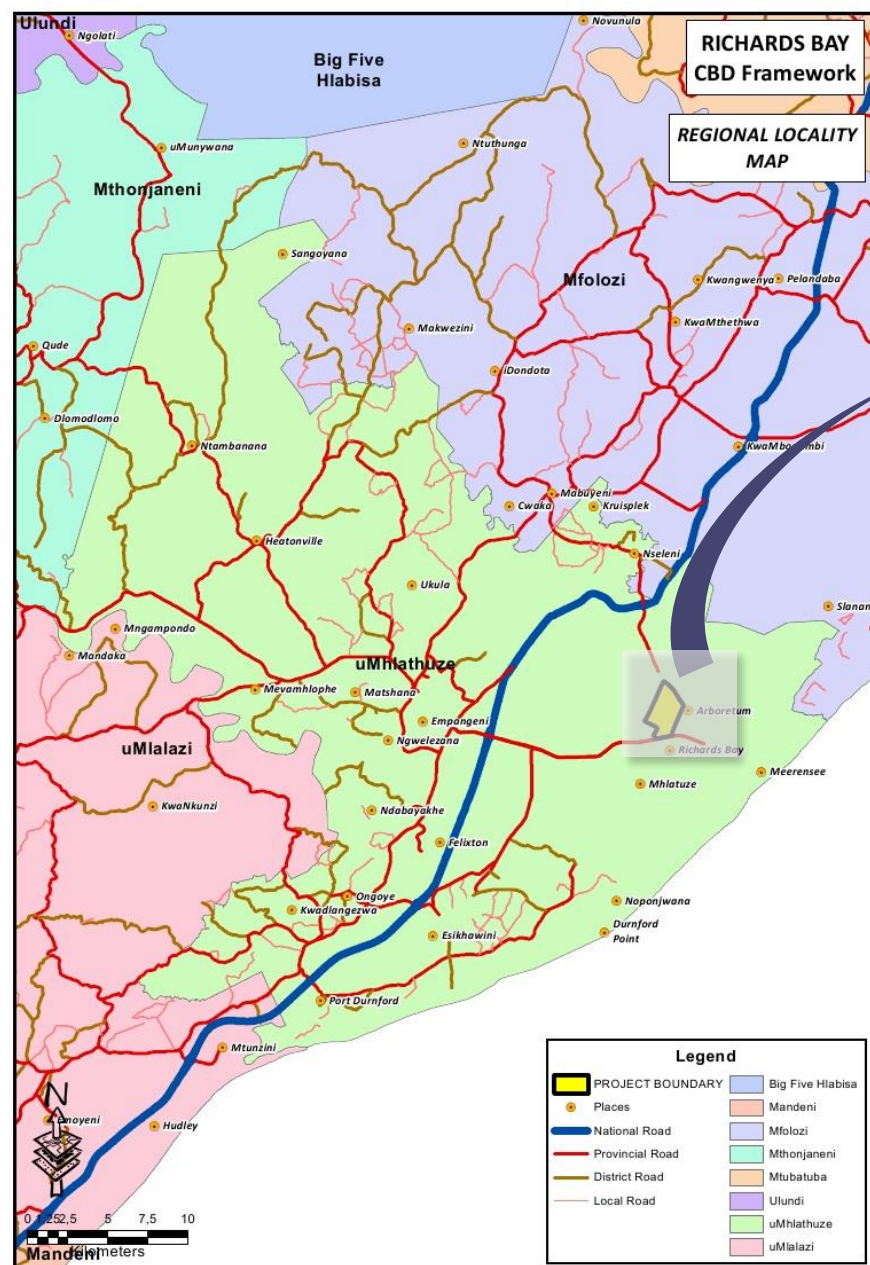
- To establish and influence the growth trends of the CBD;
- To discourage urban sprawl by encouraging high rise buildings i.e. densification;
- To identify and facilitate an efficient parking system with adequate parking facilities and supporting infrastructure;
- To identify and control informal trading areas and activities respectively;
- To facilitate an efficient public transportation network system;
- To maintain and enhance pedestrian linkages to and from public transport installations;
- To maintain and enhance street furniture;
- Establish and encourage adherence to building façade and building edge guidelines and regulations particularly those facing public spaces and main streets;
- To establish landscape character for precincts and streets through landscaping and appropriate built form controls;
- To initiate street landscaping programmes;

- To initiate public private partnership ventures in development initiatives;
- To monitor decentralisation of retail and office uses into residential edges with a view to maintaining economic vitality of the CBD;
- To ensure safety and security in the CBD.

1.4 STUDY AREA

The study area includes the central business district of Richards Bay, but excludes the industrial area to the west. It is bordered by the North Central Arterial to the north- east and the East Central arterial forms the border to the south-east. A portion of the John Ross Parkway (P496/R34) borders the study area to the south. The boundary then turns north and follows the West Central Arterial up to and along the northern border of Foskop, then turns north along the back of Alumina Alley and Ceramic Curve, ending where it intersects with the North Central Arterial (refer to figure 1 on overleaf).

FIGURE 1: LOCALITY OF THE STUDY AREA



2 METHODOLOGY

The planning process will involve the use of the following methods to collect, generate and analyse data:

- Desktop data and literature review.
- Technical investigations.
- Stakeholder engagement.
- Spatial Data Analysis Using GIS.

It is important to indicate that stakeholder participation in the form of workshops, project steering committee meetings and interviews will unfold throughout the course of the project.

2.1 DESK-TOP LITERATURE AND DATA REVIEW

The desktop literature review consisted of the use of existing information such as plans, research projects and policy documents. The

In fact, data review included the following broad categories:

- Relevant policy and legislation;
- Existing spatial and development plans including IDP, SDF and sector plans;
- Existing plans / investigations, development frameworks and strategies undertaken in the study area, e.g. Richards Bay CBD South Ext. Urban Design and Concept Plans and Guidelines; Proposed Civic

Centre Concept, 2006 Richards Bay CBD Framework Development Plan, Zululand Chamber of Business Forum Land Use Concept, etc.

- Land use management reports, Land Use Scheme and other source documents the municipality will avail for the purposes of this study;
- Latest Surveyor General cadastral data and latest aerial photography.
- Environmental information, e.g. Environmental Services Management Plan, Air Quality Management Data and Investigations, etc.
- Best practice examples of the changing role and function of Central Business Districts.

2.2 TECHNICAL INVESTIGATIONS

The following methods were be used to collect, analyse and generate data:

- Secondary information relating to the area, community and the project;
- Maps and aerial photographs;
- Geographic information systems (GIS).

Various investigative analyses were undertaken as part of the status quo phase. These will include the following:

- Spatial analysis, which includes spatial form and structure, land use, zoning and land use management system, etc.;

- Land legal investigation, which includes updating of cadastral data, land ownership pattern etc.;
- Urban design and architectural designs for the study area;
- Traffic impact study.

2.3 SPATIAL ANALYSIS AND USE OF GIS

Geographic Information Systems (GIS) was used to capture overlay information and analyse existing situations. Maps created were also used for the analysis of spatial trends and patterns.

3 THE RICHARDS BAY CBD CONCEPT

The development concept is an abstract device that provides for the formulation of conceptual spatial ordering of the study area. In essence, it requires the articulation of the main principles and ideas informing the plan. The concept is based on a series of underlying planning principles and approaches and outlines a number of development concepts suggested to form the basis of the emerging spatial development structure. It provides a guide for the integration of various elements that make up the study area into a coherent, functional and efficient spatial system. The concept is presented in the form of a vision and strategic intent for the future development of the study area.

3.1 MUNICIPAL DEVELOPMENT VISION

The vision for the Richards Bay CBD should be located within the wider development context of Umhlathuze Municipality's IDP and SDF. While the IDP vision provides the strategic development direction for the municipality, the SDF provides the spatial focus of this vision.

Richards Bay is identified as one of the primary nodes within the municipality and district, as well as a secondary node at a provincial level. This elevates the city into a major role player in the regional economy, as well as a prominent developing industrial centre at a provincial and national level. In line with the spatial vision, the Richards Bay CBD must respond to the need for transformation and equality, as stated in their vision.

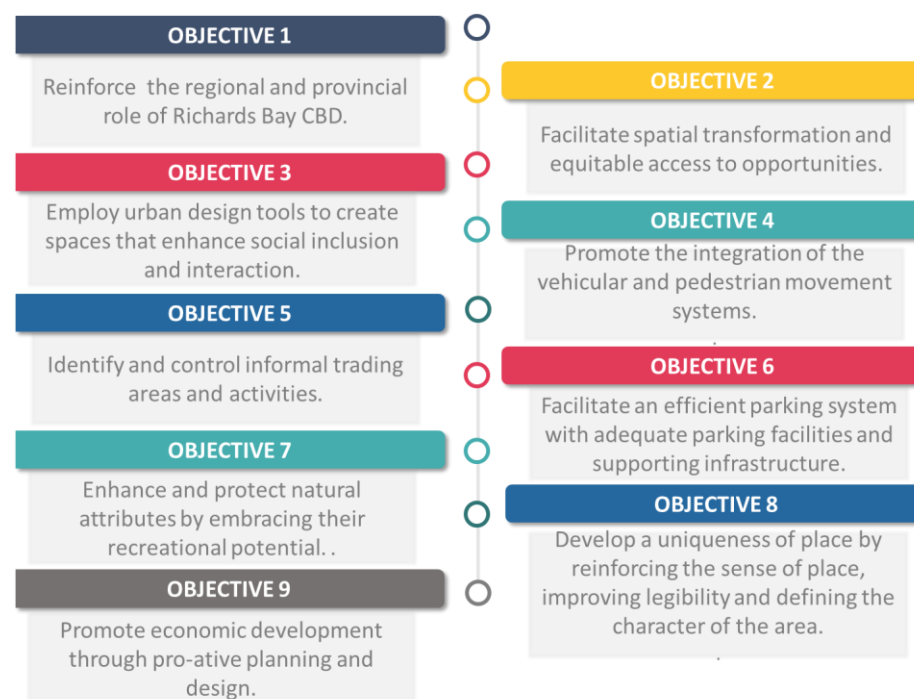
FIGURE 2: MUNICIPAL VISION



3.2 DEVELOPMENT OBJECTIVES

The following objectives have been identified to drive development and contribute to the achievement of the municipal development vision:

FIGURE 3: STRATEGIC OBJECTIVES



3.3 GUIDING PRINCIPLES

The following guiding principles have been identified as features that will contribute to the development of quality urban space. These principles are important to achieve well-performing areas or developments and are of a structural and spatial nature.

3.3.1 MAKING CONNECTIONS

Places need to be easy to get to and be integrated physically and visually with their surroundings. The movement framework of a node determines

its connectivity and accessibility, which in turn affects uses and activities, density, security and the impact of development on adjoining areas. The structural components of the movement framework are the streets and pedestrian pathways (sidewalks), whilst the individual activities and components comprise walking, cycling, vehicular transport and public. A successful movement framework will:

- provide a maximum choice for how people will make their journeys;
- provides good access, taking into account the kinds of movement that are generated in a node;
- make clear connections to existing routes, local facilities and neighbouring nodes and activities; and
- integrate to its spatial and functional context.

3.3.2 PLACES FOR PEOPLE

The public realm is the focus of public activity and community life. Places must be safe, comfortable, varied and attractive and a place that people enjoy spending time. This will result in places that are well used and well loved. They also need to be distinctive, and offer variety, choice and fun. The built environment should include parks and open spaces for visitors and residents. Public environment and infrastructure projects therefore become the basis for securing private sector investment.

3.3.3 URBAN MANAGEMENT

Developable and well cared for projects must be economically viable, well managed and maintained. This means understanding the market

considerations of developers, ensuring long-term commitment from the community and the local authority, defining appropriate delivery mechanisms and seeing this as part of the design process. The overall management of a node /precinct is critical to its successful functioning and liveability. Components of this include:

- Emergency management, including disaster management;
- Municipal services;
- The control of development through land use management systems and the enforcement of by-laws.

3.3.4 LEGIBILITY

Legibility is a characteristic whereby a city is easily understood by residents and visitors and allows them to move about in the city with ease. In legible cities, places that are important look important and are therefore easily found and differentiated from those less important. Important streets and squares must therefore look important – stately buildings must surround them and lined by tall trees, must have wide roadways and sidewalks, special street furniture and ample light at night.

3.3.5 LIVEABILITY

The liveability of an area refers to the contribution it makes to the quality of life of the area's inhabitants and users. This requires that the urban environment and its activities should contribute to the well-being of its population (residents, workforce and visitors), with regard to facilities and services, public spaces and places, parks and open spaces, supporting

engineering infrastructure, recreation, entertainment and cultural activities.

3.3.6 SAFETY

The principle of safety means that the urban space must be functional, thus responsive to the needs and expectations of all its users. This includes motorised and non-motorised users. In other words, it has to be designed and equipped (furnished) for comfort and safety of all (pedestrians, drivers, strollers, shoppers, street vendors, etc.)

3.3.7 SUSTAINABILITY

Integration of the natural environment with the built form must inform the planning and design processes. Durable and reusable spaces and building structures that are viable for change and future developments should be promoted.

3.3.8 GREEN SPACE

It is important to establish continuities of green space. Green spaces not only fulfil an important human need, but also promotes ecological diversity. Ecological systems are complex, and natural systems should allow the migration of species and their exposure to different habitats. Natural systems can be used for conservation purposes, environmental management, visual character and areas for active and passive open space. The establishment of an integrated open space system provides the opportunity of creating a diverse range of open space settings and

functions as a guide for all future management and uses of open spaces and natural areas.

3.3.9 INTENSITY OF SPACE USE

Land should be used as intensively as possible as this has positive spin-offs for settlement making. These include:

- the creation of higher levels of support for economic and social goods and services;
- the establishment of an economic climate in which economic activity can thrive;
- the creation of the preconditions for viable public transportation systems;
- the achievement of better utilisation of the land, contributing to compact urban environments, reduced travelling and energy consumption, as well as a reduction in pollution; and
- the efficient use of infrastructure.

3.4 THE CONCEPT

3.4.1 REGIONAL INTEGRATION

The R34 (John Ross Parkway) is a regional connector, which connects Richards Bay to the N2 and Empangeni, while the P230 (R619) also connects Richards Bay to the N2, further north. At a local level, both these routes are major arterials that carries traffic between different areas of Richards Bay. John Ross Parkway provides an important link to the

waterfront and harbour area, while the R619 (which becomes the North Central Arterial) also provides an important link to the northern parts of Richards Bay, the John Ross Parkway and the waterfront and harbour area.

As regional routes, R34 (John Ross Parkway) and the P230 (R619) are supposed to have limited direct access and facilitate high speed through movement. The local function on the other hand, requires improved direct access and optimal use of space.

3.4.2 CONNECTIVITY AND MOVEMENT

Connectivity and movement refers to movement of all kinds, including fixed line systems such as roads, as well as pedestrian and bicycle routes. The movement system is the network of spaces through which people move in various ways, from the pedestrian mode to modes specifically conceived for fast movement. It is primarily within this network of movement spaces that the public life of a community takes place.

Consequently, its making should be informed not only by technocratic considerations, but also by human and environmental considerations. The movement system has considerable structural significance as it defines the pattern of accessibility, both within an area and between different areas. It is this pattern, in turn, which sends structural signals to individuals, entrepreneurs and place-makers. It also significantly affect the range of choices and opportunities the settlement / area offers inhabitants.

Within the study area there is the need to facilitate movement of pedestrians between key areas of origin and economic activity areas or service points. Pedestrians move from points of origin (such as the existing

transportation facility) to their preferred destination within the CBD (being for shopping or access to a government service). As such, the necessary pedestrian friendly infrastructure / routes must be able to facilitate this type of movement.

3.4.3 ACCESS POINTS

Main access points/ entrances into an area usually serves as important focus points and must be celebrated and emphasised. As such, gateway entrances to the study area and into the CBD are the major focal attraction points and should be developed with distinct landmarks or distinctive landscaping. These enhanced entrance points should focus on the

- Mark Strasse entrance point;
- The intersection of the North Central Arterial (R619) with Albizia Avenue;
- A point just outside the CBD, along the North Central Arterial (R619) before the intersection with Bullion Boulevard.

3.4.4 UPGRADE OF THE PUBLIC REALM

The provision of an aesthetically pleasing environment is not only conducive for economic development and private sector investment, but also contributes to an improved quality of life and environment for residents and visitors to the area (shoppers). The implementation of urban design measures is one way in which the public realm can be upgraded to create an attractive and functional urban and public environment. These measures should be more focussed in specific areas, such as activity streets

and recreational areas, but should also be used to enhance the overall aesthetic character of the study area.

3.4.5 PRESERVE NATURAL ENVIRONMENT AND SYSTEMS

Preserving and enhancing the natural environment, water system and open space systems form an integral part of the development within the precinct. The natural environment forms a significant component of any area and the provision of passive open space within the precinct is important. As such, the rehabilitation, conservation and integration of open space into the vision for future development are a critical component for sustainable development. The natural system includes the following:

- Protection of wetlands: Wetland systems are running in a north-south direction through the western portion of the study area. The drainage of the wetlands will result in increased velocity of runoff and consequent soil erosion. As a result, these wetland areas should not be considered for development.
- The introduction of indigenous vegetation as a part of the urban design framework is also essential.
- The natural systems should be linked to each other where possible to establish an integrated open space system. This is critically important as it enables effective storm water management, prevents continuous conurbation and gives structure and form to the built environment.

3.4.6 RESIDENTIAL OPPORTUNITIES

The Richards Bay CBD study area is characterised by the lack of residential uses and options. Residential developments are mostly located in the outer frame of the CBD and within the residential neighbourhoods. As such, there are no higher density residential opportunities within the CBD. This is an opportunity area that can bring life into the CBD and create a vibrant 24 hour city and promote a feeling of safety. It can also locate people closer to their place of work.

Student accommodation in the form of higher density apartment blocks should be considered, considering the location of the University campus and the FET College in the study area.

3.4.7 COMPETITIVENESS

The competitive edge for the Richards Bay CBD is to be an industrial, economic and services hub, but also to further develop as a tourism destination, meeting the needs and expectations of local and international visitors.

The identification and introduction of niche activities for different age groups (leisure, holiday and tourism), business development and investment, place-making development and public and recreational facilities will enhance the area's socio-economic competitiveness and its long-term sustainability.

