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BUFFALO CITY METROPOLITAN MUNICIPALITY

BONZA BAY ROAD LOCAL SPATIAL DEVELOPMENT FRAMEWORK (BB LSDF) | **FINAL DRAFT LSDF**

May 2019

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Bonza Bay LSDF

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SECTION A :
Introduction

A. Introduction

Buffalo City Metropolitan Municipality, herein after referred to as 'BCMM', has appointed Tshani Consulting CC to update and review the **'Bonza Bay Road Local Spatial Development Framework',** hereafter referred to as 'BB LSDF'.

This document serves as a 'Final Draft Local Spatial Development Framework Report' prepared by Tshani Consulting CC. This report focuses on the Spatial Development proposals for the study area, 3D interpretation of the proposals and the Budget and Implementation Plan for the identified projects, which forms a response to the key outcomes of the Development Perspective.

Image of Bonza Bay Road

A1. BACKGROUND

The original Bonza Bay Local Spatial Development Framework (BBLSDF) was approved in August 2008. The Beacon Bay business area, centred on and surrounding Bonza Bay Road, forms an important urban component of the core metropolitan area of Buffalo City. Since the approval of the Bonza Bay LSDF in 2008, the area has developed so successfully that there is very little remaining land identified for business uses. There has been a need to identify further land that can be opened up for business purposes in order to provide spatial policy guidelines to developers. This review aims to undertake its work, cognisant of the current office and retail trends across the greater city region and vision of the city as spelled out in the BCMM SDF of 2013.

The BBLSDF Review project followed a five-phase approach. The project phases are shown below:

PHASE 1:	**Project Initiation and Finalisation of Terms of Reference**
PHASE 2:	**Formulation of A Development Perspective**
PHASE 3:	**Formulation of Development Strategy**
PHASE 4:	**Formation of Development Programmes and Budgets and Monitoring & Evaluation Framework**
PHASE 5:	**Council Approval and Adoption**

A2. PROJECT OBJECTIVES

The goal of this review of the BB LSDF is to undertake an assessment of the original BB LSDF and to assess the changes that have occurred since. It includes undertaking a needs assessment of the study area to identify issues that have risen through the implementation of the 2008 LSDF, as well as to assess ways in which to combat them. It also addresses the positives and aims to use those as opportunities for further improvement.

The review, also, looks at appropriate development projects, infrastructure requirements, and appropriate land use proposals, which would be based on the positive and negative outcomes of the implementation of the 2008 BB LSDF.

Image of Bonza Bay Road

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SECTION B :
Summary of Findings

3D interpretation of street art to create identity

B. Summary of Findings

It is essential to first provide a summary of the findings, i.e. the Development Perspective, prior to developing the Development Strategy, to gain an understanding of the background for the proposals. This section aims to summarise the key findings in terms of the original LSDF take-up, the SWOT Analysis and the Key Issues noted relating to various sectors. Refer to Annexure 1: Development Perspective for the complete Situational Analysis.

B1. IMPACT OF THE BB LSDF

The development of the original Bonza Bay Road LSDF, finalised in 2008 has seen to have a significant impact on positive growth and development of the general area within the context of East London. The plan has also been seen to have a larger impact on revenue creation from a rates and development levy perspective to those properties which were given permission to rezone and operate as Low Intensity Office. The section below discusses this latter impact.

2008 BB LSDF

A total number of 57 properties were given the right to rezone their property to Low Intensity Office. As per the Situation Analysis of this review, a total number of 30 properties submitted applications to the BCMM for the rezoning of their property.

B2. SWOT ANALYSIS

The following section will assess the Strengths, Weaknesses, Opportunities and Threats (SWOT) relating to the study area. The SWOT analysis helps to understand the issues pertaining to the study area. The Strengths and Opportunities of the study area are the themes that would be able to be expanded upon and promoted, whereas the Weaknesses and Threats would require further emphasis to be able to develop them into opportunities.

TABLE B 1. SWOT Analysis

STRENGTHS	WEAKNESSES
Vibrant Corridor	Lack of Parking provision
Close proximity to the Beach	Building height restrictions
Variety of land uses along the corridor	Peak hour traffic
Well-known arterial and activity Road	Lack of taxi stop/rank in Nompumelelo
The N2 and N6 traverses Bonza Bay Road	Lack of dedicated informal trading space
Many and diverse activities such as hospital, retail, office, residential	Pavement diminishes at certain portions of the road
OPPORTUNITIES	**THREATS**
Taxi rank in general study area	Traffic congestion
Boardwalk/ hiking trail surrounding the current Bonza Bay Picnic area	Late night noise emanating from the Bonza Bay Beach area
Economic opportunity at the entrance of the Nompumelelo gateway	Inadequate Bonza Bay Road Taxi rank outside Spargs Complex
Pavement and pedestrian space upgrade	Taxi's stopping and making U-turns as they please
Formal trading space for traders	Abandoned/unused buildings
Demand for office space	Floor area ratio for Low Intensity Office

B3. KEY DEVELOPMENT ISSUES

The following have been outlined as key issues pertaining to the study area as developed through the Development Perspective Phase and through the SWOT Analysis.

The key issues were grouped into the following themes:

1. Key Environmental Issues;
2. Key Land Issues;
3. Key Transport Issues;
4. Key Economic Issues;

5. Key Social Issues;
6. Key Urban Design Issues.

1. Key Environmental Issues

The following has been outlined as Key Environmental Issues pertaining to the study area:

- Insufficient Stormwater Management;
- Combating the risk of flooding.

2. Key Land Issues

The following has been outlined as Key Land Issues pertaining to the study area:

- Illegal land use;
- Continuous increase of density in Nompumelelo and how to plan against this.

3. Key Transport Issues

The following has been outlined as Key Transport Issues pertaining to the study area:

- Insufficient on-street parking to cater for the needs;
- Low curb height allows taxi's to park on the pavement;
- Vehicular traffic during peak hours creates congestion at certain intersections and creates a challenge for pedestrians moving in the area within those times;
- Poorly designed taxi rank outside Spargs which forces taxi drivers to park in alternative locations to suit their needs;
- The need for a taxi stop near the gateway of Nompumelelo and Retail Park.

4. Key Economic Issues

The following has been outlined as Key Economic Issues pertaining to the study area:

- The size of business signage for Low Intensity Offices along Bonza Bay Road;
- Percentage that businesses are allowed to develop on the site is not viable for the rates and taxes that businesses pay.

5. Key Social Issues

The following has been outlined as Key Social Issues pertaining to the study area:

- Lack of sheltered informal trading space;
- Residents' complaints regarding vehicular noise.

6. Key Urban Design Issues

The following has been outlined as Key Social Issues pertaining to the study area:

- Lack of landmarks and public art;
- Inadequate street lighting;
- Irregular paving width throughout Bonza Bay Road.

The complete list of Issues experienced by individuals can be seen in Annexure 1. These issues have been carefully thought out and included through developing the proposals but are not the "Key Issues" as outlined above.

Image of Taxi's along Bonza Bay Road

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SECTION C :
Development Vision, Goals & Objectives

3D interpretation of traffic circle (night view)

C. Development Vision, Goals and Objectives

The development vision for the study area should be based on BCMM's vision of the metro being a "responsive, people-centred, developmental city".

The vision aims to outline the future goal of a specific area as well as to combat the key issues pertaining to the area. The proposed vision for the Bonza Bay Road Corridor is as follows:

"A mixed-use precinct which places focus on pedestrian and vehicular movement, in a well-designed and appealing space"

C1. GOALS AND OBJECTIVES

Development Goals

The following goals for development have been set for the BB LSDF: -

- Guide and manage the types and scale of new retail, residential and office developments in the study area, whilst recognizing the desirability of maintaining the overall primacy of the East London CBD and associated revitalization initiatives;
- Facilitate the development of mixed land use nodes and development corridors within the study area;
- Encourage residential densification in the study area;
- Facilitate economic activity in the study area in such a manner that it does not negatively impact on the nature and character of the essentially residential fabric of the area;
- Encourage development that:
    - Reinforces and strengthens the viability, vitality and efficiency of identified development nodes and corridors;
    - Achieves effective management and safety of all transport modes, including pedestrians, cyclists, private and public vehicles;
    - Improves the appearance of the built form and open spaces;
    - Enhances the overall aesthetic character of the area;
- Ensure that development maintains or enhances safety, health and the environment.

Objectives & Performance Criteria

The achievement of the above goals is proposed by using the following planning mechanisms: -

1. Setting clear objectives for land development and transportation in the study area; and
2. Establishing Performance Criteria that defines the parameters within which land use change and land development can take place in the study area.

Development Objectives

The following Objectives are identified in respect of land development processes within the study area: -

- To identify appropriate areas for development as nodes and corridors, using the classification of these structuring elements as contained in the Buffalo City Spatial Development Framework;
- To set in place appropriate planning measures to encourage development of office and retail land uses within the areas defined as development nodes and development corridors;
- To manage land use and land development within the development nodes and corridors that will maintain and enhance the viability and vitality of these areas;
- To facilitate job creation by permitting small home-based businesses to be developed within appropriate guidelines set by the East London Zoning Scheme, 2007;
- To ensure the rectification of non-conforming land uses within the study area
- To minimise the impacts of land use and land development within the development nodes and corridors on adjoining land uses;
- To allow for residential accommodation in business precincts in order to provide housing choice and promote activity levels; thereby taking advantage of existing infrastructure and underutilised properties.
- To manage development so as to minimise risk, vulnerability and promote sustainability.

The following goals and objectives aim to combat the Key Issues pertaining to the study area, which are structured in terms of the following:

1. Environmental Goals and Objectives;
2. Land Goals and Objectives;
3. Transport Goals and Objectives;
4. Economic Goals and Objectives;
5. Social Goals and Objectives;
6. Urban Design Goals and Objectives

1. Environmental Goals and Objectives

The following have been outlined as the Environmental Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Ensure sustainable development	-Promote the use of Green Technology for future and current developments -Ensure that the precinct services a wide variety of people, of all ages -Implement viable and sustainable green stormwater reticulation
Develop a precinct which is integrated and offers a variety of land uses in order to allow for ease of access	-Provide various housing options to provide for people from all income earning backgrounds -Promote mixed use development through the provision of development incentives

2. Land Goals and Objectives

The following have been outlined as the Land Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Promote mixed use and high-density development	-Accommodate a variety of land uses
To ensure that the suburb retains its residential fabric	-Accommodate a land uses that complement and not disrupt residential use -To ensure a buffer between residential activity and higher, more intense uses -To promote a mix of land uses within a single property
Develop a precinct which is integrated and offers a variety of land uses in order to allow for ease of access	Provide various housing options to provide for people from all income earning backgrounds -Promote mixed use development through the provision of development incentives

3. Transport Goals and Objectives

The following have been outlined as the Transport Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Improve vehicular traffic movement	-Upgrade key road links -Implement measures to control high traffic intersections and reduce traffic congestion -Implement bus and taxi stops at appropriate areas around activity nodes -Implement traffic calming mechanisms to ensure pedestrian safety

4. Economic Goals and Objectives

The following have been outlined as the Economic Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Provide for the community needs	-Allocate more opportunities for Low Intensity Offices -Bring back afterhours activity on Bonza Bay Road to increase street surveillance -Improve the livability of the Bonza Bay Road Corridor -Increase residential densities and promote mixed use development

5. Social Goals and Objectives

The following have been outlined as the Social Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Promote mixed use development	-Accommodate a variety of land uses
Provide for the community needs	-Allocate more opportunities for Low Intensity Offices -Bring back afterhours activity on Bonza Bay Road -Upgrade pedestrian facilities -Increase residential densities

Develop a precinct which is integrated and offers a variety of land uses in order to allow for ease of access	-Provide various housing options to provide for people from all income brackets -Promote mixed use development through the provision of development incentives

6. Urban Design Goals and Objectives

The following have been outlined as the Urban Design Goals and Objectives of the Study Area:

GOALS	OBJECTIVES
Improve pavement Infrastructure	-Upgrade pavements to ensure adequate widths, which are continuous throughout Bonza Bay Road and other prominent roads such as Beaconhurst Drive and Edge Road -Increase the curb height to ensure that vehicles are unable to drive onto the pavement

Image of vehicular movement along Bonza Bay Road

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SECTION D :
Spatial Policy and Proposal

3D interpretation of pedestrian crossing

D. Spatial Policy and Proposals

This section will discuss the Spatial Policy and Proposals which will begin with outlining scenarios and thereafter selecting a preferred scenario. The Concept will be derived from the preferred scenario. Spatial Structuring Elements will then be outlined for the study area.

D1. ALTERNATIVE SCENARIOS

A study was conducted in order to understand the relationship and the difference of the outcomes of 'controlled' and 'uncontrolled' development. This study was completed in order to gain an understanding about the necessity for controlled and managed development.

Scenario 1: Uncontrolled Development

Development that is aligned to "haphazard outcomes". This scenario aims to directly address issues without careful consideration of external or outcoming factors. An example of such development would be the implementation of an extra lane along Bonza Bay Road by minimising the road reserve to account for the extra lane.

This proposal is at first seen as positive, as it would provide more roadway for vehicles which currently experience excess traffic. This proposal aims to combat the issue of traffic along Bonza Bay Road. There are, however, negative impacts that could be an outcome of this development which include:

1. The development would decrease the size of the road reserve thus minimising the space available for pedestrians. This would exclude and hinder a large portion of the users of the area;
2. The limited space of the road reserve would mean that there would be less space for urban design features, which would beautify the space;
3. It may also allow for further traffic volumes due to the extra space provided;
4. An increase in provision for vehicles would mean an increase in speed of the vehicles traveling on the road thus, making the road dangerous for pedestrians crossing the road as well as cyclists travelling on the road;
5. An increase in noise and air pollution.

Through the above, it is seen that a detailed study is required to combat each issue for each proposal. Careful consideration is necessary when addressing the issues pertaining to the study area. Proposals for the study area should ensure that they aim to benefit the majority of individuals and for all activities to act in synergy with each other.

If Bonza Bay Road is allowed to grow in a haphazard manner with no spatial direction, this will result in poor land use management, a decline in the environment, uncontrolled settlement growth, etc. From an

infrastructural point of view, this scenario does not offer an opportunity for forward planning, which could result in even more costly services in the future.

Scenario 2: Managed Development

Managed development is having proper development controls and guidelines for development put in place for effective and well-thought out development controls that considers all individuals and aspects. It assesses the path of least resistance of all parties. It ensures that the areas, which can be intensified are, and to limit development within the areas that should be protected and looked after. It assesses the pros and cons of each development and aims to find a middle ground as to ensure sustainability and accessibility.

Preferred Scenario

The preferred scenario selected is Scenario 2, Managed Development. This Scenario ensures that the urban fabric of the precinct can remain as it is and can be supported. More importantly, it allows improvement on aspects that are not supported. The Managed Development Scenario, ensures controlled traffic and pedestrian movement and the allocation of land uses in the most appropriate manner.

Considering factors, such as the (i) current balance of land use, current land development trends and (ii) proximity of erven to major transport routes and other land uses within and outside the identified node; preferred future land uses were identified and assigned to erven. It is to be noted that the uses assigned in this manner were based on a broad categorisation of uses.

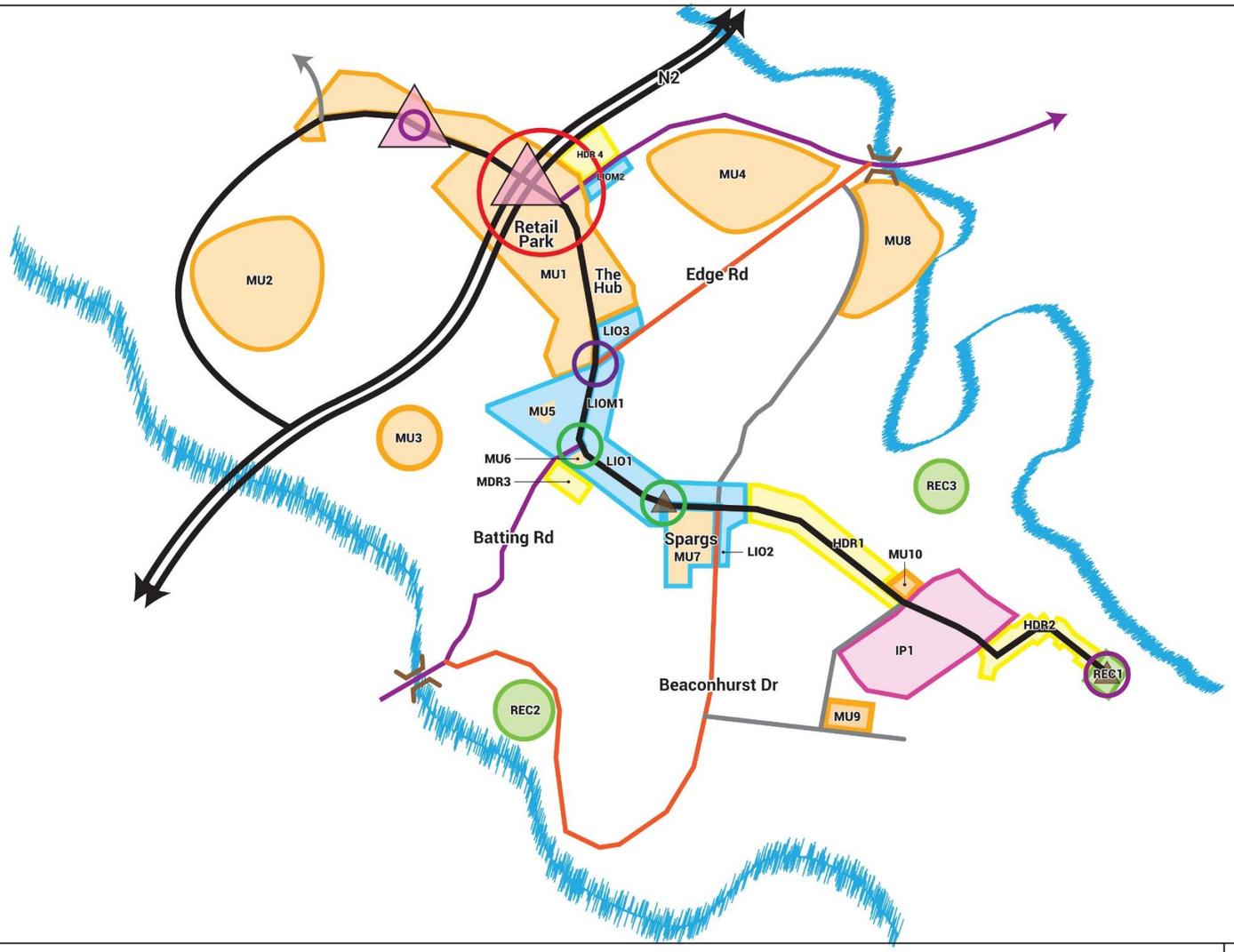
D2. CONCEPT PLAN

Mixed Use Concept

The concept plan, shown below, is a representation of the proposed concept of the study area. The primary roads shown on the plan are Bonza Bay Road and the N2, the secondary road is the Edge Road linkage into Gonubie and the linkage roads as shown on the plan are a representation of Beaconhurst Drive, Major Square Road, Pell Street, and other feeder roads onto Bonza Bay Road. The high-level concept depicts the Low Intensity office and High Density Residential uses which needs to be provided along Bonza Bay Road with pockets of Mixed Use Development. Lower density residential will remain in the extent of the Beacon Bay, Bonza Bay, and the Nompumelelo region.

PLAN D 1. High Level Concept Plan

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
HIGH LEVEL CONCEPT PLAN



Legend

- Primary Corridor
- Secondary Corridor
- Tertiary Corridor
- Linkage Road
- Precinct 1: Mixed-use Precinct
- Precinct 2: Office Precinct
- Precinct 3: Residential Precinct
- Precinct 4: Institution Precinct
- Precinct 5: Recreation Precinct
- Major Gateways
- Primary Node
- Secondary Nodes
- Tertiary Nodes
- Bridge
- Minor Gateway

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : October 2017
Scale : NTS

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The proposed concept is based on the current situation of Bonza Bay Road and its surroundings, as well as the outcome of the key issues and to assess ways in which to improve on those key issues. The idea of the concept above is to focus on a range of land uses namely: *residential, low intensity office, education, retail, office, medical and restaurant*. Due to all these uses, the study area experiences a high degree of activity and congestion. This is the reason to ensure effective planning, traffic management and pedestrian movement.

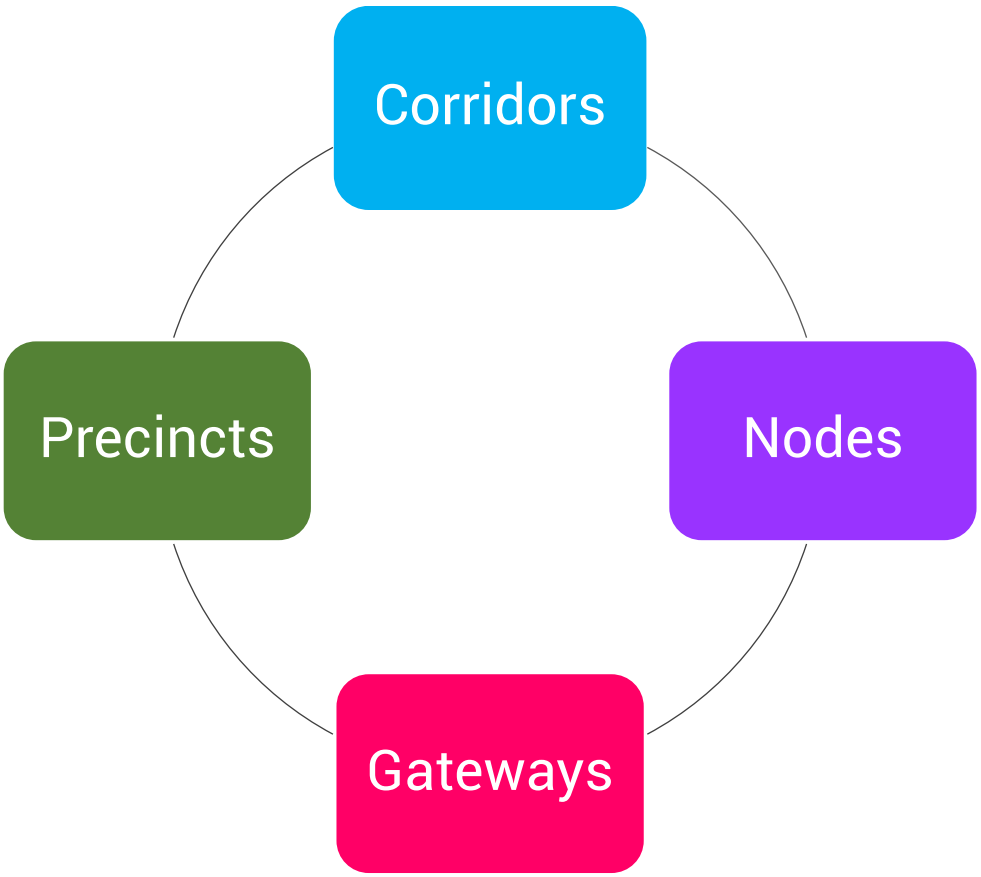
The proposals aim to approach the LSDF in a manner that will give rise to high quality urban spaces and amenities for people to experience. The mixed-use developments aim to introduce a variety of users within a space and to maximize land usage. The aim is to exploit existing positive features such as the Bonza Bay Beach, Retail Park, Spargs, etc. to ensure the creation of a lifestyle environment for occupants of Beacon Bay and the greater East London area to utilise.

Mixed use proposals were also considered in the core of the study area as there is a high demand for office space, retail activity and commercial land usage within Beacon Bay, specifically along Bonza Bay Road. The concept of Mixed Use is promoted in order to create compact living with ease of access whereby individuals would be able to easily access a multiple of activities such as their place of residence, office, retail, schooling, etc. with all these activities located within close proximity with each other. The mixed use precincts highlighted in the concept aims to be promoted to be developed in such a manner.

Image of Petrol filling station and the Spargs Complex

D3. SPATIAL STRUCTURING ELEMENTS

Spatial Structuring Elements are practical tools, used to help shape the Bonza Bay Road Corridor, in line with the Development Goals and Objectives discussed in the previous section. The following four (4) Spatial Structuring Elements are proposed to guide urban renewal and future development along the Bonza Bay Road Corridor.



These elements will be discussed and expanded upon below.

D 3.1. CORRIDORS

Corridors are described as, "pedestrian and vehicular movement networks through an area". Corridors within the study area can be divided into Primary, Secondary and Tertiary Corridors as well as Linkage Corridors, which are linkage roads leading to nodes or activity spaces. The corridors within the study area are identified as follows:

TABLE D 1. Corridors

TYPE	LOCATION
Primary Corridors	-Bonza Bay Road -N2
Secondary Corridors	-Batting Road -Quenera Drive
Tertiary Corridors/Major Linkage Roads	-Beaconhurst Drive -Edge Road
Linkage Roads/Feeder Roads	-Pell Street -Kelvin Grove -Sherwood Avenue -Major Square Road

Primary Corridor: Bonza Bay Road

Bonza Bay Road is a Primary Corridor within the study area. This is due to the high intensity of the various activities along the corridor such as Nompumelelo Residential settlement, Beacon Bay Crossing, mixed-use pockets, Retail Park, The Hub, Palm Square, the Low Intensity Office corridor, the Spargs Complex, residential and the Beach Node from the north to the south of the study area, respectively.

Primary Corridor: N2

The N2 National Road is thoroughfare road that links East London to other towns such as Port Elizabeth to the south and Mthatha and Durban to the north. This is a Primary Corridor due to the intensity of the movement system at a regional level.

Secondary Corridor: Batting Road

Batting Road is a major linkage road that acts as a feeder road and gateway into the study area. High traffic volumes are present along this corridor throughout the day, and especially during peak hours (07:00 to 08:00 and 16:00 to 17:30).

Activities north of this road include retail and a restaurant with higher density residential activity being located to the left of this corridor.

Secondary Corridor: Quenera Drive

Quenera Drive is the proposed linkage road between Beacon Bay and Gonubie. Due to the development of this road, it can be labelled as a proposed secondary corridor. The intensity of the activities that can be located alongside the road is proposed in the land use section of this report.

Tertiary Corridors: Edge Road and Beaconhurst Drive

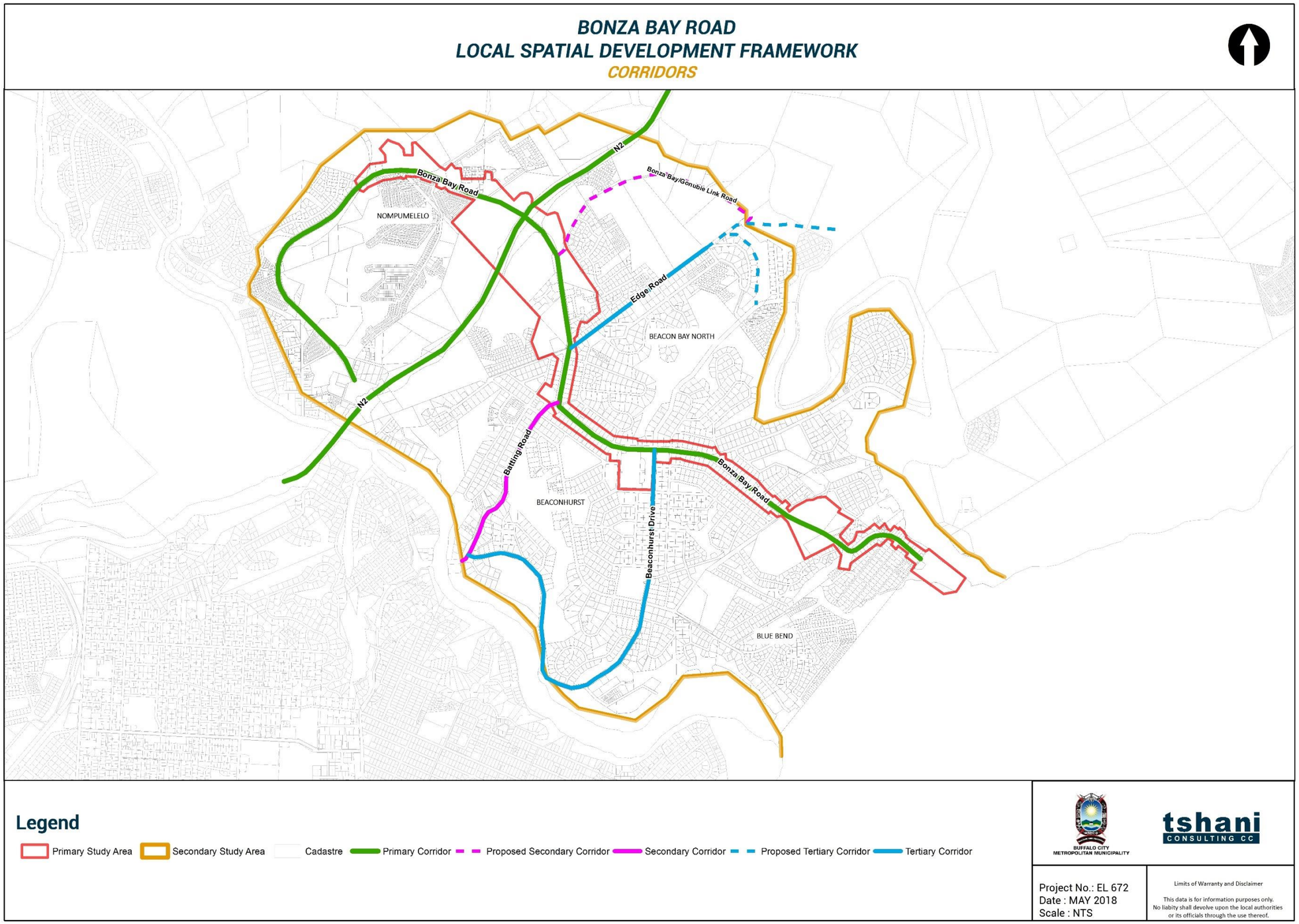
Edge Road and Beaconhurst Drive are seen as Tertiary Corridors or Major Linkage Roads into the study area. These roads are alternative roads to access the study area as opposed to Batting Road or the N2. These roads mostly have residential activity on either side of the corridor with pockets of mixed-use activity, such as a petrol filling station and convenience store along Beaconhurst Drive and office or retail activity along Edge Road.

Linkage Roads or Feeder Roads: Pell Street, Kelvin Grove, Sherwood Avenue and Major Square Road

The above-mentioned roads are residential roads and can be described as Linkage or Feeder Roads as they link and allow for access into Bonza Bay Road.

Image of the Hub and Palm Square

PLAN D 2. Corridors



D 3.2. NODES

Nodes are identified as "areas of higher intense activity and the concentration of people". Nodes are often formed at intersections and areas where activity and movement are concentrated. The intensity of nodes can be discussed as Primary, Secondary and Tertiary Nodes, where Primary Nodes are the first priority activity areas and Secondary Nodes are the less intense activity spots, while Tertiary Nodes are minor activity areas.

The nodes along the Bonza Bay Road Corridor are as follows:

TABLE D 2. Nodes

TYPE	LOCATION
Primary Nodes	-N2/Bonza Bay Road
Secondary Nodes	-Batting Road/Bonza Bay Road -Beaconhurst Drive/Bonza Bay Road
Tertiary	-Kingfisher Avenue (Bonza Bay Beach Node) -Edge Road/Bonza Bay Road

Primary Node – N2/Bonza Bay Road:

The Primary Node along the Bonza Bay Road Corridor is the 'N2/Bonza Bay Road intersection'. The N2 is the National Road that links East London to Mthatha and further, to Durban. The intersection acts as a gateway into the Beacon Bay area on a daily basis. It is due to this that this intersection has high traffic volumes.

In addition to the high traffic volumes, this space is a Primary Node due to the high pedestrian movement between the residential area of Nompumelelo, which is located north of this intersection and the mixed use/retail centre of Retail park, located south of the intersection. It should be ensured that this nodal point allows for the safe movement of both vehicular and pedestrian movement.

Secondary Node – Batting Road/Bonza Bay Road:

The intersection of Batting Road and Bonza Bay Road is described as a Secondary Node as Batting Road is used as a gateway into Beacon Bay and onto Bonza Bay Road. The node includes activities such as retail, restaurant, office as well as low and higher density residential. This ensures high volumes of vehicular and pedestrian traffic. It should be ensured that the node allows for the safe movement of vehicles and pedestrians.

Secondary Node – Beaconhurst Drive/Bonza Bay Road:

Batting Road links into Beaconhurst Drive which further leads to Bonza Bay Road. Beaconhurst Drive is also seen as a secondary corridor due to it being a thoroughfare road. The land uses located around this nodal point include the Spargs Complex which includes a mix of uses including activities such as retail, restaurant, residential. Other activities around the node includes the Low Intensity Office Corridor.

The area also includes a taxi stop which brings people in from various points in the city and beyond. This taxi stop often has taxis waiting to take people to various destinations around East London.