FIGURE 4: CONCEPT

LEGEND

- Site Boundary
- Reinforce Regional Access
- Pedestrianise Activity spines
- Future Arterial Routes
- Future Intersection / Access Points
- Required intersection upgrading
- ★ Establish Gateway Entrances
- Reinforce transportation facility with informal trading and SMME opportunities
- Enhance Iconic Public Places
- ▨ Unlock Development opportunity areas
- Investigate small scale automotive industry opportunities
- Development of Lira Link Boulevard
- Protect and Enhance environmental areas not suitable for development



4 STRATEGIC AREAS FOR INTERVENTION

FOCUS AREA	SPATIAL & FUNCTIONAL INTEGRATION	PROTECT & ENHANCE A QUALITY ENVIRONMENT	IMPROVE URBAN MANAGEMENT	ECONOMIC DEVELOPMENT & INVESTMENT
OBJECTIVE	To facilitate spatial and functional integration of the study area with its context.	To enhance the quality of life and the environment.	To effectively manage and improve the urban environment.	To develop and grow the local economy.
STRATEGIC FOCUS AREAS	<ul style="list-style-type: none"> • Improve access, connectivity & internal circulation • Densification & intensification • Unlock and implement development opportunities and proposals • Introduce more residential opportunities 	<ul style="list-style-type: none"> • Promote integrated open space system • Conservation of sensitive environments • Provision of parks 	<ul style="list-style-type: none"> • Pedestrian activity & safety • Parking facilities • Public realm upgrade • Place – making elements • Legibility • Enforcement of Bylaws and regulations • Safety & security • Maintain and upgrade the capacity and efficiency of infrastructure 	<ul style="list-style-type: none"> • Informal trading infrastructure • Skills training & capacity building • Informal trader support • CBD improvement incentives • Promote & develop industrial and commercial opportunities • Green economy
OUTCOME/IMPACT	<ul style="list-style-type: none"> • Improved integration • Mixed land use development 	<ul style="list-style-type: none"> • Ecosystem preservation • Effective management of open spaces 	<ul style="list-style-type: none"> • Improved safety • Improved quality of life • Economic growth • Infrastructure investment 	<ul style="list-style-type: none"> • Inclusion of small business in economic development • Improved relations

4.1 SPATIAL AND FUNCTIONAL INTEGRATION

4.1.1 IMPROVE ACCESS, CONNECTIVITY AND CIRCULATION

An efficient access and movement framework is critical for the future development of the area. The following proposals are suggested.

4.1.1.1 REGIONAL CONNECTIVITY

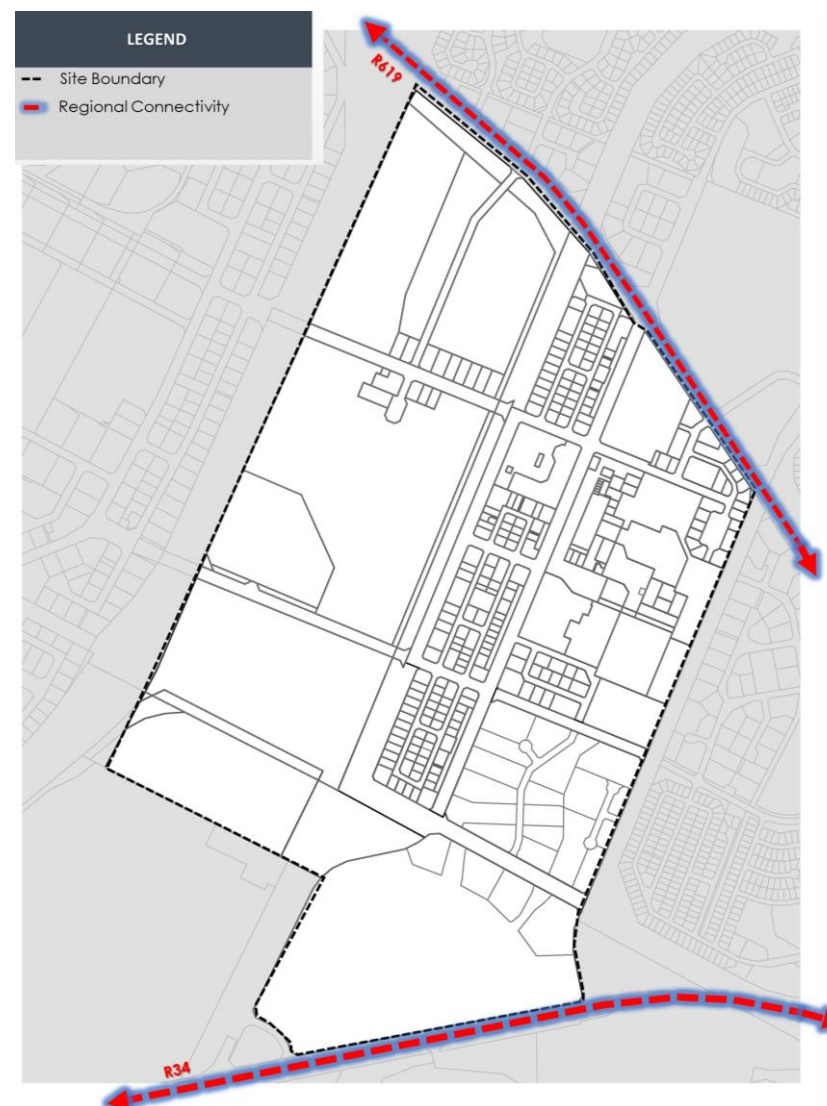
The Richards Bay CBD is accessible on a regional level via the John Ross Parkway (R34) and the North Central Arterial (R619). Both these arterials originate from the N2 national road, which bypass Richards Bay and link Durban to Mpumalanga, Swaziland and Mozambique.

The first access point is via the John Ross Parkway (R34) via off-ramp 322 and the R619 (which becomes the North Central Arterial) via off-ramp 342. Both the John Ross Parkway (R34) and the R619 are identified as approved arterials on a municipal level and should retain their reserves identified in the arterial framework plan. The John Ross Parkway (R34) is identified as a primary corridor in the SDF, while the North Central Arterial (R619) and part of John Ross Highway (from Mzingazi Canal to Meerensee Suburb sections) is identified as secondary corridors. These corridors provide access and linkages between nodes and the surroundings. As such, the role and character of these arterials must be retained and strengthened.

The main access points into the CBD from these corridors / arterials should be strengthened and reinforced. These includes:

- the off-ramp from John Ross Parkway (R34) via Bullion Boulevard;

FIGURE 5: REGIONAL CONNECTIVITY



- the intersection of John Ross Parkway (R34) and the East Central Arterial;
- the intersection of the North Central Arterial (R619) with Bullion Boulevard; and
- the intersection of the North Central Arterial (R619) with Albizia Avenue.

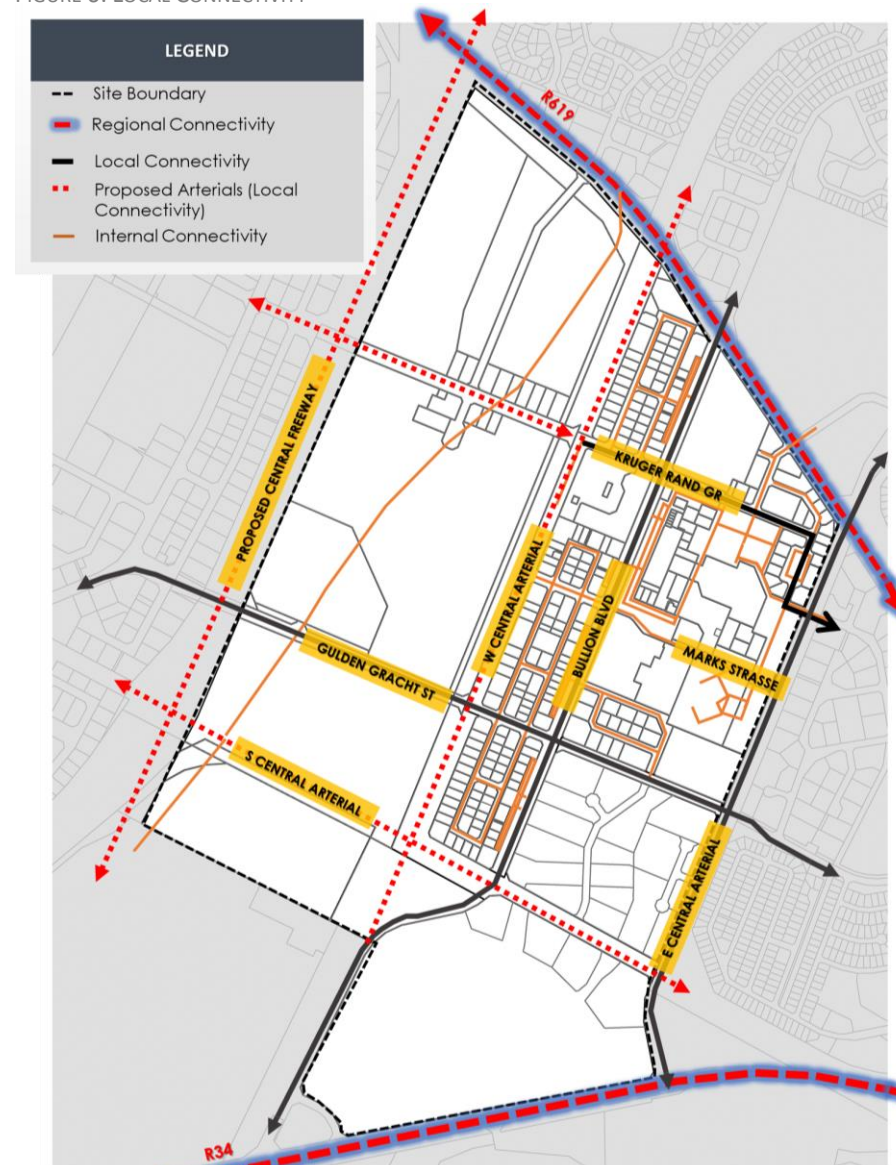
Proper signage at these access points are required and these access points can be improved and enhanced through appropriate design measures.

4.1.1.2 LOCAL CONNECTIVITY

Local distributors or minor arterials provides for access through the CBD. These include Mark Strasse, Krugerrand Grove, Gulden Gracht / Chalk Lane, Dollar Drive and Bullion Boulevard. These streets should be treated and developed as distinct avenues, providing access to the Civic Centre, the Intermodal Facility, the university, public facilities and shopping centres within the CBD.

Mark Strasse, Krugerrand Grove, Gulden Gracht / Chalk Lane and Bullion Boulevard should become activity spines / streets and be developed with appropriate urban design measures. They should also become the main pedestrian routes through the CBD and accommodate pedestrian walkways. The implementation of landscaping measures, such as focus lighting, greening (trees), litterbins and seating facilities, can enhance these spines.

FIGURE 6: LOCAL CONNECTIVITY



Internal arterials identified as part of the Arterial Framework, includes existing and proposed arterials, as follows:

- Existing internal arterials include Krugerrand Grove and Gulden Gracht / Chalk Lane, providing east-west linkages and movement through the area. The western section of Krugerrand Grove has not been constructed, and can only be accommodated once development in this section takes shape.
- Proposed internal arterials include the extension of the South Central Arterial through the ZCBF precinct area, linking to the East Central Arterial. Reserves for this arterial need to be established and acknowledged before detailed land use planning commence.
- The other proposed arterial is along the western boundary of the study area, running parallel to Ceramic Curve. The Arterial Framework indicates this as the Central Freeway with two major intersections at South Central Arterial and the North Central Arterial

Activity spines or routes can be described as important routes within their urban context. It is characterised by strip and/or nodal urban development along sections of the route. A mix of land uses and higher-density urban development can support activity routes. These routes are characterised by direct access and interrupted movement flows, especially at bus and taxi stops and traffic lights. Areas targeted for densification include areas near the activity route and near public transport interchanges, mixed-use areas and concentrated activity, business/ commercial nodes, and public institutions and facilities including open space. Higher density type of development should focus on these spines.

(R619), as well as a smaller intersection with the proposed extension of Krugerrand Grove. Reserves for this arterial need to be established and acknowledged before detailed land use planning commence.

Lira Link that connects the Civic Centre to the northern parts of the CBD hospital) should be developed as a spine with urban design measures, such as focus lighting, greening (trees), pedestrian walkways, etc.

4.1.1.3 INTERNAL MOVEMENT / ACCESS GRID

The road network / access grid within the study area consists of all the internal roads and local streets, such as Dollar Drive, Drachma, Peseta Parade, Rupee Rif etc. These internal roads and streets link the area to surrounding developments and facilitates integration into the regional movement network. In addition, it provides access to individual properties. The blocks that are served by the internal access grid ranges between 100 x 200 meters or 300x100 meters. Some sections of the access network is laid out in a grid pattern, which has a number of positive aspects, such as permeability and accessibility.

Local (access) streets must facilitate mixed traffic within the study area in safety and at low speed. Public transport should be precluded from using this type of street, but it should accommodate pedestrian walkways. Typically, there should be interaction between one side of the street and the other, with much pedestrian crossing.

4.1.1.4 TRAFFIC MANAGEMENT AND INTERSECTION UPGRADES

Proper traffic management is very important, especially during peak hours.

As such, a traffic management plan that can deal with traffic during peak hours, with specific attention paid to certain intersections can contribute to the regulation and management of traffic. Key intersections that are currently operating at an un-acceptable level of service, include the following:

- Bullion Boulevard / R619 (North Central Arterial);
- East Central Arterial/ R619(North Central Arterial); and
- Gulden Gracht / Bullion Boulevard.

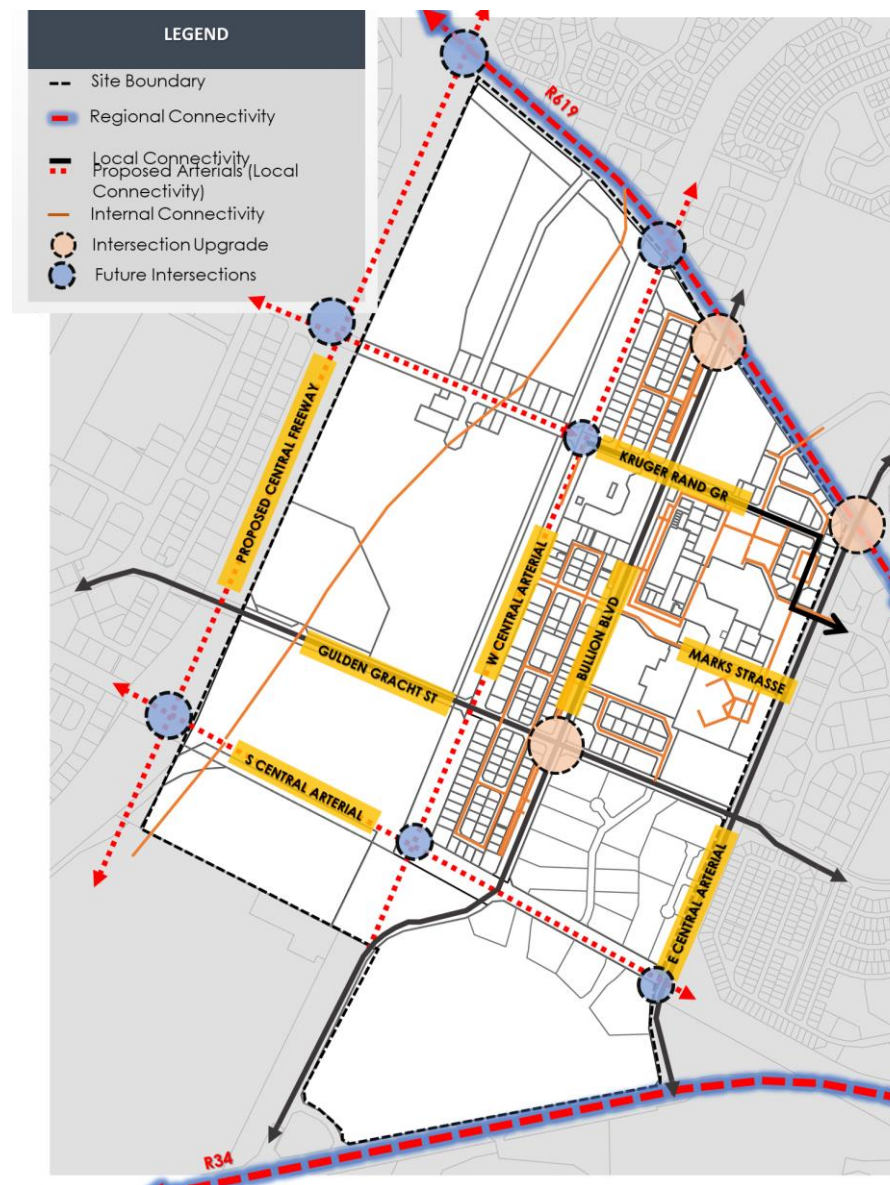
These intersections need to be upgraded by the municipality in order to accommodate the existing 2018 traffic demand. Gulden Gracht, the North Central Arterial and the East Central Arterial are all part of the arterial framework plan.

As per the proposals of the Arterial Framework, the construction of the Central Freeway (along the western boundary of the study area) will include two major intersections at South Central Arterial and the North Central Arterial (R619), as well as a smaller intersection with the proposed extension of Krugerrand Grove.

4.1.1.5 PEDESTRIAN MOVEMENT

The facilitation of pedestrian movement within and through the study area is very important. The aim is to facilitate movement of pedestrians between key areas of origin and activity areas.

FIGURE 7: INTERSECTION UPGRADES



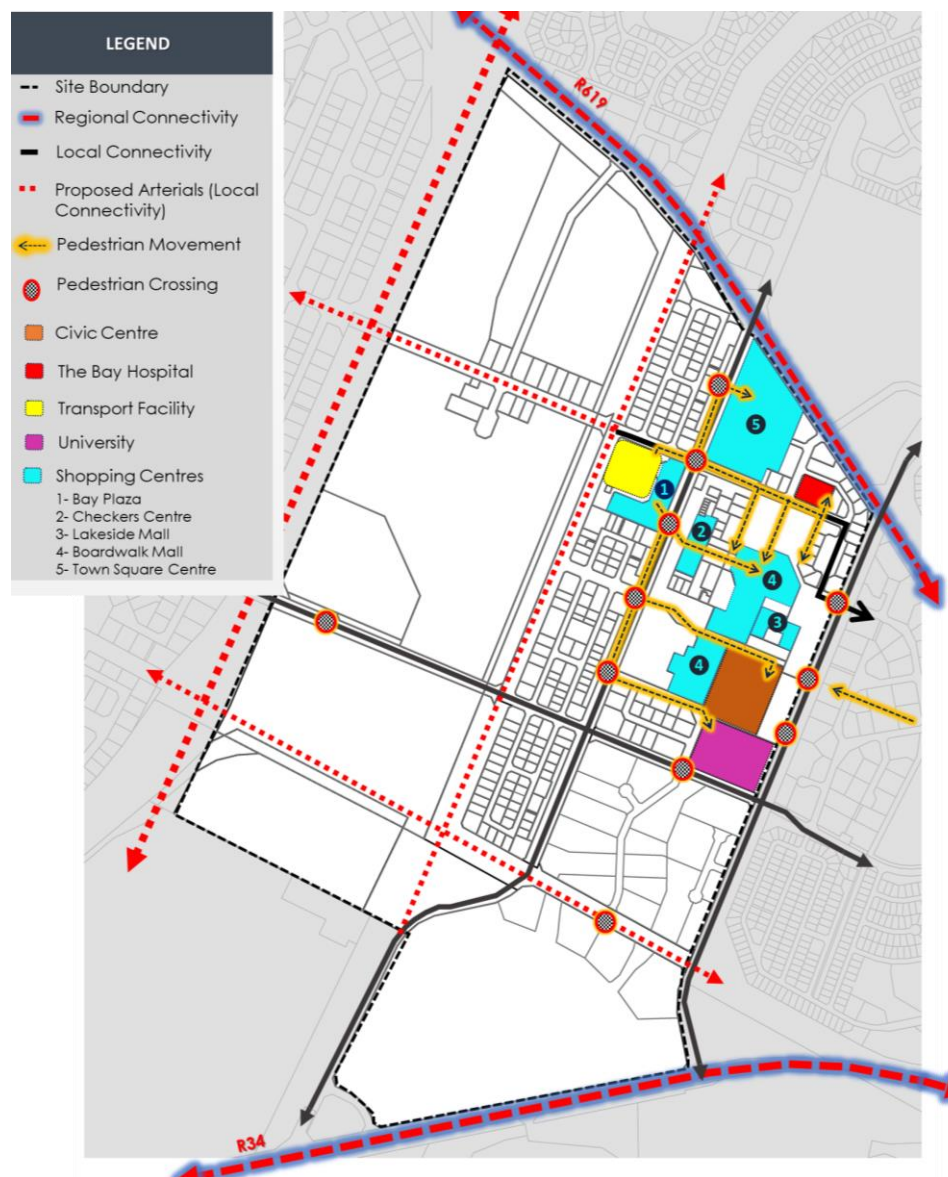
People using public transport become pedestrians once they reach the taxi rank or drop off point in the CBD and have to walk to where they want to be. This implies that the CBD has to respond to the needs of pedestrians and be pedestrian friendly. In view of the ever-increasing fuel prices, more emphasis on a pedestrian friendly town cannot be ignored. The compact urban form and gentle to moderate topography opens up the opportunity to develop the CBD as a more pedestrian friendly town.