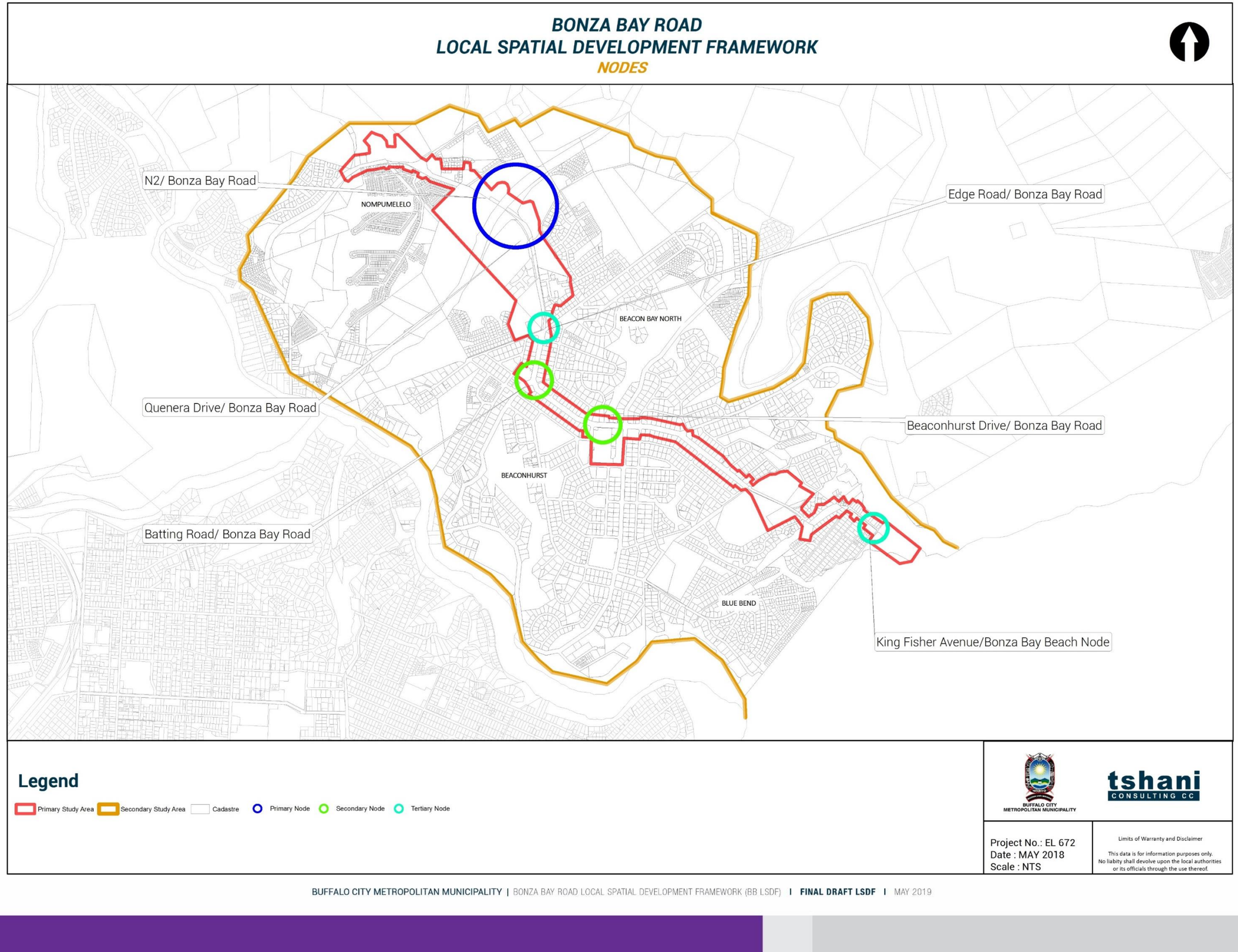
This high intensity of activities, including the taxi rank ensures that there are high volumes of vehicular and pedestrian movement within the space. It should be ensured that this space is pedestrian friendly and includes sheltered space for pedestrians to wait for their transportation.

Tertiary Node – Edge Road and Bonza Bay Road

This node is located further north along the Bonza Bay Road Corridor. The intersection includes activities such as a petrol filling station, residential, mixed use and office activity further north. This node includes higher volumes of vehicular and pedestrian traffic during peak hours of the day.

Tertiary Node: Bonza Bay Road and Edge Road

PLAN D 3. Nodes



D 3.3. GATEWAYS

Gateways can be described as "entrance ways into a specific precinct, area or space". Gateways can also act as nodal points, as they can form intersections and can contain a high movement of people as well as goods and services and activity.

Gateways into a specific area should be visual, should have characteristics of the space one is entering into and should be pedestrian friendly and inviting. Gateways are not necessarily physical barriers but are rather general access points or entranceways into a space. There are various gateways present along the Bonza Bay Corridor, some more distinct and used than others. These are discussed below.

TABLE D 3. Gateways

TYPE	LOCATION
Major Gateway	N2 Gateway into the study area
	Entrance into Nompumelelo Gateway
Minor Gateway	Pedestrian entrance into the Spargs Complex
	Entrance to the Picnic Spot at the Bonza Bay Beach

N2 Gateway into the study area

Access can be gained into the study area off the N2 National Road. This is a major linking road from towns such as King William Town and Peddie to the south and Butterworth and Idutywa to the north as well as to further cities such as Port Elizabeth to the south and Durban to the north. This gateway, thus, becomes a prominent feature in the study area as brings in an influx of people from all over the country.

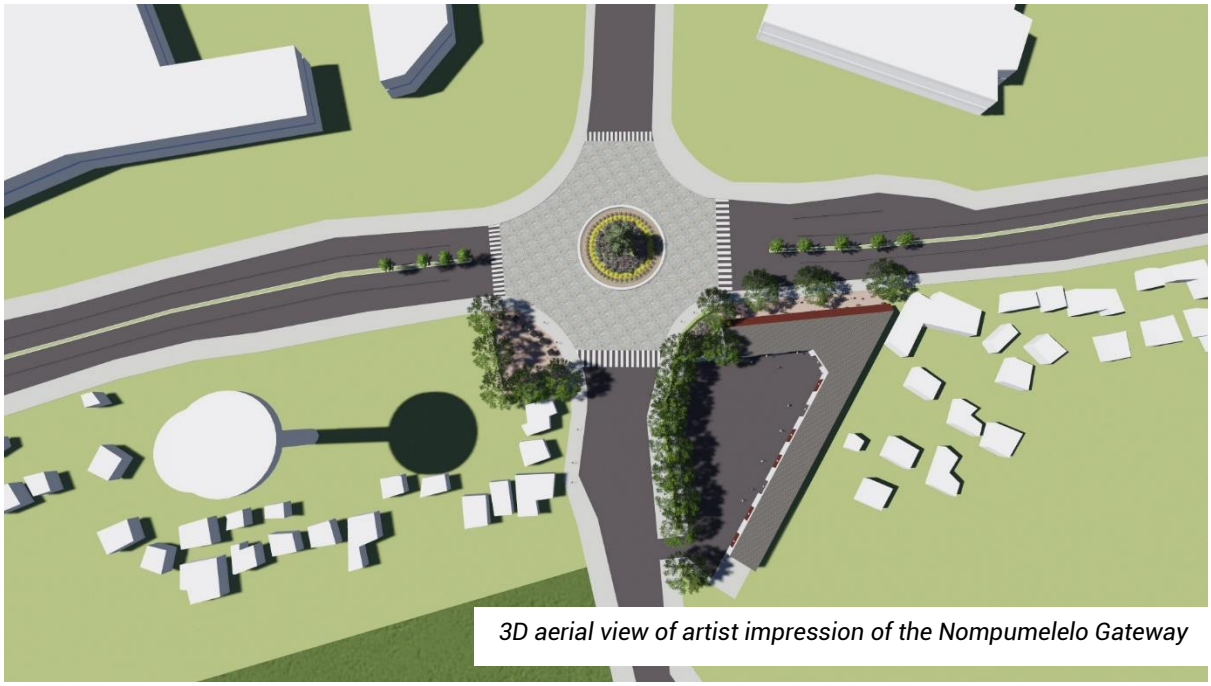
Gateway to Nompumelelo

The gateway to Nompumelelo is proposed to be a highly pedestrianised space, which would include businesses, informal trading stalls and common space for pedestrian interaction. The informal trader stalls would be a dedicated space with sheltered space for traders to lock up their goods after hours. The space would accommodate landscaping, sufficient lighting, benches and bins for pedestrians and users. It would be a vibrant public space.

The table below shows the land usage, ownership and zoning information of the gateway.

TABLE D 4. Entrance to Nompumelelo Erven

Erf Number	Current use	Zoning	Ownership
Erf 57640	Car Repairs	BUS 1	BCMM
Erf 51639	Car Repairs/Open space	BUS 1	BCMM
RE Erf 56880	Car Repairs/Open space	BUS 1	BCMM



3D aerial view of artist impression of the Nompumelelo Gateway

3D interpretation of the Nompumelelo Gateway

Artist impression of garages to accommodate local businesses

Artist impression of garages to accommodate local businesses

Artist impression of informal trader stalls

Artist impression of informal trader stalls

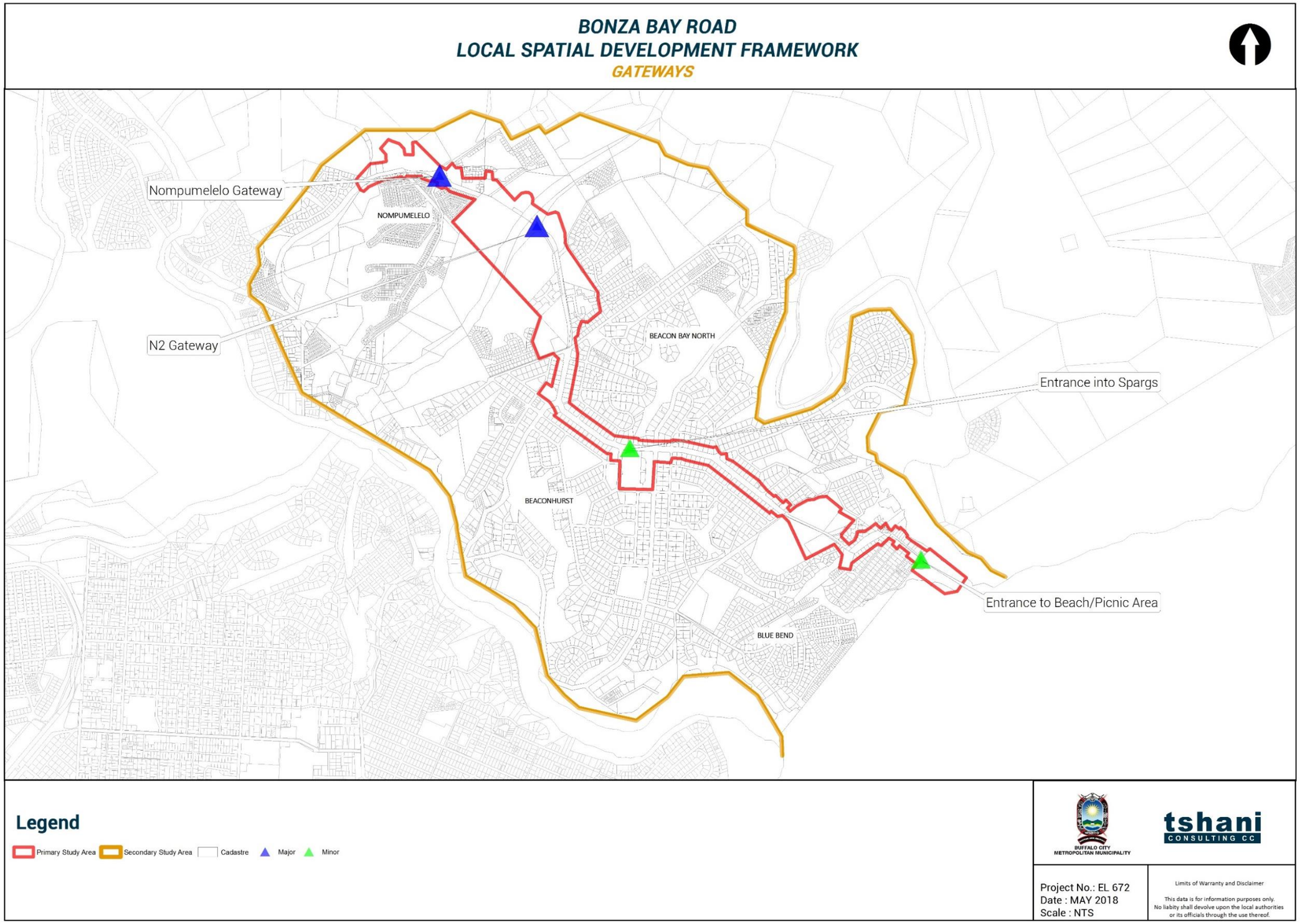
Entrance into the Spargs Complex (pedestrian entrance)

This space is a gateway used by many pedestrians. A taxi rank/stop is located within this space and thus pedestrians exit taxi's and enter the complex to utilise the space. The space currently does not have sufficient lighting, bins and shaded seating facilities for these pedestrians waiting for their taxi. It is thus proposed that this space be more attractive and inviting for more pedestrians who utilise this space.

Gateway into the Bonza Bay Beach space

The Bonza Bay Beach is not only utilised by residents of the area but attracts visitors from all over East London and further. It is thus essential that the gateway of this notable destination contain visible directions leading to the space and is well lit and easily accessible.

PLAN D 4. Gateways



D 3.4. PRECINCTS

In conjunction with identifying nodes and corridors, it is essential for a spatial framework to also identify potential precincts where a change in zoning may be allowed.

Precincts can be described as "larger areas within which activity occurs, often including nodes and corridors and are separated by different activities/land uses". This section highlights five (5) broad precinct types which are as per the general land use of certain portions of the study area. The precinct types are as follows:

- Mixed Use Precinct;
- Office Precinct;
- High Density Residential Precinct;
- Institutional Precinct;
- Recreation Precinct.

Due to the size and extent of the study area, the precincts mentioned above are further divided into sub precincts in order to discuss the specific characteristics of each sub-precinct as well as to locate them within the study area for ease of reference. Further, the precincts are numbered, and colour coded. The report can also be read whereby depending on which precinct is being read, the respective colour code is highlighted at the bottom of the page.

TABLE D 5. Sub Precinct Code

NUMBER	PRECINCT	PRECINCT SUMMARY CODE	COLOUR CODE
D 3.4.1	Mixed-Use Precinct	MU (1-10)	
D 3.4.2	Office Precinct	LIO (1-2) LIOM (1-2)	
D 3.4.3	High Density Residential Precinct	HDR (1-4)	
D 3.4.4	Institutional Precinct	IP 1	
D 3.4.5 OR D 4	Recreation Precinct	REC (1-3)	

For each of the 5 precincts, a definition will be provided to understand what comprises of a precinct. As mentioned above, the five (5) precincts have been further broken down into sub-precincts. Section D 3.4.1- D 3.4.5 includes the sub-precincts of the privately-owned land parcels. Section D 4 includes the sub-precincts of the municipal and state-owned land parcels. This separation is provide in order to easily

access the conditions of the LSDF that fall within the land parcels which are privately owned and those which are state and municipally owned.

It must also be noticed that each general precinct (Mixed Use, Office, High Density Residential, Institutional, and Recreation) may have components of more than one sub-precinct. i.e. there may be a Mixed use sub precinct within the general area defined as the "Office Precinct".

Section D 3.4.1 discuss all sub-precincts within the "Mixed-use Precinct"; thereafter D 3.4.2 will discuss all the sub-precincts within the "Office Precinct", D 3.4.3 will discuss all the sub-precincts within the "High Density Residential Precinct". The Institutional Precinct does not have any sub precincts and thus Section D 3.4.4 will only discuss the Institutional sub-precinct and the Recreational sub-precincts will be discussed under Section D 4: Municipal and State Owned Land Parcels as all the sub-precincts here are Municipal and State owned as opposed to privately owned.

Each sub-precinct will be discussed as follows:

- Plan of where the sub-precinct is located
- Preferred Land Use
- Proposed Zoning
- Desired Spatial Outcome

These points provide a summary to understanding each precinct and allow for ease of reference to make comparisons between precincts and to understand the basic components of the precincts. The desired spatial outcome is discussed to understand the holistic picture of the sub-precincts to understand why a specific proposal is given and further, to understand the general spatial proposal for the study area.

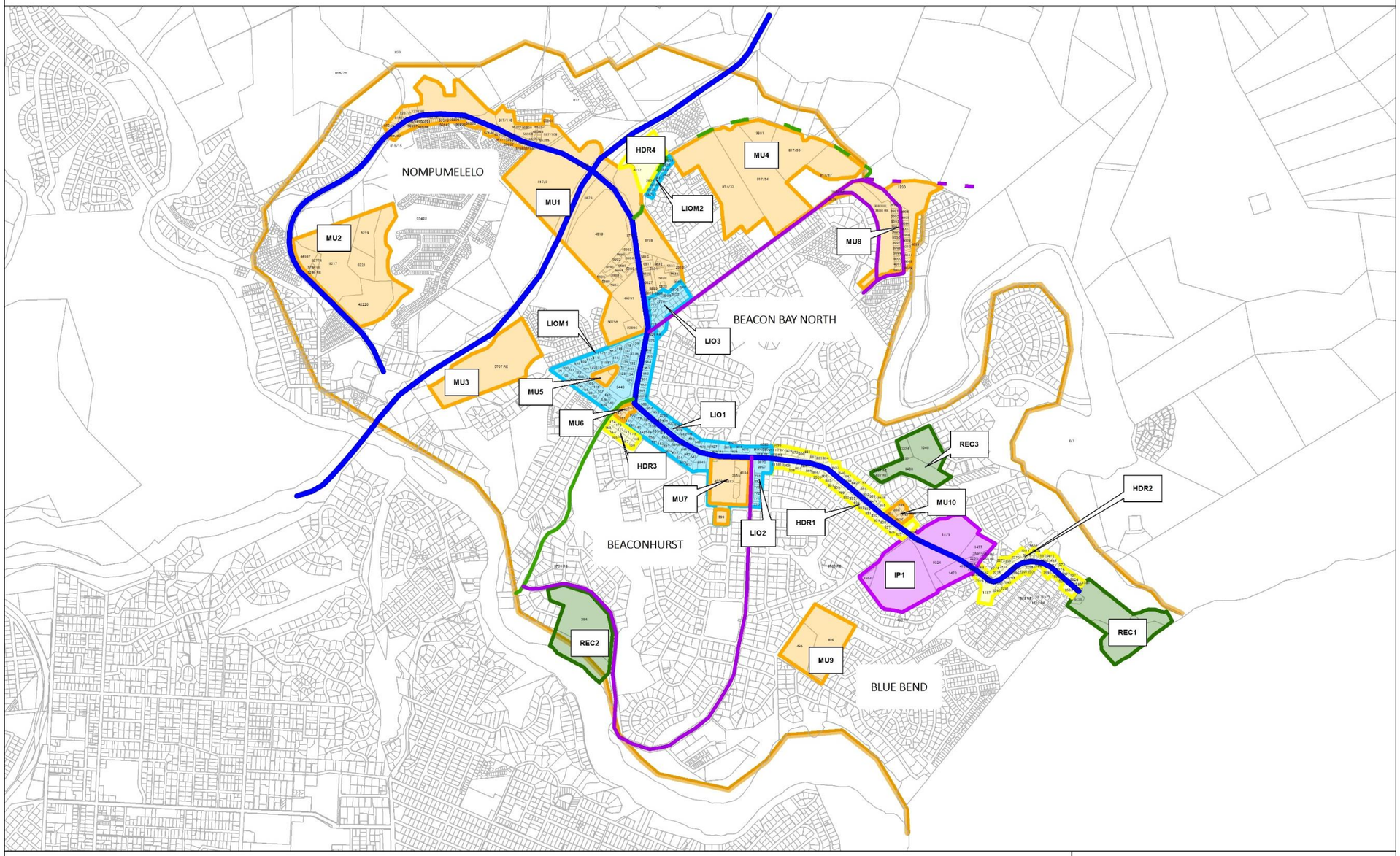
TABLE D 6. Sub Precinct Code and Description

The Precincts are further divided into sub precincts as mentioned above. The sub precincts have been given a name/description as to easily locate where they are within the study area. These sub precincts are a complete summary and include the private and municipal and state-owned land parcels.

PRECINCT SUMMARY CODE	PRECINCT	DISCRIPTION/LOCATION OF NODE	PAGE NUMBER
MU 1	Mixed-Use Precinct	Bonza Bay Road Mixed-Use Precinct	D-45
MU 2	Mixed-Use Precinct	Nompumelelo South Mixed-Use Precinct	D-49
MU 3	Mixed-Use Precinct	Institutional and Residential Mixed-Use Precinct	D-50
MU 4	Mixed-Use Precinct	Office and Residential Mixed-Use Precinct	D-51
MU 5	Office Precinct	Vacant Land Parcel: Edge/Sherwood/Batting	D-78
MU 6	Office Precinct	Sherwood/Batting Mixed-Use Node	D-57
MU 7	Office Precinct	Spargs Complex Mixed-Use Node	D-63
MU 8	Developable Land Parcel	Waste Recycling Centre	D-80
MU 9	Developable Land Parcel	State-Owned Institutional and Residential Mixed Use Precinct	D-82
MU 10	High Density Residential Precinct	OK Supermarket mini-node	D-69
LIO 1	Office Precinct	Low Intensity Office Corridor: Bonza Bay Road	D-54
LIO 2	Office Precinct	Low Intensity Office: Beaconhurst Drive	D-54
LIO 3	Office Precinct	Low Intensity Office: South of The Hub	D-54
LIOM 1	Office Precinct	Low Intensity Office with Medical Preference: Edge/Sherwood/Batting	D-56
LIOM 2	Office Precinct	Low Intensity Office with Medical Preference: Quenera Drive	D-56
HDR 1	High Density Residential Precinct	High Density Residential: Upper Bonza Bay Road	D-68
HDR 2	High Density Residential Precinct	High Density Residential: Lower Bonza Bay Road	D-68
HDR 3	High Density Residential Precinct	High Density Residential: Sherwood Avenue	D-68
HDR 4	High Density Residential Precinct	High Density Residential: Quenera Drive	D-83
I P 1	Institutional Precinct	Institutional: Retirement Homes and School	D-73
REC 1	Recreation Precinct	Bonza Bay Beach	D-84
REC 2	Recreation Precinct	Adjacent Bonza Bay Sports Club	D-86
REC 3	Recreation Precinct	Nature Reserve	D-87

PLAN D 5. Precincts

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
PRECINCTS



Legend

- Cadastre
- High Density Residential Precinct
- Institutional Precinct
- Low Intensity Office Precinct
- Mixed Use Precinct
- Recreational Precinct
- Primary Corridor
- Proposed Secondary Corridor
- Secondary Corridor
- Proposed Tertiary Corridor
- Tertiary Corridor

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : MAY 2019
Scale : NTS

Limits of Warranty and Disclaimer

This data is for information purposes only. No liability shall devolve upon the local authorities or its officials through the use thereof.

D 3.4.1.

MIXED USE PRECINCTS

MU 1: Bonza Bay Road Mixed-Use Precinct

MU 2: Nompumelelo South Mixed-Use Precinct

MU 3: Institutional and Residential Mixed-Use Precinct

MU 4: Office and Residential Mixed-Use Precinct

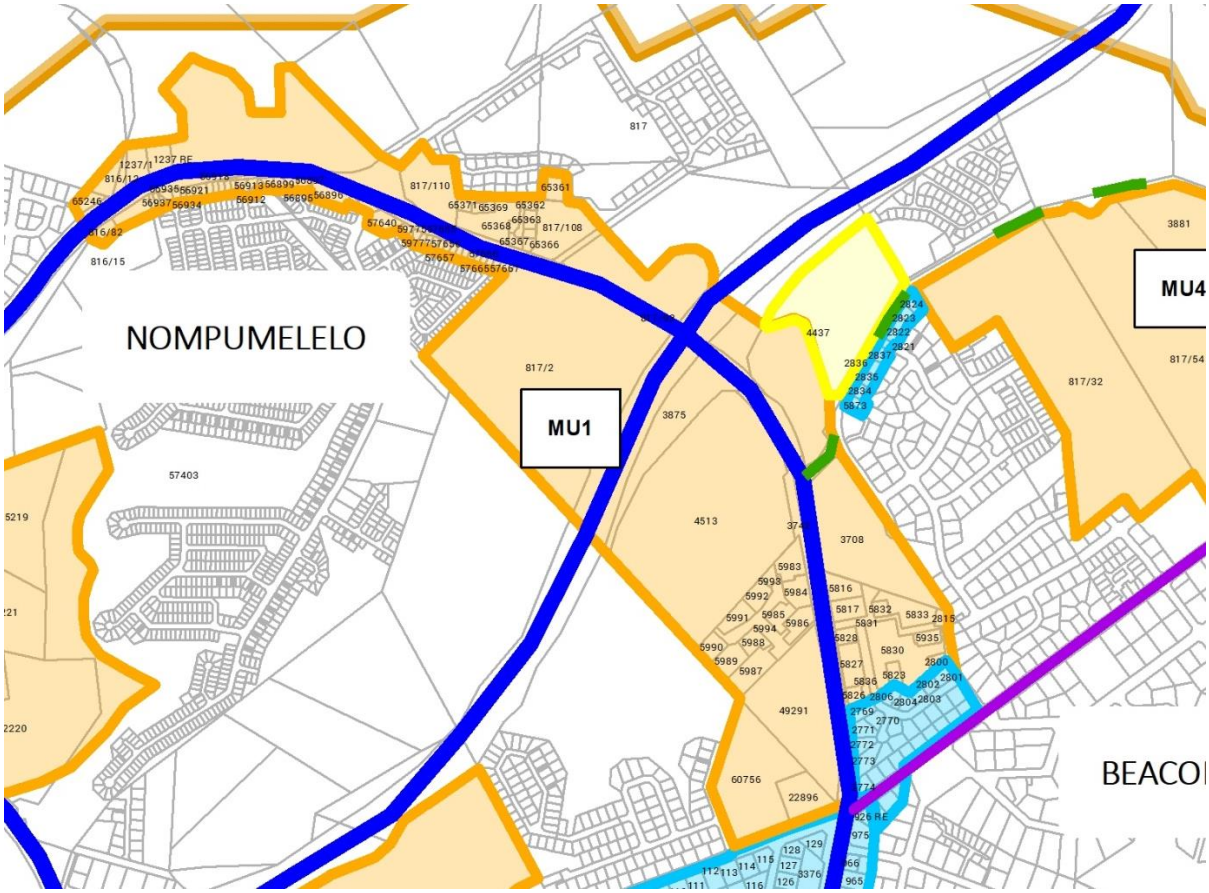
"Mixed use" as discussed under the Concept section as multiple uses located within a single building or within an area. This is a concept that is promoted to increase densities within the study area and to ensure that a variety of uses are easily accessed from each other.

Mixed land use within the the context of the study area includes a variety of uses within a single space, including retail, office, residential or other ancillary uses.

Mixed land use creates an activity precinct due to the high densities and further, the higher volumes of people. This enforces the movement of people and develops the concept of "eyes on the street".

MU 1: Bonza Bay Road Mixed-Use Precinct

(Nompumelelo, Beacon Bay Crossing, Car Dealerships, China Mall, Retail Park, The Hub and Palm Square)



PLAN D 6. MU1 Bonza Bay Road Mixed-Use Precinct

PREFERRED LAND USE

Business

Retail/ Restaurant

Residential

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome for this sub precinct is to be developed as high activity mixed use precinct. The land uses include the Retail Park Shopping Centre which is a regional shopping centre and it includes an office park of Palm Square and The Hub mixed-use park. This sub precinct supports the mixed-use activity and such variety of uses are encouraged in this sub precinct.

This precinct is located north of the N2 bridge and is thus bounded by this road. The precinct includes various car dealerships and the China Mall.

Nompumelelo

Also forming part of this precinct is the predominantly residential area of Nompumelelo, located towards the northern portion of the study area. The building density within Nompumelelo is continuing to increase in an informal manner. Lower income housing is a necessity within the area.

Image of the Nompumelelo entrance

Beacon Bay Crossing

Beacon Bay Crossing is an activity node which comprises of retail and restaurant activities as well as a gymnasium and other physical activity. This property is zoned for Business 1, which allows for business use, supermarkets, townhouses and flats amongst other land uses as per the BCMM Zoning Scheme. This zoning does not have any height restrictions and allows a coverage of 100%.

Retail Park

Retail Park is currently a retail node with retail and restaurant stores being provided for the general Beacon Bay area as well as the rest of East London. The property is also zoned for Business Zone 1, which does not have any height restrictions. Since this development caters for the public by providing for their retail needs, the pedestrian and vehicular mobility into this node is of great importance. A pedestrian access way is proposed from Nompumelelo through to the entrance of the node while a taxi rank in the precinct is encouraged, to allow for the easy movement of taxi's and those who travel by taxi. Should Growth Point wish to accommodate a taxi rank, a relaxation will be made on the number of parking bays needed to accommodate the private vehicles.

Image of pedestrian and vehicular movement outside Retail Park

Image of Retail Park and Nompumelelo in the distance

The Hub

The Hub is a mixed-use space with the inclusion of office, retail, gym, pub, pet store and a beauty salon/spa. Certain activities such as the pub ensures that there is activity within the space until late hours of the day. Activities such as the pet store, beauty salon and retail stores ensure that the space is active during the weekends. Buildings within the node are of two storeys with shared parking in front of most buildings.

Mixed use development is also encouraged in this sub-precinct, to ensure a well-integrated space. A mixed-use precinct in this sense would include the accommodation of office and/ residential activity on floors above the retail space. The retail component would ensure that the space is active after hours and does not become deserted at night.

Image of The Hub

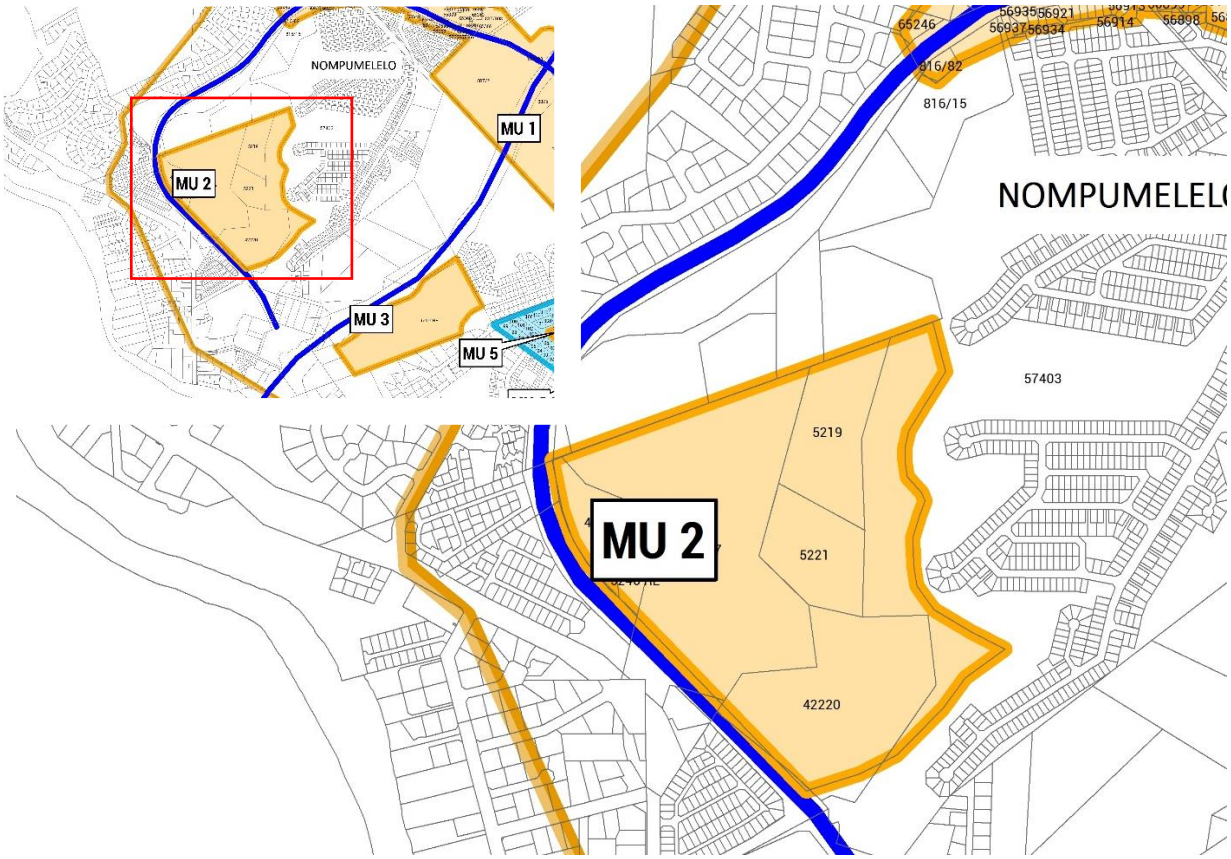
Palm Square

The Palm Square Property is zoned for Business Zone 1. It is predominantly an office park that caters for the upmarket offices market. It is promoted for the property to provide a variety of land uses. Restaurant activity and small-scale retail activity is promoted as it would complement the office development. This property, having been zoned for Business Zone 1, does not have any height or coverage restrictions, as per the BCMM Zoning Scheme.

Image of vehicular movement along Bonza Bay Road

MU 2: Nompumelelo South Mixed-use Precinct

MU 2 is located alongside the N6 National Road.



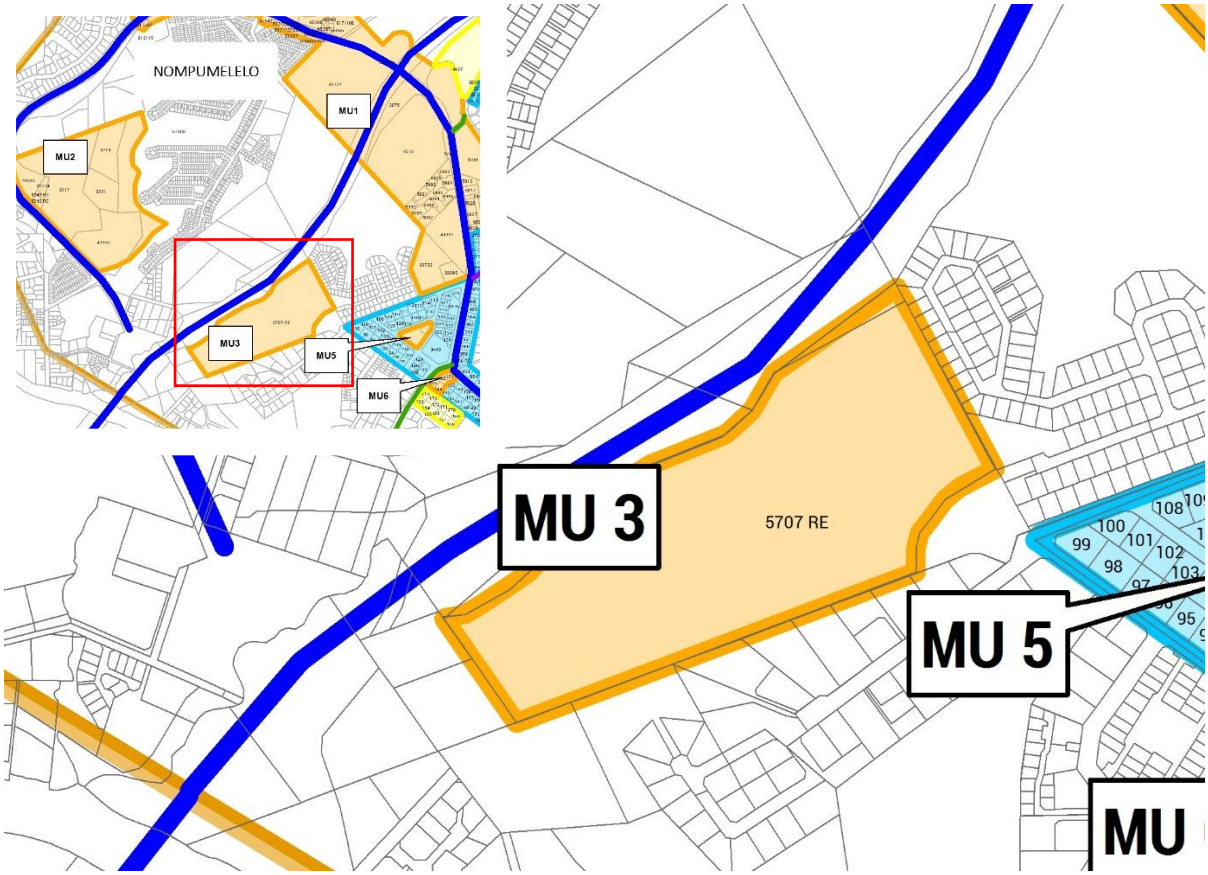
PLAN D 7. MU 2: Nompumelelo South Mixed-use Precinct

PREFERRED LAND USE
Business
Light Industry/Warehousing
High Density Residential

PROPOSED ZONING
Institutional Zone 1
Residential Zone 5
Industrial Zone 1

DESIRED SPATIAL OUTCOME
The desired spatial outcome for the precinct to be developed for Light industrial activity due to the property being located along the N6, with high density residential and business activity as an alternative.

MU 3: Institutional and Residential Mixed-Use Precinct



PLAN D 8. MU 3: Institutional and Residential Mixed-Use Precinct

PREFERRED LAND USE

Institutional

Medium Density Residential

PROPOSED ZONING

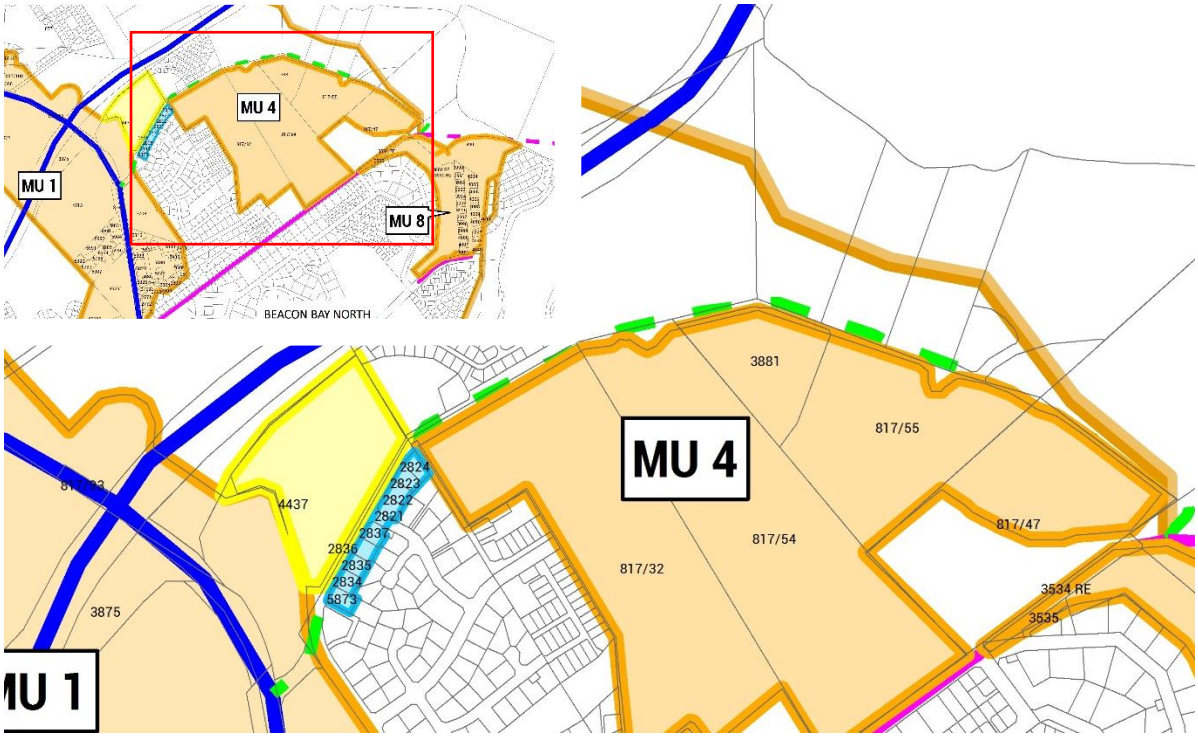
Institutional Zone 1

Residential Zone 2, 3, 4

DESIRED SPATIAL OUTCOME

The desired spatial outcome for the precinct is medium density residential activity such as town houses. Institutional activity and schools can be considered.

MU 4: Office and Residential Mixed-Use Precinct



PLAN D 9. MU 4: Office and Residential Mixed-Use Precinct

PREFERRED LAND USE

Retail/ Restaurant

High Density Residential

Office (Medical Preference)

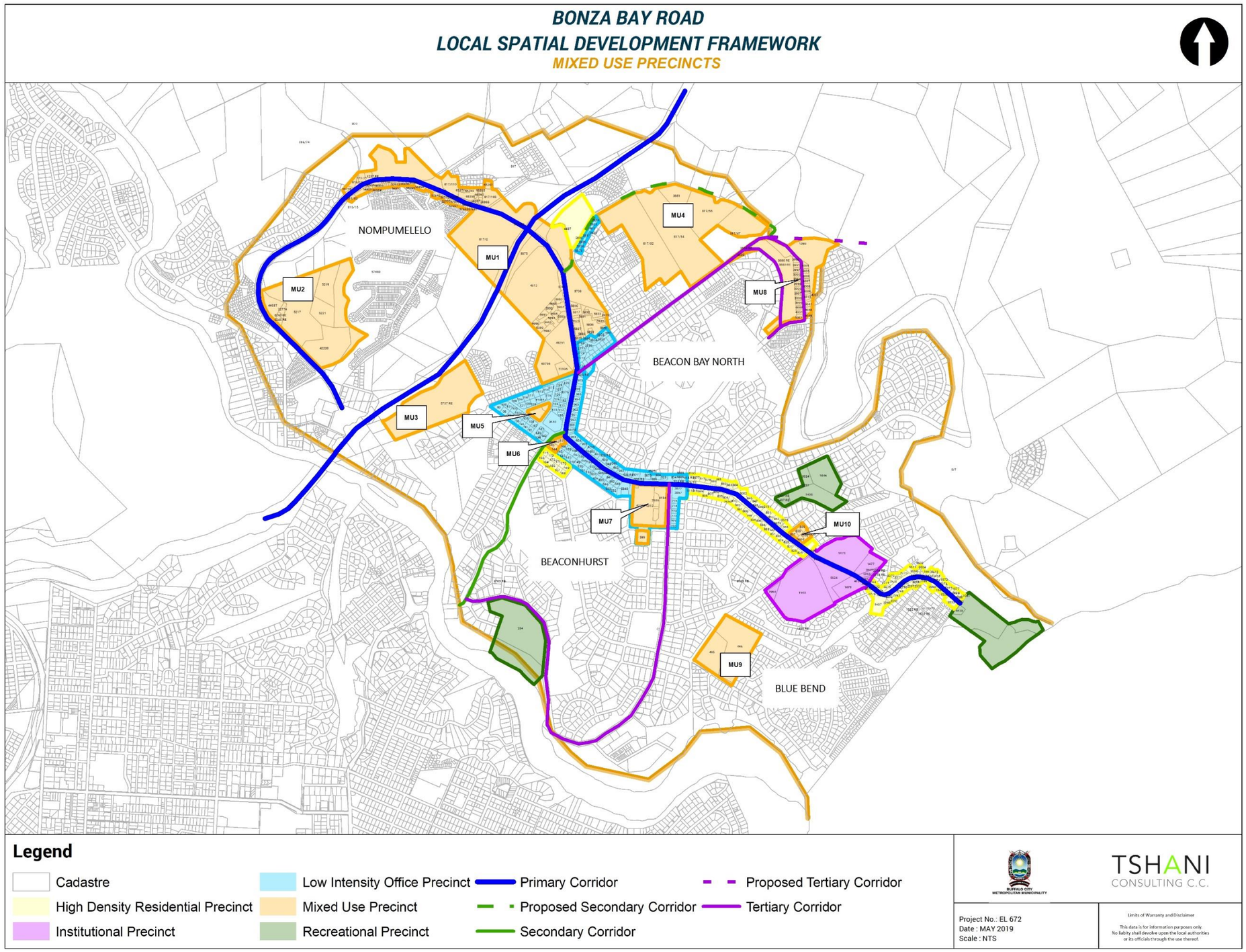
PROPOSED ZONING

Business 2

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome is a Mixed-use Precinct including Office and high-density residential activity which would support the proposed corridor linking Beacon Bay to Gonubie. The extension of Quenera Drive is a prominent proposed corridor. It is due to this that the activities proposed alongside should ensure that it aligns with this intensity. Thus, the proposed land uses for these parcels of land is mixed-use with the consideration of retail, office and residential in the form of high building density developments. An example of such developments would be the consideration of retail use at the ground floor of buildings, office usage on the 1st and 2nd floors and approximately 3 floors of residential above. This type of development allows for compact mixed use with a concept of live-work-play within a general area.

PLAN D 10. Mixed Use Precincts



D 3.4.2.

OFFICE PRECINCTS

LIO 1: Low Intensity Office Corridor: Bonza Bay Road

LIO 2: Low Intensity Office: Beaconhurst Drive

LIO 3: Low Intensity Office: South of The Hub

LIOM 1: Low Intensity Office with Medical Preference: Edge/Sherwood/Batting

LIOM 2: Low Intensity Office with Medical Preference: Quenera Drive

MU 6: Sherwood/Batting Mixed-Use Node

MU 7: Spargs Complex Mixed-Use Node

The Office precinct within the context of this study is the precinct in which Low Intensity Office use is proposed. Low Intensity Office is office use which has limited number of vehicles entering the site and which does not operate with much noise.

Low Intensity Office is specifically proposed for this study area as it is a predominantly residential area thus high impact office activity would disrupt this nature of residential activity.

There are mixed-Use sub-precincts are proposed within this general Office Precinct. This is due to the location of these sites and that this mixed-used activity would be suited within the proposed spaces.

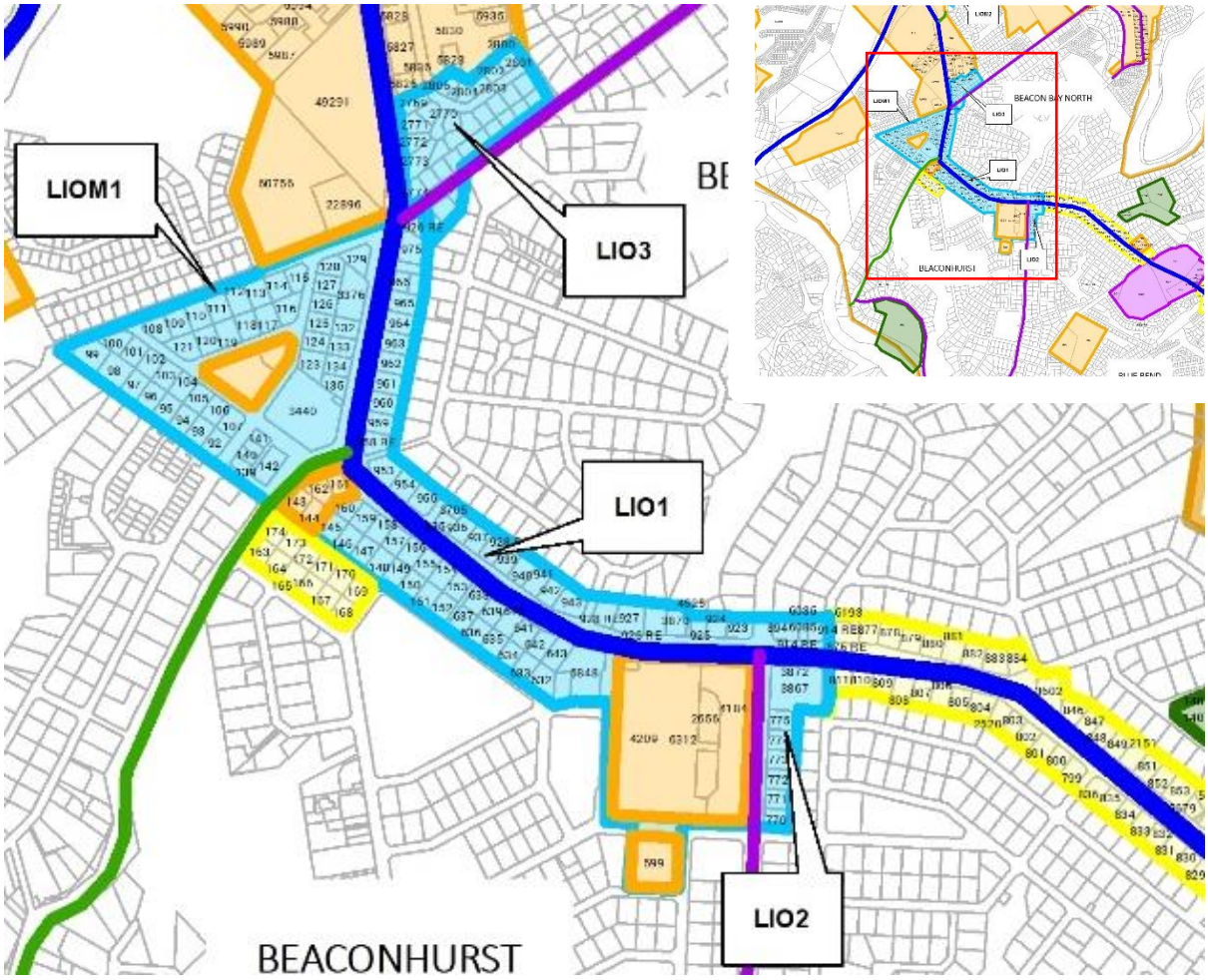
This precinct consists of a number of components. It is proposed that the current Low Intensity precinct be extended. The extended Office Precinct includes mixed use sub-precincts.

LIO 1: Low Intensity Office Corridor: Bonza Bay Road and Sherwood Road;

LIO 2: Low Intensity Office: Beaconhurst Drive

LIO 3: Low Intensity Office: South of The Hub

All 3 of these sub precincts have the same characteristics and thus are discussed together.



PLAN D 11. LIO 1, LIO 2, LIO 3

PREFERRED LAND USE
Low Intensity Office
Residential

PROPOSED ZONING
Business 4 (as per guidelines in Section E)

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome is to allow for more Low Intensity Office use within the area in a managed approach. Properties that fall within this category can be rezoned for Low Intensity office use but are required to have a residential component. *See Section E, Land Use Management Guidelines for detail. In terms of LIO 3, the office use in this space cannot have access from Bonza Bay Road. Development ca be consolidated at accessed through Stuart Star Crescent from Edge Road and Wild Rose Way.

With regards to LIO3, No individual access onto Bonza Bay Road. Development must be consolidated. No piecemeal development of office/retail/communal. If residential, can be done individually with Residential 4 with departure from minimum erf size. Except for Erf 2774, that has access onto Edge Road.

The following properties are excluded from this proposal:

- Erf 3440
- Erf 3867

LIOM 1: Low Intensity Office with a Medical Preference: Edge/Sherwood/Batting and; LIOM 2: Low Intensity Office with a Medical Preference: Quenera Drive

Both these proposed sub precincts have the same characteristics and thus are discussed together. LIOM 1 is one of two new proposed low intensity office precincts that are intended to respond to the need for medical offices in Beacon Bay. The mixed use component (MU5) in the centre of LOIM 1 will be discussed in the 'Developable Land Parcels" section as this land parcel is **state owned.**

PLAN D 12. LIOM 1, LIOM 2

PREFERRED LAND USE

Low Intensity Office (Medical Preference)

Residential

PROPOSED ZONING

Business 4 (as per guidelines in Section E)

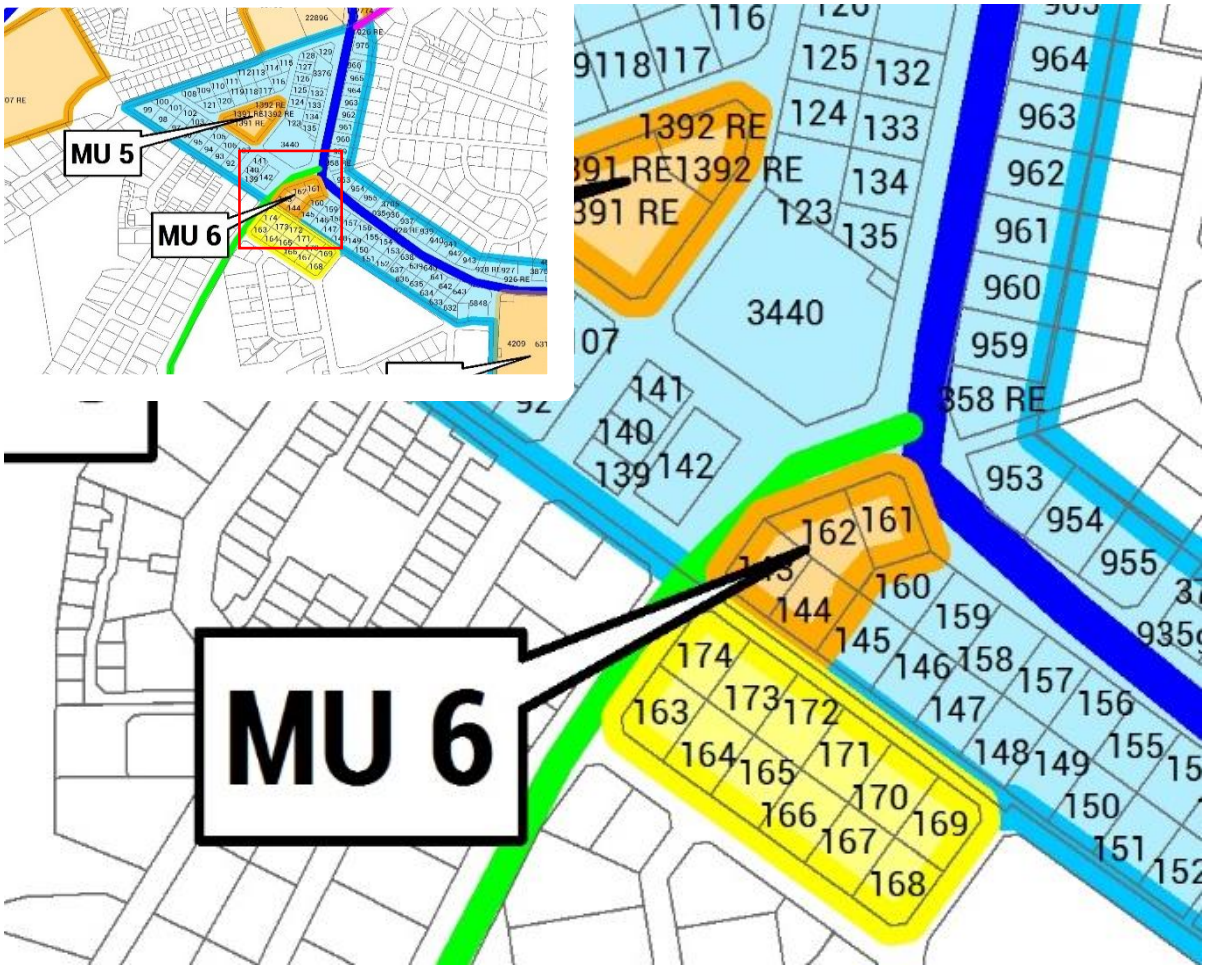
DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome is the accommodation of Low Intensity Office usage with LIOM 1 & 2 (Medical preference) to accommodate for the needs of medical practitioners to support the Beacon Bay Life Hospital. A residential component is a requirement. *See Section E, Land Use Management Guidelines for detail.

Exception of Erf 127 where said property can be rezoned to Institutional or Low Intensity Office

MU 6: Sherwood/Batting Mixed-Use Node

This proposed Mixed-Use Node is within the Bonza Bay Road Office Precinct. **Plan D-7 above highlights the properties that will comprise the node.**



PLAN D 13. Sherwood/Batting Mixed-Use Node

PREFERRED LAND USE
Office
Retail/ Restaurant/Coffee Shop
High Density Residential

ERVEN AFFECTED
Erf 161, Beacon Bay
Erf 162, Beacon Bay
Erf 143, Beacon Bay
Erf 144, Beacon Bay

PROPOSED ZONING

Only Business Zone 2 will be applicable within this node.

DESIRED SPATIAL OUTCOME

The properties which make up this node, are to be developed as one fully integrated mixed-use development with the focus being on retail, office and residential land uses. The preferred development model is the consolidation of all four erven into one integrated development

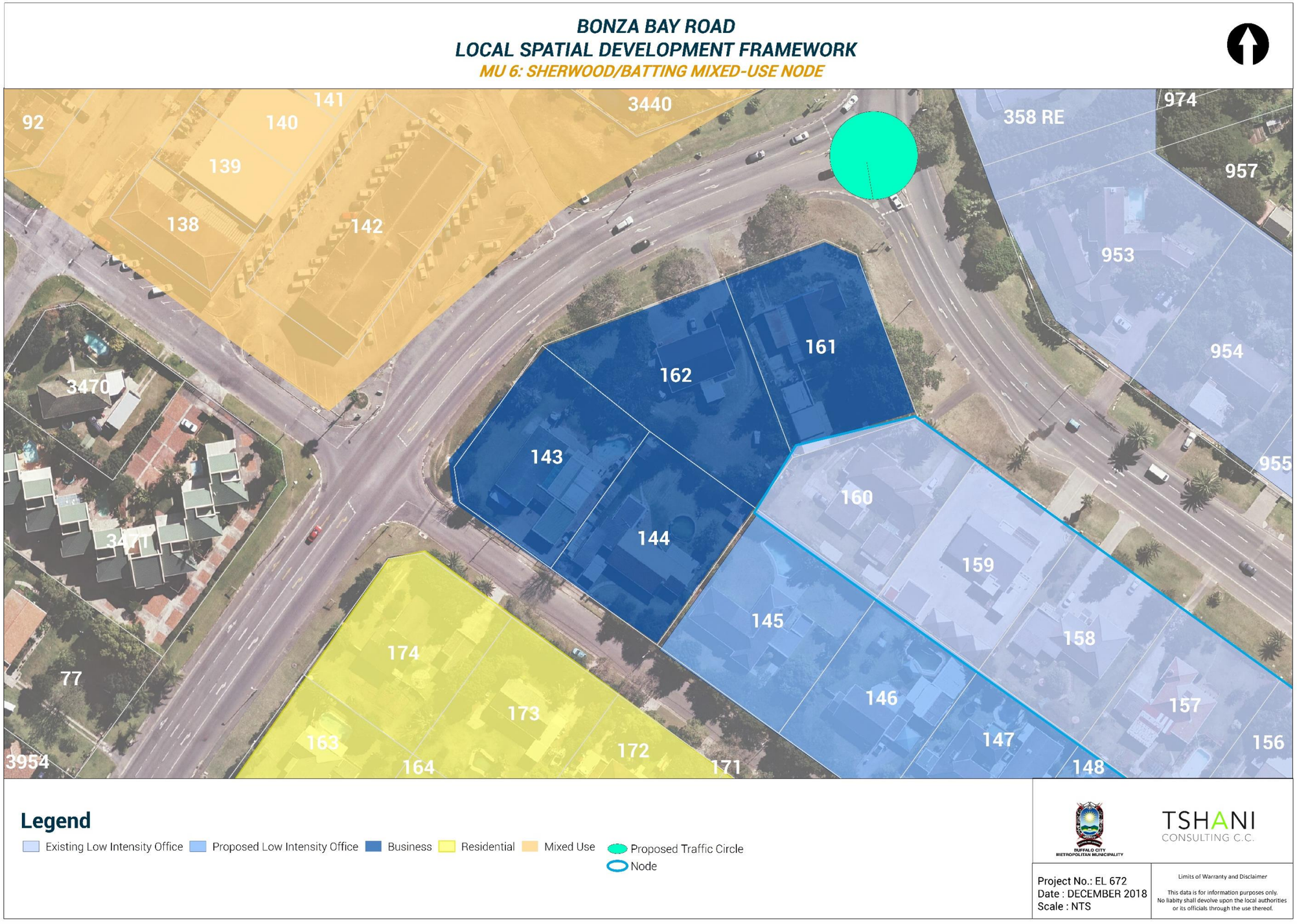
The following additional development requirements are applicable to this node/sub- precinct:

1. The entire development must be physically, functionally and aesthetically integrated across all four of the above erven;
2. The scale of the development is to be compatible with the surrounding neighbourhood.
3. A residential component must be part of the development and be consistent with the objectives of the mixed use concept.
4. Locate active uses such as retail shops and restaurants at the ground level to provide pedestrian interest.
5. The street view of the development is not to be visually dominated by vehicles and vehicle access points;
6. Windowless, blank or uninteresting walls of buildings facing the street frontage are to be avoided.
7. Single use buildings will not be considered to be in keeping with the integrated Mixed Use objective and aesthetic required within this node;
8. In the event that properties are individually developed, access servitudes may be required at the points mentioned below.
9. Parking is to be set at the rear of all buildings in such a way as to create an aesthetically pleasing and pedestrian friendly street frontage;
10. Parking can be shared amongst the various uses so long as there are no clashes with different uses and times of parking required. Shared parking is subject to be reviewed annually based on demand of usage;
11. Signage control level will be set at Minimum Control (See Signage Guidelines, Section E 5). Departures from the signage guidelines can only be considered based on suitable motivation to the satisfaction of the Council.
12. Access to the final development should not be taken from Batting Road.
13. Off-loading of goods for the commercial component is to be fully accommodated on site in a manner that does not affect traffic flow onsite or offsite.
14. Access to any proposed development can only be taken from erf 144 along the boundary with erf 145 and from erf 161 along the boundary with erf 160.

15. Departures from height building lines, coverage and floor area ratio can be considered if they serve to achieve the above desired outcomes.
16. Extensions to the node will not be considered until a successful outcome has been achieved on the proposed site.

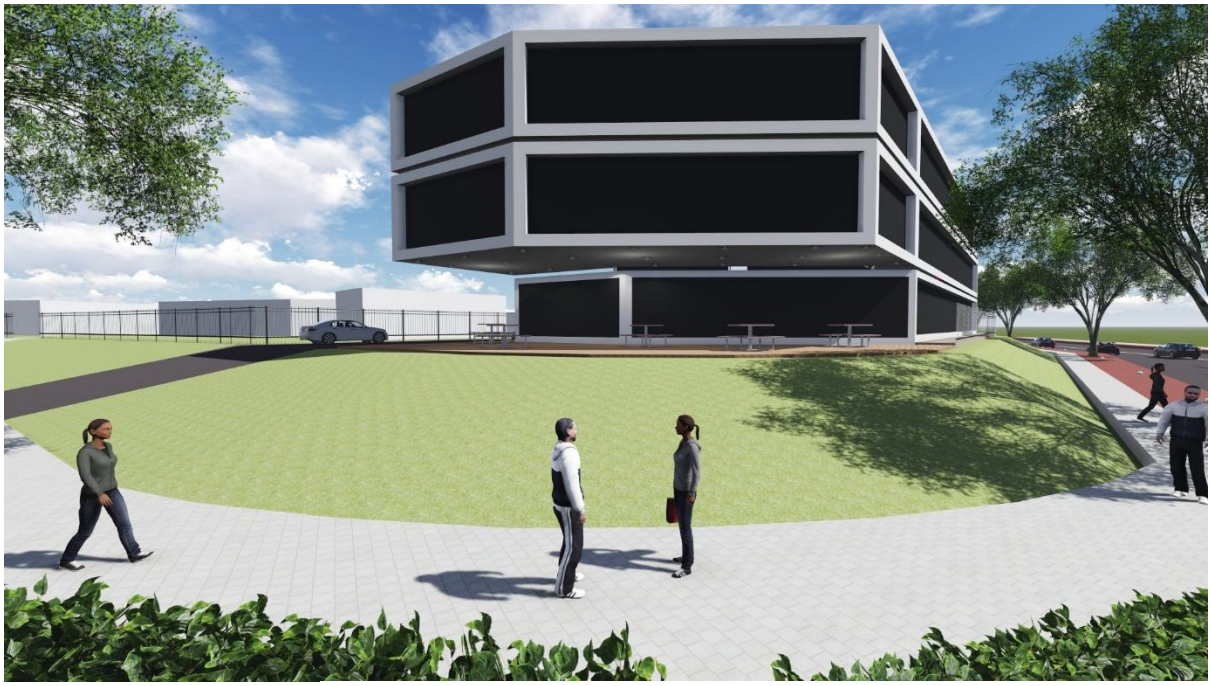
Bonza Bay Road and Batting Road intersection, with location of proposed mixed use node at bottom left of the image

PLAN D 14. MU 6: Sherwood/Batting Mixed Use Node



Artist impression of entrance into a mixed use complex. Entrance on Sherwood Avenue

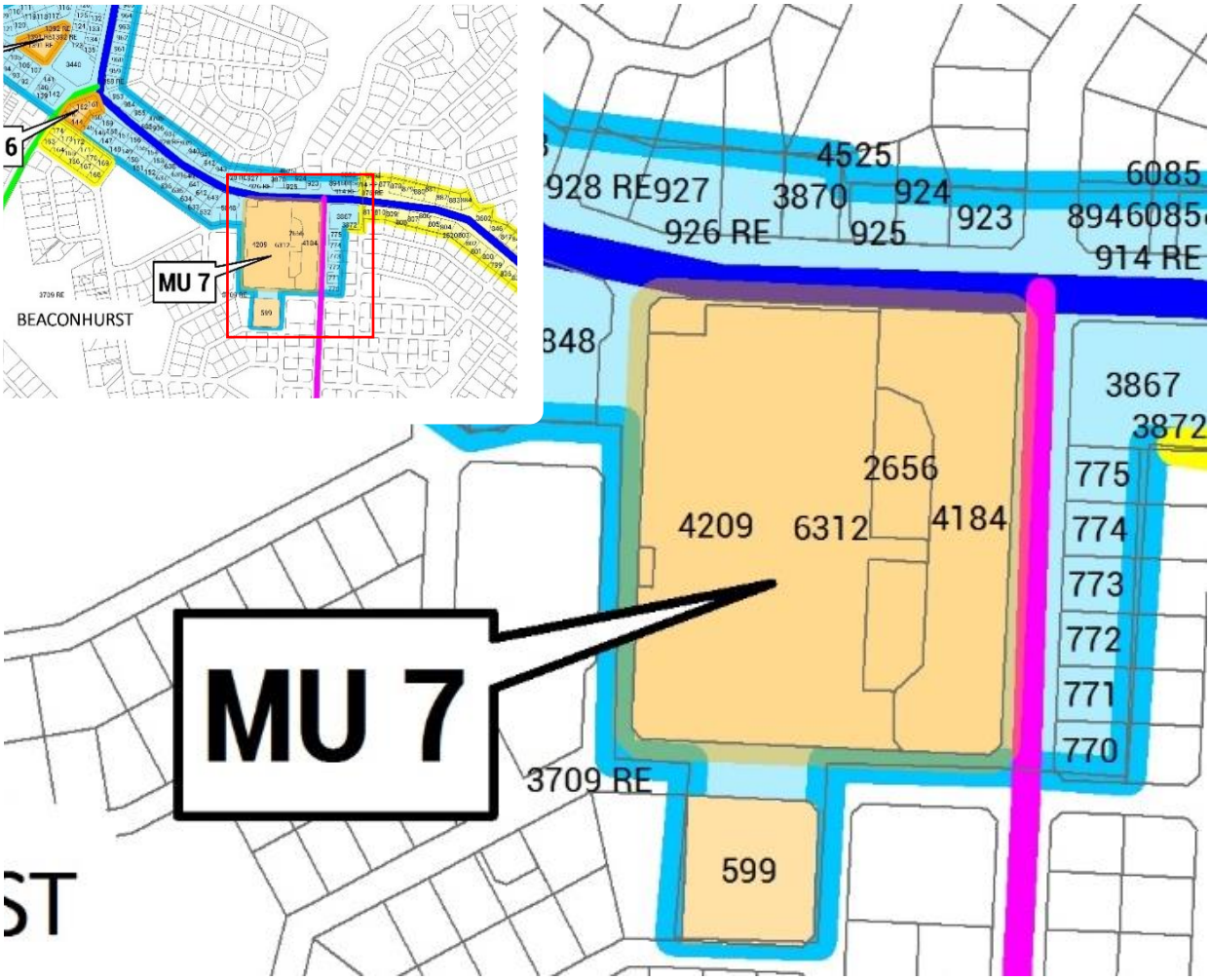
Artist impression of Mixed use complex



Artist impression of Mixed use complex with outside seating

Artist impression of Mixed use complex – Sherwood Avenue

MU 7: The Spargs Complex Mixed-Use Node



PLAN D 15. MU 7: The Spargs Complex Mixed-Use Node

PREFERRED LAND USE

High Density Residential

Retail/ Restaurant, Coffee Shop

Office

ERVEN AFFECTED

Erf 6312, Beacon Bay (BUS 1)

Erf 599, Beacon Bay (AUT 2)

PROPOSED ZONING

Erf 599 - Business 2 (with a provision for Extra Height)

DESIRED SPATIAL OUTCOME

The Spargs complex is situated in a prime position along Bonza Bay Road, as the complex is surrounded by residential and business activity. The node is synonymous with its retail activity and Engen Petrol Filling Station. This activity node also includes a coffee shop and a restaurant. This space is zoned for Business Zone 1 purposes, where a mix of land uses are promoted. The property is ideally located at the highest point of Beacon Bay where, if developed, a few storeys of height and angled in a specific direction, one would be able to experience amazing views of Bonza Bay Beach and/ the East London Coastline. These developments could be utilised for high-end residential accommodation.