It is thus suggested that proper pedestrian walkways along all major roads and pedestrian routes to and from the CBD be provided. The following are some principles to guide pedestrian movement and routes:

- Footpaths / walkways should lead where people want to go, rather than follow a preconceived geometry.
- Implement measures that slow traffic and help pedestrians feel safer, such as raised pedestrian crossings and appropriate signage.
- Pedestrian routes should also connect the places where people want to go, e.g. routes used by people working in the CBD and people walking to town from surrounding residential areas. This can provide a guide for the development of a network of pedestrian walkways.

Pedestrian movement should be focussed along the proposed activity spines (Mark Strasse, Krugerrand Grove, Gulden Gracht / Chalk Lane and Bullion Boulevard). This will facilitate linkages between points of origin and destination within the CBD, such as between the transportation facility to various places of work, shopping centres in the CBD and the Civic Centre.

FIGURE 8: PEDESTRIAN MOVEMENT



Pedestrian crossings must be facilitated at strategic points, such as:

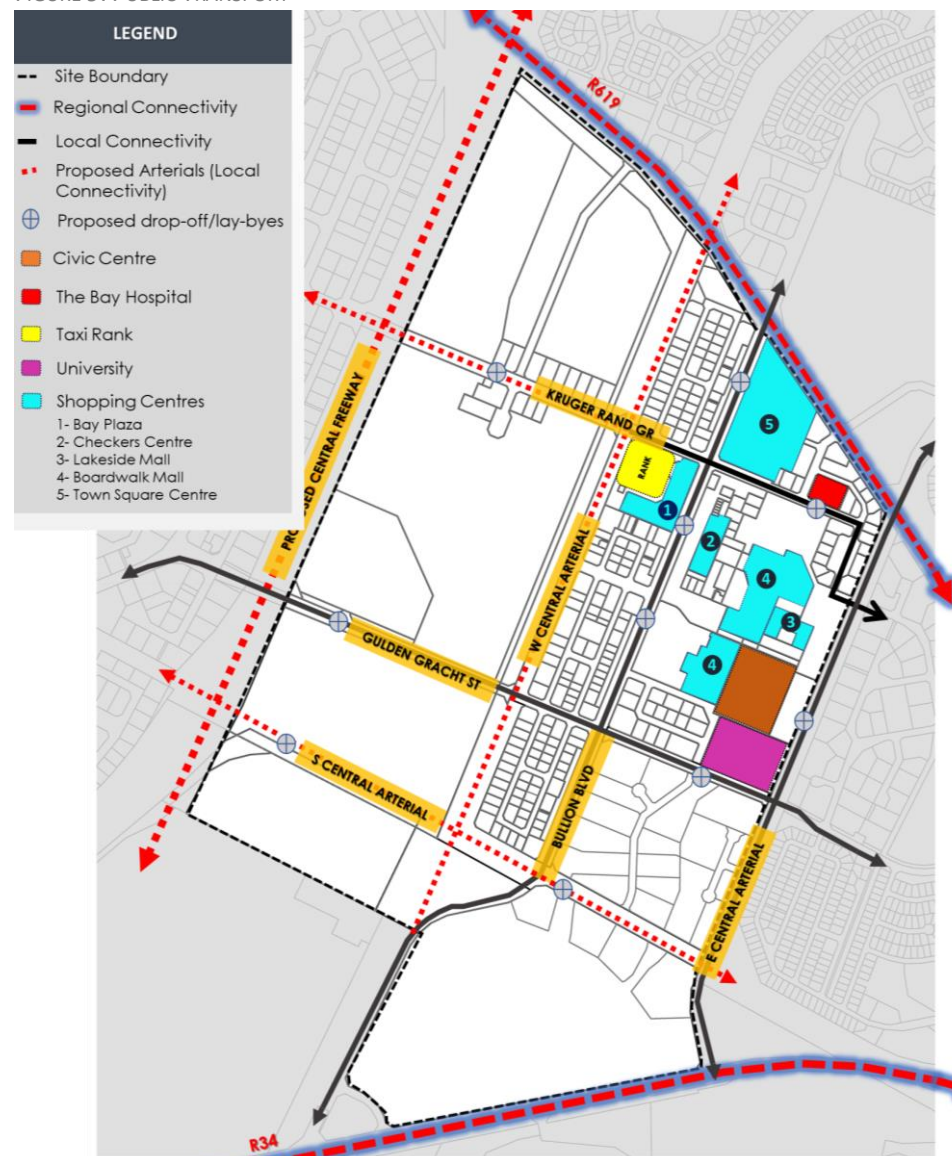
- Further south (at the university) crossing the East Central Arterial into the Civic Centre;
- The crossing over the East Central Arterial into Krugerrand Grove or from the intersection of East Central Arterial into Krugerrand Grove.

4.1.1.6 PUBLIC TRANSPORT

Public transport in Richards Bay currently consists of buses, minibuses and metered taxis. The existing transportation facility at the Bay Plaza has been upgraded recently. It accommodates minibus taxis and buses and includes a wash bay for minibus taxis and informal trading stalls. Interventions required in respect of public transport includes the following:

- Provision of shelters and drop off zones (lay-bys) along major taxi routes. Lay-bys are to be located along the existing kerb-line. Where this is not possible, lay-byes are to be cut into the verge. There should also be adequate shelter at each stop e.g. bus shelters.
- Earmarked parking / waiting areas for taxis that are yet to load passengers.
- Improved security at the transportation facility.
- Improve the regulation of metered taxis that focus on regulating the quality and quantity of metered taxis.

FIGURE 9: PUBLIC TRANSPORT



- Adequate provision at public transport interchanges (any point at which passengers change modes) for ranking space for the metered taxi.
- This specifically relates to the use of parking spaces by metered taxis (parking bays) between Lakeside Spar and the Boardwalk.

4.1.2 DENSIFICATION AND INTENSIFICATION

Densification is one of the key activities that can lead to and facilitate spatial and functional integration and can be achieved through a range of land use, financial and regulatory measures, such as:

- Regulatory and zoning refers to the development controls in a scheme document. These controls should be effective enough and appropriate to encourage densification through unrestricted height controls, subdivision of sites and increased bulk / FAR. It is proposed that the CBD area be developed to a higher density and with a stronger urban character. This should be a 24-hour activity area with a higher intensity of land use mix.
- There are a large number of open air parking areas associated with shopping centres that are currently zoned for 'Parking area / Parkade'. These parking areas provide opportunities for more intense use of land and the possible development of a parkade (buildings used exclusively for the parking of motor vehicles). This could potentially contribute to the densification and more sufficient use of land within the CBD. Height is unrestricted, coverage 100% and FAR is 3, which implies that the use of land can be intensified.
- These parking areas, which are currently zoned 'Parking area / Parkade', can also be converted into a mixed use building, parkade with commercial uses on the ground floor, parking zones / floors, as well as high density residential uses above. These mixed use buildings can also include residential opportunities, such as student accommodation, considering the close proximity to the University. The existing controls for the 'Parking area / Parkade' will however need to be revised in order to accommodate this type of development. Alternatively, the municipality will have to rezone some of these properties.
- A number of properties within the CBD are zoned 'Commercial 3' and 'Office 1'. These zones allow more intense commercial development with no height restriction and development controls that allow for intense development.
- In addition, 'Office 1' allows a residential building as a formal authority use, while a residential building (except on ground floor) is allowed as a free entry use under the 'Commercial 3' zoning. Mixed-use development (commercial on ground floor and high density residential uses above) can thus contribute to densification and intensification of land use. Other commercial zoned properties should also be developed to their full extent to allow for intensification of land use.

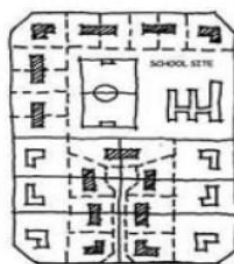
FIGURE 10: MEASURES TO ACHIEVE DENSIFICATION AND INTENSIFICATION OF LAND USE

Subdivision and release of vacant land

- Vacant land on edges of towns / settlements
- Vacant land within urban areas; e.g. open space
- Higher-density infill on vacant and underutilised land throughout the built area.



SCHEMATIC CROSS SECTION

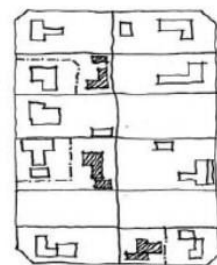
SCHEMATIC BLOCK LAYOUT
(with underlying subdivision)

Subdivision of existing site

- Subdivision large sites into two or more
- Subdivision of land, and redevelopment at higher densities.



SCHEMATIC CROSS SECTION

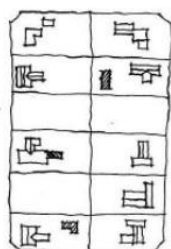
SCHEMATIC BLOCK LAYOUT
- - - New Subdivision ■ New Dwelling

Densification on existing sites

Construction of attached / detached second dwellings, including the changing of non-residential buildings, or parts of buildings, to residential buildings (e.g. garages)



SCHEMATIC CROSS SECTION

SCHEMATIC BLOCK LAYOUT
□ Existing ■ Second Dwelling

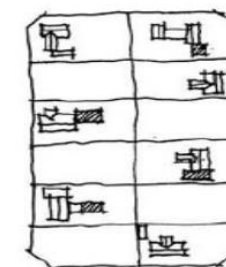
Linear densification along main access roads / transport routes

- Non-residential land uses along main access roads / development corridors
- Sites directly accessible from road

The increase of existing bulk rights through the extension of the building or adding-on of floors to accommodate an increased number of units.



SCHEMATIC CROSS SECTION

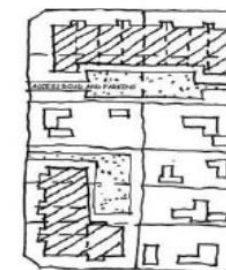
SCHEMATIC BLOCK LAYOUT
□ Dwelling ■ Addition

Densification on consolidated site

Consolidation with redevelopment at higher densities, including the demolition and integration of existing structures



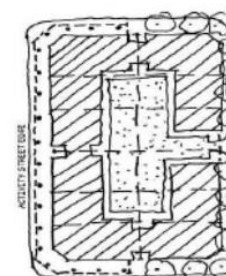
SCHEMATIC ELEVATION

SCHEMATIC BLOCK LAYOUT
□ Existing ■ New

Consolidation of sites within a street block to create a single, larger parcel for redevelopment into multi-storey units.



SCHEMATIC ELEVATION

SCHEMATIC BLOCK LAYOUT
(showing underlying subdivision)
■ New Development ■ Court

Intensification on existing sites

- Home businesses / small business in residential area.
- Individuals working from home.

- The scheme controls will be able to facilitate further development and densification within the CBD. Developers and property owners should make use of this opportunity to develop properties further. Higher densities within the core urban area can thus be achieved.
- The municipality's parking policy should be able to accommodate densification through appropriate parking standards and sharing of open space in medium to higher density developments.
- Incentives such as tax rebates in areas targeted for densification can be implemented. Such incentives can have a major impact on development in the CBD and will be discussed in more detail under section 4.4.2 (CBD Improvement Incentives).
- Specific guidelines (e.g. urban design guidelines) applicable to certain areas, can be a mechanism to encourage densification.

Figure 10 illustrates some of the means to achieve densification in certain target areas. It should be noted that some of these measures would be applicable in certain areas, such as the CBD area and residential areas along the beachfront. The implementation of these densification measures should thus be carefully considered within the specific context that it is used.

4.1.3 INTRODUCE ALTERNATIVE RESIDENTIAL OPPORTUNITIES

Additional residential uses are to be introduced into the CBD to add diversity and vibrancy. High-density residential uses can be created along

the edges of the CBD core and CBD south. Elsewhere in the CBD, residential buildings could have non-residential uses on the ground floor.

There are also opportunities to introduce student accommodation. This can be in the form of high density accommodation in relatively close proximity to the University and the FET college in the southwest (ZCBF framework proposal). As mentioned in section 4.1.2, the diversification of some of the parking areas, which is owned by the municipality, can be explored to introduce mixed-use buildings that can accommodate both parking and higher density accommodation.

New alternatives to conventional student accommodation can also be explored. Universities are faced with an ever-increasing problem as students struggle to find suitable accommodation in close proximity to the university.

FIGURE 11: ALTERNATIVE FORMS OF STUDENT ACCOMMODATION

Examples of student accommodation, using shipping containers.



Source:
<https://www.aacontainers.co.za>

An alternative form of student accommodation that seems to become more popular, is the conversion of shipping containers into affordable student accommodation. The demand for shipping containers as an alternative building material has been increasing. An example of existing student accommodations include the Umhlanga Junction in Brixton. This is a high tech, energy-efficient 75-bed student residence in central Johannesburg. It is a six-storey building constructed from a range of materials, including shipping containers, which offers a choice of single and double rooms, a shared kitchen, dining area, lounge, etc.²

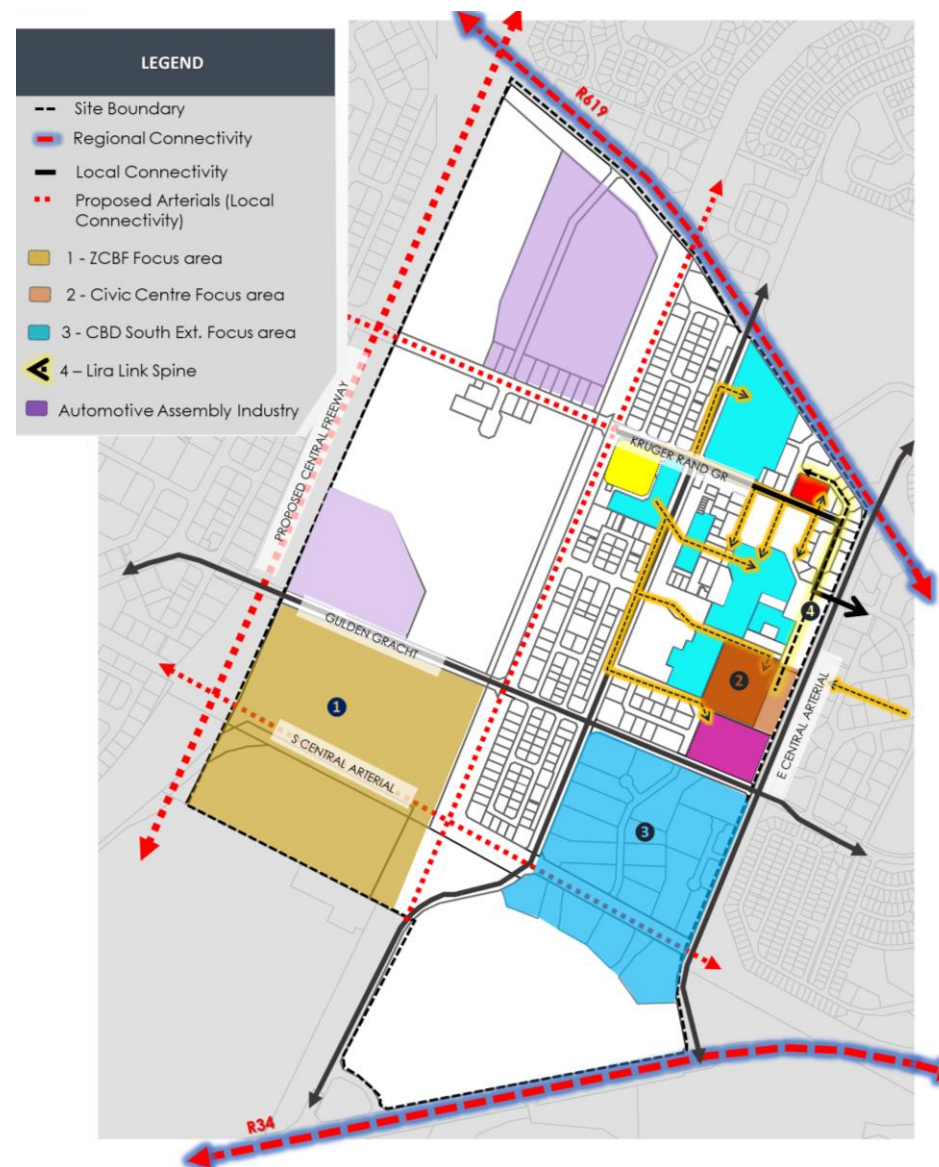
4.1.4 UNLOCK AND IMPLEMENT DEVELOPMENT OPPORTUNITY AREAS AND DEVELOPMENT PROPOSALS

There are a number of development proposals and concepts within the study area. These include the following and are discussed in more detail under section 5.2 (strategic focus areas):

- ZCBF Land Use Framework, to the south-west of the study area.
- Richards Bay CBD South Extension Master Plan. This area is located to the south of the University and Civic Centre and provides opportunities for the expansion of the CBD.
- The Civic Centre Concept Plan provides development proposals for the Civic Centre, which will elevate this centre as an iconic landmark in Richards Bay.

² <https://www.bigboxcontainers.co.za/blog/shipping-container-student-accommodation-around-the-world>

FIGURE 12: UNLOCK DEVELOPMENT OPPORTUNITY AREAS



4.2 PROTECT & ENHANCE A QUALITY ENVIRONMENT

The role and function of open space in settlement systems is essentially to enable ecological processes to continue to occur sustainably and safely within environments significantly altered by human action, and to accommodate a variety of socio-economic community needs (CSIR Guidelines for Human Settlement Planning and Design). As such, it is important to observe existing environmental sensitivities within the CBD.