A second restaurant or a coffee shop is also encouraged for this space.

The following additional development requirements are applicable to this node/sub- precinct (Erf 599):

1. The scale of the development is to be compatible with the surrounding neighbourhood.
2. A residential component must be part of the development and be consistent with the objectives of the mixed use concept.
3. Shops and restaurants are not to face onto the streets with existing residential uses.
4. Locate active uses such as retail shops and restaurants at the ground level to provide pedestrian interest.
5. The street view of the development is not to be visually dominated by vehicles and vehicle access points.
6. Windowless, blank or uninteresting walls of buildings facing the street frontage are to be avoided.
7. Single use building will not be considered to be in keeping with the integrated Mixed use objective and aesthetic required within this node;
8. Parking is to be set at the rear of all buildings in such a way as to create an aesthetically pleasing and pedestrian friendly street frontage;
9. Signage control level will be set at Minimum Control (see Signage Guidelines, section E5).
10. Off-loading of goods for the commercial component is to be fully accommodated on site in a manner that does not impact on the existing adjacent residential area.
11. Departure from height building lines, coverage and floor area ratio can be considered if they serve to achieve the above desire outcomes.

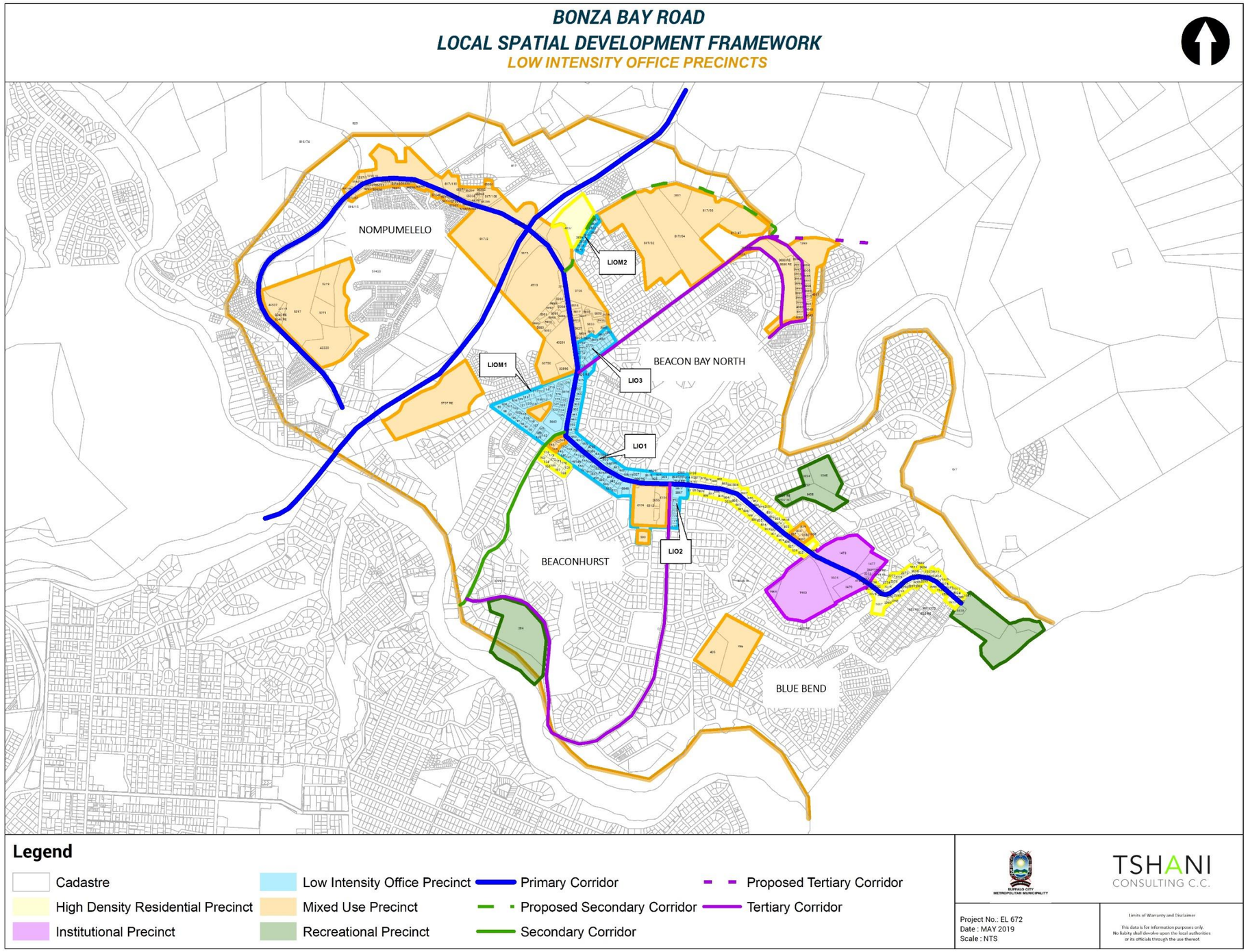
Development is not to isolate individual erven in the node where owners do not wish to participate in the development.

The Spargs Complex

Artist impression of the Spargs Complex and Bonza Bay Road including intersection leading into the Spargs Complex and design feature

Artist impression of design feature to be accommodated on Erf 1404 RE which would add ambiance to the Complex and would beautify this intersection

PLAN D 16. Low Intensity Office Precincts



D 3.4.3.

HIGH DENSITY RESIDENTIAL PRECINCTS

HDR 1: High Density Residential: Upper Bonza Bay Road

HDR 2: High Density Residential: Lower Bonza Bay Road

HDR 3: High Density Residential: Sherwood Avenue

MU 10: OK Supermarket mini-node

High density Residential is the promotion of more compact residential development. An example of such development is town house developments or flats. High density residential wold not be the standard one house-one plot type of development.

High density residential activity can act as a buffer between Low Intensity Office and Low Density residential (one house-one plot) as due to the increase in density, there is a higher influx of people, and further due to it being residential activity, it is not as intense as office use and is thus acts as the buffer.

The increasing of densities is promoted due to the creation of a more compact city where a variety of land uses are able to be easily access from another.

Four Higher Density Residential precincts situated along the two main Corridors are proposed:

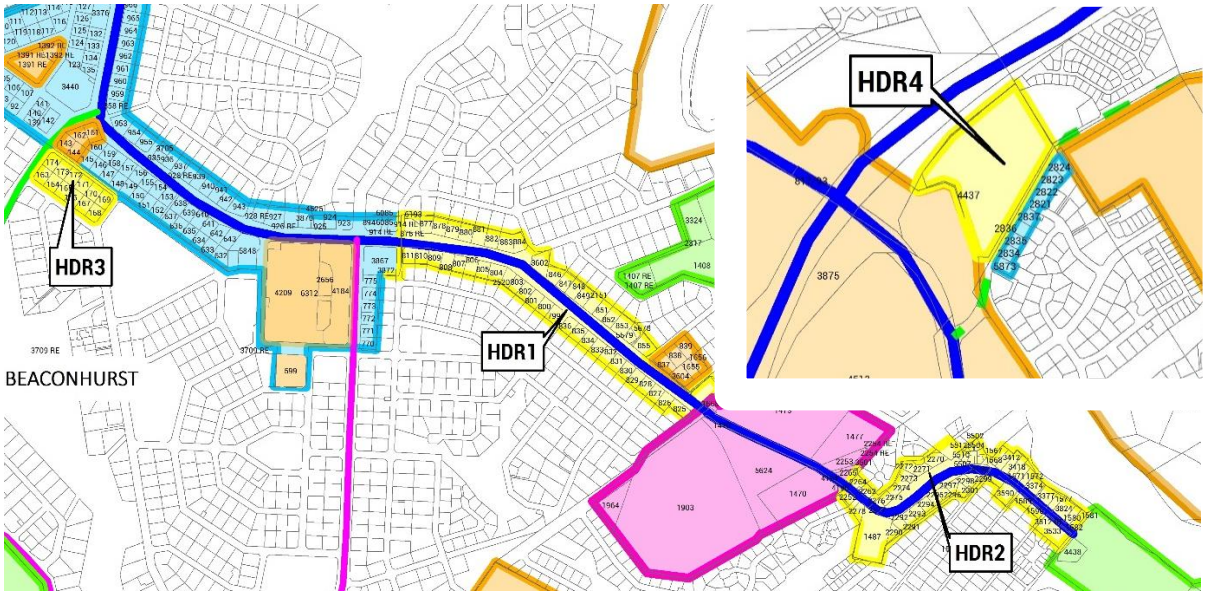
HDR 1: High Density Residential Upper Bonza Bay Road

HDR 2: High Density Residential Lower Bonza Bay Road

HDR 3: High Density Residential: Sherwood Avenue

HDR 4: High Density Residential: Quenera Drive (See state-owned land section)

All of these sub precincts have the same characteristics and thus are discussed together



PLAN D 17. HDR 1, HDR 2, HDR 3, HDR 4

PREFERRED LAND USE

High Density Residential

PROPOSED ZONING

Residential Zone 4 (HDR1 – 3) Maximum 2 storeys

Residential Zone 5 (HDR 4)

DESIRED SPATIAL OUTCOME

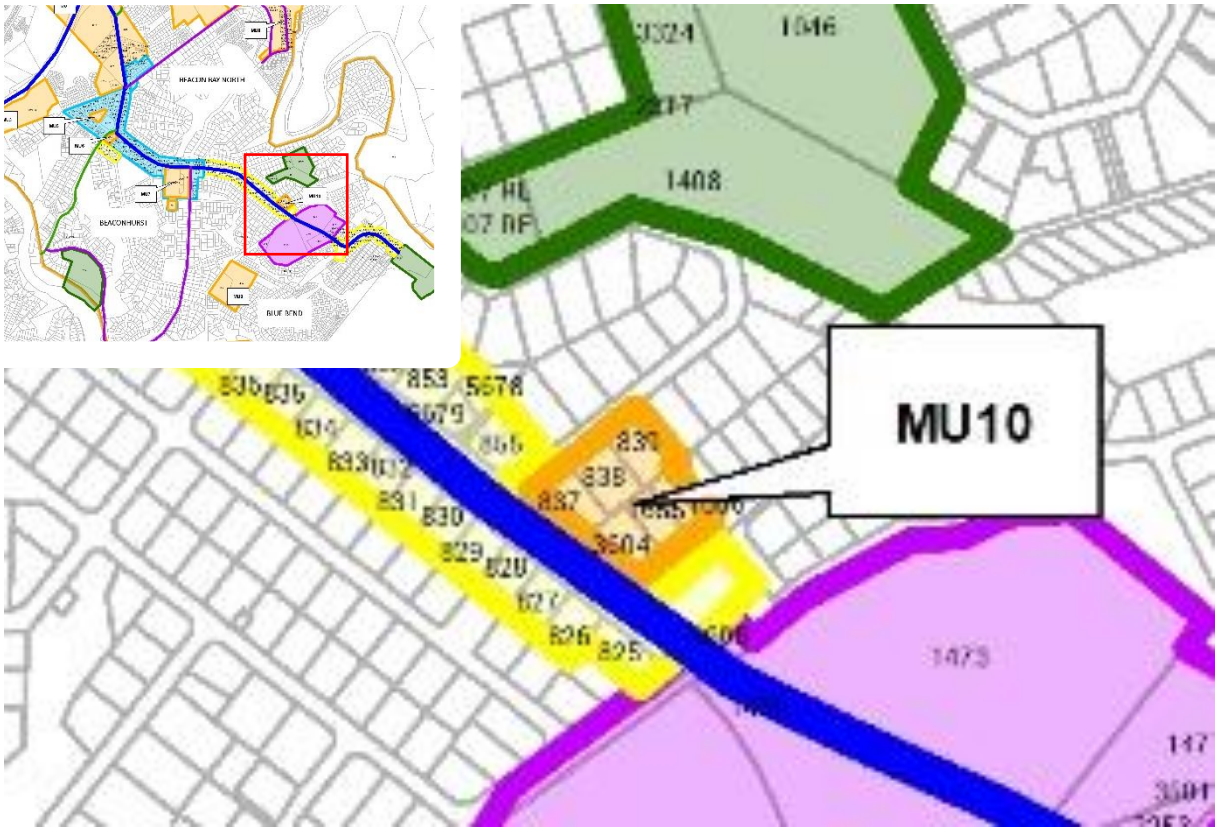
Gradual Densification along Bonza Bay Road in support of public transport. The intention is that this process is not to have a negative impact on the liveability and residential amenity of the surrounding erven.

Development criteria:

1. Departures from the minimum erf size of 2000m^2 as required in terms of the Zoning Scheme will be approved subject to a careful assessment of the comments/objections of neighbours
2. Consent from neighbours is to be sought at the pre-submission phase of the application
3. Departures from the side and rear building lines are not encouraged.

MU 10: OK Supermarket mini node

This proposed Mixed-Use Node is within the Bonza Bay Road High Density Housing Precinct. Plan D-7 above highlights the properties that will comprise the node



PLAN D 18. MU 10: OK Supermarket mini-node

PREFERRED LAND USE
Business
High Density Residential

PROPOSED ZONING
Business Zone 2
Residential Zone 4/5

PRROPERTIES AFFECTED	FUTURE LAND USE
Erf 3604	Existing OK Supermarket
Erf 1655	Expansion of OK Supermarket
Erf 1656, Erf 839, Erf, 838, Erf 837	High Density Residential

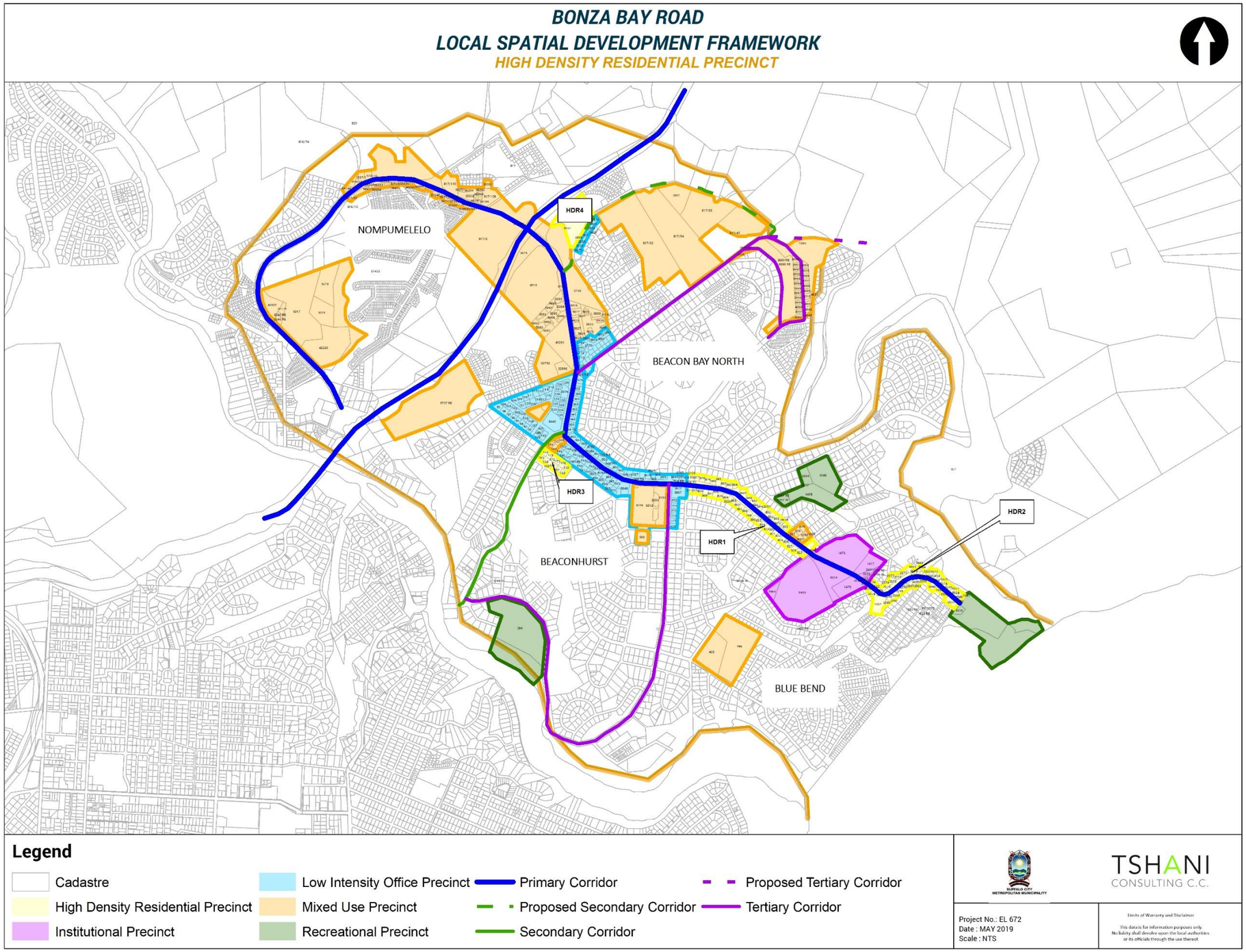
DESIRED SPATIAL OUTCOME

The desired spatial outcome for sub precinct MU 10 is for the expansion of the existing commercial component to be contained and that the node transition to a mixed use node containing predominantly higher density residential uses. The properties which make up this node, are preferably to be developed as one fully integrated mixed-use development with the focus being on retail, office and residential land uses.

The following additional development requirements are applicable to this node/sub- precinct:

1. The entire development must be physically, functionally and aesthetically integrated across all six of the above erven;
2. The scale and location of the development is to be compatible with the surrounding neighbourhood.
3. A residential component must be part of the development and be consistent with the objectives of the mixed use concept.
4. Locate active uses such as retail shops and restaurants at the ground level to provide pedestrian interest.
5. The street view of the development is not to be visually dominated by vehicles and vehicle access points;
6. Windowless, blank or uninteresting walls of buildings facing the street frontage are to be avoided.
7. Single use buildings will not be considered to be in keeping with the integrated Mixed Use objective and aesthetic required within this node;
8. In the event that properties are individually developed, access servitudes may be required at the points mentioned below.
9. Parking is to be set at the rear of all buildings in such a way as to create an aesthetically pleasing and pedestrian friendly street frontage;
10. Signage control level will be set at Minimum Control (See Signage Guidelines, Section E 5). Departures from the signage guidelines can only be considered based on suitable motivation to the satisfaction of the Council.
11. Access to the final development should not be taken from Bonza Bay Road
12. Off-loading of goods for the commercial component is to be fully accommodated on site in a manner that does not affect traffic flow on or offsite.
13. Departures from height building lines, coverage and floor area ratio can be considered if they serve to achieve the above desired outcomes.
14. Extensions to the node will not be considered until a successful outcome has been achieved on the identified sub- precinct.
15. Development is not to isolate individual erven in the node where owners do not wish to participate in the development.

PLAN D 19. High Density Residential Precincts



D 3.4.4.

INSTITUTIONAL PRECINCT

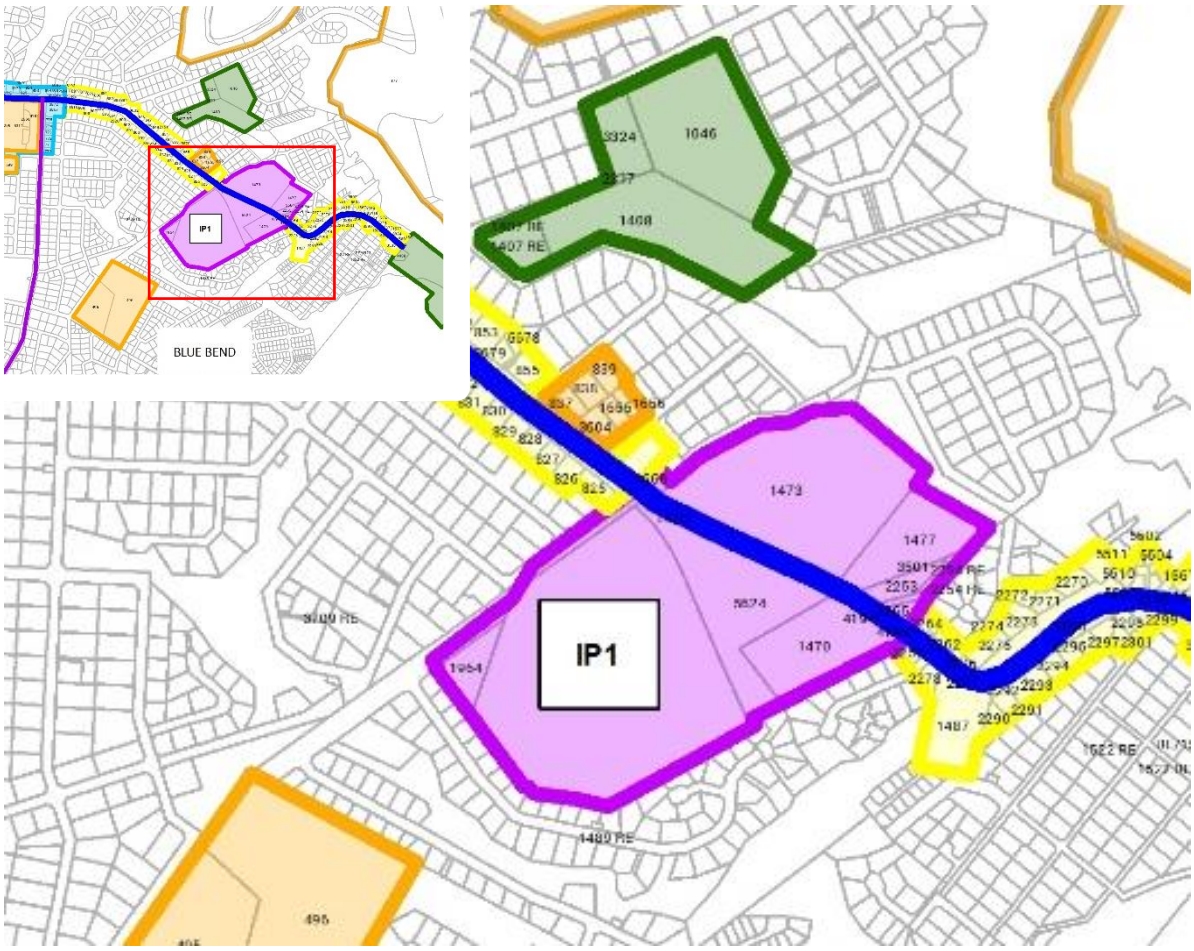
IP1: Institutional: Retirement Homes and School

The Institutional Precinct comprises of education facilities and retirement homes. Institutional use is the use intended for social or welfare or for the administration thereof.

The Institutional Precinct along Bonza Bay Road is between residential activity.

The Institutional Precinct includes higher density residential, with the focus on retirement homes. It also accounts for frail care facilities as well as proposals for expansion of this land use as well as the use of Schooling.

IP1: Institutional: Retirement Homes and School



PLAN D 20. IP1: Institutional: Retirement Homes and School

PREFERRED LAND USE

School

Retirement Complex

High Density Housing

PROPOSED ZONING

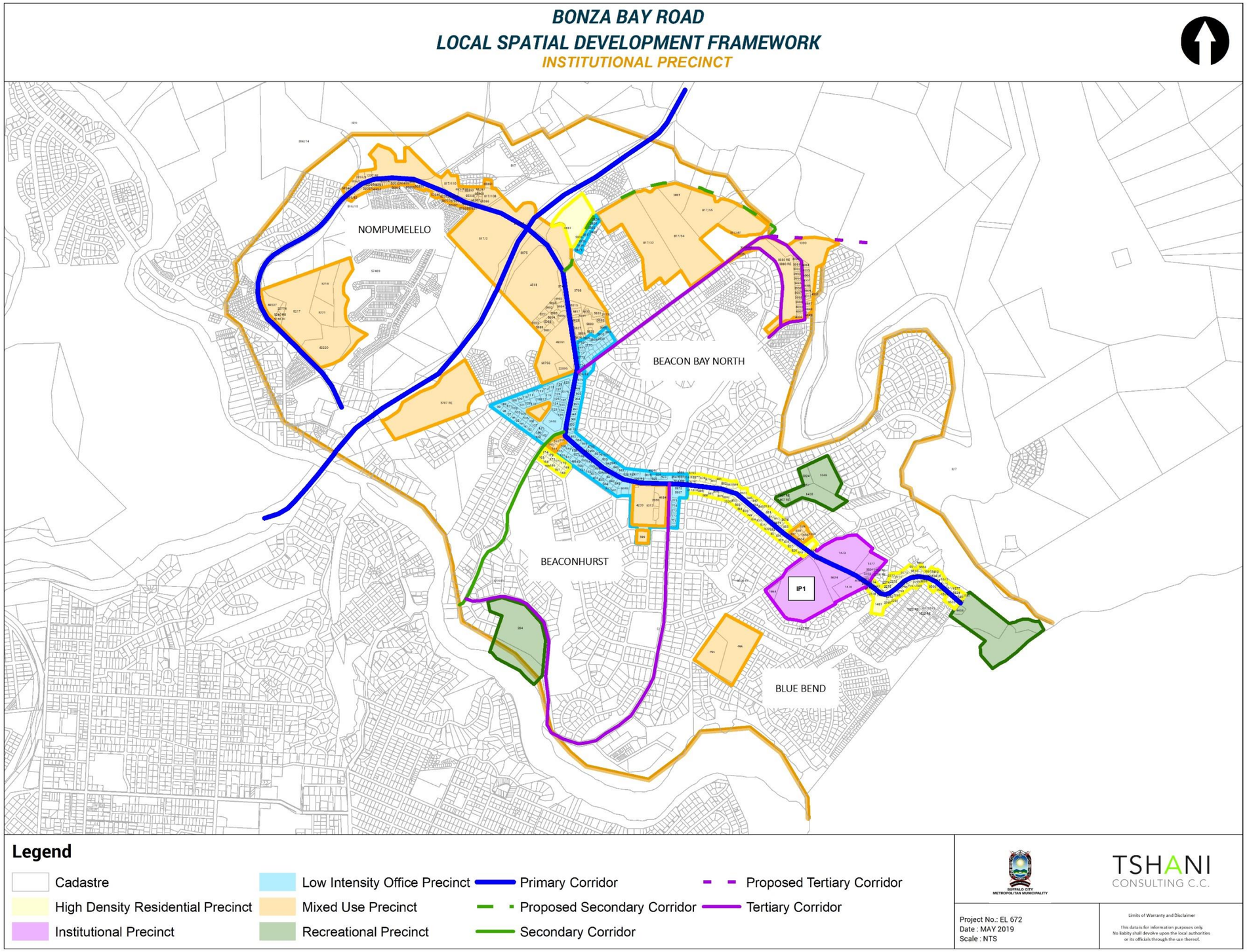
Institutional Zone 1 & 3

Residential 4 and 5

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome for this precinct is to allow for the expansion of Kennersley Park; to accommodate education facilities to support the residential activity throughout the study area. High density residential in also regarded as a suitable land use within this precinct.

PLAN D 21. Institutional Precincts



D 3.4.5.

RECREATION PRECINCT

All Recreational Sub-precincts are municipal and state-owned land parcels and are thus discussed in Section D 4.

Recreation activity can be active or passive. Active recreation is a space were active or sporting recreational activities can occur such as running, cycling, or playing any other sport. A space of passive recreation is where activities such as picnics, or parks, etc.

D4.

MUNICIPAL AND STATE-OWNED DEVELOPABLE LAND PARCELS

MU 5: Vacant Land Parcel: Edge/Sherwood Batting

MU 8: Waste Recycling Centre

MU 9: Institutional and Residential Mixed-Use Precinct

HDR 4: High Density Residential: Quenera Drive

REC 1: Bonza Bay Beach Recreational Area

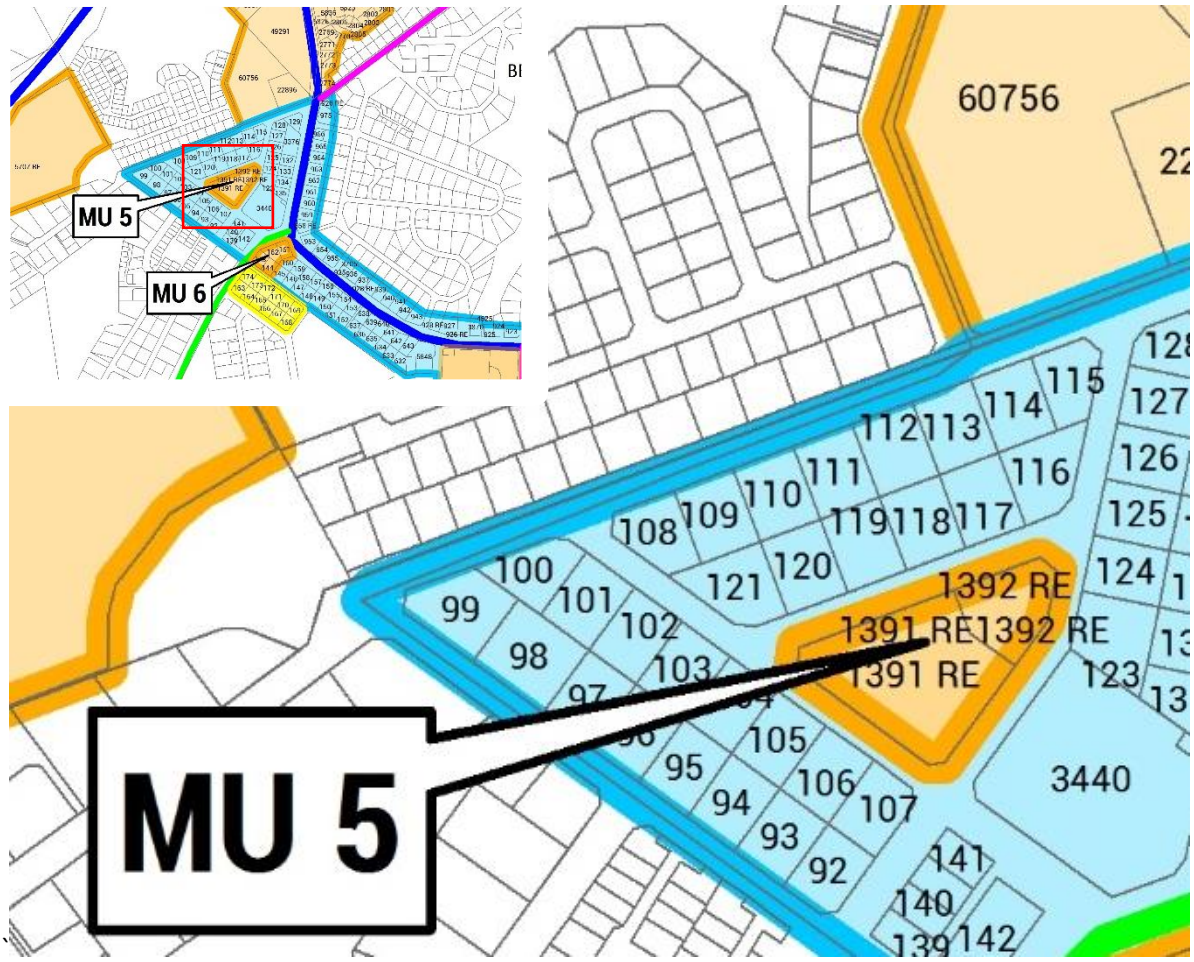
REC 2: Adjacent Bonza Bay Sports Club

REC 3: Nature Reserve

There are various vacant and unused developable land parcels along the Bonza Bay Corridor that have the potential to ensure positive growth of the area. These are discussed below.