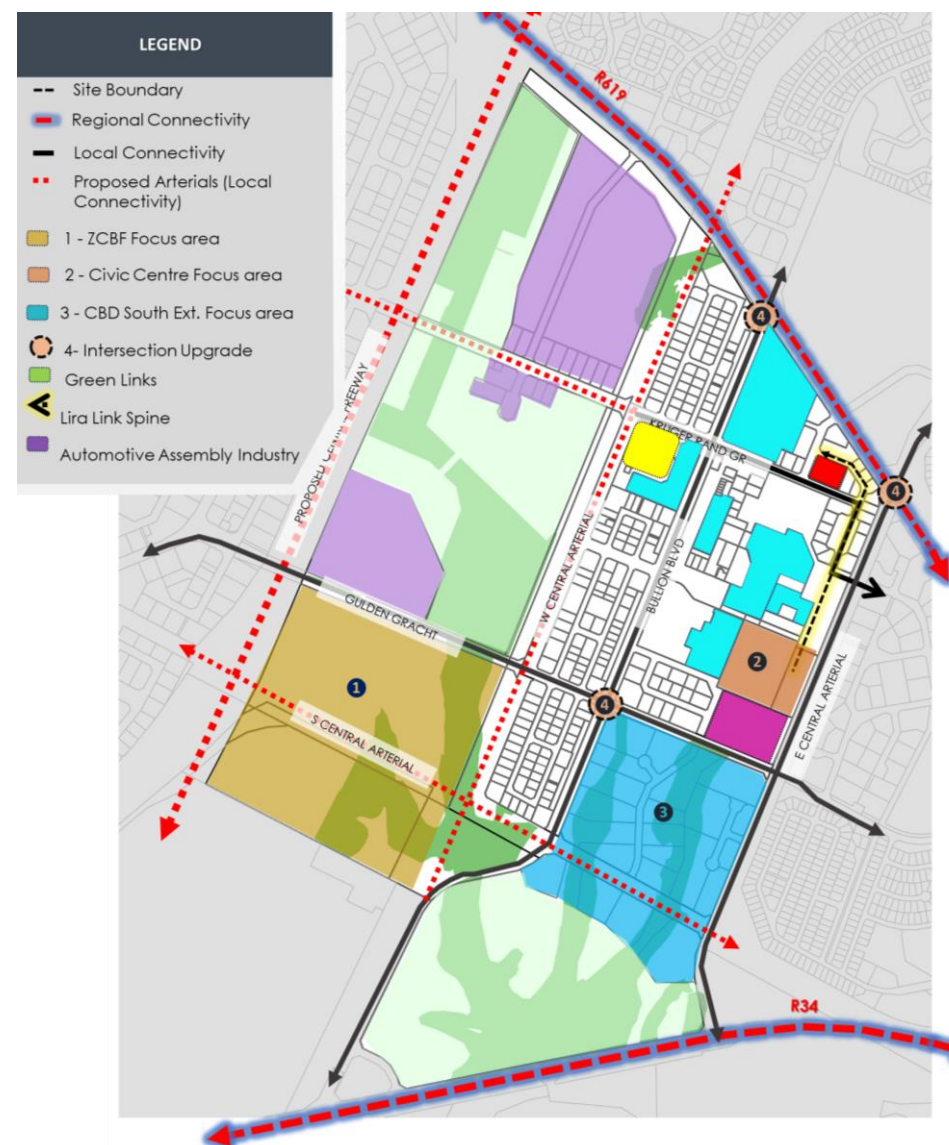
4.2.1 INTEGRATED OPEN SPACE SYSTEM

Open spaces can be used for conservation purposes, environmental management, visual character and areas for active and passive open space.

The establishment of an integrated open space system provides the opportunity of creating a diverse range of open space settings and functions as a guide for all future management and uses of open spaces and natural areas. The integration of open spaces through linkages is a critical component and facilitates ease of access and management. However, sensitivity in development around the open space systems are important and should be managed properly.

The open space system within the study area follows the sensitive environments identified as part of the ESMP, as well as wetlands and swamps. As such, these areas are not suitable for development and will form part of the integrated open space system of the municipality. Swamp forests are critically endangered, while wetlands are a constraint to development. Both these features must thus be protected accordingly.

FIGURE 13: PASSIVE OPEN SPACE AND CONSERVATION



The open space system should also include the area in the south that forms part of the 1:50 and 1:100 year flood line. The CBD South Extension Master Plan has afforded this area the status of a proposed nature reserve.

4.2.2 PARKS AND RECREATIONAL SPACES

The CBD is not people orientated. There are currently no parks in the CBD, save for the proposed park and playground that is proposed as part of the Civic Centre Concept. In addition to the above, it is also proposed that a small public park be developed in the norther part of the CBD, in the vicinity of the KFC and proposed Magistrate Court (along Krugerrand Grove). This area will be part of the pedestrian routes that people use when exiting the transportation facility.

4.3 IMPROVE URBAN MANAGEMENT

4.3.1 PEDESTRIAN ACTIVITY AND SAFETY

The study area is located within a built-up area must promote walking as some of the means of movement from one point to the other. Development of infrastructure that provides for efficient pedestrian movement is essential. This can include the following:

- Paved pedestrian walkways along local access roads. Specific attention should be afforded to the identified activity streets, namely Mark Strasse, Krugerrand Grove, Gulden Gracht / Chalk Lane and Bullion Boulevard.
- Make use of quality materials to create an attractive environment for pedestrians in the CBD.

- Traffic calming measures, such as speed bumps, zebra stripes and rumble strips that can facilitate and aid pedestrian traffic.
- Transport stops at strategic points along main roads within the CBD to drop off or pick up pedestrians.
- Boulevard along Lira Link: This pedestrian link will connect the Civic Centre to the north (hospital and offices) and will continue through the Civic Centre (proposed concept) towards the University campus in the south. This link needs to be visually accentuated and in order to strengthen the axis it is proposed that a focal point be created at either end.

4.3.2 THE PUBLIC REALM

Public realm upgrade generally refers to the creation of an aesthetically pleasing, attractive and functional urban environment. Ultimately, it aims at creating a 'walkable' town, with a safe, clean and green public environment in a good state of repair. Streets should also be connected to appropriate and interesting public open spaces and or iconic public places. Measures to facilitate the achievement of the above include a range of urban design measures (also refer to the urban design framework and guidelines) that can be implemented:

- The provision of proper pedestrian walkways where there is none provided yet.
- The planting of indigenous street trees, where necessary, and the provision of flower boxes or alternative measures of greening.

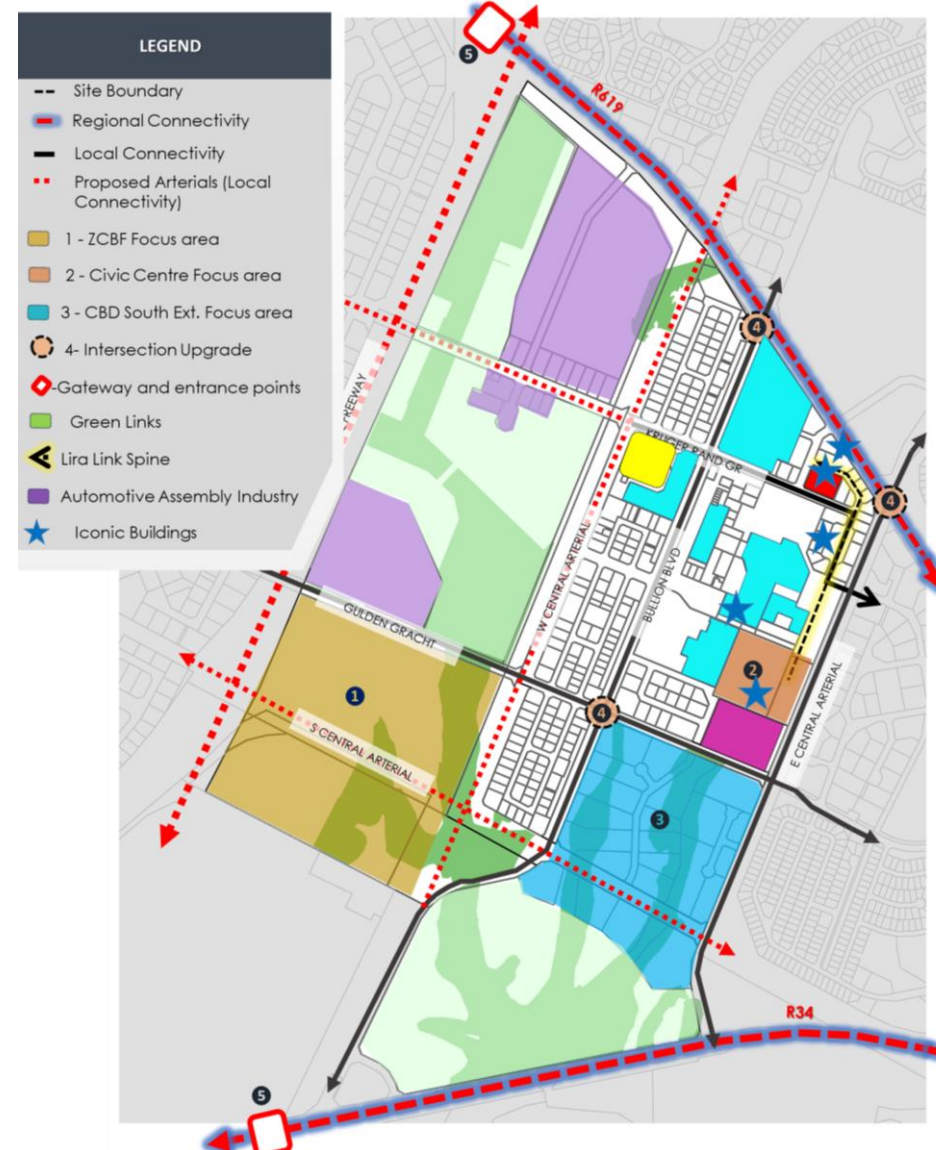
- Proper management of street/informal trading.
- Provision and maintenance of clean public amenities.
- The provision of appropriate street furniture (seating, etc.).
- The replacement of existing lighting and the provision of new lighting suited for a pedestrian environment, as well as focus lighting. Appropriate energy-efficient lighting technologies should be investigated and implemented.
- The provision of refuse/litter bins. These should be placed at strategic areas or areas where a lot of activity is happening and should be durable (withstand frequent use, weathering and vandalism), but without loss of design quality.
- The upgrade of relevant facades and foyers adjacent to semi-public places.
- The provision of proper and ample lighting at night is important, as well as focuses lighting, which can accentuate certain buildings/areas.
- The ongoing monitoring of visual clutter.

4.3.3 PLACE MAKING ELEMENTS

4.3.3.1 LANDMARKS (ICONIC PUBLIC PLACES)

Landmarks define the character and identity of the area. Landmarks also assist in orientation and can be created through the structural use of

FIGURE 14: GATEWAYS AND FOCAL POINTS



higher or iconic buildings at special places. These need to be acknowledged, highlighted and protected.

- Places / buildings that are important must look important and must be easily found and differentiated from those less important. The civic centre is one of the important landmarks and point of reference in the CBD. As such, the approved Civic Centre Urban Design Concept must be implemented. This will enhance and elevate the Civic Centre block.
- Other landmarks include Lake View Commercial Building along Penny Lane; the Bay Hospital on Krugerrand Grove; and the Boardwalk Mall.

4.3.3.2 GATEWAYS AND ENTRANCE POINTS

Focal points distinguish the gateway into an area by emphasising arrival points. These gateways become focal points for commuters, vehicles and pedestrians and can be emphasised by a landmark or distinctive landscaping.

Entry signs or gateways communicates a lot about a place and it improves legibility, traffic management and the identity of the area. As such, the following main gateway entrances into the study area provides a unique opportunity for the development of a gateway element that marks the entrance to a unique destination:

- The gateway should be located at a point outside the study area boundary, which can announce the entrance into Richards Bay. As

such the intersection of the North Central Arterial (R619) with Heliumhoogte has been identified as a possible gateway.

- The intersection of John Ross Parkway (R34) and Bullion Boulevard is another major gateway into Richards Bay and should be emphasized.

Smaller focal points within the context of the CBD, should be attributed to:

- the entry points at the intersection of Tassel Berry, Mark Strasse and Gulden Gracht along the East Central Arterial;
- the intersection of the North Central Arterial (R619) with Bullion Boulevard and Albizia Avenue; and
- the intersection of the North Central Arterial (R619) and the East Central Arterial.

4.3.3.3 URBAN FABRIC

The urban fabric of an area helps to define the character of the place, contributes to easy maintenance and provides comfort. As such, street furniture should be standardised elements, which capture the character of the area and which can ensure the ongoing maintenance and upkeep of the public spaces.

4.3.3.4 SIGNAGE / ADVERTISING

Traffic and directional signage has to be carefully considered, since this can easily interfere with the lines of sight along identified vistas and view zones.

Outdoor advertising must be regulated in accordance with the municipality's by-laws (Advertising Bylaw) in order to avoid clutter and to create a legible town.

4.3.3.5 PUBLIC ART

Introduce public art to animate certain public environments. Public art, such as sculptures can become landmarks in their own right. The municipality should encourage the introduction of public art along the beachfront and other public spaces.

4.3.4 ENFORCEMENT OF BYLAWS

Municipal bylaws are public regulatory laws, which apply in a certain area, in this case the uMhlathuze Municipality. Some of the relevant bylaws in uMhlathuze that are applicable to the study area include the following:

- Building Aesthetics Bylaw;
- Advertising Sign bylaw;
- Outdoor Advertising;
- Public Amenities;
- Control Of Parking Attendants/ Car Guards;
- Rates bylaw;
- Street Trading;
- uMhlathuze Spatial Planning and Land Use Management Bylaw, etc.

The implementation of by-laws is critical, since it can assist with regulating land use, management and the control of undesirable land uses. The following activities can be undertaken in the enforcement of by-laws:

- Develop specific popular media and signage that clearly communicates key by-laws that must be obeyed.
- Roll out a comprehensive by-law education programme.
- Develop a range of alternative mechanisms to punish by-law infringements.
- Strengthen and continue with the peace officers initiative, whereby municipal staff and community members are trained to strengthen law enforcement.

4.3.5 SAFETY AND SECURITY

An area perceived as a safe and secure area to live, work and do business in, is an area that will attract investment. Safety and security usually go hand in hand with crime prevention, which requires certain strategies or intervention for the attainment thereof. In South Africa, the fear of crime is serious and reducing the fear of crime can be as important as reducing or preventing crime itself. Therefore, effective policing is also effective crime prevention and must be an integrated part of the strategy.

It is commonly recognised that for every crime there is a victim and a perpetrator, however the environment in which the crime occurs is less often thought about. Interventions into the design of the environment can help to reduce the incidence of crime. Internationally, this strategic

component is known as Crime Prevention through Environmental Design or CPTED (pronounced sep-ted) and is being successfully employed worldwide. CPTED is based on certain principles of architecture, landscaping, visibility and lighting, aesthetics and the marking of spaces that create greater public security both in real terms, and in terms of people feeling safe in a location. These aspects can be achieved through the upgrading of the public realm, focusing especially in areas of concentrated activities. Initiatives that can be introduced in to improve safety and security include:

- Visible policing will ensure a permanent policing presence in high priority areas. It will deter street-level crime and enable faster reaction times to all reported crime incidents. Capacity to undertake effective visible policing might however not be available at present. Initiatives like the Peace officers and strategic planning of future resource requirements is required.
- Surveillance Technology: Closed circuit television cameras (CCTV) in the business district can add significantly to the ability of law enforcement agencies to combat crime. It also strengthens the public's perception of safety and security.
- Businesses needs to unite against crime and see that they install appropriate internal security measures to curtail shoplifting and burglaries.
- A Safe Town Initiative (e.g. in Pietermaritzburg) that makes use of an SMS service that tips off the authorities about criminal activity. The

system uses cell phone technology pioneered by Coretalk and can be launched under a partnership between the Municipality, Businesses, South African Police Services, the National Prosecuting Authority, and the Community Policing Forum.

- Partnerships between individuals, communities, businesses, non-government organisations and government is required. These partners have to work together in a coordinated way to implement effective strategies to prevent and reduce crime. It should include the promotion of community policing, encouraging community participation in crime prevention and supporting sustainable Community Police Forums.

4.3.6 INFRASTRUCTURE INVESTMENT

Adequate infrastructure forms the cornerstone of development and growth in a city /town. The availability and adequate capacity of infrastructure services can facilitate the implementation of all proposed development and expansion in an area. However, should the provision of infrastructure be lacking or inadequate or problematic, the effects will cause a ripple effect and affect all activities that could and should have been undertaken. Proper infrastructure will create an environment conducive for business establishment, business confidence, growth, and the attraction of new developments

- The continued upgrading and maintenance of all roads within the CBD is an important aspect of infrastructure maintenance. Roads in the CBD, which are the focus and nexus of Richards Bay, and the area

where the majority of activities are concentrated, require specific and regular maintenance. The development of a programme and costing for regular upgrade and maintenance of all roads can be beneficial.

- Repair, maintain and expand the capacity of storm water infrastructure.
- Repair, maintain and expand the capacity of sanitation infrastructure.
- Repair, maintain and expand the capacity of water infrastructure and implement a program targeting water efficiency/ saving.
- All infrastructure introduced within the CBD should be green infrastructure.

4.4 ECONOMIC DEVELOPMENT AND INVESTMENT

4.4.1 INFORMAL TRADING

Informal trading plays an important role in the local economy of Richards Bay and creates a significant contribution to the economic and social life of communities. It provides a livelihood to people and has to be recognised in the context of high unemployment and limited formal business opportunities for market-entrants.

The informal sector also plays an important role in the providing a platform for growth and development of small businesses. However, informal traders need to be organised, regulated and managed properly, as they pose challenges to pedestrian mobility, waste management, urban management and crime prevention.

4.4.1.1 INFORMAL TRADING INFRASTRUCTURE

Informal traders and SMMEs generally have difficulty in affording market related workspace rentals. It is thus important to create an enabling environment that allows informal traders to work in a conducive environment. Support infrastructure such as street furniture (i.e. stalls, trading bays / markets), ablution facilities, water and electricity must receive attention. Erecting trading bays/kiosks will not only serve the purpose of housing the informal traders but will also improve the municipal outlook. It is important to note the Transportation Facility at Bay Plaza includes kiosks for informal traders.

4.4.1.2 IMPROVE THE REGULATORY ENVIRONMENT

There are a number of ways in which the municipality can improve the regulatory environment of informal traders.

- Enforcement of Informal Trading Bylaws. uMhlathuze Municipality adopted an informal trading policy in 2013 to assist in the regulation of this sector. This policy is currently being updated to improve the management of this sector. However, these by-laws need to be enforced to improve the regulatory environment of informal traders.
- Development of a formal informal trader's database. The compilation and maintenance of a formal database for Informal Traders will assist in the registration.
- Computerised Informal Traders' Management and Monitoring System. Municipal departments, such as finance, planning and LED

Department, requires access to information on the informal traders. To manage and monitor informal traders efficiently and effectively a computerized information system can be investigated and adopted. This system can determine which trader is up to date or in arrears with rentals / permit, can pick up area of operation, kind of merchandise and will smoothen the work of law enforcers.

- Removal of illegal informal trading structures. Illegal trading structures must be removed. These structures undermine the regulations set by the municipal planning and bylaws and spoil the outlook of the municipality. Appropriate channels need to be followed to remove such structures and relocate them in appropriate sites or areas.

4.4.1.3 SKILLS TRAINING AND CAPACITY BUILDING

Access to applicable vocational, technical and business skills, as well as literacy and entrepreneurial awareness are particularly important to enable people to advance from survivalist activities into larger and better earning enterprises. Responsibility for education, training and skills transfers rests on a wide range of institutions, including the national and provincial spheres of government, NGOs, parastatals and the private sector. As a means to address skills shortage among the SMMEs and informal traders, it is recommended that the municipality continue with their support programmes and focus on, among others, financial management, marketing and sales, business management and labour relations. Existing programmes that should continue include:

- Financial workshops in association with Banks to help traders learn more about finance and running a business.
- Engagement with traders regarding informal trading policy.
- Registration workshops, where permit procedures are explained.

4.4.1.4 INFORMAL TRADER SUPPORT

In addition to the above, it is proposed that the following support be provided to informal traders:

- Link informal traders to markets: The municipality can assist by revising its procurement policy framework to make provision for the targeted procurement of certain goods and services from local informal traders.
- Access to information is important to the growth and development of the informal traders. The government through its various ties has initiated programmes meant to grow the informal sector. However, most informal traders are not aware of support services that exist for informal traders. The municipality, through its informal traders unit, can establish a help desk that will provide information on how the traders can access finance and technical support, as well as assisting traders with business plans or linking them to appropriate funding sources.
- Developing a communication strategy with informal traders can create and strengthen relationships between the municipality and informal traders.

4.4.2 CBD IMPROVEMENT INCENTIVES

4.4.2.1 URBAN DEVELOPMENT ZONE TAX INCENTIVE

The Urban Development Zone (UDZ) Tax Incentive was promulgated in 2003. It is an accelerated depreciation scheme that acts as a catalyst for private sector investments and facilities, improving return on investment for those investors. A UDZ can be demarcated in Richards Bay, should the municipality decide to apply for demarcation of a UDZ to the National Treasury.

The Urban Development Zone (UDZ) tax incentive/rebate system is thus an incentive scheme aimed at encouraging town renewal, promoting urban development and regeneration through rebates from the municipality for new building constructions or refurbishment of existing buildings. Any taxpaying, property-owning, individual or entity may claim the rebate from the municipality. The key objectives of the UDZ are to (Johannesburg: Inner City Regeneration Charter, p34):

- Stimulate economic development, and attract private sector businesses to areas where interest would otherwise be lacking, and thus reverse urban decay;
- Promote private sector investment in construction and improvement of buildings, thereby stabilising and increasing land values, and so growing assessment rates tax revenues used to pay for key services;
- Increase investment in and utilisation of the existing infrastructure;

- Use the property and land at the town's disposal to promote BEE and previously disadvantaged groups participation in the mainstream economy;
- Increasing opportunities for employment near affordable housing, reducing the cost of sprawl, and improving the quality of life for people living, working, or visiting this targeted urban area.

4.4.2.2 CITY IMPROVEMENT DISTRICTS (CID)

In larger cities, the City Improvement Districts (CIDs) initiatives are non-profit companies representing property owners (ratepayers) in a geographical area within a municipality. A CID makes an agreement with the municipality so that more money (a CID levy) can be collected from ratepayers in the area over and above the normal rates charges.

This extra money is used to give 'top up' services in the area covered by the CID. The extra services usually include extra security and cleansing. The CID levy is a dedicated levy that must be used for services in terms of the business plan agreed to by property owners in the CID and cannot be redistributed for use outside the CID.

The **Light Industry 1 zone** is a zone that permits manufacturing uses which are compatible with land uses permitted in adjacent sensitive land use zones, such as residential, mixed use and open space zones. As a light industrial zone, it would permit manufacturing activities that usually do not involve vibration, noise, odour, cause undue load on any existing or proposed engineering services or high volume of automobile and truck traffic.

Levies charged to property owners are sometimes paid by property owners, or sometimes passed on to tenants, in the same way that rates are (<http://www.capegateway.gov.za>).

uMhlathuze Municipality can consider implementing this initiative in their central business district. This will regenerate and improve the area and build investor confidence. Proper consultation and communication with the business sector in town would however need to be conducted to get their buy-in into such a proposal.

4.4.3 INDUSTRIAL DEVELOPMENT

The identification of manufacturing as the main economic activity in Richards Bay, elevates the importance of this sector in the economy. As such, this industry is a major focus area for future development and investment.

There are currently land available within the study area (western portion), that has not been developed. This area includes a large portion of land that is not suitable for development due to environmental sensitivities. These areas are accordingly zoned as 'Conservation'. However, there are also properties that have existing development rights for industrial development and are zoned 'Light Industry 1'. These properties are located between the existing light industrial development in the CBD (between Bullion Boulevard and the proposed Western Central Arterial)

and the proposed Central Freeway (western boundary of the study area) and are owned by the uMhlathuze municipality.

In order for the industrial land market to function well, five pre-conditions have to be in place. These include³:

- Availability of a steady supply of industrial land at realistic prices;
- Availability of bulk infrastructure, especially electricity, water, waste water and roads;
- An effective, facilitative local municipality;
- A clearly understood regulatory environment;
- Affordable municipal rates.

In addition to the above, the role of the municipality in facilitating industrial development is important and there are certain actions in which a municipality needs to engage to pave the way for industrial land development.

- The municipality needs to do forward planning for industrial/commercial land; e.g. zoning for industrial. But it is advisable that the zoning maintains flexible to accommodate shifting demand with regard to the types of industry.

³ KwaZulu-Natal Urban Development Framework Manual

- The municipality also needs to provide spare capacity in bulk services in order to allow for servicing industrial land at short notice. This requires that a budget is available.
- Furthermore, the municipality needs to take on a facilitating role in:
 - Observing the demand for different types of development;
 - Communicating with important stakeholders such as Chamber of Business on an ongoing basis;
 - Keeping a database of skilled individuals and local companies;
 - Understanding financial institutions and funding sources;
 - Advising potential industrialists and developers accurately on environmental issues and assisting them on this basis in the EIA process.

It is important to provide the highest possible degree of certainty for serious developers and industrialists. Knowledge of policies, strengths and intentions of competing cities and neighbouring municipalities is useful to offer incentives to investors such as charging of full rates only at time of occupation.

The above mentioned properties provides an opportunity for the municipality to engage with prospective developers. The municipality can call for proposals and should consider encouraging industries that are labour intensive, clean and non-polluting, environmentally friendly and related to import or export.

4.4.3.1 THE AUTOMOTIVE INDUSTRY

A possible manufacturing opportunity that presents itself in Richards Bay, is the automotive industry. According to the Automotive Export Manual (2018) of South Africa, the automotive industry has developed into a major player within the country's economic landscape. South Africa's manufacturing sector accounts for 13,2% of the country's GDP, making it a vital driver of economic growth. Durban is currently the main focus area in terms of the automotive industry, with the Durban Automotive Supplier Park being built at Illovo (south of Durban and near to the Toyota plant). Toyota plays a big role in the province's automotive sector and the province also has a substantial and varied component sector.

South Africa's busiest bulk port is located at Richards Bay, providing an excellent opportunity to this sector. Together with the availability of land in the context of the study area, investigations into the manufacturing of certain automotive components should be explored further.

4.4.4 THE GREEN ECONOMY

The green economy relates to economic goals based on ecological sustainability and built on a culture that recognises that socio-economic systems are dependent on and embedded in ecosystems.

The Department of Environmental Affairs defines the green economy as:

"a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over

*the long term, while not exposing future generations to significant environmental risks or ecological scarcities”.*⁴

Opportunities in the green economy includes, amongst others:

- Environmentally friendly infrastructure;
- Green (renewable) energy generation and green manufacturing;
- Public employment schemes to support natural resource management; and
- Environmental programmes including recycling and community cleaning.

Green economy programmes have to be acknowledged within the CBD Framework, and should include particular focus on the following programmes:

- Green buildings and the built environment, which includes greening private and public buildings.
- Sustainable transport and infrastructure, which includes promoting non-motorised transport.
- Clean energy and energy efficiency, such as off-grid options, REFIT optimisation for large scale renewable and localisation and up-scaling solar water heater rollout.
- Environmental sustainability, i.e. greening of large events; research, awareness and skills development and knowledge management.

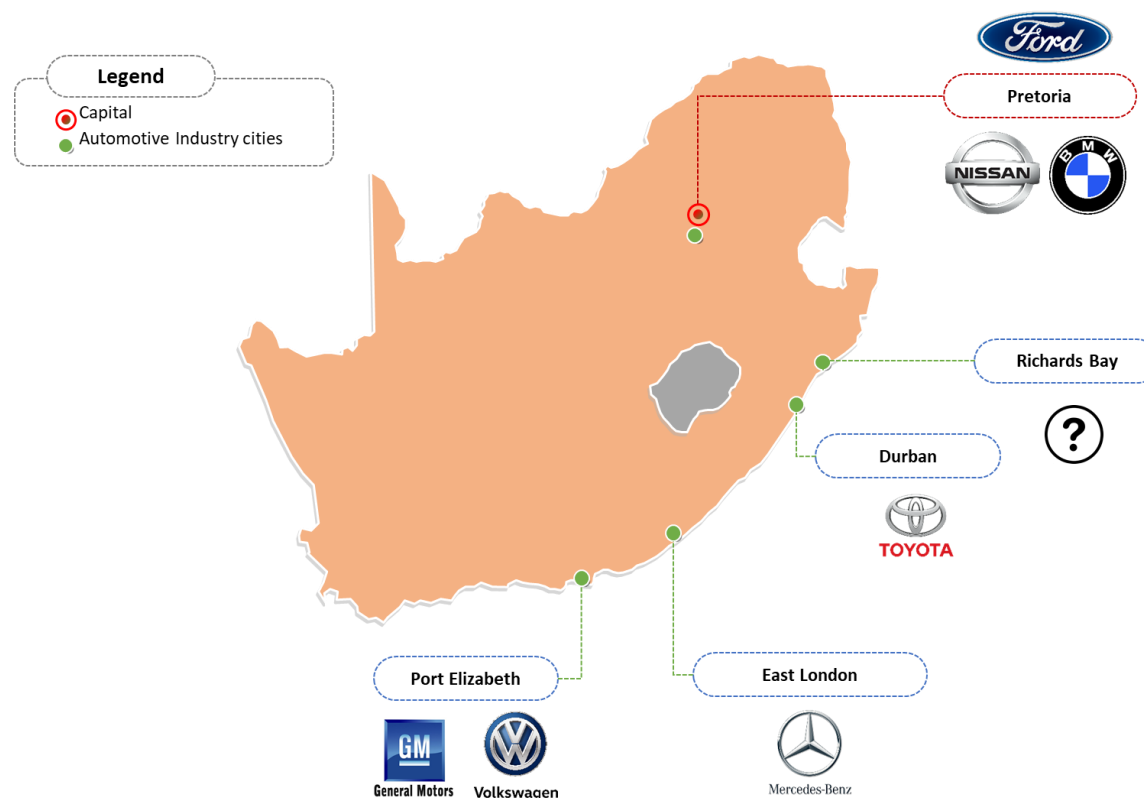
⁴ <https://www.environment.gov.za/projectsprogrammes/greeneconomy>

THE AUTOMOTIVE INDUSTRY

- Vehicle and component production is the largest manufacturing sector in the country's economy, accounting for 30,1% of South Africa's manufacturing output in 2017
- The broader automotive industry's contribution to the GDP stood at 6,9% (4,4% manufacturing and 2,5% retail).
- The automotive industry therefore represents an increasingly important strategic and catalytic role in the overall South African economy by impacting directly on many important aspects, such as contribution to GDP, employment, skills development, economic linkages, technology and innovation, and making significant contributions to the fiscus through taxes, and substantial foreign direct investment.
- Total automotive revenue in the ambit of the automotive business sphere in South Africa amounted to over R500 billion in 2017.
- Exports of automotive products in 2017 accounted for R164,9 billion, equating to 13,9% of total South African exports.
- Although the automotive export revenue declined in 2017 due to a stronger rand exchange rate and the time effect of major new model introductions during the fourth quarter of 2017, the figure still represents the second highest level of export on record.

Source: Automotive Export Manual (2018)

FIGURE 15: AUTOMOTIVE CLUSTERS IN SA



Source: Durban Auto Cluster

5 URBAN DESIGN FRAMEWORK

This section of the report provides an urban design framework and is the bridge between policy and implementation. The Urban Design Framework focuses on the spatial aspects of the development proposals and positions of key interventions. It describes and illustrates how planning and design policies, and principles should be implemented in the study area where there is a need to control, guide and promote change. The urban design framework can also assist in the transformation of a wide area by coordinating more detailed development briefs and master plans for separate sites. In addition, it can give confidence to residents and investors that public and other private funds are channelled into a common goal.

5.1 LAND USE AND ACTIVITY

5.1.1 RETAIL AND COMMERCIAL

The CBD is the heart of Richards Bay and retail and commercial development forms an integral part of the CBD. As such, retail and commercial uses are to be concentrated in the CBD core and CBD South Extension. It is also proposed that the CBD area be developed to a higher density and with a strong urban character. This can be done through implementation of densification strategies, as previously outlined in this report.

It is also proposed that the ground floors of all buildings are to be occupied by retail uses, restaurants, coffee shops, banks and other publicly accessible uses. Office space and residential uses are to be permitted on

upper floors of buildings. Offices are however not limited to upper floors, since the office development component in the CBD South area is a strong feature.

FIGURE 16: MIXTURE OF USES TO BE APPLIED IN THE CBD



The area that forms part of the CBD South Extension (area to the south of the proposed South Central Arterial) has a strong focus on a corporate / office environment with a central parking structure.

5.1.2 CIVIC AND SOCIAL

This category includes all types of government offices, community health facilities (public and private), social facilities and public services and educational facilities. Public / government facilities form an important component of the area and should be visually enhanced through the implementation of the following measures:

- Provide focus lighting on the buildings;
- Appropriate signage in front of the buildings and directions to these buildings;
- Adequate on-site parking should be provided.

Key anchors for civic and social uses are the Civic Centre in the south and the private hospital in the north. People should move between these facilities and clusters via pedestrian paths.

5.1.3 INDUSTRIAL

Light and service industrial uses and warehouses should be concentrated along the block between Bullion Boulevard and Dollar Drive / Gulden Gracht. This forms the outer core of the CBD and will be supplemented in the long term by the development of vacant industrial properties along the western side of the study, between the proposed Western Central Arterial and the Central Freeway.

5.1.4 OPEN SPACE AND PARKS

Green linkages follows the environmental sensitive features. This land use traverse the study area along the western boundary in a north-south direction. It includes the area affected by the 1:50 year flood line in the south, where a nature reserve is proposed to protect this area.

5.1.5 RESIDENTIAL

Residential use is to be introduced into the CBD to add diversity, vibrancy and 24 hour activity. Residential uses can be permitted on the upper floors, but not on the ground floors of buildings throughout the core CBD.

Student accommodation by means of higher density residential developments can be introduced in the CBD, as well as close to the FET College in the southwest.

5.2 FOCUS AREAS

5.2.1 ZCBF FOCUS AREA

Zululand Chamber of Business Forum developed a land use framework that includes a number of proposed land uses.



Proposed Land Uses

1. FET College
2. Public parking
3. Student centre
4. Offices
5. Student accommodation
6. New tertiary facility
7. SMME centre
8. Sports field
9. Main centre entrance
10. Open spaces
11. Warehousing
12. New provincial road
13. Race course
14. Light industry
15. Access
16. Shops
17. Resource centre
18. Park
19. Sports centre
20. ICT

5.2.2 CIVIC CENTRE FOCUS AREA

The Civic Centre Concept forms an integral part of the CBD Framework, due to its important status as a major landmark in the CBD. It is also an important focus area. It is to be developed in accordance to the proposed design guidelines.

Civic Centre Model from the South-east



Public Zone: The public zone makes provision for the City Hall, Library and Museum buildings, the landmark structure on the corner of Mark Strasse and East Arterial, the open plaza, playground facility incorporated into the existing central grouping of trees, an open parkland, an enclosed parkland, the proposed memorial, two open public parking areas, and the pedestrian circulation through the precinct and the pedestrian boulevard axis further into the CBD and the University campus.

Civic Centre Urban Design Concept



Council Administration Zone: This zone consists of the existing Council buildings, new parkade and offices above the parkade.

Political Administration Zone: This zone includes the new council chambers, meeting rooms, banqueting halls and its associated kitchens and executive offices.

Source: Richards Bay Civic Centre: Urban Design Concept, May 2018

5.2.3 CBD SOUTH EXTENSION FOCUS AREA

The Richards Bay CBD South Extension Master Plan provides options for the future development of the southern part of the CBD and is an important component of the Richards Bay CBD Framework.

Richards Bay CBD South Extension Master Plan – Proposal

LEGEND

- 1 - EXISTING SHOPPING CENTRE
- 2 - FUTURE MUNICIPAL OFFICE EXPANSION
- 3 - UNIVERSITY
- 4 - RETAIL, SHOWROOM, GALLERIES, COMMERCIAL, OFFICES
- 5 - OFFICE BOULEVARD
- 6 - MULTI STOREY PARKADE
- 7 - ICONIC CORPORATE HEADQUARTERS
- 8 - FILING STATION
- 9 - EXISTING STRIP DEVELOPMENT
- 10 - CONFERENCE CENTRE & SPILL OVER PARKING
- 11 - MINI BUS PICK UP AND DROP OFF ZONE
- 12 - ACCESS CONTROLLED PUBLIC PARKING



Source: Richards Bay CBD South Extension Master Plan

Components of the CBD South Extension Master Plan

Retail/commercial Boulevard: The ground floor is mainly retail facilities and restaurant / outlets. Linkage to civic centre node and university via controlled crossings.

Commercial Boulevard: Focus on a more corporate / office environment. A central parking structure is proposed. This is a mixed used zone and residential units above shops and offices are encouraged. The creation of a mixed use zone will ensure a lively environment 24 hours per day.

Nature Reserve: The 800 meter Foskor radius establishes a natural restriction area which is proposed to be a protected nature. An opportunity exists for an institution / organization to manage this and utilize the amenity as a research facility.