There are various portions of vacant land dedicated for mixed use developments. The intensity or prominent land use differs from each portion depending on its location, however, the common land use proposed for the larger portions of developable portions is the accommodation of higher density residential use.

MU 5: Vacant Vacant Land Parcel: Edge/Sherwood/Batting



PLAN D 22. MU 5: Vacant Vacant Land Parcel: Edge/Sherwood/Batting

PREFERRED LAND USE

Coffee Shop

High Density Residential

PROPOSED ZONING

Business Zone 2

Residential Zone 5

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome is for the inclusion of a coffee shop and high density residential in the form of flats can be considered. The surrounding preferred land use is office with a medical preference.

The following additional development requirements are applicable to this node/sub- precinct:

1. The entire development must be physically, functionally and aesthetically integrated across all six of the above erven;
2. The scale and location of the development is to be compatible with the surrounding neighbourhood.
3. A residential component must be part of the development and be consistent with the objectives of the mixed use concept.
4. Locate active uses such as retail shops and restaurants at the ground level to provide pedestrian interest.
5. The street view of the development is not to be visually dominated by vehicles and vehicle access points;
6. Windowless, blank or uninteresting walls of buildings facing the street frontage are to be avoided.
7. Single use buildings will not be considered to be in keeping with the integrated Mixed Use objective and aesthetic required within this node;
8. In the event that properties are individually developed, access servitudes may be required at the points mentioned below.
9. Parking is to be set at the rear of all buildings in such a way as to create an aesthetically pleasing and pedestrian friendly street frontage;
10. Signage control level will be set at Minimum Control (See Signage Guidelines, Section E 5). Departures from the signage guidelines can only be considered based on suitable motivation to the satisfaction of the Council.
11. Access to the final development should not be taken from Bonza Bay Road
12. Off-loading of goods for the commercial component is to be fully accommodated on site in a manner that does not affect traffic flow on or offsite.
13. Departures from height building lines, coverage and floor area ratio can be considered if they serve to achieve the above desired outcomes.
14. Extensions to the node will not be considered until a successful outcome has been achieved on the identified sub- precinct.

Development is not to isolate individual erven in the node where owners do not wish to participate in the development.

MU 8: Waste Recycling Centre

*See plan below

SYMBOL	PREFERRED LAND USE
	Waste Recycling Centre
	Light Industry
	Business
	High Density Residential

PROPOSED ZONING
Industrial Zone 1
Residential Zone 5
Business Zone 2

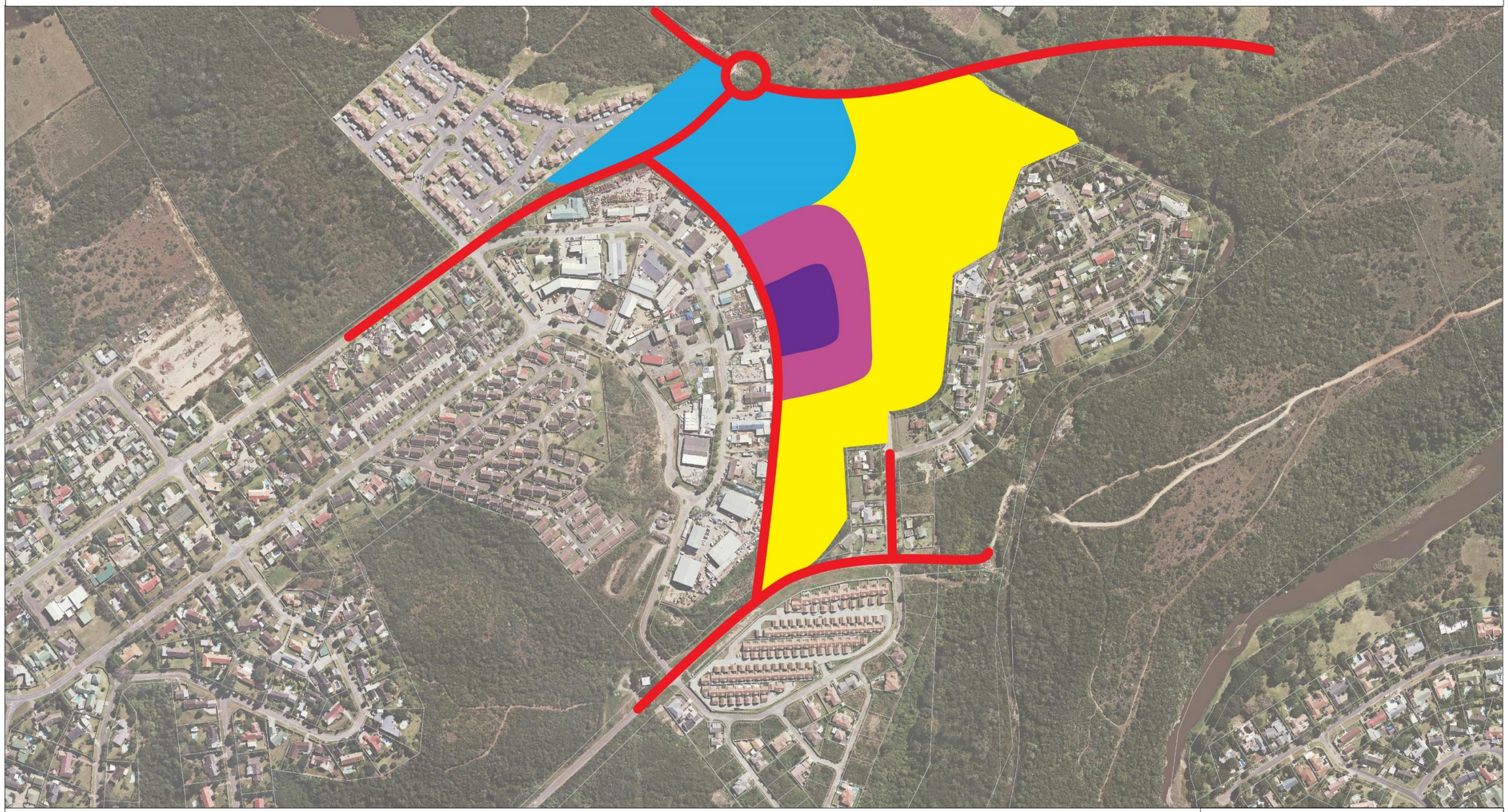
DESIRED SPATIAL OUTCOME

A proposal for industrial/warehousing is, located north east of the of the study area. A waste site is located within this region. The warehousing proposal acts as a buffer to the waste site. This site could potentially be subdivided into smaller portions for the use of Industrial or warehousing activity.

Further past the warehousing, is a proposal for higher density residential and business activity.

PLAN D 23. MU 8: Waste Recycling Centre

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
MU 8 - WASTE RECYCLING SITE



Legend

- Tertiary Corridor
- Business Zone
- Light Industry/Warehouse
- Waste Cycling Centre
- Medium Density Residential

BUFFALO CITY METROPOLITAN MUNICIPALITY

tshani CONSULTING CC

Project No.: EL 672
Date : JULY 2018
Scale : NTS

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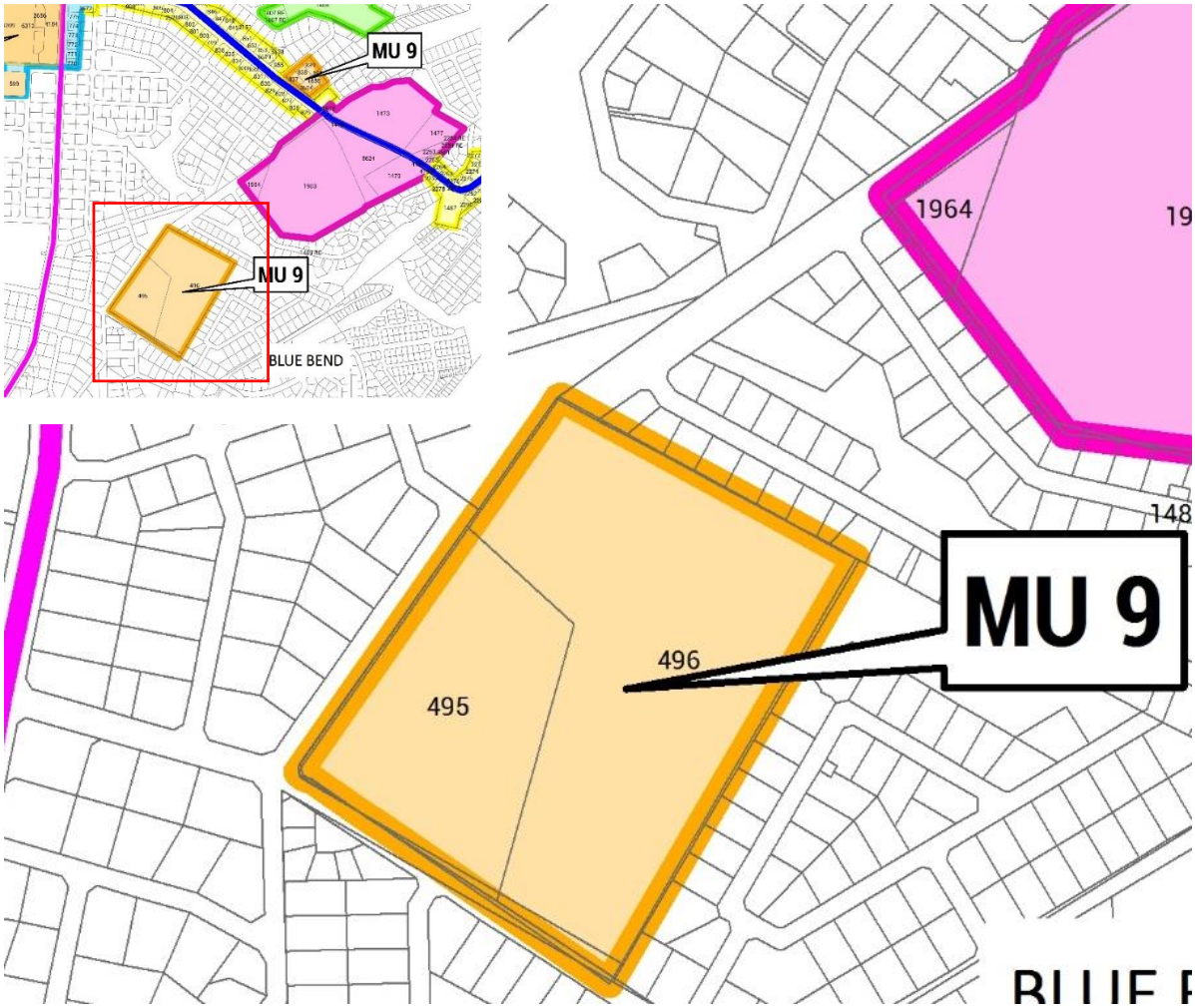
MU 9: State-Owned Institutional and Residential Mixed-use Precinct



PLAN D 24. MU 9: State-Owned Institutional and Residential Mixed-use Precinct

PREFERRED LAND USE

Institutional (school)

High Density Residential

PROPOSED ZONING

Institutional Zone 1

Residential Zone 5

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome is Mixed use activity with schooling and high-density residential activity.

HDR 4: High Density Residential: Quenera Drive

PLAN D 25. HDR 4: High Density Residential: Quenera Drive

PREFERRED LAND USE

High Density Residential

PROPOSED ZONING

Residential Zone 4 (HDR1 – 3) Maximum 2 storeys

Residential Zone 5 (HDR 4)

DESIRED SPATIAL OUTCOME

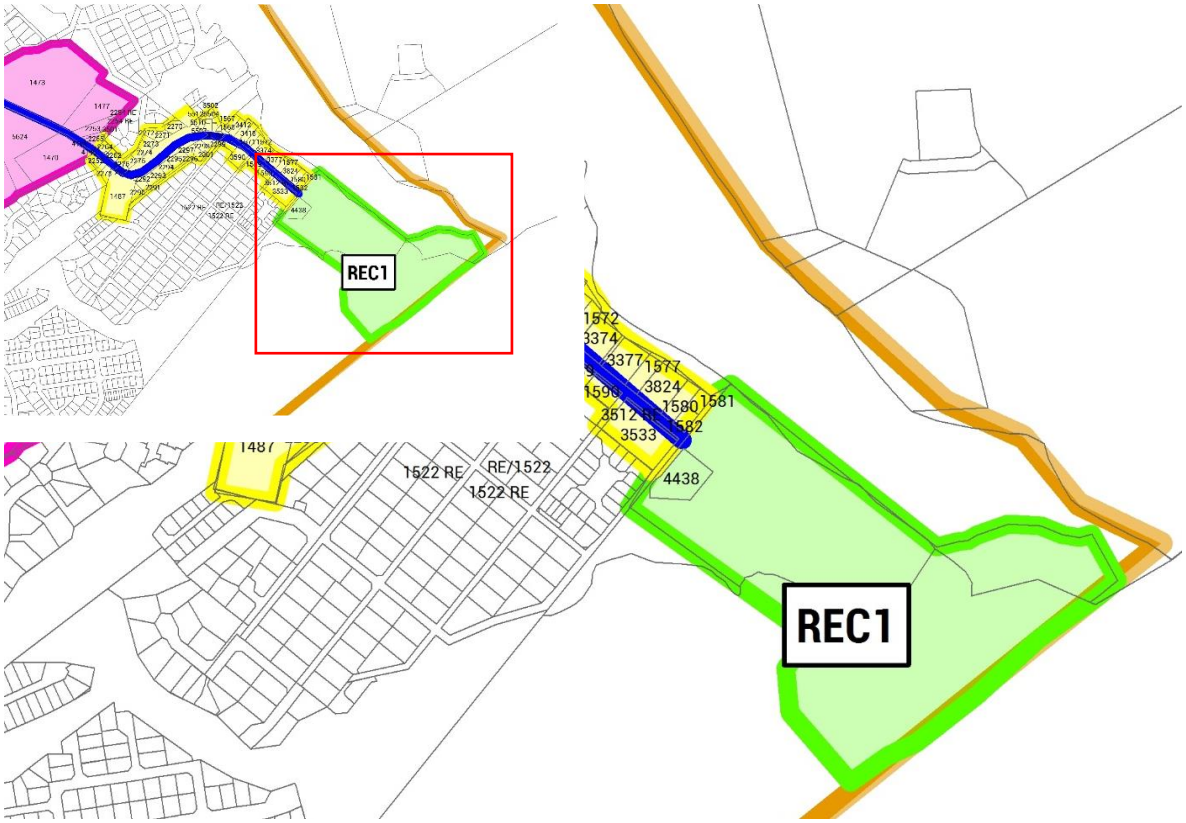
Gradual Densification along Bonza Bay Road in support of public transport. The intention is that this process is not to have a negative impact on the liveability and residential amenity of the surrounding erven.

Development criteria:

1. Departures from the minimum erf size of 2000m2 as required in terms of the Zoning Scheme will be approved subject to a careful assessment of the comments/objections of neighbours
2. Consent from neighbours is to be sought at the pre-submission phase of the application
3. Departures from the side and rear building lines are not encouraged.

The beach space is aimed to provide for the passive recreation for the public. It is proposed for this space to provide for passive recreational needs such as the accommodation of benches, braai facilities, shade, lighting and bins. A pedestrian walkway is proposed to be located from the park/braai space through to the beach, where appropriate and sufficient lighting is promoted.

REC 1: Bonza Bay Recreation Area



PLAN D 26. REC 1: Bonza Bay Recreation Area

PREFERRED LAND USE
Open Space
Passive Recreation

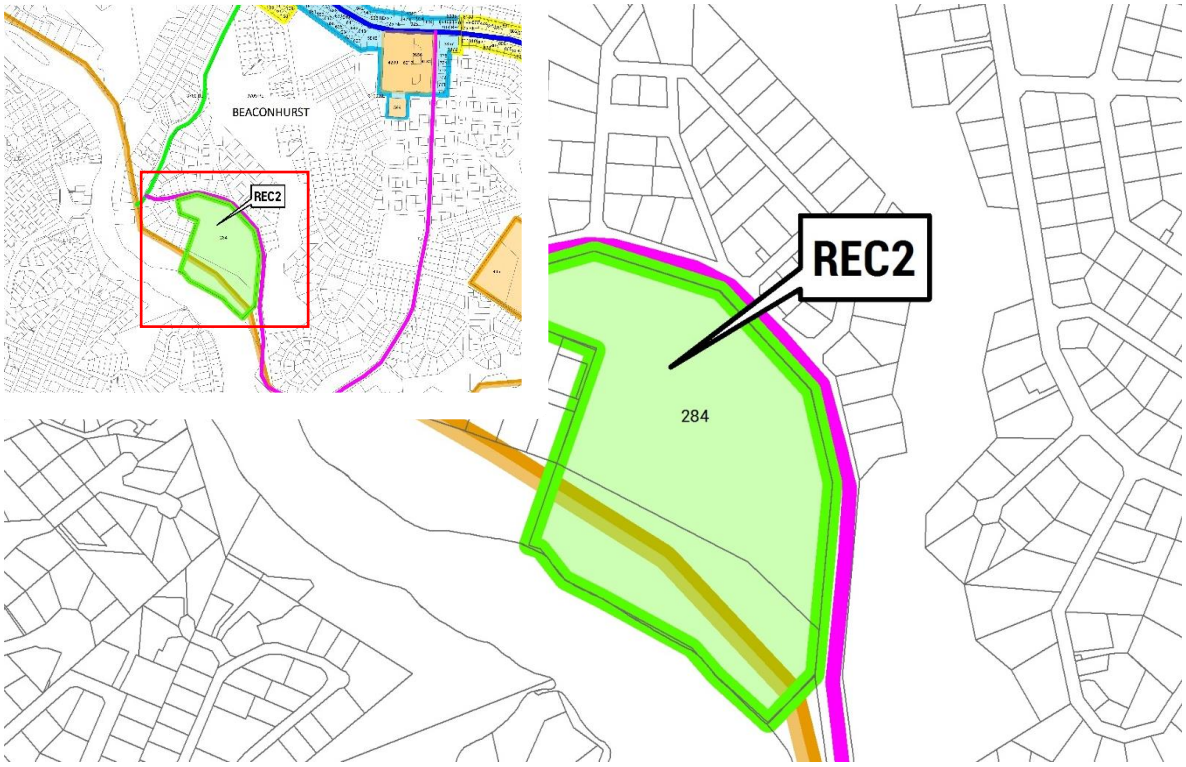
PROPOSED ZONING
Open Space Zone I

DESIRED SPATIAL OUTCOME
The recreation space is aimed to provide for the passive recreation for the public. It is proposed for this space to provide for passive recreational needs such as the accommodation of benches, braai facilities, shade, lighting and bins. A pedestrian walkway is proposed to be located from the park/braai

space through to the beach, where appropriate and sufficient lighting is promoted. The following will be looked at for this space:

1. Fencing to protect the adjacent bush from being stripped for firewood;
2. Upgrading Beach Facilities.

REC 2: Adjacent Bonza Bay Sports Club



PLAN D 27. REC 2: Adjacent Bonza Bay Sports Club

PREFERRED LAND USE

Active/Passive Recreation

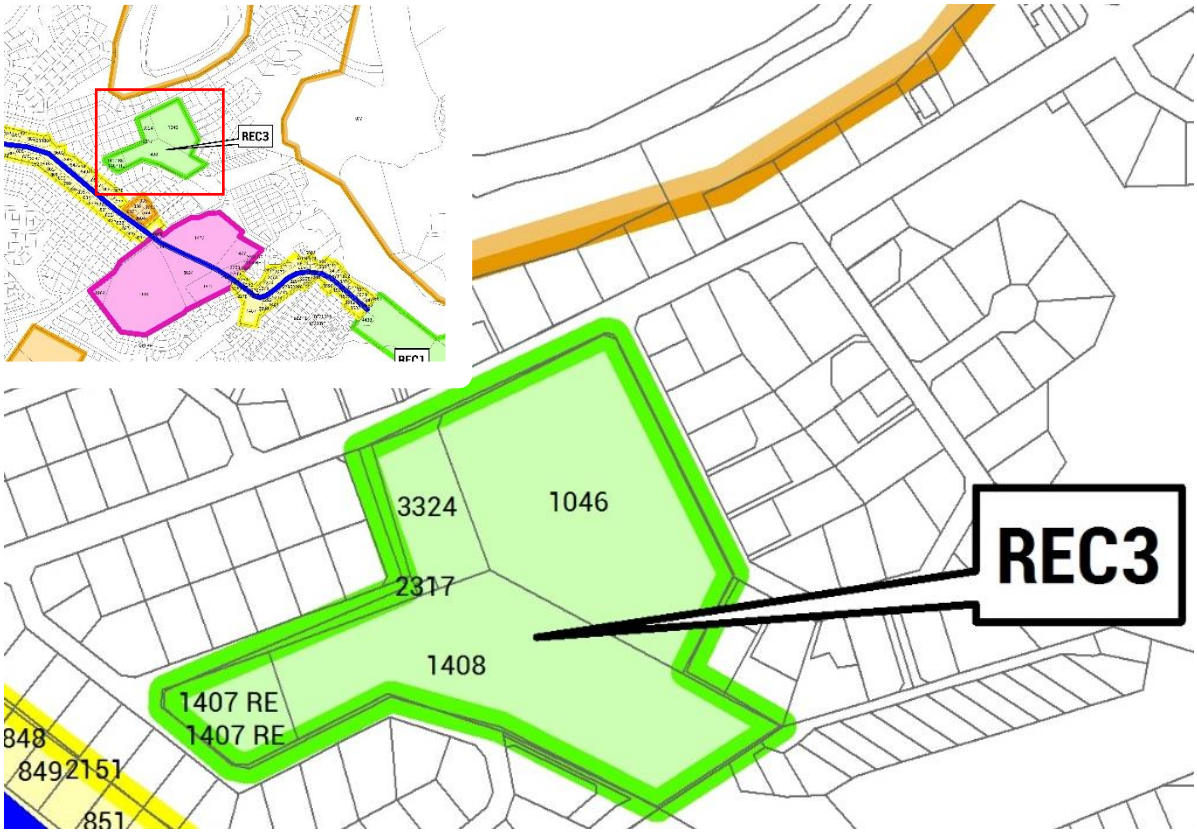
PROPOSED ZONING

Open Space Zone I

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome for this sub precinct is to add to the recreation activity of the precinct. Possibility for a cycle and/or hiking trail that runs through the forests.

REC 3: Nature Reserve



PLAN D 28. REC 3: Nature Reserve

PREFERRED LAND USE

Nature Reserve

PROPOSED ZONING

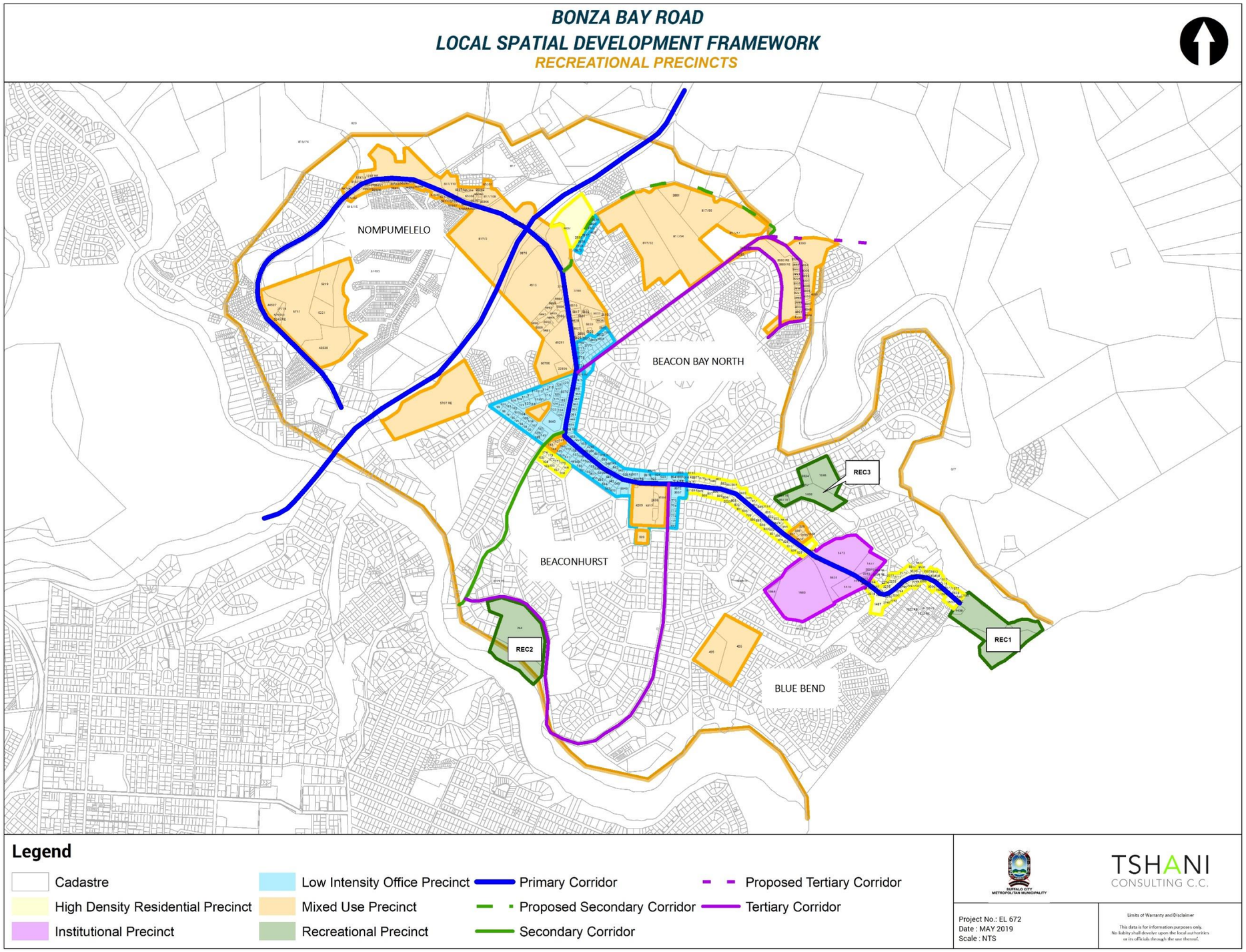
Open Space Zone III

DESIRED SPATIAL OUTCOME

The Desired Spatial Outcome for this sub precinct is to accommodate a nature reserve to support the Institutional uses within the area and within the broader context of East London. Children would be able to come to the nature reserve to learn about ecosystems and the flora and fauna that exist within the reserve.

The area is currently under management as a biodiversity corridor. Rehabilitation of indigenous animals is currently being addressed within the area. This is an educational project being run by the Beaconhurst School.

PLAN D 29. Recreation Precincts



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SECTION E :
Development Guidelines

E. Development Guidelines

E1. GENERAL DEVELOPMENT PERFORMANCE CRITERIA

The following Performance Criteria are established in respect of land development processes within the study area:

- Identified development nodes and corridors are the preferred location for retail, office and other commercial uses and encroachment of these land uses into other areas is discouraged;
- Buffalo City Municipality shall levy a development contribution in respect of an approved land use change, where such change will result in an additional load on existing infrastructure and road networks;
- All land development proposals shall comply with the requirements of the East London Zoning Scheme to ensure adequate parking is provided for vehicles on-site, without compromising the character and appearance of the built and natural environments;
- On-site signage is to be in compliance with the East London Zoning Scheme (in respect of Occupational Practices from home) and the Buffalo City Municipality's Advertising Signs Policy;
- The SDP (Site Development Plan) must indicate how the rear of all developments will be adequately secured after hours;
- The SDP must indicate where adequate security lighting is to be provided for all developments in a manner that does not intrude on or lessen the amenity of neighbouring properties;
- Landscaping must be provided in order to enhance the aesthetic appeal of the business precinct and, where appropriate, to complement existing landscaping and landscaping themes;
- The SDP must comply fully with Clause 4.23 of the East London Zoning Scheme.
- A Stormwater Management Plan (i.e. a plan indicating how on-site stormwater is to be managed and introduced into the Municipal stormwater system) will be required for all developments before applications will be processed;
- The use of machinery, vehicles or equipment that cause a noise nuisance for extended periods of time is not to be permitted adjacent to residential land uses that are not identified in this Local Spatial Development Framework as being suited for non-residential uses. Site Development Plans must indicate the proposed use of such machinery, vehicles or equipment at application stage. This clause shall be inserted into all town planning approvals issued;
- Elevation drawings and proposed finishes may be requested and are subject to approval by Buffalo City Municipality.
- No alterations to or demolition of listed buildings older than sixty (60) years will be permitted without a Certificate of Approval issued by the Provincial Heritage Resources Authority in terms of the National Heritage Resources Act;

- Residential accommodation should not occupy ground floor retail street frontage within identified development nodes and corridors, which would be out of keeping with the established nature and character of a local area;

E2. SPECIFIC DEVELOPMENT PERFORMANCE CRITERIA

In order to that the desired outcomes for each precinct are achieved specific development criteria have been formulated for the applicable land use uses and zonings involved. This means that the LSDF does, in places, impose further restrictions or departures from the Zoning Scheme in order to achieve the desired outcomes.

E3. PROPOSED LAND USE CATEGORIES

The proposed land use categories have been derived as result of issues identified in the data gathering process as well as through the consultation sessions. During the formulation of these proposed categories consideration has been given to factors such as the current balance of land uses, land development trends and the proximity of various land uses to transportation and movement corridors, land uses current and proposed for the study area are identified. These are identified and defined below:

1. Low Intensity Office: Zoning: BUS 4B

The previous BB LSDF promoted low intensity office use along Bonza Bay Road between Edge Road through to Spargs. This proposal has taken up well through the years that have passed since the 2008 LSDF. It is now seen that the demand for this usage has increased in the area. The extension of the low intensity office zoning is proposed and includes the upper end of Bonza Bay Road up and until the Spargs Complex.

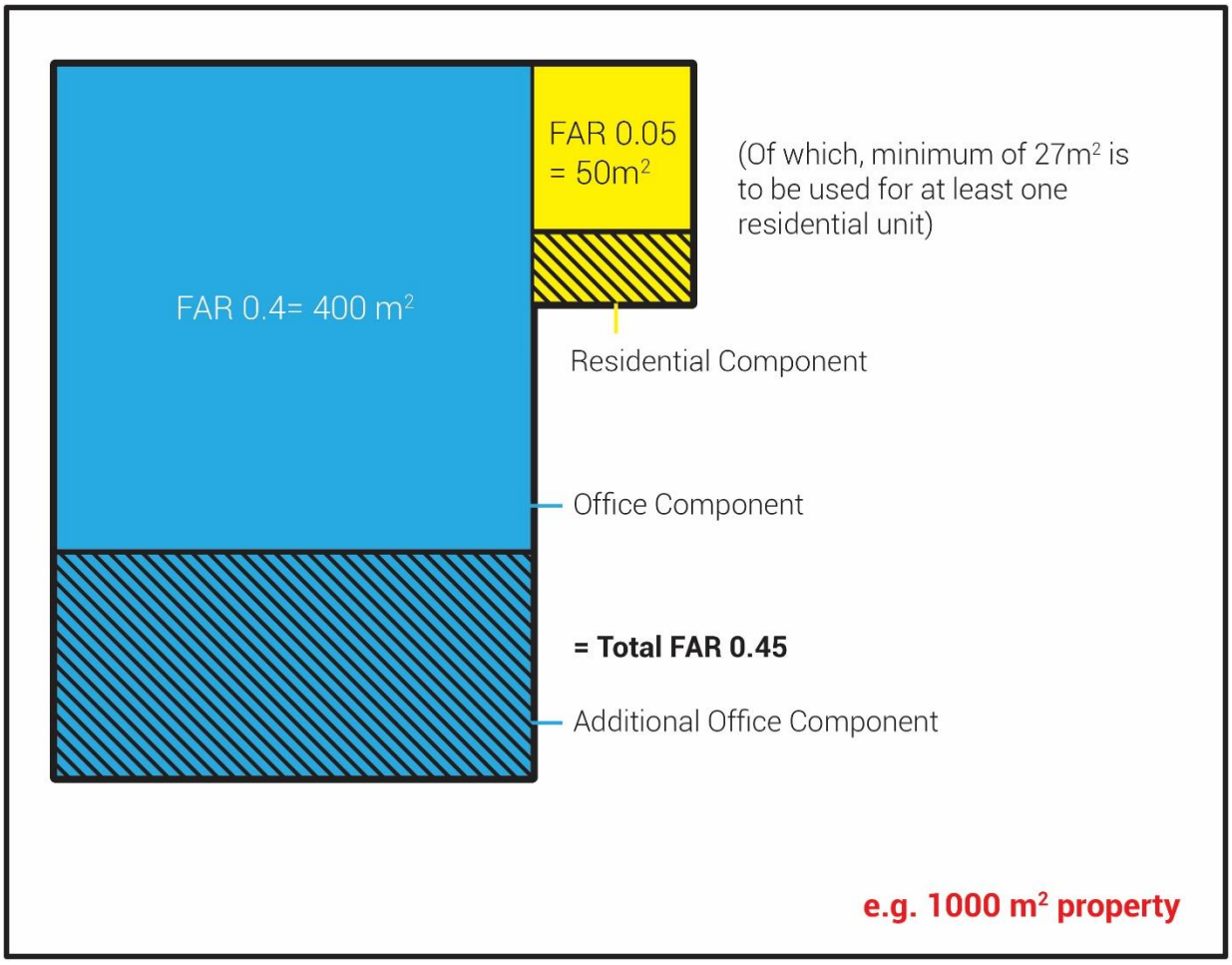
Low Intensity Office (Bus 4B) use is intended essentially to act as a buffer between "hard" business uses and surrounding residential areas. The concept acknowledges the need for small office type business areas in BCMM especially in association with business nodes. The identified need is being accommodated on condition that it does not impact negatively on the amenity of the adjacent residential area. The amenity of a property will be negatively impacted inter alia by the number of vehicles visiting the site and using the surrounding roads as well as the level of activity on the site. Only a moderate negative impact will be permitted in the "Low Intensity Office only" areas. The concept of Low Impact Offices is essentially one that will allow for business uses, but one that retains the overriding residential character and features of the residential area and surrounding houses, especially as viewed from the street.