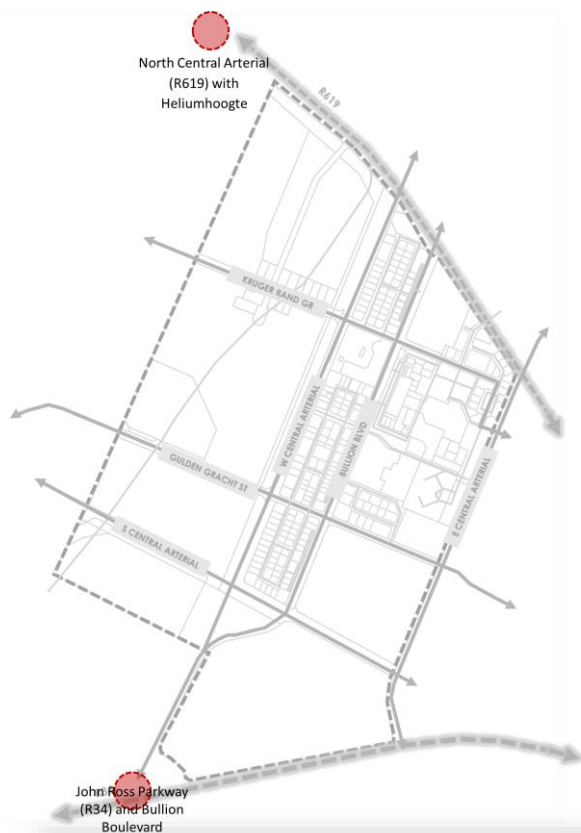
Green Links: The plan proposes that wetlands and buffer areas receive elevated walkways that link commercial and retail buildings.

Parking: Two centralized multi storey opportunities for a parkade are provided in the retail / commercial boulevard and one in the commercial boulevard in addition each site can provide its own parking. Additional public transport opportunities for a small enterprise will be allowed for.

A **conference centre** opportunity with spill over parking into the 800 meter radius area is located at the end of the retail / Commercial Boulevard.

Residential opportunities could be provided in the form of residential units above shops and offices, as well as possible student accommodation.

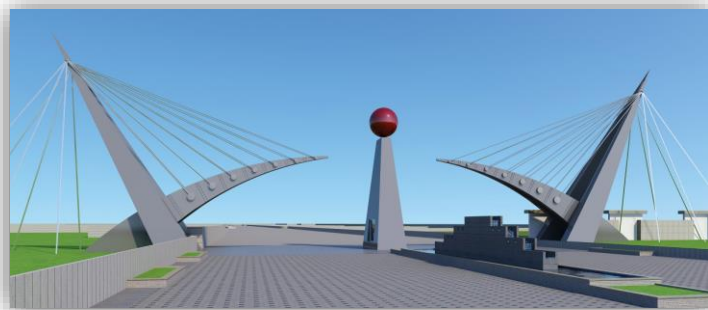
5.2.4 GATEWAY FEATURES AND ENTRANCE POINTS



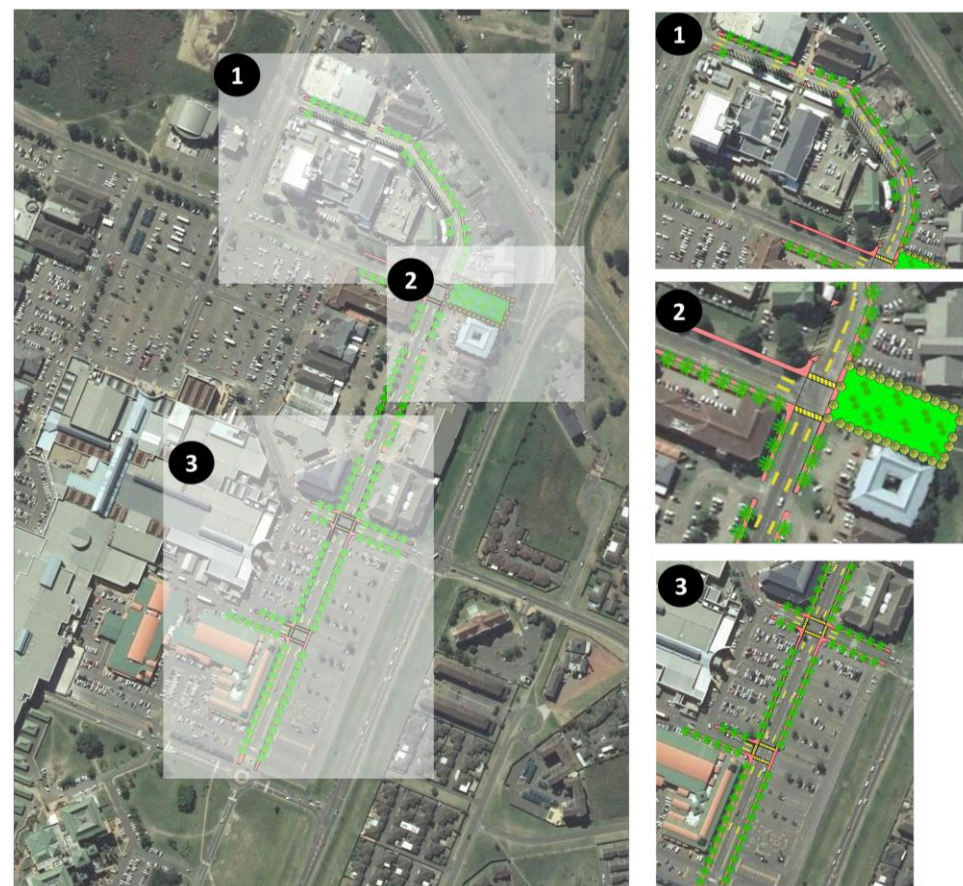
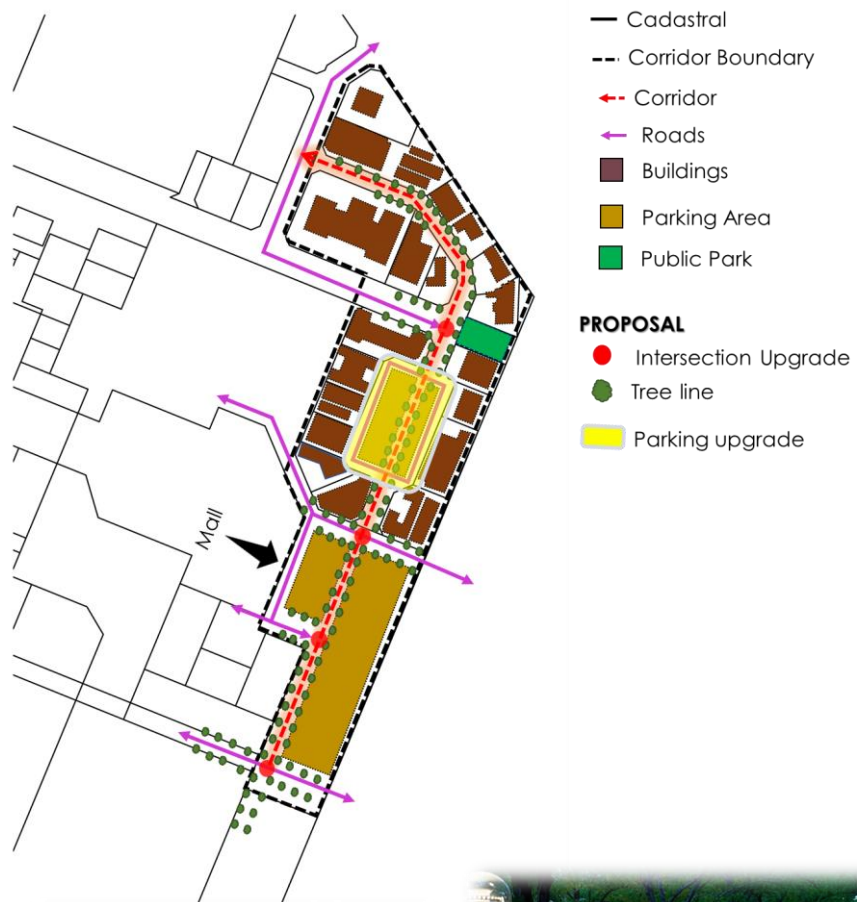
Focal points distinguish the entrance / gateway into an area by emphasising arrival points. The provision of a unique gateway landmark or entrance feature will improve legibility and the identity of the area. Principle gateways are to be celebrated with the development of iconic buildings or structures.



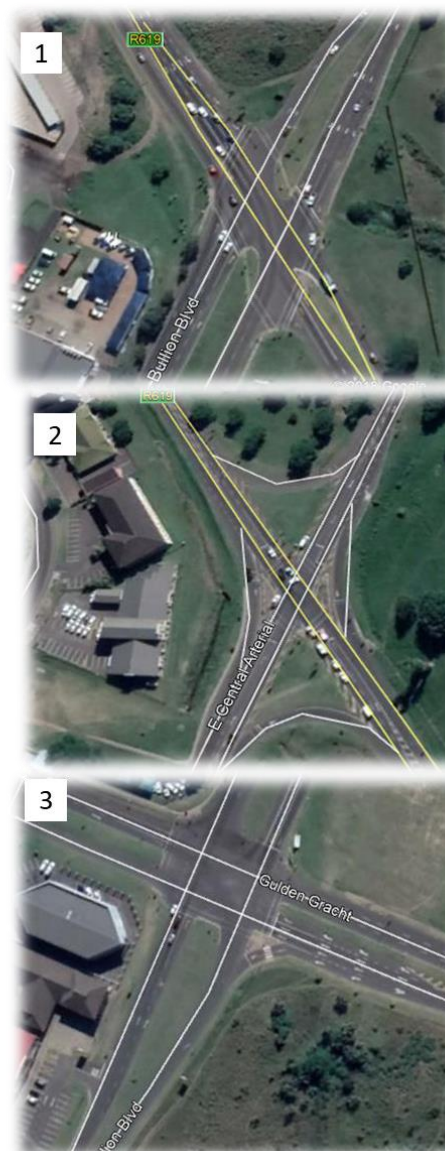
Examples: A gateway can establish the character of the area. Clear graphics and text helps with navigation.



5.2.5 LIRA LINK SPINE



5.2.6 INTERSECTION UPGRADES



Intersections operating at an unacceptable level of service and need to be upgraded by the City in order to accommodate the existing 2018 traffic demand are as follows:

- Bullion Boulevard / R619 (North Central Arterial);
- East Central Arterial/ R619(North Central Arterial); and
- Gulden Gracht / Bullion Boulevard

5.2.7 PROPOSED PEDESTRIAN CROSSINGS

Areas identified for the pedestrian crossings, which could contribute to pedestrian safety.

Tassel Berry and E Central Arterial



Guldengracht St and Cedi Cress



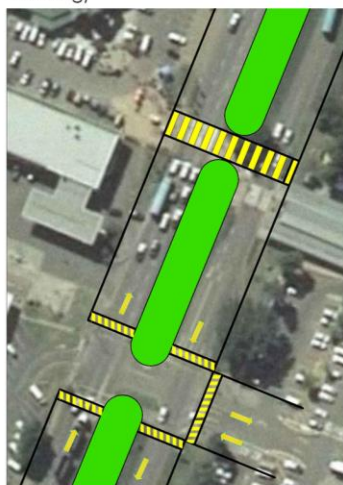
Bullion Blvd and Mark Strasse



Bullion Blvd and Guldengracht St



Bullion Blvd and Maloti Way (Bay Plaza Crossing)



Bullion Blvd and Cedi Cress



Lira Link and Krugerand Grove

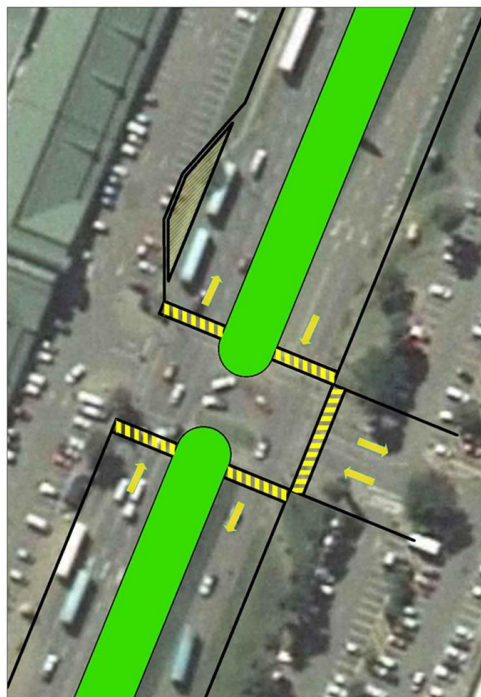


Bullion Blvd and Krugerand Grove

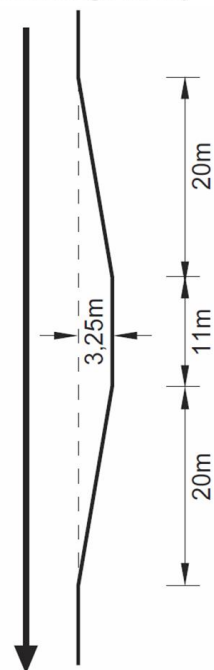


5.2.8 PROPOSED DROP-OFF ZONES / LAY BYES

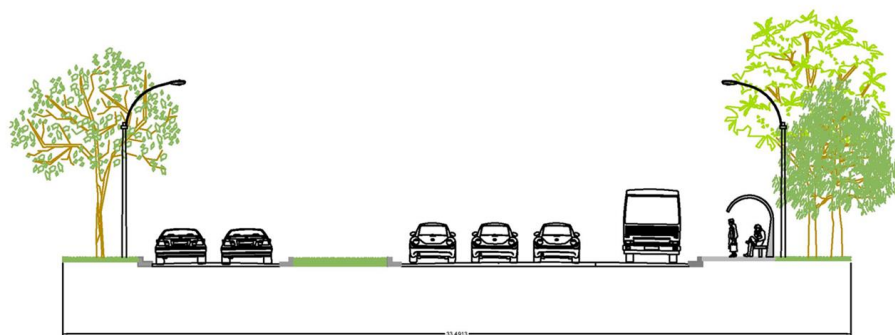
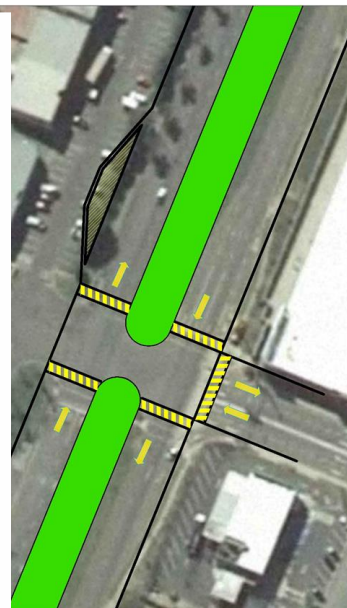
BILLION BLVD DROP-OFF ZONE (BAY PLAZA)



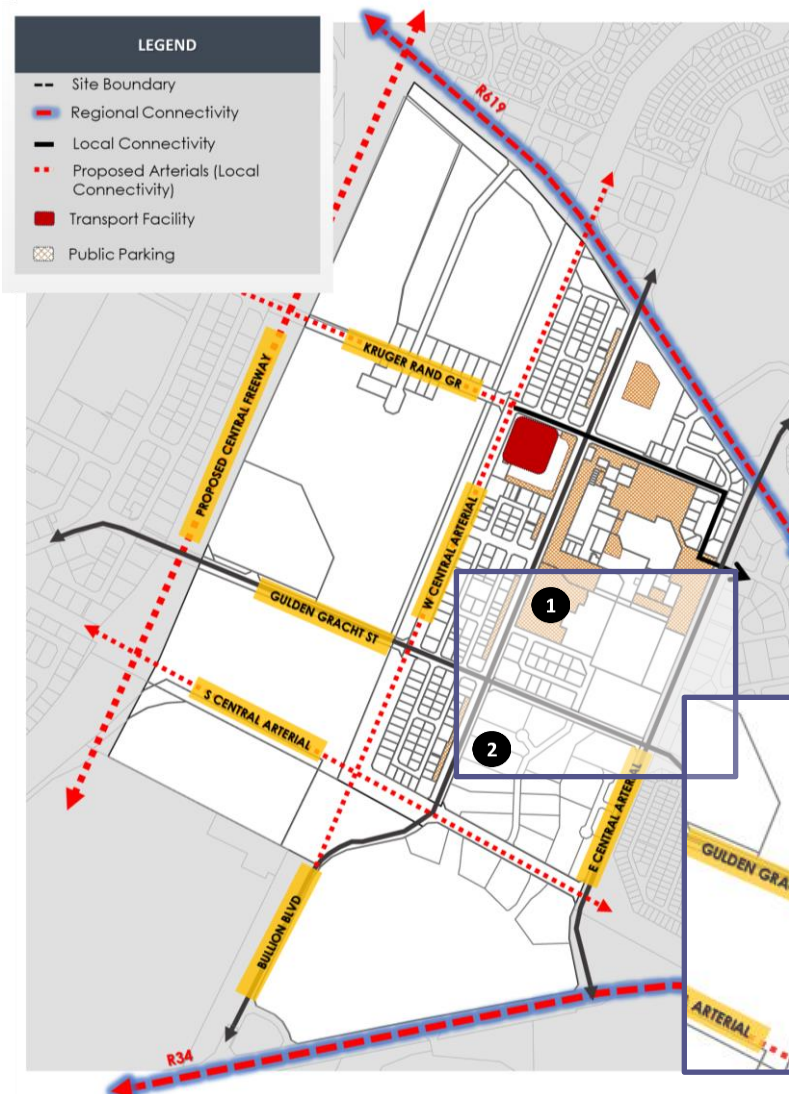
Standard single bus bay



Town Square Centre



5.2.9 PARKADE / PARKING GARAGE



An opportunity for the development of parking garages / parkades within the core CBD, as well as in the CBD South Extension. This will contribute to more efficient use of space, intensification of land use and densification.

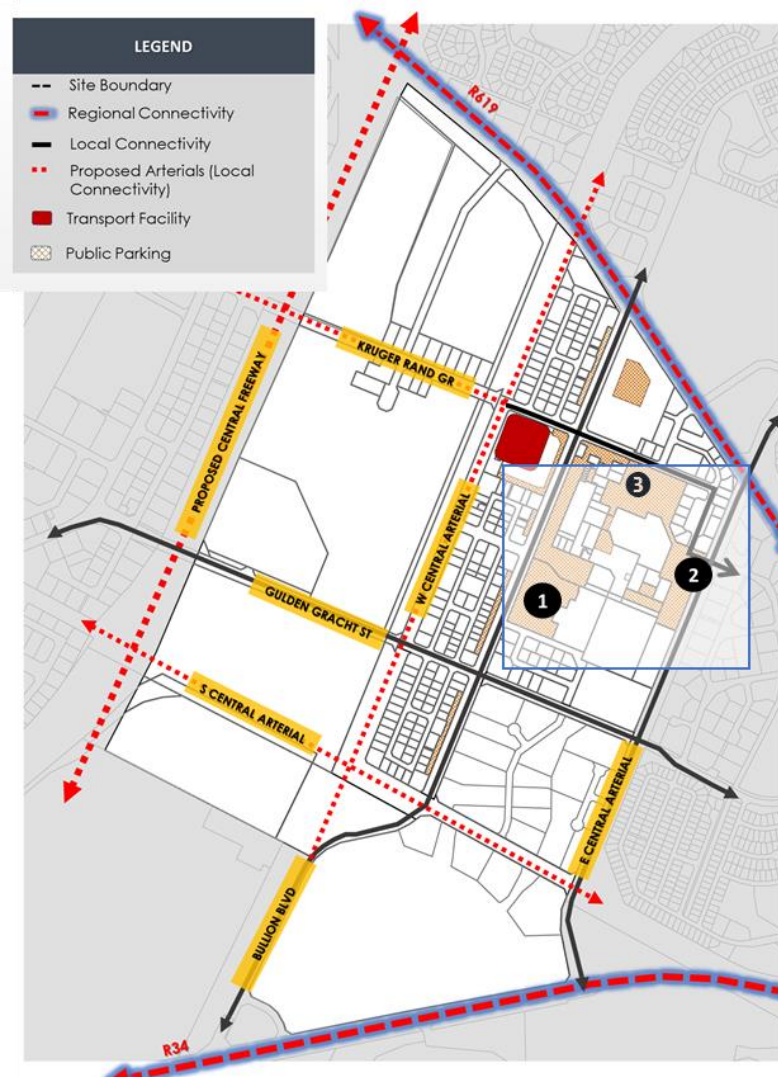


Example: These building features ground floor commercial uses with parking above.



Possible Parking garages / parkades

5.2.10 RESIDENTIAL OPPORTUNITIES



An opportunity for the development of mixed use buildings on parking areas, which are owned by the municipality, exists. Some of these, zoned for 'Parking areas / Parkade', can be converted into a mixed use building, parkade with commercial uses on the ground floor, parking zones / floors, as well as high density residential uses above. These higher density residential uses can also be used for student accommodation, considering the close proximity to the University. This will contribute to more efficient use of space, intensification of land use and densification.

Example left: The building features ground floor commercial uses with residential above.



<https://www.makaan.com/bhubaneswar/>

Example right: Mixed use building: Chicago, 6 storey building with enclosed parking and shops situated on the ground floor.



<https://i.pinimg.com/originals/9a/ec/a6/9aec/a6b21b7eac3b2747ed28f345ed87.jpg>

5.2.11 INDUSTRIAL PARK



Examples: The images provides examples of light industrial parks.

The sketch on the left provides a conceptual layout on available light industrial land.



There are existing industrial land available within the CBD (western undeveloped side). These properties have existing industrial development rights that can be taken up by potential developers.

The municipality needs to consider the possibility of rereleasing this land and consider manufacturing opportunities related to the automotive industry, which is a lucrative market in the South African economy.

6 IMPLEMENTATION FRAMEWORK

The physical improvements brought about from the projects are intended to create an environment that is more conducive to doing business, attracting investment and visitors and encouraging residents to spend more leisure time in the CBD.

6.1 SCHEDULE OF PROJECTS AND PROJECT DESCRIPTION

The following table presents possible projects for implementation. Please note that all project budgets need to be confirmed before implementation and final costs can only be generated at a Final Design Stage.

1. GREENING AND LANDSCAPING ALONG SPINES				
THE CONTINUATION OF LIRA LINK AS A PEDESTRIAN BOULEVARD, FROM THE CIVIC CENTRE TO THE NORTH UP TO THE INTERSECTION WITH KRUGERRAND GROVE. THE INTENTION IS NOT TO CREATE A PEDESTRIAN ONLY BOULEVARD, BUT TO CREATE A BOULEVARD THAT GIVES PRIORITY TO THE PEDESTRIAN AND CREATING AN AESTHETICALLY PLEASING, ATTRACTIVE AND FUNCTIONAL AREA. ULTIMATELY, IT AIMS AT CREATING A 'WALKABLE' TOWN, WITH A SAFE, CLEAN AND GREEN PUBLIC ENVIRONMENT IN A GOOD STATE OF REPAIR.				
DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Prepare designs for the pedestrian walkways along Lira Link ◦ Prepare designs and drawings ◦ Prepare tender documentation and appoint contractor ◦ Implement 	◦ uMhlathuze LM	R5 000 000.00	◦ uMhlathuze LM	Short

2. CBD IMPROVEMENT INCENTIVES				
THE MUNICIPALITY SHOULD INVESTIGATE THE FEASIBILITY OF CREATING CITY IMPROVEMENT DISTRICTS (CIDs).				
DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Investigate possible establishment of Urban Development Zone (UDZ) or City Improvement Districts (CIDs) ◦ Liaise and negotiate with relevant stakeholders ◦ Register / establish Urban Development Zone (UDZ) 	<ul style="list-style-type: none"> ◦ uMhlathuze LM ◦ Business stakeholders 	n/a	<ul style="list-style-type: none"> ◦ uMhlathuze LM ◦ Private sector 	Short to medium term

3. IMPLEMENTATION OF THE CIVIC CENTRE PLAN

A CONCEPT PLAN FOR THE CIVIC CENTRE HAS BEEN DEVELOPED. IT REQUIRES APPROVAL BY THE MUNICIPALITY, BEFORE IMPLEMENTATION AND CONSTRUCTION PHASES CAN COMMENCE.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Council approval ◦ Approval of Development application ◦ Preparation of designs and drawings ◦ Preparation of tender documentation and appointment of contractor ◦ Construction phase 	◦ uMhlathuze LM	TBC	◦ uMhlathuze LM	Short to medium term.

4. DEVELOPMENT OF A PARKING GARAGE / PARKADE (CBD SOUTH EXTENSION PRECINCT)

A PARKING GARAGE IS PROPOSED IN THE CBD SOUTH EXTENSION PRECINCT.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Confirm the need for a scheme amendment process. ◦ Prepare site plans and construction drawings for the proposed facility. ◦ Prepare tender documentation and appoint contractor. ◦ Implementation. 	◦ uMhlathuze LM	TBD	◦ Private sector	Medium to long term.

5. DEVELOPMENT OF A PARKING GARAGE / PARKADE (BOARDWALK MALL; ALONG LIRA LINK AVENUE AND THE PARKING AREA ALONG KRUGERRAND GROVE OPPOSITE THE BAY HOSPITAL.

A PARKING GARAGE IS PROPOSED AT THE BACK OF THE BOARDWALK MALL, AS WELL AS ALONG LIRA LINK AVENUE AND THE PARKING AREA ALONG KRUGERRAND GROVE OPPOSITE THE BAY HOSPITAL. THIS PARKING GARAGES CAN ALSO BE USED TO PROVIDE AN AREA FOR TRADERS, AS WELL AS OPPORTUNITIES FOR HIGHER DENSITY ACCOMMODATION (WITH A FOCUS ON STUDENT ACCOMMODATION).

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Confirm the need for a scheme amendment process. ◦ Prepare site plans and construction drawings for the proposed facility. ◦ Prepare tender documentation and appoint contractor. ◦ Implementation. 	◦ uMhlathuze LM	TBD	◦ Private sector	Medium to long term.

6. INTERSECTION UPGRADES

THERE ARE A FEW INTERSECTION THAT REQUIRES UPGRADING BY THE MUNICIPALITY.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> Secure Funding Prepare construction drawings and designs Prepare tender documentation and appoint contractor Construct 	<ul style="list-style-type: none"> uMhlathuze LM 	R20 000 000.00 (TBC)	<ul style="list-style-type: none"> uMhlathuze LM DoT 	Short term.

7. ENFORCEMENT OF BY-LAWS

THE IMPLEMENTATION OF BY-LAWS IS CRITICAL, SINCE IT CAN ASSIST WITH REGULATING LAND USE, MANAGEMENT AND THE CONTROL OF UNDESIRABLE LAND USES. THE MUNICIPALITY SHOULD IMPLEMENT INITIATIVES THAT CAN CONTRIBUTE TO THE ENFORCEMENT OF BY-LAWS.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> Roll-out a by-law education programme Raise awareness of bylaws and implications thereof. 	<ul style="list-style-type: none"> uMhlathuze LM 	R180 000.00	<ul style="list-style-type: none"> COGTA 	Medium term

8. DEVELOPMENT OF ENTRANCE FEATURES/ GATEWAYS

GATEWAYS /ENTRANCE POINTS BECOME FOCAL POINTS FOR COMMUTERS, VEHICLES AND PEDESTRIANS, WHICH CAN BE EMPHASISED BY A LANDMARK OR DISTINCTIVE LANDSCAPING. ENTRY SIGNS OR GATEWAYS COMMUNICATES A LOT ABOUT A PLACE AND IMPROVES LEGIBILITY, TRAFFIC MANAGEMENT AND THE IDENTITY OF THE AREA.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> This project should focus on entrances from both sides of the R102, Nelson Mandela Drive entrance. Design appropriate entrance features /entry signs or gateways. Secure funding Prepare drawings / designs Implement/construct entrance features. 	<ul style="list-style-type: none"> uMhlathuze LM 	R500 000.00 per entrance feature	uMhlathuze LM	Medium term

9. FEASIBILITY STUDY FOR AUTOMOTIVE ASSEMBLY PLANT / LIGHT INDUSTRIAL PARK

AN INVESTIGATION INTO THE POSSIBLE CONTRIBUTION OF RICHARDS BAY TO THE AUTOMOTIVE INDUSTRY ON AVAILABLE LAND WITHIN THE STUDY AREA.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Feasibility study to determine the viability of proposed project ◦ Preparation of business plan ◦ Liaise and negotiate with relevant stakeholders ◦ Package proposal and secure funding 	<ul style="list-style-type: none"> ◦ uMhlathuze LM 	R650 000.00	<ul style="list-style-type: none"> ◦ DTI ◦ Trade and Investment KwaZulu-Natal (TIKZN) 	Short to medium term

10. CONSTRUCTION OF MAGISTRATE COURT

A NEW MAGISTRATE COURT IS PROPOSED AT THE BACK OF KFC, ALONG PREMIUM PROMENADE.

DESCRIPTION AND ACTIVITIES TO BE UNDERTAKEN	RESPONSIBILITY	BUDGET	SOURCES OF FUNDING	TIMEFRAME
<ul style="list-style-type: none"> ◦ Approval of Development application ◦ Preparation of designs and drawings ◦ Preparation of tender documentation and appointment of contractor ◦ Construction phase 	<ul style="list-style-type: none"> ◦ Department of Public Works 	TBC	<ul style="list-style-type: none"> ◦ Department of Public Works 	Medium to long term

6.2 ACTIONS REQUIRED FOR IMPLEMENTATION

The following are some of the actions and tools that will be necessary to prepare for sustainable implementation of the plan.

- The Richards Bay CBD Framework approval by relevant technical departments, council committees and technical departments.
- Secure stakeholder support of the Richards Bay CBD Framework from the property developers and the local community (including residents, community based organisations, property owners and business owners).
- A Project Steering Committee comprising of the municipality's senior management should be established and tasked with the overall management of the project.
- Appointment of a Development /Programme Manager, who will be responsible for the overall co-ordination of all activities necessary to effect the sustainable implementation of projects that have been identified. While the municipality provides strategic fit to the program, an external programme manager can be appointed to undertake day-to-day management of the program. This will augment municipal capacity and ensure that the project is managed efficiently and effectively. The Development/Programme Manager will report directly to the DMM: City Development.
- Identify project champions (administrative and political). Possible administrative champions can be the Manager: Land Use Management, who will be responsible for the provision of strategic guidance and implementation of the project/programme. It will also be important to identify a possible political champion who can deal with strategic political issues affecting the project.
- Preparation of a management plan to ensure the successful implementation of development projects. This plan should provide a framework for effective implementation of the precinct plan and should include, but is not limited, to the following:
 - Management structure for the implementation of the programme.
 - Identify clear roles and responsibilities of the management structure.
 - Develop a funding strategy and confirm project budgets (preliminary estimated budgets are provided and should be confirmed).
 - Monitoring and evaluation framework.
 - Business plan for the implementation of the Richards Bay CBD Framework.

7 ANNEXURE A: URBAN DESIGN GUIDELINES

7.1 KEY URBAN DESIGN GUIDELINES

The following section provides broad urban design guidelines. It should be noted that the Civic Centre Concept and the CBD South Extension Masterplan did include specific design guidelines that should be acknowledged when these developments commence.

7.1.1 PUBLIC FACILITIES

For a meaningful urban structure, link symbolic elements or public facilities to certain hard open spaces in relation to their importance and character. Create special public places, as public spaces and public institutions are the focal point of community life. Public furniture should support the desired character of the space. Concentrate buildings with public facilities, amenities and collective service points adjacent to public spaces. Locate public buildings in relation to formal public spaces and important movement routes. Hard open space should announce the buildings and accommodate informal activities that respond to these buildings. Balance the composition of building groups, place the focal point near the middle of the group, and locate symbolic and/or focal points in the middle of a cluster space or at the termination points of a linear space.

7.1.2 PRIVATE AND PUBLIC DOMAINS

Ensure definition of the public space through effective design of an interface between public and private domains. Thresholds should act as shared environments (meeting places) or transitional space between

public and private space. Visual permeability through an interface can enrich the public domain and will affect the way private space is used. It becomes a controlling and enabling constraint. Enhance the visibility and legibility of the relationship and the transition between private and public domains.

7.1.3 ENCLOSURE

Ensure appropriate sense of enclosure that is on a human scale and fits into the context within which the space is situated, and enclosure is needed for the public space to act as an urban room. The degree of enclosure and nature of enclosing elements determine the character of the space, and proportion should not be vehicle dominated. Use trees as enclosing elements and to create a human scale; and finally define the boundary of the space by means of a unified wall or a series of pavilions linked with landscaping.

7.1.4 CONTINUITY AND RHYTHM

Continuity and rhythm of and within spaces should enhance legibility and interest. Create rhythmic and spatial progression along a space through the composition of activities or change in land uses, and establish a continuation of special activities or functions that exist, and within the linkages towards the node. Perception of hard open spaces is related to the concepts of speed and complexity, thus movement relates to complexity and the number of changes that take place within a specific unit of time, due to the relative slow movement of pedestrians, a greater degree of

complexity and a large number of changes are needed. Faster vehicle movement requires more simplicity and less changes per unit of time. This holds implications for the richness of detail to be provided on buildings.

7.1.5 SCALE AND PROPORTION

Visual recognition and surveillance: height of detail on buildings that could be appreciated from certain distances away from the facade: up to 2m high to be appreciated from 0,5m away, up to 4m high to be appreciated from 2,5m away, up to 6,5m high to be appreciated from 5m away, up to 12m high to be appreciated from 10m away. To maintain contact for safety between pedestrians on street level and people in adjacent buildings, a maximum of 5m is required. To ensure privacy for inhabitants of buildings at this distance, the street should be at minimum 0,6m lower than the ground level of the building, and to maintain privacy, a clear distance of at least minimum 11m is needed, otherwise visual obstructing elements, such as trees, should be provided. Human scale: Intimate human scale:12m (maximum distance to see facial expression); Normal human scale: 21-24m (25m at maximum to recognise a face); and public human scale:140m (135m at maximum to distinguish a human); and monumental scale:1 500m (maximum distance for vista).

7.1.6 ENCLOSURE

Buildings should be seen as a whole from a distance that is twice its height at a 27° angle, and relationship between radius and height to ensure enclosure. Full degree of enclosure is 1:11; threshold for enclosure is 1:2 (beyond this proportion space leaks out); minimum enclosure is 1:3

(prominent objects are perceived beyond the space); and loss of enclosure is >1:3 (space loses its containing function).

7.1.7 ENVIRONMENTAL FACTORS

- Solar access: Locate highest buildings to the southern side of the open space, with lower buildings or trees (as enclosing elements) on the northern side.
- To provide adequate solar access to a building, the distance between two buildings should be determined with the following: $\tan(\text{latitude of the area} + 10^\circ)$ divided by the height of the adjacent building to the north. For example, at Midrand (with a latitude of 22°) the following is applicable: If the adjacent building is 2,85m high (one storey), the distance between the two buildings should be 4,6m; If the adjacent building is 5,7m high (two storeys), the distance between the two buildings should be 9,1m; If the adjacent building is 8,85m high (three storeys), the distance between the two buildings should be 14,2m.

7.1.8 WIND PROTECTION

An obstruction such as trees can provide the necessary protection against wind. The ground area protected is generally 10 times the height of the obstruction.

7.2 LOCATION AND TYPOLOGIES

Ensure a meaningful location in terms of the movement network and urban structure. Design the road network to accommodate various and diverse functions, and meeting of special streets should result in squares and focal

points. Concentrate intensive activities along continuous vehicle orientated and public-transport routes. Locate majority of public buildings also along these routes. Locate buildings close to the street to increase pedestrian activity, reduce resident isolation, and foster pedestrian services such as retail outlets along streets connecting higher density developments.

7.2.1 INCREASE INTENSITY AND DIVERSITY IN THE STREET RESERVE

- High information routes are experienced as short, but remembered as long. Ensure complexity and interest along roads and in space along routes. Create rhythmic and spatial progression along an axis/street, via composition of activities or change in land uses.
- Block lengths influence access and economic thresholds and design optimal block lengths to foster diverse activity and economic viability. Effectively design the whole reserve, including the spaces between the road surface and the building entrances. Design for and make a distinction between the following: building zone (arcades, canopies, commercial signs, enclosed cafes and sidewalk cafes); sidewalk zone (sewers, gratings, kerbs, urban art, benches, bicycle racks, hawker stalls, information kiosks, trees, cycle areas, pedestrian areas, newspaper stands, telephone booths, fire hydrants, traffic signs, refuse bins, mail boxes, planters, street lighting, parking meters and bus shelters); and vehicular zone (banners, manholes, traffic signals, on-street parking, decorative lighting and telephone poles).

7.2.2 DEFINE THE STREET AS A SAFE AND UNIQUE PUBLIC SPACE

The general pattern of buildings should help to define the street, in pavilion-type buildings, use trees to define the street. The streetscape design should incorporate a consistent theme, strengthening the association of unrelated buildings. When a street is not strongly defined at its edges, focal points at the ends or at regular intervals could provide a sense of place. Land uses should enliven the street and ensure surveillance of it. Parking structures should not dominate street frontages, thus distinguish between so-called front-and back uses and definition, which take place within the street realm, but which differ for various urban users and cultures. Intersections and road crossings should be designed to be safe for pedestrians and vehicles. This includes the design of sidewalks and crosswalks, traffic signals and other intersection treatment. Modify existing leftover space to accommodate easy pedestrian crossing of streets, and where pedestrian routes cross streets, ensure visibility through landscaping and signage. To enhance safety for pedestrians on sidewalks, minimise conflict with cars, and cater for the disabled; provide sidewalks; provide parking between road and pedestrian; the busier the street, the broader the sidewalk should be; place kerb between sidewalk and street; and design road to discourage speeding.

7.2.3 ACCOMMODATE A VARIETY OF USERS IN THE STREET

The effective separation of pedestrian and vehicular movement should be at a scale which encourages activity and pedestrian comfort, thus for movement, the street should include a surface for cars, together with

bicycle and pedestrian lanes; and other facilities to be accommodated are those for informal traders, small-scale businesses (such as decorative kiosks for flowers), landscaped strips and spaces of relief and relaxation in bustling areas.

7.2.4 PEDESTRIAN-ORIENTATED STREETS

Ensure a meaningful location in terms of the movement network and urban structure. Create a symbolic location for a special street through its relative location within a geographical area. 4,5m per person allows a clear view of the ground ahead, for comfortable adjustment to meet changing conditions. This serves a capacity of 1000 pedestrians per hour. However, different contexts would allow for different walking spaces. Stairs reduce walking speed to about one third the speed of level conditions and constrict traffic flows.