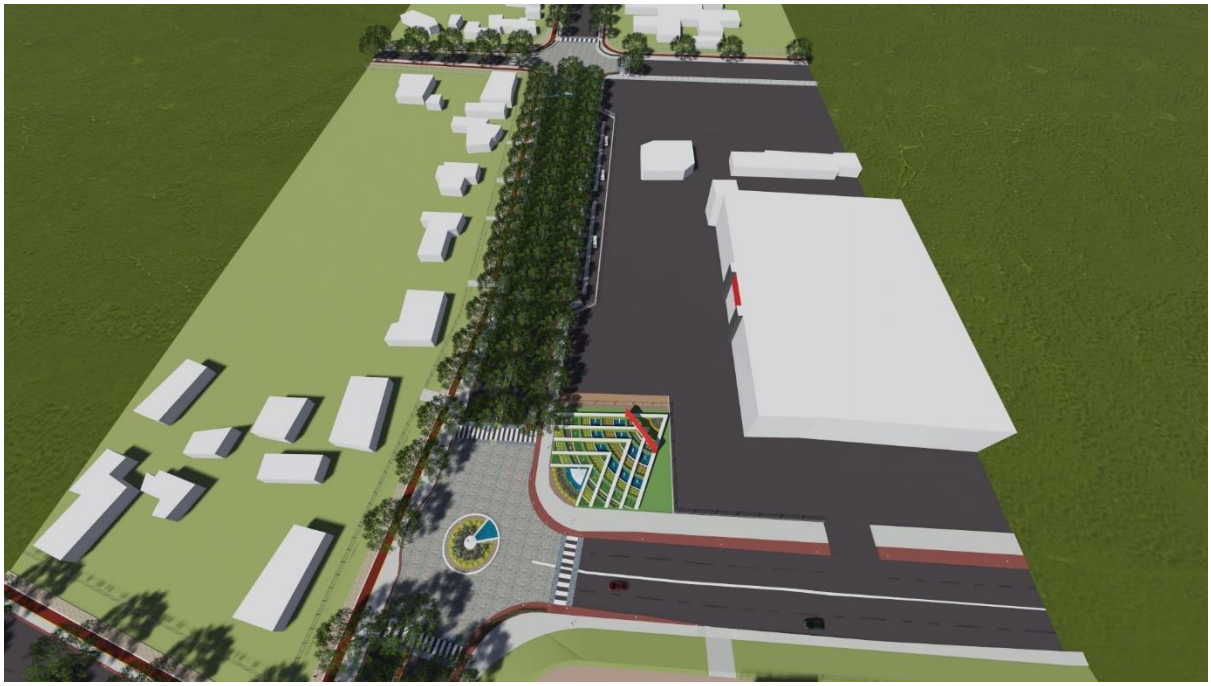
The following specific performance criteria are applicable:

1. Business 4B (Low Intensity Office) is to be used for office purposes as per the definition in the BCMM Zoning Scheme (For the sake of clarity the definition does not include training facilities or places of worship and in addition for the purpose of this LSDF it no longer includes Hairdressing Salons);
2. A maximum floor factor/FAR of 0.4 and a maximum of 2 storeys is permitted for low intensity offices.
3. In order to improve safety on low intensity properties after office hours limited residential uses are now encouraged on all properties identified for low intensity offices. To facilitate the proposal an additional floor factor of up to 0.05 may be permitted on condition that at least one suitable residential unit is added with a minimum size of 27m2 (See illustration below);
4. Garages above ground are permitted but may not account for more than 20% of the total parking requirement. Basement parking will be permitted;
5. Applicant must indicate the number of people to be working in the building by clearly indicating on the SDP the workstations/ desks and accompanying chairs that are proposed for each space within the building;
6. Bed and Breakfasts or Guesthouses are permitted in the area defined for Low Intensity Office. Max FAR is to be in keeping with that of the Low Intensity Office requirements;
7. Development levies already paid on property must be clearly defined in all subsequent SDP's;
8. All required parking in terms of the BCMM Zoning Scheme shall be supplied on-site only (no PADF permitted);
9. Parking areas and boundary walls/fences are to be placed in such a manner so as to ensure that no more than 4 vehicles can be viewed from the street from any angle;
10. Existing building lines applicable in terms of the current Residential Zone are to remain in force and no departures in respect of the relaxation of these shall be permitted;
11. Where a residential land use is to be converted, the development shall retain the character of the residential environment including retaining or building secure front garden walls and controlled access i.e. in keeping with the character of surrounding properties; the aspect from the street is to be as closed and secure as the surrounding residential norm notwithstanding the need for businesses to be as visible as possible;
12. Where a site has been cleared, the character of the site shall be deemed to have been that of the original property and an approved building plan shall be required to ensure that when the site is redeveloped, the character will be in keeping with that of the demolished building and the surrounding residential character;
13. Compressors and/or Air Conditioning Units are to be screened or positioned so as not to cause a disturbance to neighbouring residential properties;
14. No smoke, dust or fumes may be emitted, which could cause an environmental nuisance to neighbouring properties;
15. Appropriate arrangements shall be made to ensure that the property shall be landscaped in a manner that is in keeping with the character of the surrounding residential area;

16. Appropriate arrangements shall be made to ensure that the property shall be secured in order that the security of adjacent properties is not negatively impacted. The property is to be secured along the entire length of cadastral boundary with a 1.8m wall or fence. The type of wall or fencing used is to note the requirement of point 9 above;
17. A Stormwater Management Plan (i.e. a plan indicating how on-site stormwater is to be managed and introduced into the Municipal stormwater system) will be required for all developments before applications will be approved. Proposals for green infrastructure alternatives will need to be approved by the Directorate of Infrastructure Services;
18. No alterations to or demolition of listed buildings older than sixty (60) years will be permitted without a Certificate of Approval issued by the Provincial Heritage Resources Authority in terms of the National Heritage Resources Act.

EXAMPLE OF THE FAR CALCULATION FOR A 1000M2 ERF.





Artist impression of the Spargs Complex and Bonza Bay Road including proposal of a traffic circle at the intersection and design feature on Erf 1404 RE

PLAN E 1. Low Intensity Office Proposals

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK

LOW INTENSITY OFFICE PROPOSALS

Legend

- Cadastre
- Existing Low Intensity Office
- Proposed Low Intensity Office

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : MAY 2019
Scale : NTS

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PLAN E 2. Detailed Low Intensity Office Proposal

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
LOW INTENSITY OFFICE PROPOSALS

Legend

Cadastre | Existing Low Intensity Office | Proposed Low Intensity Office | Primary Study Area

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : OCTOBER 2017
Scale : NTS

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2. Mixed Land Use: Zoning: BUS 2 / BUS 4

As per the uses permitted as per the Precincts and Nodes, mixed land use is to accommodate for a variety of land uses within a general area to allow for ease of access and to decrease the need to travel. Mixed land use allows for compact urban development and to ensure the 24-hour usage of spaces. Mixed Land Use includes activities of office and residential in smaller combinations in order to achieve set policy objectives.

Mixed Use can also include a variety of land uses within a space which allows for the ease of access to this variety of land uses. Such an example of mixed land use would be a development which includes retail at the ground floor (public access), Office use at the 1st and/or 2nd floor (semi-public/private), and residential (restricted access) on further floors above. This type of development ensures the maximum usage of space, ensures that the development is in constant use, during various hours of the day and most importantly, ensures the creation of a compact, and accessible city model. This type of development in encouraged for all the identified Mixed Use Precincts. Specific Performance Criteria have been formulated for each Mixed Use Precinct.

3. Residential: Zoning: Res 1 - 5

Residential use is the prominent use within the Beacon Bay area as the suburb was developed around the need for residential homes. It is essential to ensure that the residential fabric of the area remains intact and that land use proposals do not conflict the residential use or reduce the attractiveness of the area for residents.

The analysis has indicated that there are also a significant number of families who require affordable housing within the study area. It is proposed that a component of smaller more affordable housing be included as part of the proposed Mixed Use Precincts and Precincts identified for low intensity office uses. In light of the above it is proposed that the existing process of densification of the residential area be encouraged. A possible social housing development in the study area has also been included in the proposals.

<u>High Density Residential (RES Zone 4)</u>

Precinct HDR4, (Erf 4437) is proposed to have a zoning of RES 4 or RES 5 where the land use of higher density residential of 3 to 4 storeys is promoted.

The cluster of 4 properties, Erf 817/32, Erf 817/54, Erf 3 It is noted that these spaces consists of a cluster of 3 properties. Future access into the development would be off Erf 144 It is due to this that this erf may and should be developed first. Should it not be developed first, access would need to be made as to allow provision into the two sites on either side. The developments could be approximately 3 to 4 storeys with a zoning of BUS 2 which would allow for mixed land use

PLAN E 3. Overall Residential Proposals

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
RESIDENTIAL DENSIFICATION PROPOSAL
HDR 1: HIGH DENSITY RESIDENTIAL: UPPER BONZA BAY ROAD
HDR 2: HIGH DENSITY RESIDENTIAL: LOWER BONZA BAY ROAD

Legend

- Cadastre
- Residential Densification Proposal

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : MAY 2019
Scale : NTS

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4. Retail: Zoning: BUS 2

Retail activity can complement office and residential uses as these activities can work in conjunction with each other as a mixed-use precinct.

5. Education/Institution: Zoning: Institution 1/2

A sustainable area ensures that there are sufficient social facilities to service the population. The analysis showed that a majority of the population fall within the young adult categorisation. These individuals fall within the category of young married couples with small children. The needs of such couples would be a cheche care facility.

Beaconhurst Primary and High Schools service the public schooling demand for the area. There is also a demand for a private school within the Beacon Bay area. The Precincts section above highlighted the areas where an Institution facility can be accommodated.

The Institution Zoning also allows for a Church facility. Areas where a church can be accommodated within the area is also highlighted within the precincts section.

6. Public Open Space: Zoning: POS

Public Open Space along the Bonza Bay Road Corridor is present at the Bonza Bay Recreation Area and the Botanical Gardens. These areas are spaces for passive recreation where users are able to relax and enjoy their surroundings. The beach could, however, include forms of active recreation for beach sporting activities such as swimming, surfing, beach volley ball, beach soccer, etc.

Less formal forms of Public Open Space includes the vacant land parcels along the Bonza Bay Road Corridor.

7. Industrial: Zoning: Industrial 1/2

A new area for warehousing located adjacent to existing waste site is proposed. The warehousing will act as a buffer to the waste site.

E4. SIGNAGE GUIDELINES

Background

The approved BCMM Advertising Signage Policy indicates:

"Outdoor advertising and signs should not compromise the functioning and safety of traffic and should not adversely affect the character of a locality by way of appearance, size or illumination".

"The local character of an area in which a sign is proposed will affect the degree of control applied in that area.

It recognises that the dynamics between the type of the sign, the sign itself and where it is to be located can most effectively be dealt with by the determination of **areas of control**. "Areas of control" are defined as those areas set out in Schedule 1 of the Policy; and **which may be modified and/or amended from time to time, which amendments and modifications will be graphically depicted by way of maps as prepared by the Municipality from time to time.**

TABLE E 1. Signage Categories

Four categories of control are used, varying from the most stringent to the most lenient. The four categories of control are:

SIGNAGE CATEGORIES (PER PRECINCT)		
1	Prohibited	Precinct 5: Recreation Precinct
2	Maximum Control	Precinct 3: Residential Precinct, Precinct 4: Institution Precinct
3	Partial Control	Precinct 2: Low Intensity Office and Medical Precinct
4	Minimum Control	Precinct 1: Mixed use Precinct

The potential for outdoor advertising and the sign types to be considered is therefore determined by permitting certain sign types in certain areas of control".

1. PROHIBITED

No advertising signs are permitted in these areas.

2. MAXIMUM CONTROL: RESIDENTIAL AREAS, SENSITIVE AREAS, AND AREAS OF CIVIC INTEREST

Signs may be permitted under strict control of the design, size, location, colour and number of signs, but the Municipality reserves the right to prohibit signs other than those giving the name of the owner or main tenant or the name of the building.

In Sensitive Areas and Areas of Civic Interest the following controls will apply in addition to those set out in the paragraph above:

(i) Only one sign will be permitted for each street frontage of a property;

(ii) The materials and colours of the sign must harmonize with the building;

(iii) Only concealed backlighting or floodlighting of signs will be permitted.

3. PARTIAL CONTROL

Signs in these areas are controlled in terms of size, position and subject matter and where required in terms of colour.

A businessperson will have the right to make his presence and the nature of this service known.

Partial control would apply within schools/educational institutions, sports fields and stadia, office blocks, commercial centres in residential areas, government enclaves and commercial ribbon development.

4. MINIMUM CONTROL

In the areas in which this category applies the main consideration would be public safety.

Minimum control would apply within industrial areas, commercial enclaves and shopping centres, entertainment complexes, transport nodes such as taxi and bus ranks, airports, etc.

Review of Spatial Policy

Given the above guidelines it is thus the responsibility of those departments who wish to define the areas of control by means of mapping to do so. The review of the BB LSDF provides an appropriate opportunity for the Directorate of Spatial Planning and Development to demarcate the areas of control applicable within the Study area.

One of the objectives of the Bonza Bay policy is to create an aesthetically pleasing environment along Bonza Bay Road. Signage plays an important part in aesthetics and needs to be carefully controlled.

The intention behind allowing advertising signage is so that it can identify the business operating from on the site. If the business is retail then one can reasonably expect it to advertise its name and its products as well.

If the business is an office in a Bus 4 Zone then the intention of allowing signage is that it will serve to advertise only the name of the business operating on the property

The following Control areas within the BB LSDF study area are proposed:

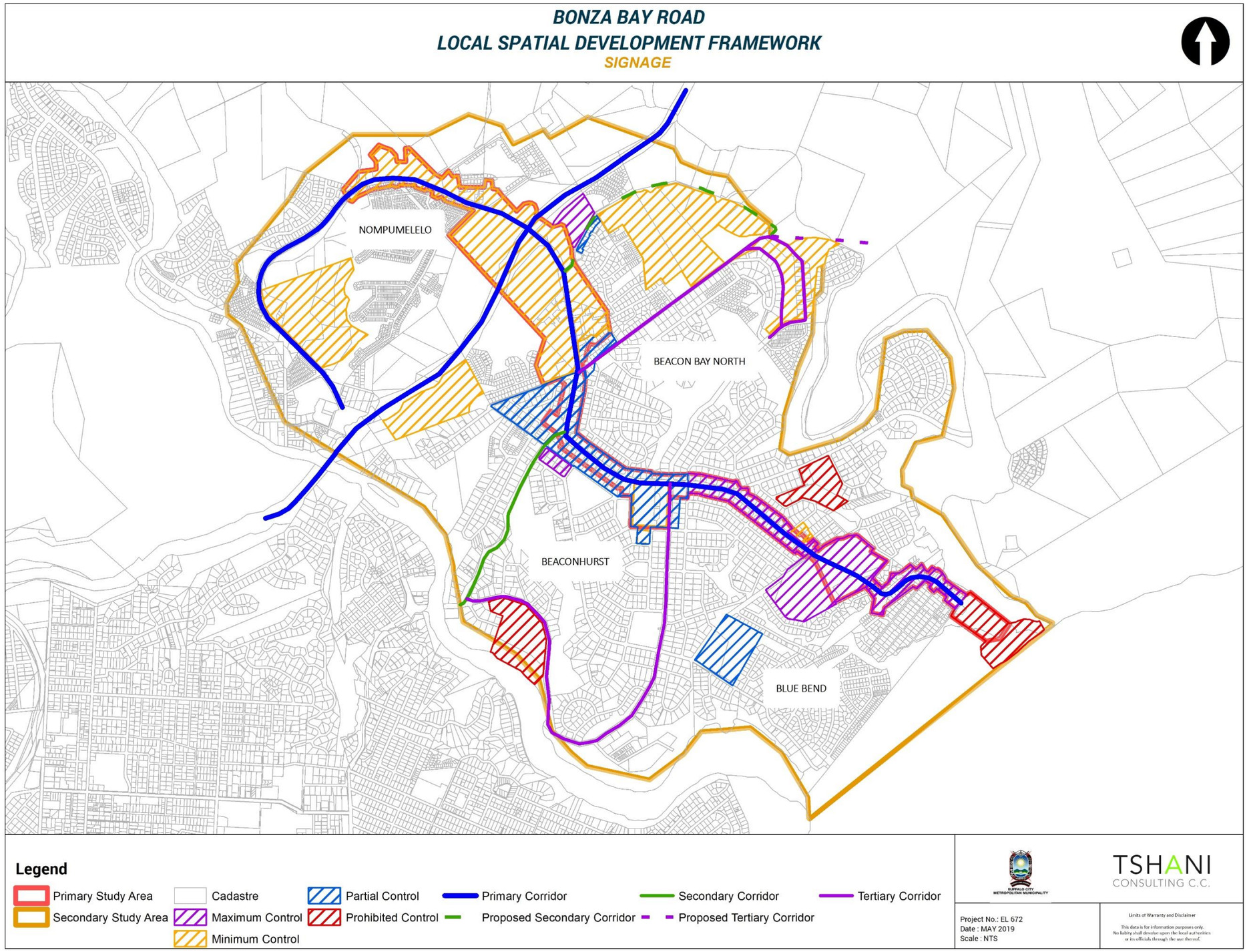
1. With respect to the Areas of Control identified in Annexure 1 of the Advertising Signs Policy, the Bus 4b areas identified in the BBLSDF are regarded as Areas of Partial Control.
2. Within and adjacent to areas identified for Bus 4b, advertising signage as per Annexure 4 and 8 of the Advertising Signs Policy will be allowed but notwithstanding the aforementioned Policy

the size of all signage on any individual erf to be rezoned for Bus 4b must add up to not more than total maximum size of 1m2. See plan.

3. No Transit Advertising signage will be permitted on the public roadway adjacent to any Bus 4B zoned erven.
4. All residential zoned erven within Beacon Bay are designated to be in the Area of Maximum Control.
5. An Area of Minimum Control is situated around the commercial enclave and shopping centres associated with the N2 business node. See plan
6. The Bonza Bay picnic are designated as a Prohibited area

Developments along Bonza Bay Road

PLAN E 4. Signage Proposals



TSHANI
CONSULTING C.C.

SECTION F :
Traffic Managment Framework

Artistic impression of a Proposed mixed-use node (night view)

F. Traffic Management Framework

F1. TRAFFIC MANAGEMENT OBJECTIVES

The following objectives have been identified as traffic management objectives pertaining to the study area:

- To provide for safe and efficient traffic circulation;
- To ensure that proper provision is made for the safe and effective movement of through traffic along major roads within the study area;
- To ensure that there is no significant intrusion of traffic associated with the business precincts into the surrounding residential areas;
- To maintain accessibility within the study area for all modes of transportation.

F2. TRAFFIC GENERATION

For the analysis of the future development scenario the study focused on the year 2028. The recommended critical peak hours for analysing retail developments are weekday PM and SAT peak hours and weekday AM and PM peak hours for most other land uses. In this study, the analyses, where necessary, were made for both the future weekday AM and PM peaks to address anticipated capacity problems in the peak hours most relevant to the study area.

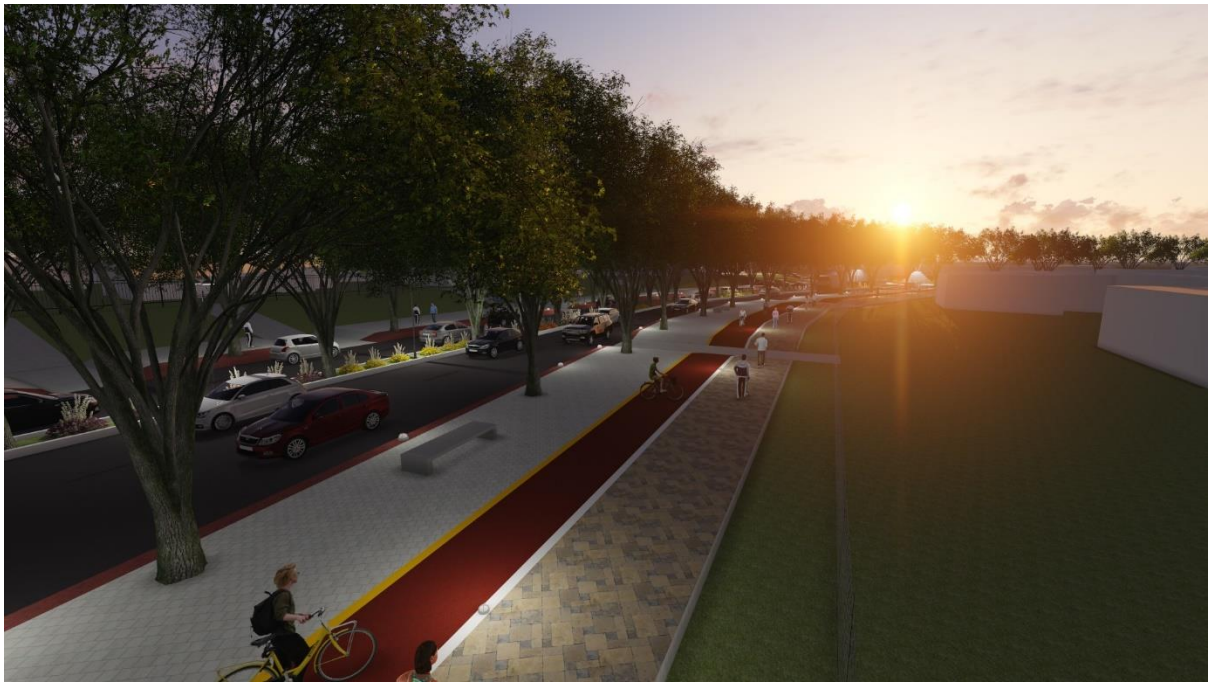
Developments generate traffic based on land use and size of the development. The recommended vehicle trip generation rates for the land use categories expected in the study area were used to calculate the estimated number of trips, $Trips_{TMP}$, for the various peak hours

F3. PEDESTRIAN MOVEMENT

Pedestrians and cyclist are in general poorly catered for in the primary study area in terms of safety. In many instances there is no formal surfaced pedestrian or cycle facility / path, while the footpaths observed along the primary study area indicate a heavy pedestrian demand.

A raised pedestrian/cycle facility crossing the N2 between Nompumelelo and Beacon Bay is suggested for further investigation. The improvement of existing and provision of new facilities where these are outstanding, for the non-motorised travellers, are mandatory along all the main routes in the secondary study area.

Artist impression of pedestrian sidewalk, cycle lane and urban furniture space along Bonza Bonza Bay Road



Artist impression of evening view along Bonza Bay Road

F4. PARKING REQUIREMENTS

Parking is to be provided in terms of the Buffalo City Zoning Scheme and the Traffic Engineering Guidelines for Buffalo City (Reference Nine). Details of the parking requirements are included in the Traffic Management Plan, Annexure 2.

Some changes to the parking requirements, as reflected in the Buffalo City Zoning Scheme and the Traffic Engineering Guidelines for Buffalo City, are proposed. These proposed changes are included in Table F.1 below.

TABLE F 1. Parking requirement changes

Land use	Parking requirement
A : Residential	
1. General Residential: Flats, townhouses, group housing, etc.	1.5 bays/unit – bachelor, studios and/or 1 bedroom units 1.5 bays/unit – 2 bedroom units 2.0 bays/unit – 3 or more bedroom units
B : Office and business	
1. General Offices (Business Zone lV) - Office only zoning	No detailed SDP showing floor/office layout - 4 bays/100 m² GLA Detailed SDP showing floor/office layout and demonstrating that on average a maximum of 1.5 persons per office (based on size of office of approximately 9 to 14 m², etc.) - 2.5 bays/100 m² GLA

F.4.1 Permitted parking reductions

A development may qualify for a reduction in the parking bay requirements as reflected in the Traffic Engineering Guidelines for Buffalo City and the Traffic Management Plan, Annexure 2.

It should however be noted that there are maximum reductions permitted. Further, not all permitted reductions are accumulative. Table F.2 illustrates which parking reductions are permitted, including the maximum permitted parking reductions per item.

TABLE F 2. Permitted maximum parking reductions in the study area

Description	Reduction for various car ownership areas (%)*	Reference**
Disabled bays	Not a % reduction, but replacement of parking	Section 2.6 (i)
Moms and tots bays	Not a % reduction, but replacement of parking	Section 2.6 (vi)
Bicycle/motorcycle bays	1% extra reduction if within 500 m of cycle route	Section 8.1
	1%	
Public transport bays – distance from facilities	Existing and/or planned PT facilities - 20% if within 500m	Section 2.7 (i)
Public transport on-street embayments	Equivalent to 5% of "effective" required on- site parking bays	Section 2.7 (ii)
Public transport on-site	15%	Section 2.7 (iii)
Hourly/daily distribution	Table 1.9, with maximum of 10%, except places of worship (25%)	Section 2.18
PADF	25%	Chapter 7
Shared parking	20%, increasing to 25% if access shared	Section 7.2 (iii)
Other (motivated in Traffic Study)	10%	NA
Maximum (%)	**30%**	**NA**

Note Each application for reduction in parking is subject to approval from the Transport Planning and Operations Department and may vary based on zoning and/or land use. Further, all requests for reductions must be motivated for as part of a Traffic Study.*

*** Reference refers to Buffalo City's Traffic Engineering Guidelines.*

As an example of using these reductions in included in the the Traffic Management Plan, Annexure 2.

F.4.2 Areas with limited parking reductions

Certain areas have been identified as current parking shortfall areas or where parking reductions could impose unnecessary strain on the area should further development occur. In these areas certain parking reductions restrictions will apply. These areas and land used are listed in Table F.3.

TABLE F 3. Restrictions to parking reductions in the study area

Description	Area/land use	Reason/s
Bicycle/motorcycle bays	Not applicable to residential land use within the whole LSDF area	Need to cater for vehicles due to expected car ownership in the area
Public transport bays – distance from facilities		
Public transport on-street embayments*		
Public transport on-site		
PADF**	Not applicable to all land uses within the whole study area, except existing buildings were less than 10% additional GLA is being added	
Shared parking	- Shared parking may be permitted for mixed land use sites such as LIO 1, 2, 3, LIOM 1, 2 (if office and residential uses are accommodated on a single erf), MU 6, MU 7 provided that there is no clash between uses and times parking is required for the use. The allowance of shared parking will be determined on each individual application. Should shared parking be allowed, no on street parking may be applicable to said property. Shared parking is subject to be reviewed annually based on demand of usage -Not applicable to all land uses along roads with on-street parking prohibitions, be the prohibitions on either one or both sides	Limited, or no, on-street parking to accommodate any possible shortfall of on-site parking

*Note * Only permitted on taxi routes for non-residential land uses.*

*** The exception for buildings where less than 10% additional GLA is being added does not apply to LIO.*

F.4.3 Visitor/customers and tenant parking

Off-street parking bays are for the use of visitors, customers, residents, tenants and staff - all parking bays are to be made available for such. The Developer may however request that a section of the parking area be demarcated for tenants/staff parking only. The maximum percentage of parking bays that may be demarcated for tenant/staff/residents parking bays that shall be permitted are included in the Traffic Management Plan, Annexure 2.

F5. ACCESS REQUIREMENTS

F.5.1 Access control distance

The Developer is to obtain approval prior to the utilisation of booms, gates, chains, etc. that restrict access to parking areas during business hours. The distances at which access controls may be placed back from the property boundary are included in the Traffic Management Plan, Annexure 2.

F.5.2 Access control on the boundary

The Developer may approach the Transport Planning and Operations Department for permission for access control on the property boundary. The conditions under which this will be considered are included in the Traffic Management Plan, Annexure 2.

F6. ROADS OF METROPOLITAN SIGNIFICANCE REQUIREMENTS

Table F.4 lists all the current roads of metropolitan significance (ROMS) within the study area.

TABLE F 4. Roads of metropolitan significance within the study area

Name	No.	Section
Batting Road	MR00517	
Bonza Bay Road	MR00507	South of N6
Quenera Drive		
Beaconhurst Drive		West of Bonza Bay Road
N2*		
N6*		

*Note * Roads of national significance.*

The following additional conditions will apply to developments on a ROMS:

- Approval of the application will need to be obtained from the Eastern Cape Department of Transport, and to SANRAL in the case of Roads of National Significance, i.e. the N2 and the N6.
- No surface trenching will be permitted.

F7. TRAFFIC IMPACT ASSESSMENTS AND SITE TRAFFIC ASSESSMENTS

Developments should be implemented in such a way that minimises their impact on the road network. In order to achieve this, traffic and transportation matters need to be addressed in the early stages of the

development. To this extent this TMP addresses the overall anticipated impact of possible developments in the study area. The TMP is however general and does not address the specifics of a particular development as the extent of each development is only made known at the application/building plan stage.

The required improvements to the road network, and on-site improvements, for each development therefore should be addressed at the SDP approval stage. The issues which need to be addressed include parking, loading, public transport, non-motorised transport, access improvements, intersection improvements, road safety, etc. The type of development and size thereof will require either a **Traffic Impact Assessment (TIA)** or **Site Traffic Assessment (STA)** to be undertaken, Reference Twelve.

The following may be used as a guide as to determine when a particular type of Traffic Assessment is required. Table F.5 is a basic guideline as to when either a TIA or a STA is required. In addition to Table F.5, the following land use related procedures may also warrant a Traffic Assessment:

- Township establishment when agricultural holding is converted to urban land in terms of various Town Planning and Township Ordinances;
- Rezoning where it is necessary to amend the Town Planning Scheme;
- Consent use applications where the local authority has the authority to consider and grant an application without referring it to a higher authority;
- Removal of restrictive conditions contained in the Town Planning Scheme;
- New or revisions to on site traffic facilities and access arrangements; and
- Changes to the public road network, including street closures.

TABLE F 5. Guidelines for requesting a TIA and a STA, Reference Twelve

No.	Application submitted	Trips generated*	Required study
No Traffic Impact Assessment			
1	1. Land use change or expansion of existing land uses	Less than 50veh/h	1. Input and conditions to be imposed by the Transport Planning and Operations Department
Traffic Impact Assessment			
2	1. Land use change or expansion of existing land uses	More than 50veh/h	1. Traffic Impact Assessment required 2. Traffic and transportation conditions to be recommended in TIA and approved by the Transport Planning and Operations Department
Site Traffic Assessment			

3	1. Land use change, or 2. Erection of building or structure, for which a SDP is required**	NA	1. Site Traffic Assessment required 2. Traffic and transportation conditions to be recommended in STA and approved by the Transport Planning and Operations Department
Right of request by Transport Planning and Operations Department			
4	*Irrespective of change in land use and trips generated, the Transport Planning and Operations Department has the right to request either a TIA or STA to be undertaken whenever it feels that any component of the road network may be negatively impacted upon or the on-site situation warrants it*		

Note Refer to Traffic Engineering Guidelines for trip generation rates.*

***Single dwelling units are exempt from the above requirement when access is obtained from Class 5 roads and when access is to the satisfaction of the Transport Planning and Operations Department.*

Table F.6 has been produced as a quick reference as to when the respective developments require a TIA.

TABLE F 6. Size of development requiring a Traffic Impact Assessment

No.	Land use	Lower limit when a TIA is required
1	Retail (shopping centre)	230m^2 GLA
2	Offices	2,400m^2 GLA
3	Residential, single residential	50 dwelling units
4	Residential, flats and apartments	85 dwelling units
5	Lodging, hotel, guest house (excluding PAA etc.)	100 rooms
6	Schools	60 students
7	Places of worship	80 seats
8	Industrial	5,900m^2 GLA

Note that for mixed used developments the trip generation is accumulative and is given by the following formula:

Total Trip generation = Sum of (Trip rate$_n$ (a) X Size of the development$_n$ (units)/ Units$_n$ (b))

e.g. Mixed use developments with retail GLA of 1,000m^2, office GLA of 2,000m^2, and 20 residential flats will generate the following trips in the PM peak,

Total trips generated = (19.3 x 1,000/100)+(2.1 x 2,000/100)+(0.6 x 20/1)=193+42+12=247 veh/h. In this case the trips generated are in excess of 50 trips therefore a TIA would be required.

F8. PARKING AND MANOEUVRING ON SIDEWALKS

No part of the public sidewalk or roadway outside the property boundary may be used by a vehicle to manoeuvre into and out of a parking bay. For this reason it is essential to have a distinction between the parking area and the public sidewalk. This will be achieved by placing a physical barrier on the boundary. The physical barrier must be either of sufficient height to be visible at all times to a motorist using the parking area, or alternatively, low enough not to cause damage to a vehicle that mounts the barrier unintentionally.

Certain areas along Bonza Bay Road have been permitted to park within the road reserve. These need to be formalised.

Artist impression of center island along Bonza Bay Road

This section deals with the Traffic Management Plan (TMP) projects required in order to ensure the proposed developments can proceed with minimal impact on the existing road network and to ensure the current traffic and transportation deficiencies in the road network are addressed.

F.9.1 Bonza Bay Road LSDF (2018) projects

Intersection improvements

Bonza Bay Road/Coad Road intersection

This intersection was proposed to be converted to a traffic circle as identified in the original Bonza Bay Road LSDF TMP of 2008. However, due to the number of lanes on Bonza Bay Road it is proposed that the intersection be converted to a roundabout.

Bonza Bay Road/Lagoon View Drive intersection

- Upgrade the existing stop controlled intersection to a roundabout with an island diameter of 12m and two circulating lanes, each 5m in width.
- Construct raised pedestrian crossings on the western approach of Bonza Bay Road and on the Lagoon View Drive approach.
- A taxi embayment should be constructed west of the intersection on the eastbound side of Bonza Bay Road.

Bonza Bay Road/Pell Street intersection

The intersection of Bonza Bay Road with Pell Street should be converted into a left-in, left-out intersection and no discontinuation in the median should be provided.

Bonza Bay Road/Beaconhurst Drive intersection

- Upgrade the existing small diameter traffic circle to a traffic circle with an island diameter of 15m and two circulating lanes, each 5m in width.
- Construct a 0,6m wide concrete median to divide the east-and westbound traffic on Bonza Bay Road from Beaconhurst Drive to Lagoon View Drive.
- Construct raised pedestrian crossings on all approaches at the intersection, set 15m back from the intersection yield lines.

Bonza Bay Road/Major Square Road intersection

Upgrade the existing stop controlled intersection to a traffic circle with an island diameter of 12m and two circulating lanes, each 5m in width.

Construct raised pedestrian crossings on all approaches.

It is proposed that the owners of the Engen service station be contacted by BCMM to recommend that they construct a speed hump on their premises to prevent rat-running through the service station forecourt for the safety of their staff and customers.

Repaint the left and right turn directional arrows at the access of the service station on Bonza Bay Road to indicate left turn movements out of the service station only.

Bonza Bay Road intersections with Myall Road and Shire Street

The intersections of Bonza Bay Road with Myall Road and Shire Street should be converted into left-in, left-out intersections, and no discontinuation in the median should be provided.

Bonza Bay Road/Batting Road intersection

- Upgrade the existing mini-circle to a traffic circle with an island diameter of 15m and two circulating lanes, each 5m in width.
- Construct a 0,6m wide median to divide the east- and westbound traffic on Bonza Bay Road from Batting Road to Lagoon View Drive.

Construct raised pedestrian crossings on the southern approach of Bonza Bay Road and the western approach of Batting Road.

Bonza Bay Road/Edge Road intersection

The introduction of a left slip lane from the east.

Bonza Bay Road/Quenera Drive intersection realignment improvements

The Quenera Drive/Bonza Bay Road intersection being relocated to tie into the realignment of Quenera Drive.

The intersection is to remain a traffic signal controlled intersection.

A new left-in (slip lane) into the Beacon Bay Retail Park being implemented. This is to be implemented in conjunction with a central median island along Bonza Bay Road.

Bonza Bay Road/N2 interchange - southbound ramps

It is proposed to introduce traffic signals at this intersection. The traffic signals will need to be co-ordinated with the traffic signals at the northbound ramps. The lane configuration at this intersection will be based on the lane configuration of Bonza Bay Road bridge over the N2.

Bonza Bay Road/N6 intersection

It is proposed that a second circulating lane be introduced at this existing roundabout. This should form part of the planned upgrade of the N6 by SANRAL, the timing of which is unknown at this stage.

Traffic circle at the Caltex Garage along Bonza Bay Road

N6/Homeleigh intersection (Reference One)

This is a new proposed roundabout that will open up the areas adjacent to the N6 for development. The roundabout was proposed as part of the conditions imposed on a number of proposed developments in the area. In conjunction with the roundabout was the introduction of a central median island.

Sherwood Road/Batting Road intersection

This intersection is to be converted to a roundabout. Access to the four properties, i.e. Erven 143, 144, 161 and 162 need to be addresses as they are located in close proximity to this intersection as well as the Bonza Bay Road/ Batting Road intersection. Should these erven be developed individually then access must be located as far away as possible form these two intersections. No access is to be permitted along Batting Road. As a result, Erf 162 must obtain a right of way servitude over one of the other three move mention erven.

Vehicular movement along Bonza Bay Road

Table F.7 illustrates graphically the lane configurations of the intersections requiring improvements.

TABLE F 7. Identified intersection improvements

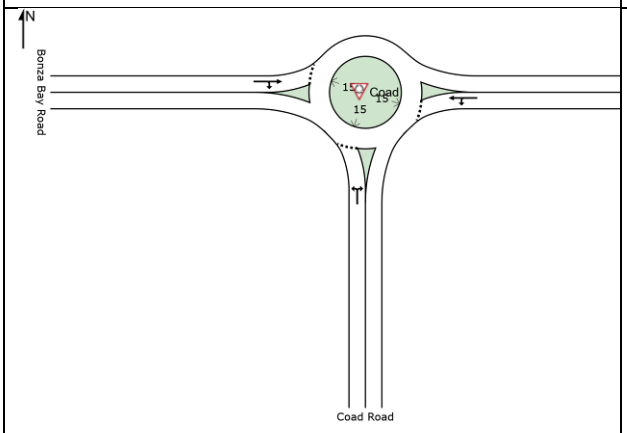
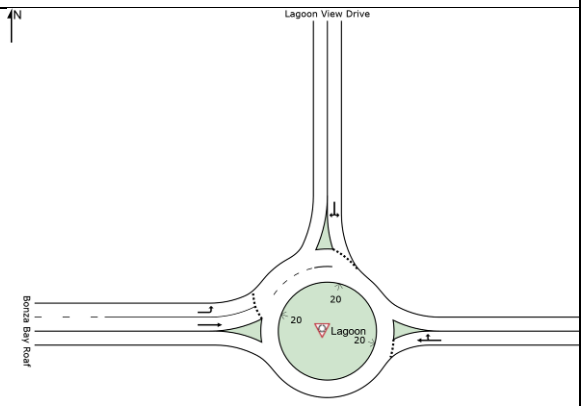
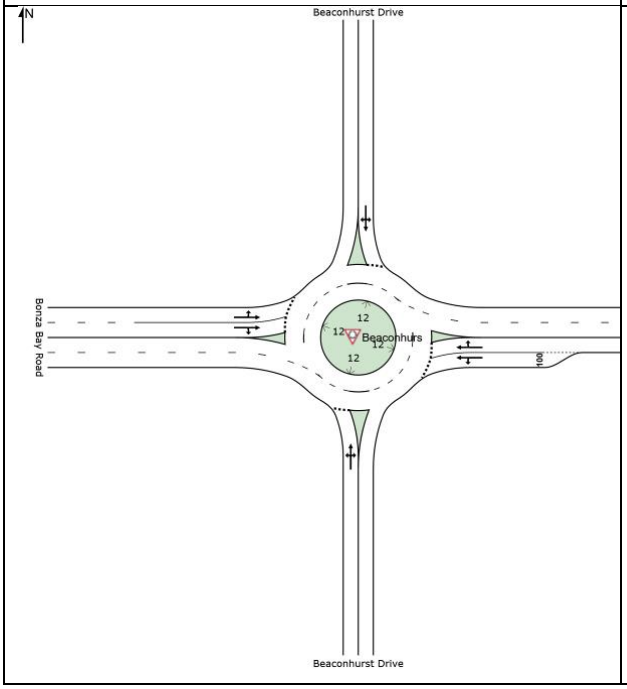
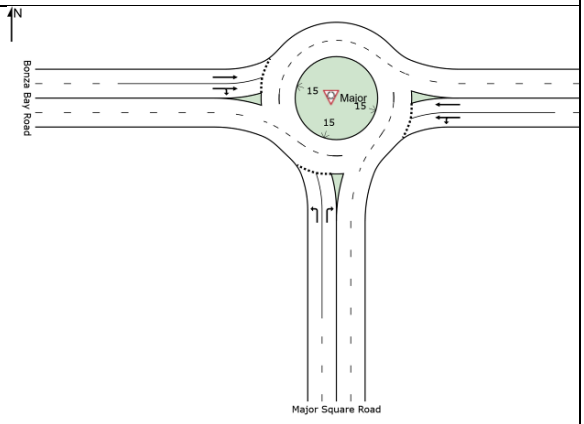
Intersection: Bonza Bay Road with…..	
Code Road	Lagoon View Dr
	
Beaconhurst Dr	Major Square
	

Table F.7: Identified intersection improvements (continues)

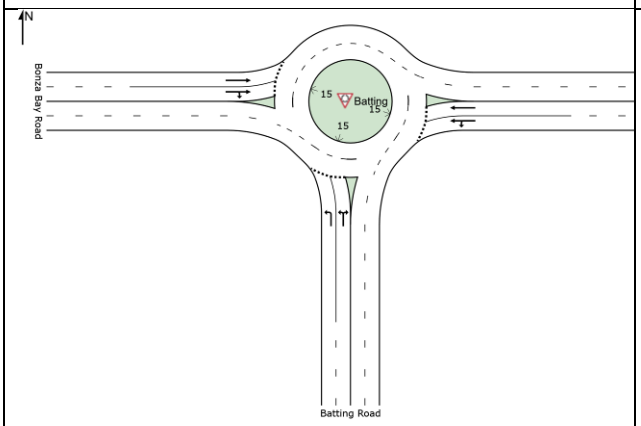
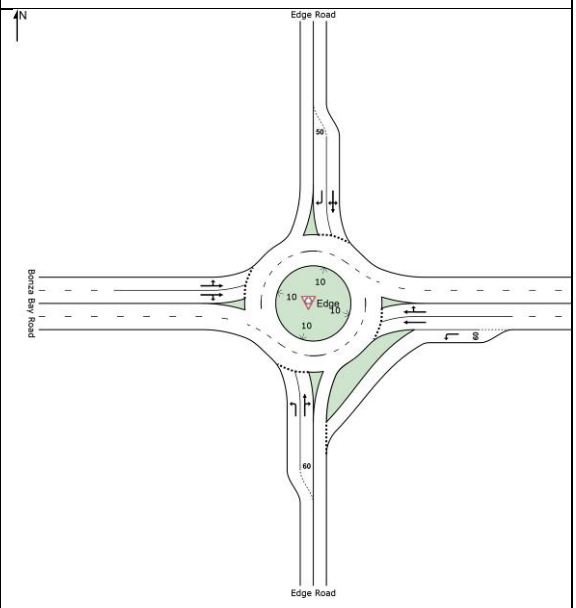
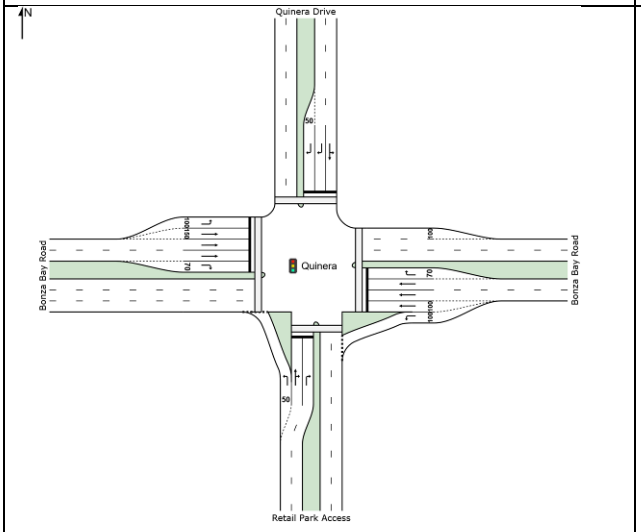
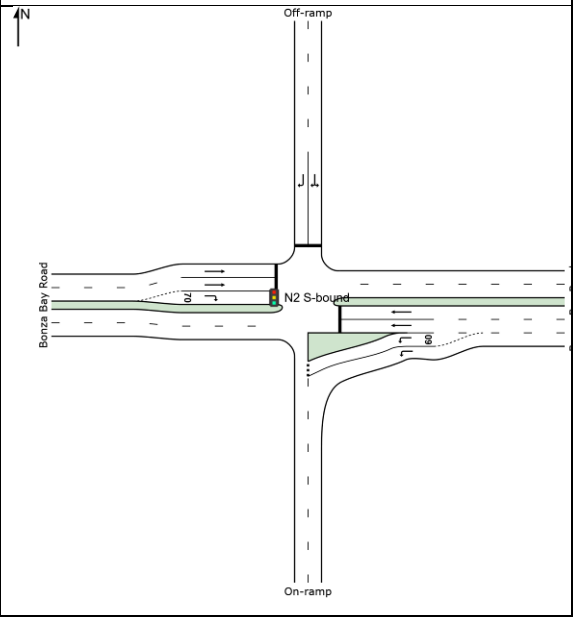
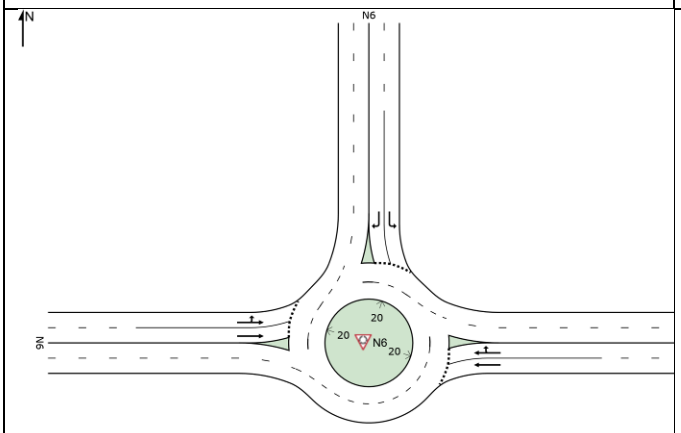
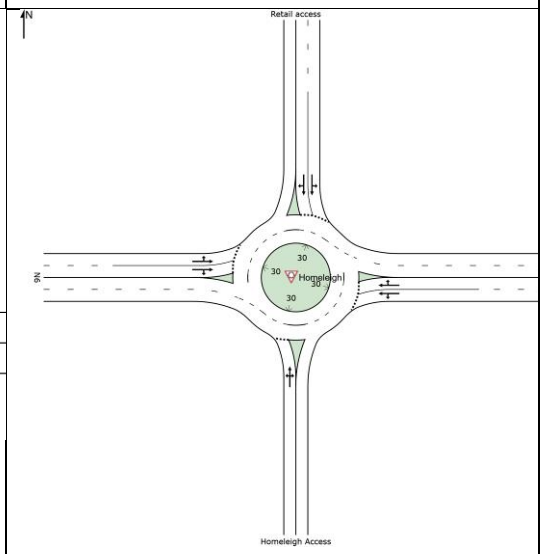
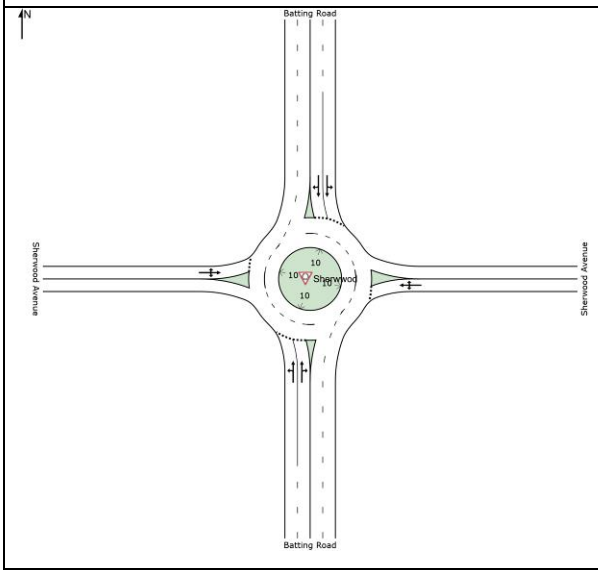
Batting Road	Edge Road
	
Quenera Drive	**N2 Southbound**
	

Table F.7: Identified intersection improvements (continues)

N6	Homeleigh Access
	
Sherwood Avenue	**others**
	For improvements at Pell Street, Myall Road and Shire Street refer to Section I.9.1.

Road improvements

Central constructed island along Bonza Bay Road

Due to the current width of Bonza Bay Road the maximum width of the constructed central island to avoid widening of Bonza Bay Road is 0.6m. This island should extend from Lagoon View Drive in the east to the N6/Homeleigh intersection in the west.

It should be noted that the ideal minimum width of the central island is 1.4m to cater for pedestrians in a safe manner. Should budget permit it is proposed to increase the central island to 1.4m. This may be achieved by widening Bonza Bay Road on one side.

A "no right turn" sign should be installed facing all the intersections along the section of Bonza Bay Road where the central island is installed.

Increasing the number of lanes along Bonza Bay Road

It has become necessary to increase the number of lanes along Bonza Bay Road to two lanes in each direction. This will address the capacity issues that currently exist as well as the increase in traffic from the proposed developments.

This will see the increase in the width of the Bonza Bay Road bridge over the N2 to cater for the four lanes and possible right turn lanes.

The section of Bonza Bay Road between Quenera Drive and the N2 southbound ramps will most likely require three westbound lanes once Quenera Drive extension to Gonubie is completed. It is essential that taxi facilities to be designed into this section of road. Should Retail Park consider an upgrade of their parking area then the possibility of left in and left out slip lanes should be considered.

The possible development on Erf 72552 (situated on the north eastern corner of Bonza Bay Road and the N6) will possible result in the upgrading Bonza Bay Road to two lanes in each direction with a central island and constructed pedestrian sidewalks.

Batting Bridge and approaches to the NEX on-ramp

It is recommended to increase the capacity of this section of road to a four lane single carriageway. This will also require the widening of the Batting Bridge which is regarded as a major project.

Bonza Bay Road/N2 NB on-ramp (RP BB 08)

Currently no eastbound on-ramp exists onto the N2, for eastbound traffic generated from the Beacon Bay area. The introduction of this fourth leg will improve the traffic flow along Bonza Bay Road and reduce the northbound traffic flow along the M10/R102.

M10/R102 upgrade

At this stage the M10/R102 is being designed by the Eastern Cape Department of Roads and Public Works as a two lane road, with the possibility of increasing to four lanes in the future.

Edge Road

The is a potential for significant further development along Edge Road. In order to facilitate this potential development it is proposed to do certain upgrades along Edge Road. These upgrades could include localised widening, realignment, sidewalks, etc.

Prohibiting stopping and on-street parking along Bonza Bay Road

Currently vehicles, in particular taxis, stop at all points along Bonza Bay Road. It is therefore proposed that a red "no stopping line" be introduced along both sides of Bonza Bay Road. The only stopping that will be permitted is at the proposed taxi embayments.

It should however be noted that this will need to be enforced by the law enforcement department.

Quenera Drive access restrictions

It should be noted that Quenera Drive has been designed as a mobility road with limited access. All accesses along Quenera Drive is to be restricted to the existing roundabouts.

Traffic Proposals

The plan below highlights all the traffic circle upgrades/the proposed traffic circles along Bonza Bay Road as well as the traffic light proposals

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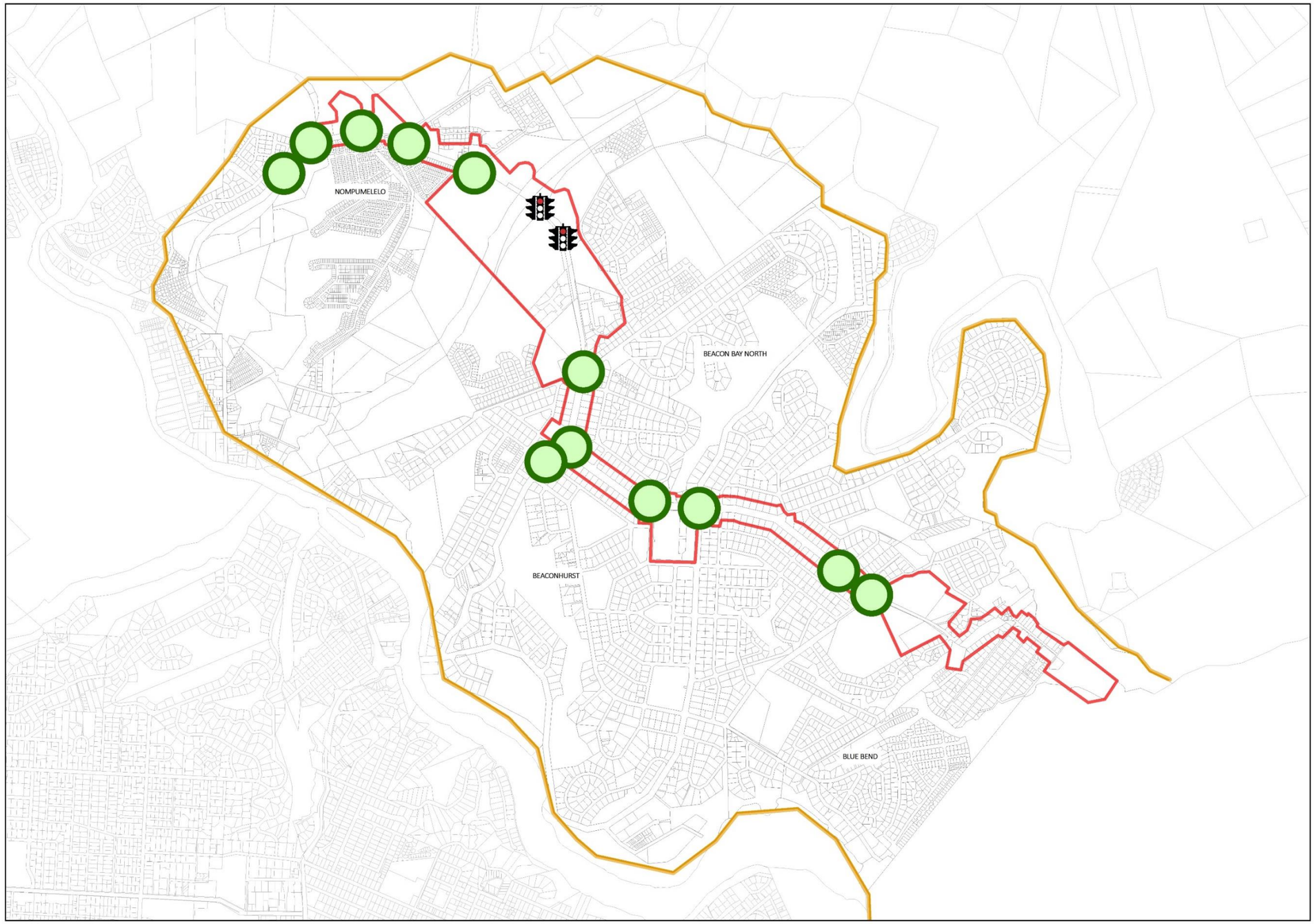
PLAN F 1. Traffic Proposals



F9. PUBLIC TRANSPORT IMPROVEMENTS

The following recommendations are made to improve public transport mobility along Bonza Bay Road:

A paved pedestrian walkway, a structure with facilities for informal traders and a covered waiting area for public transport users should be constructed adjacent to the newly constructed taxi rank along Bonza Bay Road adjacent to Spargs.

The taxi embayment on the eastbound side of Bonza Bay Road between Beaconhurst Drive and Pell Street should be maintained, but moved forward into the area currently occupied by the left turn lane into Pell Street, which should be removed for safety reasons.

Taxi embayments should be constructed on both sides of Bonza Bay Road at all intersection along Bonza Bay Road between Lagoon View Drive and the Homeleigh access.

This proposed embayment, located between Major Square Road and Beaconhurst Drive, should replace the existing embayment serving the eastbound traffic of Bonza Bay Road that is located east of Beaconhurst Drive.

The construction of a large taxi rank, with associated informal trading facilities, ablutions, etc. near the entrance to Nompumelelo.

A southbound taxi embayment along Batting Road just south of its intersection with Bonza Bay Road.

The northbound taxi embayment along Bonza Bay Road, just west of the Quenera Drive intersection, being extended by approximately 20m.

F10. PEDESTRIAN AND CYCLE FACILITIES IMPROVEMENTS

Pedestrian sidewalks need to be standardised, continuous and to a level that is acceptable. For these reasons a number of new or improved sidewalks will be proposed. Some of the proposed sidewalks will go hand in hand with the proposed increase in the number of lanes along Bonza Bay Road.

It is also important to keep up continuity. In this regard it is important to continue the cycle network along Bonza Bay Road that is currently being implemented along Quenera Drive.

The following recommendations are made to enhance pedestrian safety:

- Raised pedestrian crossings are recommended at the approaches to all the proposed roundabouts to enable them to cross safely.
- The use of tactile paving on kerb edges at crossing points to alert blind pedestrians to the presence of an intersection and pedestrian crossing.

- The converting of the damaged sidewalks along Bonza Bay Road to concrete sidewalks.
- The introduction of new sidewalks along the sections of Bonza Bay Road where sidewalks do not currently exist on both sides. The sidewalk on the southern side should be of sufficient width to cater for both pedestrians and cyclist.

F11. TRAFFIC CALMING IMPROVEMENTS

In order to improve traffic safety, raised pedestrian tables have been proposed at all the approaches to the roundabouts and traffic circles as identified herein.

F.9.2 Projects recommended as part of existing pending/approved applications

The rezoning of Erf 5707 Beacon Bay, to accommodate a church and a school, required the Developer to introduce two taxi bays and a pedestrian sidewalk as indicated in the diagram below. Note that these improvements will only be implemented once the development proceeds.

Improvements required for Erf 5707 Beacon Bay

F.9.4 TMP development contribution

F12. CALCULATION OF TMP DEVELOPMENT CONTRIBUTION

The BCMM identified the need to introduce development contributions for road improvements required as a result of increased traffic volume due to developments. The development contributions discussed here relate specifically to the Bonza Bay Road LSDF and to the road network improvements identified in the TMP to accommodate the accumulative trips generated by the various possible developments.

It should be noted that if a particular development required additional road network improvements, other than those identified in the TMP, and which benefit only that development, then such road network

improvement costs will be in addition to the standard development contribution imposed, unless the Transport Planning and Operations Department agree that the improvement will benefit the broader community within the study area. In general, development contributions relate to trips generated from a development in proportion to the overall trips generated by other developments in the Bonza Bay Road LSDF, plus any other specific requirements. The specific requirements may include, but are not limited to, access arrangements, new road works to provide access to the development, and all internal roads.

The following formulae are to be utilised for the calculation of the TMP development contribution for a specific development$_{(n)}$.

$TMP_{development\ contribution\ (n)}$ = $Trips_{(n)} \times Cost_{trip}$

Where,

$Trips_{(n)}$ = Critical peak trips for Development(n)*

$Cost_{trip}$ = $(Cost_{TMP} - Cost_{BCMM\ TMP\ subsidy} - Cost_{previous\ contributions})/Trips_{TMP}$

$Cost_{trip}$ = Cost per vehicle trip (i.e. R3,000)

$Cost_{TMP}$ = Total Cost of TMP projects requiring funding from sources other than external sources (i.e. approximately R47,500,000)

$Cost_{BCMM\ TMP\ subsidy}$ = BCMM subsidy towards TMP projects - 50% (i.e. R23,750,000)

$Cost_{previous\ contributions}$ = Previous contributions received from developers within the study area – say R3,750,000)

$Trips_{TMP}$ = Total number of new trips generated by proposed developments in the critical peak (i.e. 6,800 trips).

Note* The number of trips per development is to be calculated by either the Buffalo City and/or a qualified Traffic Engineer appointed by the Developer. Existing trips generated by the current approved land use of the site on which the development is to take place shall be deducted from the trips generated by either the Buffalo City and/or a qualified Traffic Engineer appointed by the Developer.

It should be further noted that the $TMP_{development\ contribution\ (n)}$ includes VAT, but excludes escalation at the rate of CPI from 1 January 2018. The Cost per vehicle trip ($Cost_{trip}$) is R3,000, which is similar to the previous R2,000 that would be escalated at CPI from 1 January 2009.

It should be noted that the TMP development contribution is applicable to all types of developments within the Bonza Bay Road LSDF study area that generate additional vehicular trips. This includes subdivisions, second dwellings, sectional title developments, rezoning, additional GLA greater than 100m² to existing developments (excluding residential where the number of units does not increase), etc.

This development levy also applies to accommodation facilities such as guest houses, lodges and Bed and Breakfast, schools and places of worship, that are not normally located within the areas identified for offices/retail as illustrated in the Bonza Bay Road LSDF, but are within the study area. For these facilities the normal development contribution will apply and will be based on the maximum weekday peak trips generated.

The recommendations of the Bonza Bay Road LSDF regarding development levies excluded escalation are presented below in Table F.9.

As reflected in Table F.9, the development contribution is based on either erf size, number of seats, rooms, beds or students. The rates included in Table F.9 are for the sizes reflected therein. These rates are to be multiplied by the actual size of a particular development.

Below are two examples of how Table F.9 may be utilised to calculate the development contributions:

Example 1: An office development on 1,500m² erf.

- Development contribution for 1,000m² = R25,200 (Table 1.18) /1,000m² X 1,500m² = R 37,800

Example 2: A guest house with 10 rooms, irrespective of erf size.

- Development contribution for 1 room = R 1,350 (Table 1.18) X 10 rooms = R 13,500.

It should be noted that Table F.9 is to be used as a guide and represents the "realistic maximum development potential of the site". Development contributions should be calculated by the Transport Planning and Operations Department and/or the Developer's appointed Traffic Engineer. If it is calculated by the Transport Planning and Operations Department then Table F.9 is to be used. If the development is of a size/nature that requires a TIA to be undertaken then the development contribution must be calculated by the appointed Traffic Engineer.

If calculated by the appointment Traffic Engineer, as part of the STA or TIA, then the calculation may be based on actual trips based on the SDP. In this case the SDP will become critical in the approval process. If the SDP changes more than 10%, the development contribution will need to be recalculated. It should be noted that permitted trip generation reductions may be used as these have been used in calculating the $Trips_{TMP}$ in the study area. For permitted reductions refer to Table F.2.

It should be noted that the number of trips are to be calculated based on actual building plan approval. However, often the building plans are not available at the time of calculating the $Trips_n$. In these cases the Tripsn is to be calculated based on the approved SDP. It should be noted that certain applications are for Council's special consent only, e.g. the establishment of a Bed and Breakfast without rezoning. If a special consent for 5 years is proposed, then the development contribution will not be applicable. It is only when a rezoning is applied for that the development contribution will become effective.

F13. PERIOD OF VALIDITY OF THE DEVELOPMENT CONTRIBUTIONS

The development contribution is to be calculated when the application is received by the Transportation Planning and Operations Department and shall be valid for a period of 12 months after the date of Council's approval letter. Should the development contribution not be received in full by that date, then the development contribution will be recalculated from the new date, and will once again be valid for a period of 12 months.

TABLE F 8. Bonza Bay Road LSDF illustrative development contributions

Land use	Erf area (m²)	Critical peak		Road cost
		Peak	Trips	
Office				
Low intensity offices	1,000	AM/PM*	8.4	R 25,200
General offices	1,000	AM/PM*	12.9	R 38,700
Medical offices	1,000	AM/PM*	32.0	R 96,000
Conference centre	1 seat	AM/PM*	0.5	R 1,500
Retail				
Retail (erf size less than 1,500m²)	1,000	Friday PM**	86.8	R 260,400
Shopping centre (erf size greater than 2,500m²)	Refer to TIA calculations	Friday PM**	Refer to TIA calculations	
Residential				
Flats and apartments	1 unit	AM/PM*	0.65	R 1,950
Townhouses	1 unit	AM/PM*	0.85	R 2,550
Single residential	1 unit	AM/PM*	1.00	R 3,000
Hotel	1 bed	AM/PM*	0.50	R 1,500
Bed and Breakfast / Guest houses	1 room	AM/PM*	0.45	R 1,350
Institutional				
Day cares	1 student	AM	1.00	R 3,000
Schools	1 student	AM	0.80	R 2,400

Place of worship	1 seat	AM	0.05	R 150
Mixed use				
Low intensity offices and apartments	1,000	AM/PM*	10.6	R 31,800
Land uses not included above				
Refer to TIA calculations				

*Note: * AM/PM whichever is the greater.*

*** Friday PM chosen as Saturday background traffic not critical within the greater study area.*

F14. UTILISATION OF DEVELOPMENT CONTRIBUTIONS

Buffalo City has to date received a significant amount of development contributions for the implementation of the TMP projects as identified in the previous Bonza Bay Road LSDF. Unfortunately there appears as if no formal mechanism exists for Buffalo City to utilise these funds. This is placing strain on the area as projects are not implemented at the required rate and now questions are being asked by existing developers who have contributed as to what is happening with their development contributions that have been paid.

It is therefore essential that the development contributions be utilised for the TMP projects identified herein.

Table F.10 below list the properties that have had development contributions imposed and which have, or should have had, been invoiced and whether development contributions have been received. As can be seen a number of invoices have not yet been issued. In addition, there are outstanding amounts that need to be received. Buffalo City needs to follow the necessary procedures in order to receive all the development contributions they are owed by these Developers.