7.2.5 DEFINE THE STREET AS A SAFE AND UNIQUE PUBLIC SPACE

Design detail to discourage traffic through the area, and speeding, and design soft mounds and plant trees separating footpaths and buildings from the road. Footpaths should preferably be designed adjacent to buildings that overlook them, as opposed to blank walls.

7.3 SQUARES

Ensure a meaningful location in terms of the movement network and urban structure. Locate largest and most important buildings in association with largest and most important squares. Create symbolic location by relative location within a geographical area, and enhance legibility of the structure

via the locality of squares at movement-decision points. Give important squares, dominance for example, by letting buildings that surround them, occupy high ground or dominate the skyline. Provide contrasting hard open spaces with greater or less activity. Avoid sunken squares with difficult access, which make people feel uncomfortable. Keep squares level or just slightly below sidewalk grade.

Ensure easy access for paraplegics to all facilities around the square. Choose surfaces that will most likely accommodate sports activities such as roller-skating. Some permanent benches should be arranged in order for groups of people to talk to one another.

A choice of seating should be considered, such as movable furniture. Movable chairs make ideal seating because each user can determine the direction he or she wants to face, and move it to gain privacy, sit in or out of the sun or have a better view. Provide seating in passive areas next to active areas, to encourage people to look towards either side. Design for interaction among people sitting down, and avoid conflict between people walking and sitting. Appropriate levels of lighting should be used to enhance safety and accent and highlight landscaping. Accent lighting, directed upwards into trees, provides low intensity, but often dramatic illumination of nearby pedestrian areas. Use sustainable lighting features where light energy is not dispersed into the air. Regular intervals of lights should be maintained and incorporated into streetscape improvements. Light poles and fixtures should fit into and preserve the historical character of the streetscape.

Walking on sidewalks and squares differ. On squares, the crucial spatial dimension is square metres; the more space available to adjust one's route, the faster a pedestrian can walk. Less than 1m² per person can force a pedestrian to stop and less than 0,5m² is totally unacceptable. The greatest density possible per m² is 6 people.

7.3.1 INCREASE INTENSITY AND DIVERSITY IN THE SQUARE

Integrate indoor and outdoor spaces to make them more useful. Plan spaces to be small and informal in character and quality, so as to be inviting, comfortable and non-oppressive. Use of the square and activities in the square depend on the activities at the edge, especially on the ground floor, thus develop restaurants, small shops and retail stores around the square; exclude large banks, travel agents and offices that attract few pedestrians.

7.3.2 DEFINE THE SQUARE AS A SAFE AND UNIQUE PUBLIC SPACE

Design identifiable gateways as legible entrance points to the square, and entry points should be highly visible and linked to major contextual routes. Ensure surveillance of the square through its visibility from adjacent buildings and from a central point one should be able to appreciate all sides of the square. To enhance memorability, buildings that are simple in geometric shape should be placed together; one prominent building should dominate the group. To contextualise the square and design the correct proportion within the context, take the typology of surrounding buildings into account and give attention to size, height, unifying elements,

theme, shape of space and rooflines, therefore continuity in height of buildings around a square enhances enclosure. Enclosure is reduced with the degree of difference in building height. Design for a sense of permanence, through robustness of buildings, which are compatible for a diversity of uses. Enclosure depends on the way buildings are grouped. Create a sense of enclosure, especially on corners, otherwise space is fragmented. One or two sides of a square should be enclosed with buildings; the other sides could be enclosed by something else, such as trees. If the physical sense of enclosure is less, the sense of place/activity/meaning should be higher.

7.3.3 ACCOMMODATE A VARIETY OF USERS IN THE SQUARE

Enhance the symbolic meaning of city squares by accommodating symbolic elements and places (statues, objects of remembrance and memorable places) that reflect shared community values and events. Encourage the use of bandstands, public display areas, outdoor dining space, roller-skating and other features that attract crowds. Encourage recreational facilities such as theatres, restaurants, cafes, movie houses, and libraries with late night hours, hotels, and teenage meeting rooms, extending the usage of the square to night time.

7.3.4 CREATE EASY ACCESS TO AND FROM THE SQUARE

Provide direct access to and continued routes through the square and design for permeability with as many shortcut routes through the square as possible that link the square to major contextual routes.

7.4 PARKING AREAS

Ensure a meaningful location in terms of the movement network and urban structure. Organise parking in small lots around the perimeter of the core of activities and movement. Parking lots should lead to the core and should provide pedestrian access to all streets. Integrate a parking area with the surrounding area through linking it to natural movement routes and accommodating short cuts. Parking should be located in smaller areas closer to destinations, especially in higher density development and at local shops. Parking should preferably be located away from the street at the back of buildings. If parking is provided at the front, a maximum of two rows of parking should be provided and parking structures should not dominate street frontages.

Provide dedicated pedestrian walkways separate from the parking surface, between the building and the parking area. For 30°, 45° and 60° parking, the triangle in front of each parking bay should be landscaped. Brick paving, as opposed to concrete blocks or asphalt, should be considered to provide a more interesting surface texture and pattern. Use landscaping and trees to reduce the impact of large areas of asphalt. Where appropriate, parking surfaces could consist of grass blocks to give a softer, parklike image. Where parking areas abut the sidewalk, a landscaped setback should be provided, with adequate furniture such as benches.

7.4.1 INCREASE INTENSITY AND DIVERSITY IN PARKING AREAS

Manage activities in parking areas for various uses and effective utilization of space through different times of the day, such as the closing of parking

areas to act as markets in the evening or play areas on weekends. Type and intensity of uses can vary over time as the demand for parking increases or decreases (differences between day and night, times of the day, days of the week or month). Accommodate different uses that increase latency and allow for social change without physical change.

7.4.2 ACCOMMODATE A VARIETY OF USERS IN THE PARKING AREA

Allow for informal traders to trade within the parking area in an organized way, and accommodate multifunctional use of elements within the parking area, such as trees. Accommodate pedestrian routes through the parking area.

7.4.3 CREATE EASY ACCESS TO AND FROM THE PARKING AREAS

Provide adequate stacking space for vehicles waiting to turn into the parking area. Provide ample dedicated pedestrian routes where pedestrians can access the parking area. Conflict between pedestrians and automobiles should be reduced through location and design of vehicular and pedestrian access to parking facilities.

7.5 PUBLIC TRANSPORT STOPS AND STATIONS

Locate public transport stops and stations on convenient routes between different land-use activities. Locate stops or stations at points of highest accessibility. Integrated intermodal transport nodes and changeovers should be promoted to ensure sustainable physical development. Incorporate stations within their surroundings by means of the effective

utilization and design of existing leftover space. Stations and stops should be located at more frequent intervals and closer to destinations in higher-density and mixed-use developments. Provide for use of stops and stations by wheelchairs and disabled people. Pedestrian crossings at stops should have clear markings. Take road conditions, traffic intensity and speed into account in the detail design. The paving pattern should assist in defining the public transport stop as a unique public space. When it rains, surfaces should not gather water or be muddy in order for people not to wait in these conditions and then board public transport. Provide functional and aesthetically pleasing public furniture. Provide adequate shelters against rain, sun and wind, if possible. Provide places for waiting where change in transportation modes take place and at intersections. Provide space for resting, eating or drinking while waiting for transportation. Provide benches at bus stops or shelters. Comfortable design and location of street furniture should adhere to the needs of potential users. Provide adequate lighting to improve safety. Provide enough and appropriate litter bins.

- Increase intensity and diversity at the stops and stations: Organise informal trading around the stop and within the station.
- Define the stops and stations as safe and unique public spaces: Attend to the quality of the stops in terms of safety, shelter, character or image and visibility.
- Accommodate a variety of users at the stops and stations: Provide adequate space and facilities for informal traders at stops and stations.

- Create easy access to and from the stop or station: Enhance convenience and safety through provision of the most direct pedestrian access to and from public transport facilities. Reduce the walk length with short cuts to intensify activity, and to support intermediate distance substitutes, such as bus, bicycle and taxi.

7.6 CREATE EASY ACCESS TO AND FROM THE STREET

Permeability of public space can be enhanced through the provision of maximum alternative routes. Small blocks give more choice of routes than large blocks. Enhance permeability by not absolutely segregating pedestrian and vehicular movement.

Design for permeability and access to occur at visible entrances. Provide shortcuts to intermediate distance substitutes, such as bus, bicycle and taxi.

7.6.1 ESTABLISH APPROPRIATE INTERFACES

The building façade should be linked to human activities along the route to ensure visibility of pedestrians and thus surveillance of the street. Surveillance of the street should also be facilitated from upper storeys. The way this edge is made will also determine the feeling of the upper-storey space. Arcades provide a defined human space between the building and the street and should also provide shelter against bad weather.

Interfaces can ensure coherence and interest, and will provide a visual stimulus to passers-by. Colonnades as interface could provide a coherent simple rhythm on the outside (which relates to fast-moving vehicles) and

complexity on the inside (which relates to pedestrians). Interface between pedestrians and cars should be defined through a row of on-street parking or through landscaping. Garbage receptacles or unsightly equipment should be screened, especially from pedestrian movement routes.

7.6.2 ENSURE A UNIFIED AND INTERESTING EDGE SURFACE DESIGN

Unify street design and street frontages of buildings to create a special street with an identifiable character. New buildings should fit into the existing context and attention should be given to similar elements such as rooflines, bay windows and window proportion. A number of distinctly identifiable elements along routes should be provided, with continuity of shop fronts.

7.7 PEDESTRIAN-ORIENTATED STREETS

Access for pedestrians and bicycles should be made easy, while access for vehicles should be more difficult and controlled. Use lockable bollards where applicable. Ensure accessibility and convenience for different user groups. Adequate provision should, for example, be made for paraplegics, elders who want to sit down and youths who want to play. Provide functional and aesthetically pleasing public furniture. Furniture should support the envisaged character of the street. Furniture could include fountains, litterbins, bus shelters, benches, lighting or basketball rings, depending on the context within which the street is situated.

7.7.1 ESTABLISH APPROPRIATE INTERFACES

In residential developments, it is preferable not to have any fences or walls on the street boundary. However, should fences be put up, it is proposed that palisade fencing that provide maximum visibility, be erected. This should ensure surveillance of the street. Transition from public to private space should be appropriately made through the provision of perceptual locks and this will contribute to the clear distinction between and definition of public and private spaces. Establish a boundary which can be a wall, windowed façade or natural features such as trees. Do not design large expanses of blank walls. The interface should address issues of human comfort, such as shelter from sun, wind and rain and a choice between sun and shade and public lighting. Design boundaries as meeting places between different domains. The boundary should act as interface between public space and private space or between inside space and outside space. Design edges to be used for shelter against wind or rain. Integrate bus or taxi stops for shelter and safety in the design of the interface of the adjacent building. Interfaces such as overhangs can provide shelter to informal traders or people waiting for transport.

7.7.2 ENSURE A UNIFIED AND INTERESTING EDGE SURFACE DESIGN

To organise a unified character, it is proposed that the interface be designed as a single entity. Enhance the sense of enclosure with unity in walls and similar architectural treatment of buildings. Local styles and materials should be used consistently. Squares should create discontinuity or interruption in the built form in order to prevent boredom. When

approached at an angle, the effect can be dynamic. Plant shade trees in the parking strip to continue the trees found in surroundings.

7.7.3 ENSURE ACCESSIBILITY AND CONVENIENCE FOR DIFFERENT USER GROUPS

Paving materials should provide safe walking surfaces. Provide clear markings for pedestrian crossings at intersections. Walking routes should be provided as level as possible, avoiding unnecessary changes in elevation that can cause accidents.

7.8 MIXED-MODE STREETS

- Create diversity and interest: Pedestrian activity areas should receive special pavement treatment with coordinating materials and patterns to create a specific character for the precinct. Design simple continuous routes with complex views especially for pedestrian movement. Planting and pavement treatment in pedestrian streets should be related to activities and uses in adjacent buildings. Street landscaping, in particular, should be selected and designed according to a special theme for a given area, providing a sense of place in addition to its other amenities. Provide functional and aesthetically pleasing public furniture. Provide adequate bicycle racks near entries of buildings to prevent vandalism or theft. Provide adequate seating space. Planters as part of the landscaping can also be designed for this purpose.

- On-street parking: In areas of high car ownership, two visitors' parking spaces should be provided onsite, in addition to on-street parking. In areas of low car ownership, on-street parking may be sufficient.
- Travelling distances: Design short and narrow residential blocks of $\pm 100 \text{ m} \times 30 \text{ m}$ to ensure permeability and easy pedestrian access. Shoppers carrying packages or tending to children are more aware of time and distance than people who linger. Keep walking distance and maximum length of a walkway up to a maximum of 140 m. 20% - 25% of personal trips are under 1,6 km in length. 20% are 1,6 to 3,2 km, with only 12% - 15% being 3,2 to 4,8 km. Thus, almost one half of all urban trips are less than four kilometres long. This has implications for the intensity of information to be provided.
- Human scale is lost with a linkage longer than 1 500m (maximum distance to establish vista).

7.8.1 CONSIDER SPECIFIC CONDITIONS OF SURFACES

Functionality of surfaces in terms of kinaesthetic elements such as change of level, curves with implications for speed of movement and tactile elements such as texture under foot should be taken into account. Climatic elements such as air movement and extreme temperatures should be considered. Sun exposure should be considered for early morning and late afternoon.

7.8.2 CREATE DIVERSITY AND INTEREST

A combination of soft and hard surfaces should be provided, with certain surfaces being dedicated for a main use such as the carrying of vehicles. However, secondary uses should be promoted and designed for. Movement spaces as well as resting places should form part of the route. The different kinds of spaces should be reflected in the paving pattern. Demarcate position of stalls through different paving patterns, and consider specific conditions of surfaces. Design surfaces for easy cleaning.

7.8.3 CONSIDER SPECIFIC CONDITIONS OF SURFACES

A variety of surfaces (hard and soft) should be provided to increase maximum choice of use. Surfaces should be as maintenance-free as possible.

Be aware of the influence of climatic conditions on chosen surfaces, and attention should, for example, be given to storm water runoff and excessive heating. Sunlight and drainage must be evaluated and appropriately addressed as limitations or potential assets in design.

7.9 COORDINATE SIGNAGE

Street signs and other information signs should be uniform to provide a unique precinct character. Signs should clearly convey their message but should be located and sized not to block views to and from adjoining buildings. They should also not be excessive in size and number. Signage should support the creation of a unified character for the street and convey

information to local residents. A notice board could be used for this purpose.

Within a woonerf type of street, signage should mainly convey the message to vehicles that they should drive slowly, due to a number of other users occupying the street for different reasons. Within an arcade, signage will mainly be geared to pedestrians, indicating where what can be found. Provide information through signage that is colourful, interesting and theme-based. Signage to parking areas should be coordinated with signage of the building or the street, depending on its direct relationship. Integrate signage with shelters at public transport stops. The minimum height for signs over pavements should be no less than 2,1m.

7.10 LANDSCAPING

Minimise the impact of parking areas on the living environment through the provision of at least 1 shade tree per 3 parking bays. 10% of the parking area should be landscaped. Planters, kerbs, rails and other raised surfaces can be used for seating. Any height up to 600 mm will work, with 400mm being the best. A width of at least 160mm is appropriate. Appropriate distances of plants to be placed from the facade of buildings are the following:

Flowers and climbers: 0,5m to 1m away; Substantial bushes: minimum 1m away; and Small decorative trees: minimum 2m away. The bigger the ground surface of the plants, the wider the sidewalk should be to ensure safety and ease of movement for pedestrians. Provide one linear metre of seating for every m² of square area. To enable communication, benches

should be a maximum of 1,2m apart. The minimum distance for normal conversation is 0,6m. To ensure that no interaction takes place, benches should be a minimum of 3m apart. Bollards with the dimensions of 500mm (height) and a minimum of 300mm (width) can also double as seating. Design litter bins preferably not higher than 800mm. Should they be any higher, there would be seating constraints on the bins and children would have difficulty in dumping their rubbish. Plan for at least 20% of the square to be landscaped.

7.11 RAMPS AND STAIRS

Clear space of ramps should not be narrower than 1,2m, allowing a person in a wheelchair to pass another person. Ramps should have continuous handrails and should form an integral part of the design of the building, not merely be an add-on. Ramps can have a slope of between 5% (1:20) and 8% (1:12). For continuous walkways, cross-slopes of 1:12 should be avoided, with a preferred slope of 1:16. Stairs should be avoided where large volumes of foot traffic must be accommodated. On stairs, a railing should be provided on at least one side with a height of at least 450 mm. On stairways, the rise in height should not exceed 165mm. 1,1m is recommended as a minimum stairway width to allow passing in the opposite direction. The ideal proportions for outside steps are determined by the indicated formula. For long slopes, a level rest-platform should be installed at a maximum distance of every 20 treads. This platform should be long enough for a person to walk three paces, which is approximately 1,8m.

7.12 SIDEWALK WIDTHS

With walking on sidewalks, the width is a crucial dimension, since passing is possible only when there is enough width to pass easily. A recommended width for sidewalks in mixed use development is 3,5m to 4,5m, clear of any street furniture.

7.12.1 WIDTHS AND SLOPES

The maximum gradient of bicycle tracks should be 5% (1:20), with a maximum cross-fall of 2,5% (1:40). The maximum gradient of footpaths should be 1:12 and the minimum gradient should be 1:200 (for stormwater), with a minimum cross-fall of 1:30 (3,3%). The minimum width of dedicated pedestrian walkways in these streets is 0,8m. When planting slopes with grass, bear in mind that maximum slopes for mowing machines should not exceed 1:1.5, while for tractors they should not exceed 1:3. The minimum width of a one-way bicycle track is 2,75 m and for a two-way track it is 3,6m. The maximum width for a dedicated pedestrian walkway is 12m.

7.12.2 DISTANCES

To maintain coherence and safety, the maximum length of a pedestrian orientated street should be 140m, which is the maximum distance for discerning action. In some cases, people cannot walk long distances. Pedestrians carrying packages or tending to children are more aware of time and distance and may be willing to walk an absolute maximum of 300m. Increase the number of formal public transport stops, as this may decrease the appearance of ad hoc stops, especially by minibus taxis.

Shorten the walk length to a maximum of 150m in high density and mixed use areas. In lower densities, stops can be located further (up to 400m apart).

7.13 PUBLIC FURNITURE

Bollards should not be higher than 800 mm to avoid interference with motorists' sight lines. A distance of 1,20m between bollards will bar any car from access.

7.13.1 SCALE AND PROPORTIONS

Hard open space with a certain sense of enclosure: below the threshold of 18° the space loses its sense of enclosure as one can see beyond its edges. Limit plaza size to create small, human scaled spaces. A maximum size of 235m² is appropriate with several small plazas better than one large one. To maintain a sense of enclosure, the angle between two buildings, attached or detached, should not exceed 135°. Scale of squares: Large plazas: 21-24m; Town or village square: 57m x 143m; City quarter: 800m radius.