F.9.5 Funding sources

It is assumed that funding for the TMP will be split as follows:

- Council – 50%.
- Previously paid development contributions – R3,750,000.
- New development contributions – 50%.

In such a way both Council and the developers share the upgrading requirement for the area. This is assumed to be a fair split as there are both current traffic issues that require attention without approving any upgrades, and then there are others that are required due to the additional traffic demand imposed by the new proposed developments.

There are currently a number of existing funding sources that Council can utilise to provide a significant portion of their funding contribution. These include the following:

- Traffic calming.
- Sidewalks.
- Road signs and road markings.
- PADF.
- Public transport.
- Planning projects (operational budget).
- Specific road projects e.g. Quenera Drive Extension.

Vehicular movement along Bonza Bay Road

Vehicular movement along Bonza Bay Road

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SECTION G :
Engineering Proposals

Landscaping along the proposal for a Center Island along Bonza Bay Road

G. Engineering Proposals

WATER SUPPLY

The study area currently has water supply with reticulation pipes running along the streets. The Water Service Authority for the area is the Buffalo City Metropolitan Municipality and its Operation and Maintenance Department has indicated that water supply is reliable.

A proposal for Flow and Pressure tests can be conducted by the BCMM as it becomes necessary due to the increase in intensity of the land use on Bonza Bay Road and other roads proposed for Low Intensity Office.

The current supply is from the following areas:

- Beacon Bay Reservoir, which has a capacity of 4.47 Ml and a full supply level of 87.703m above sea level.
- Homeleigh Halt boosted supply zone. The Homeleigh Halt Reservoir has a capacity of 1.5 Ml and a full supply level of 111.151m above sea level.

The existing water storage reservoirs will also need to be checked to ensure that they can be able to handle the increase in water demand because of this development.

SANITATION

The area is serviced with a formal sewer reticulation network. Sewer pipelines runs parallel to the internal streets and all of it gets collected at the Gonubie Waste Water Treatment Works (GWWTW).

It is estimated that should 80% of the domestic peak water demand and 100% of the business peak water demand is returned to the sewer system, the respective peak flows would be of the order of 0.35 l/s/ha and 0.43 l/s/ha. This is based on the assumption that the rezoning will be such that the majority of the area remains residential.

The sizes of the GWWTW could accommodate the proposed development changes, however a high-level study is required to confirm these assumptions. This study can be conducted as more take up occurs along the areas of increased pressure. This study will be proposed in the Implementation Plan.

SOLID WASTE

The Buffalo City Municipality serves the entire study area. Domestic waste is collected once a week and disposed of at a regional site. Waste produced in the study area fall within the following categories:

- Household Refuse

- Commercial and Business Refuse
- Street Sweeping
- Construction and demolition debris

A garden refuse transfer site, located off Edge Road, exists within the study area.

A Waste Recycling Centre is proposed for the the study area as mentioned in the Section D 4: MU 8. This Waste Recycling Centre is a positive proposal which promotes the recycling of waste. Homes and offices within the Beacon Bay area can enforce recycling and take their various materials to this centre, rather than combining waste for dumping within the land fill site.

STORMWATER

A formal stormwater reticulation services the study area. The reticulation pipes run parallel to the roads and collects the water through kerb inlets which then discharges the stormwater into the rives on the eastern and western side boundaries of the area. The sizes of these pipelines will need to be confirmed if they will be able to handle the addition flow produced by the developmental Proposals. Stormwater retention or attenuation facilities for the site should be further investigated to comply with municipal by - laws.

The proposed changes in land use in the study area will result in considerable hardening and will result in flood peaks in the minor system increasing by up to 50%. Particular care must be given to ensure that redeveloped sites do not cause stormwater runoff to be diverted into the sewer system.

Stormwater plans are conducted as a BCMM requirement upon each rezoning application submitted to the municipality. As a municipal requirement, these plans are to completed by an Engineer where stormwater management for the proposed development of each site needs to be articulated and approved by the roads department prior to receiving approval on the proposed development.

Due to the nature of the proposals mentioned in this review, it is further proposed that it may also be necessary to conduct a holistic Stormwater Management plan for the entire study area, with regards to the proposals mentioned in this study to ensure the capacity is sufficient at a holistic level, rather than solely at site specific.

The minor system – the primary goal is to ensure the convenience of residents and the safety of traffic during normal rain showers. The system usually consists of road drainage channels and kerb inlets, grid inlets, manholes, pipes, box culverts and small open channels for the rapid discharge of run-offs to the major drainage system.

The major system will seldom be utilized to its full capacity as its purpose is to convey and control large floods. Facilities such as golf courses can, as a secondary function, be utilized for flood control. This is possible where normal activities are impeded or disrupted during the occurrence of a rain storm with consequent flooding. Recreational areas, parks, parking areas, sports fields and certain streets are some

examples which could have a secondary function of flood control. Similarly, the opposite applies, namely where facilities primarily provided for flood control have the secondary function of recreation purposes.

ELECTRICITY

The maximum demand and total energy usage varies accordingly to the particular land use in an area. Generally office and retail areas use more energy per area in comparison with residential areas. This is largely due to the heating and cooling of office and other commercial load associated with businesses.

The quality of supply expected from commercial customers differs significantly from that of residential customers. In general the service agreements with commercial customers are a lot more stringent and prolonged power outages over and above what is allowed for in the service agreement can lead to costly insurance claims.

Due to the above it is recommended that a firm supply be provided to the area which is earmarked for rezoning, with a fully redundant design.

There is an existing electrical supply located within the study area. The operations and maintenance department at the BCMM has indicated that the current supply is adequate for the demand. Further investigation will be required and studies be conducted upon the implementation if this review to ensure that there is sufficient provision for the increased demand.

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SECTION H:
Environmental Proposals

H. Environmental Proposals

NATURAL SYSTEMS / PROTECTED AREAS

The Natural Systems / Protected Areas located within the study area are discussed in detail in the precincts section with regards to specific proposals. These are further reiterated below.

The Nature Reserve (Precinct REC 3) is managed and looked after by the Beaconhurst School. The school uses the Nature Reserve for educational purposes regarding the types of flora and fauna within the reserve. It is for this reason that the reserve is protected.

It is further proposed that the BCMM considers this area for regular maintenance and upkeeping. This will ensure the protection of the indigenous species and and the removal if the alien species. Due to the educational use of this space. Informative signs can also be created for the various species within the nature reserve.

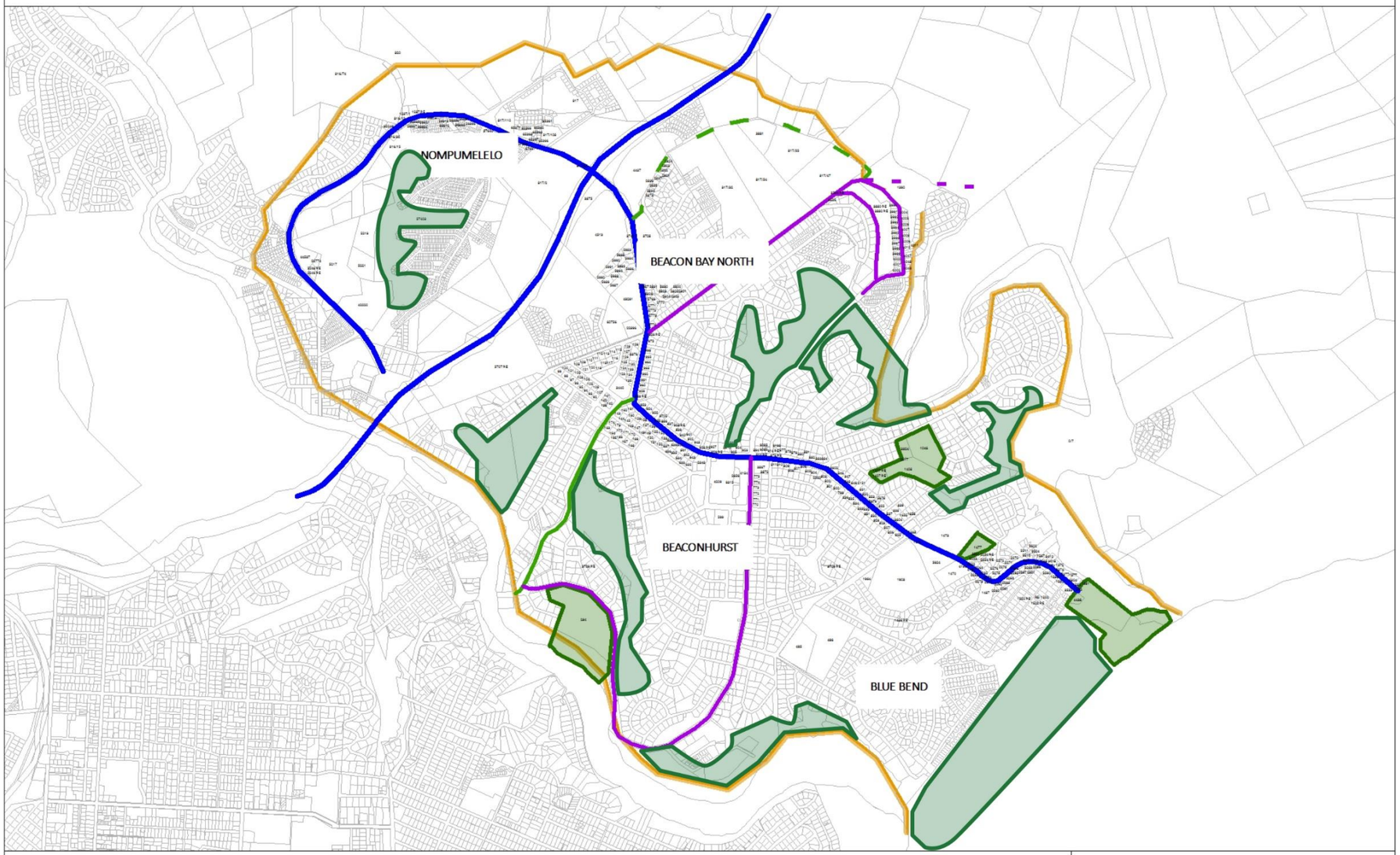
The Botanical Gardens which will be taken over by a private entity plans to use the gardens as rehabilitation for dementia patients. The gardens then will be managed privately.

The open space next to the Beacon Bay Country Club is proposed to be used as an active recreation facility with the development of cycle and pedestrian hiking trails. It if proposed for these to be maintained by the BCMM.

The MOSS areas along coastline is also a protected area due to the indigenous flora and the location of being alongside the coast. This space can be further promoted as tourist destination through upgrading the boardwalk.

There are also other natural grassland areas where slopes become too steep for development. These areas can be indirectly used as type of stormwater management where these areas can assist to contain flooding and the like.

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
ENVIRONMENTAL PROPOSALS



Legend

- Cadastre
- Recreational Precinct
- Primary Corridor
- Proposed Secondary Corridor
- Secondary Corridor
- Proposed Tertiary Corridor
- Tertiary Corridor

BUFFALO CITY METROPOLITAN MUNICIPALITY

TSHANI CONSULTING C.C.

Project No.: EL 672
Date : MAY 2019
Scale : NTS

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SECTION I :
Urban Design Proposals

I. Urban Design Proposals

A 3D interpretation was developed of the proposals mentioned above and incorporated many urban design elements to provide an artist impression of what certain areas along Bonza Bay Road could look like. The following section takes the reader through the urban design principles which is essential along Bonza Bay Road, while the 3D images show how these elements can be applied to space.

Urban design is the art of making places for people interaction. Urban design considers how people use and perceive space and take into account aspects such as safety comfort legibility and ease of access. It also considers all forms of movement such as private vehicles, public transportation, cyclists, pedestrians, etc. and the relationship that they would have with each other and how all forms can occur harmoniously within the public realm.

Urban design is essential for the creation of sustainable environments and would be the glue that sticks the economic, built environment and social life together. Good urban design can create lively spaces that would promote public interaction within space.

The urban design principles as set out in the Development Perspective phase of this study are as follows:

1. Greening and Beautifying
    a. Green Natural Systems
    b. Road Reserve Green Open Space
    c. Entrance of Nompumelelo
    d. Beautifying the Bonza Bay Picnic Spot
    e. Beautified Centre Island, Traffic Circles, and pedestrian crossings
    f. Variety of paving material
    g. Utilisation of Trees

2. Sustainable Built Environment
    a. Mix of uses
    b. Place Making
    c. Public Realm
    d. Landmarks
    e. Safety and Security

3. Accessibility, Permeability and Movement
    a. Accessibility
    b. Vehicular and Pedestrian Movement

I1. GREENING AND BEAUTIFYING

Green Natural Systems:

Green Natural Systems are green spaces which occur naturally. They are comprised of indigenous and alien green species. Such green systems within the context of the study area are located at the beachfront and the Botanical Gardens. These spaces contain indigenous and protected green systems. This natural vegetation should be used as an asset through design features within and around this vegetation. It is necessary for these systems to be maintained and managed in order to maximise its natural beauty and most importantly, to ensure that they are appreciated by-and attract users.

Sufficient Street Lighting for pedestrians and vehicles:

It is essential to provide sufficient street lighting for the safety of movement of vehicles and pedestrians after the hours of day light. Lighting can present itself in the form of lamp posts that may be solar powered to save electricity or be located at the ground or higher up to provide different forms of lighting.

Proposal of street lighting along center island along Bonza Bay Road

Proposal of street lighting along center island along Bonza Bay Road

Road Reserve Green Open Space

The green space throughout Bonza Bay Road between the road and the property boundary is underutilised green space which is fairly well maintained, but not used to its full potential. There are often cars which park on this space, due to the vacant use of this space. Ways in which this green space can be used as an advantage would be to further beautify and to accommodate urban furniture at certain intervals throughout the stretch of the road reserve.

Artist impression of pedestrian walkway, cycle lane and urban furniture along Bonza Bay Road

Gateway to Nompumelelo

The entrance to Nompumelelo is an area where a lot of activity currently occurs. The area is not appealing to its users and does not provide for their specific needs. The space should be visible and vibrant and a place of activity with controlled traffic movement. Various attractions can be placed at this entrance such as trees and benches and it should be a well-lit area that accommodates the needs of the users. The entrance should be vehicular as well as pedestrian friendly. The space has potential to accommodate informal traders in a more formalised manner and as well as to provide a space for the motor repairs traders to be able to formally operate within.

Proposal of traffic circle at the Nompumelelo intersection

Proposal for garages to accommodate local business owners

Proposal for formalised Informal Trader stalls to accommodate local business owners

Proposal for formalised informal trader stalls

Proposal for pedestrian space at the entrance to Nompumelelo

Beautifying the Picnic Spot

A key outcome of the Development Perspective phase was the insufficient provision of public facilities. Such facilities include the following:

- Braai facilities;
- Tables and benches;
- Clean ablution facilities;
- Green soft grass to sit on;

These are typical features of a sustainable picnic spot which should be implemented within the Bonza Bay Beach picnic area.

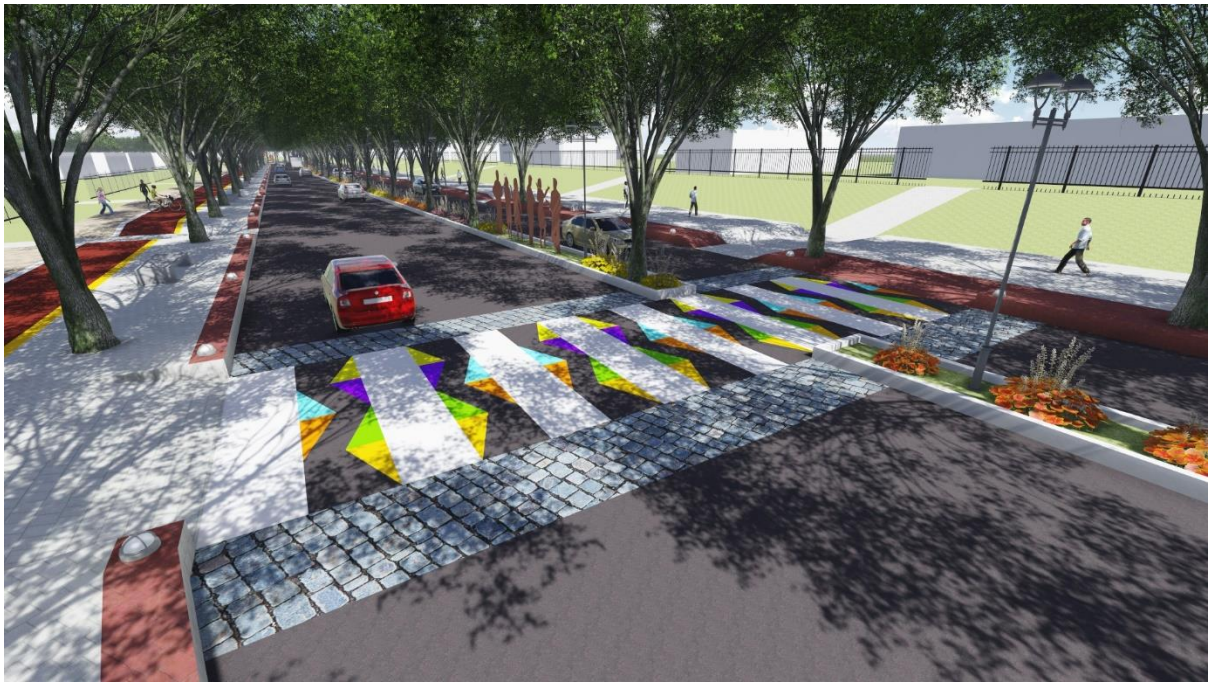
Beautified Centre Island, Traffic Circles, and pedestrian crossings

It is essential to have significant traffic details noticeable to offer variety and to stand out to ensure that they are adhered to. We have thus showed a 3D interpretation of a beautified Centre Island with flowers and trees; beautified, raised traffic circles with flowers and sculptures to ensure that vehicles cannot drive over the traffic circle. Raised pedestrian crossings are also present at all intersections to ensure the continuous safe movement of pedestrians. Pedestrian crossings are also proposed to be beautified to ensure their visibility and to add colour and variety for attractiveness and to create a character.

Proposal of center island along Bonza Bay Road

Proposal for design feature long Bonza Bay Road

Proposal for beautified traffic circle entering the Spargs Complex



Proposal for beautified pedestrian crossing along Bonza bay Road

Variety of paving material

A variety of paving material is proposed to differentiate between pedestrian space, cycle space and space dedicated for street furniture.

Utilisation of Trees

Planting trees offer many positives to a space. It acts to clean the environment, adds ambiance and shade to a space as well acts as a noise buffer between the vehicular noise and the residential homes. A proposal to grow trees along the side walk and along the centre island to create an archway along the main portions of Bonza Bay Road.

Proposal for trees along Bonza Bay Road

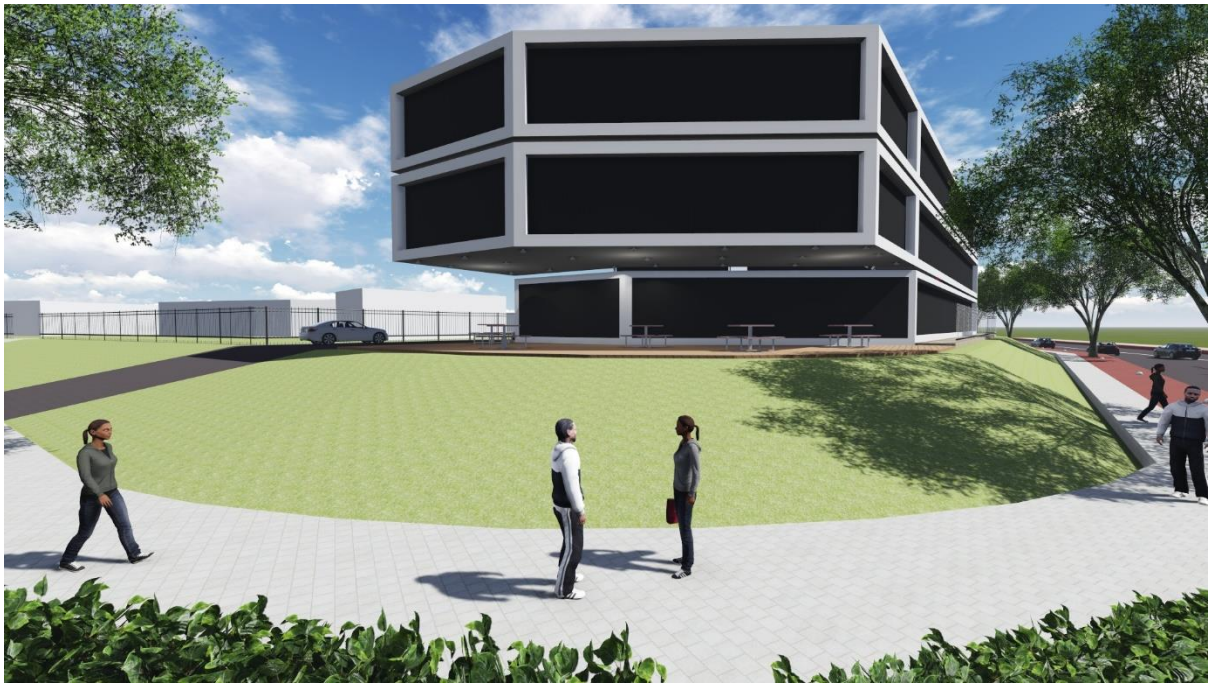
Proposal for center island

I2. SUSTAINABLE BUILT ENVIRONMENT

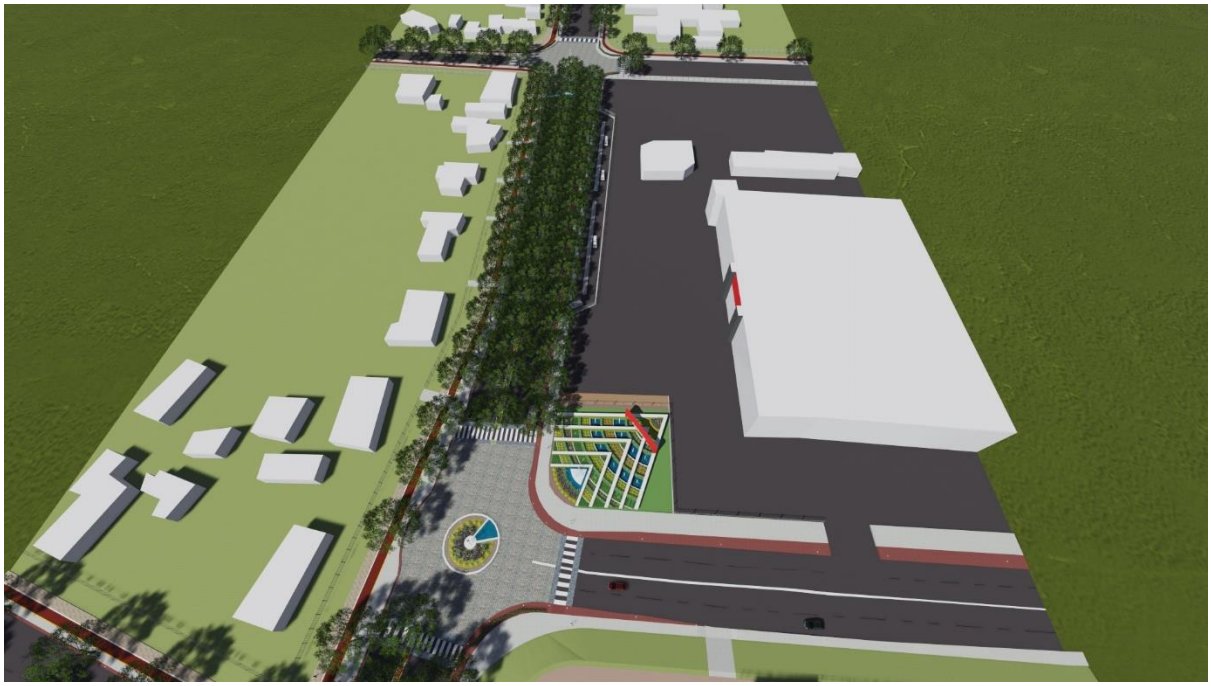
Mix of Uses

A mix of land uses ensures that a person's variety of needs are catered for. This is enforced to compact the city and to minimise the need of travel. A mix of uses allows people to be able to live, work and play within the same vicinity. It also ensures that there is continuous (24 hour) activity within an area.

Beacon Bay, for many years, had begun introducing a mix of uses being a predominantly residential area with shopping nodes of Retail Park and Spargs as well as an activity node of Bonza Bay Beach and Beaconhurst School. The 2008 Bonza Bay LSDF introduced Low Intensity Office use along sections of Bonza Bay Road. The success of this was noted and further areas of Low Intensity Office with a residential component is promoted and encouraged at certain areas. Other activities are promoted such as coffee shops, smaller scale retail activity and activities which promote the use of the beach node. These mix of uses are to be developed to ensure that the area still retains its residential nature.



Mix of land uses to be accommodates within a single building



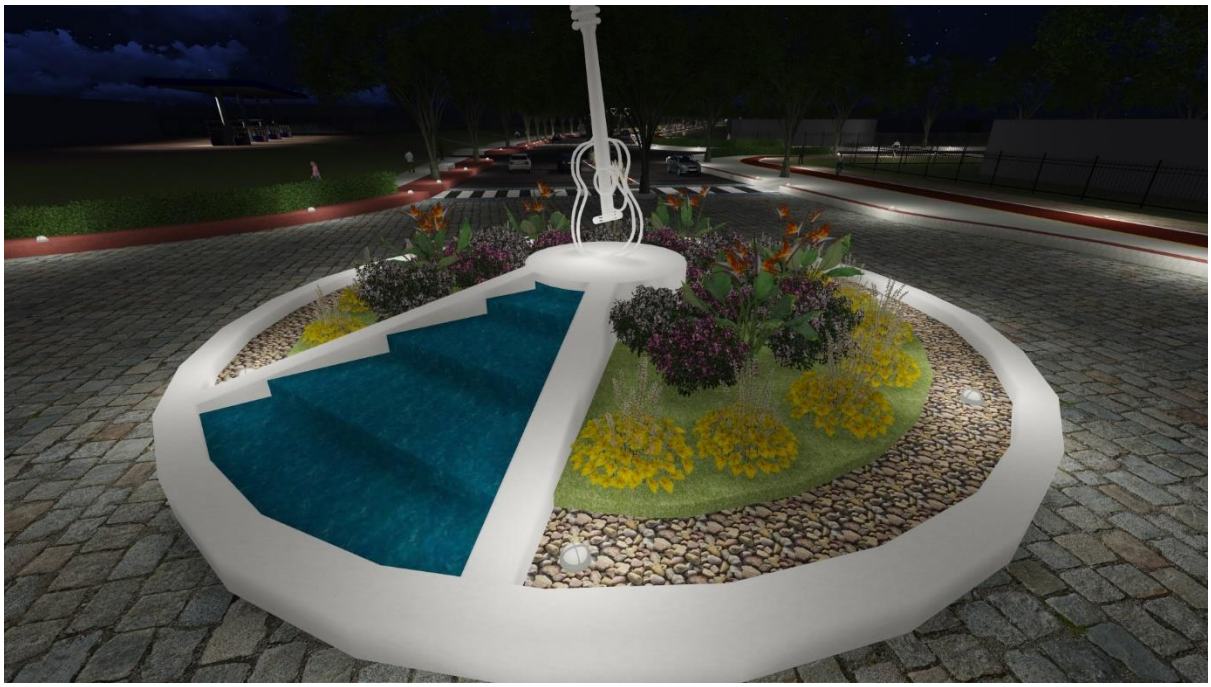
Proposal for mix of uses in the Spargs Complex

Placemaking

Place making is the act of designing a space which has meaning to its users. It allows users to be able to develop a connection with the space to make them want to visit continuously. Features of place making include the aesthetic of a space, the way in which it is designed through the relationship between the public open space and the built space within a particular area. Components of a public space should include urban furniture such as lighting, benches, and bins where they should be designed in such a way that it would promote interaction amongst the users of the space or create a pathway through the area. Placemaking ensures the creation of an identity of a place. A positive identity can enhance investment for the area. Components that can create placemaking are the following:

- Public art
- Iconic developments
- Natural features
- The general unique aesthetic of the area
- The ease of access between activities

Design features to create identity



Artist impression of a beautified traffic circle

Public Realm and Street Furniture

The public realm is all spaces which is meant for public use including roads, sidewalks, public spaces, squares and public nodes. The public realm should be designed in such a way that it does not restrict any persons and is accessible to all. A well designed public realm ensures a combination of hard and soft spaces where hard spaces are designated meeting spots, public squares and transportation nodes. Soft spaces are can be described as the landscape within the public space and more informal meeting spots and usually form the spaces in between the hard spaces.

Hard spaces within the context of the study can be described as the public space at the entrance of Nompumelelo, the mini taxi rank in front of the Spargs Mall as well as at the beachfront. These spaces would all need upgrading to promote its use to make them more pedestrian friendly. Soft spaces within the study area can be described as the walkway along Bonza Bay Road. There are currently Palm trees planted along the sidewalks. these require maintenance. Other features which could enhance this space would be the implementation of urban furniture, an alternative surfacing material and more trees or flowers to provide shade at certain portions to ensure comfort while moving within the space.

Beautified pedestrian space

Street Furniture are elements that add character to a space and users/pedestrians to pause and to appreciate space. Such aspects are benches, bins, lighting, pot plants, etc. These elements add variety to space. A proposal to include a variety of street furniture along a dedicated space on either side of Bonza Bay Road is promoted.

Urban Furniture: Bin

Urban furniture: Bench

Urban furniture: Street lighting

Landmarks

Landmarks act as iconic points of a particular area. It allows a non-frequent user to be able to identify at first glance. Aspects in space which can act as positive landmarks would be forms of public art. Public art can also link itself to urban furniture where a bench could be designed in such a way that it also acts as a form of public art. Other forms of landmarks could be nodal areas such as the entrance to Nompumelelo or the entrance to the Beach Front. These nodal areas act as common spaces that people can easily refer to.

Design elements as public landmarks

Safety and Security

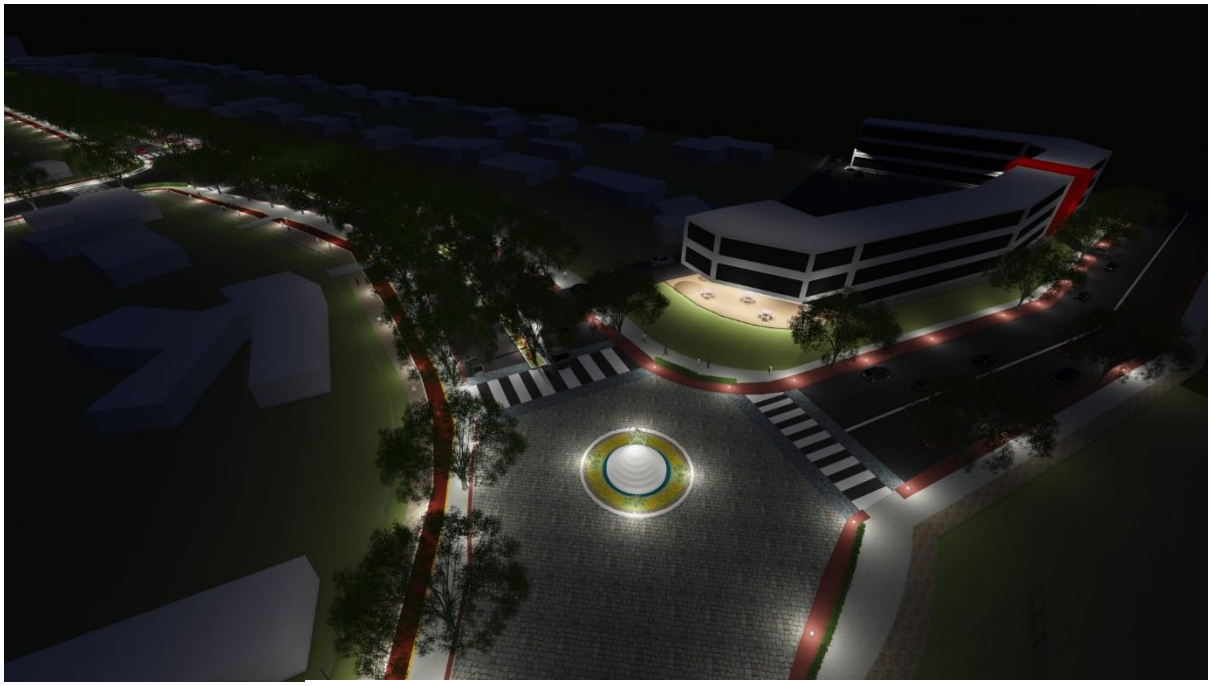
This is where the creation of a safe environment is done through the design of the environment, rather than through the implementation of security cameras and guards. Such an ideal is created through lighting of the CBD after hours, active building edges whereby building activities spill over into the public realm, as well as through scattering a variety of activities around the precinct rather than congregating them at a singular spot.

Security on the street can also be achieved through passive surveillance which is where pedestrians have views of the street which acts as the security measure to other pedestrians. The more pedestrians are on the street, the safer one would feel as one would have the knowledge that another person can view them if they are being mugged or hurt while moving within the public realm.

Through design interventions within the study area, we aim to enhance the security for residents as well as for current and future investors. Such has been proposed through the following:

- Improved street lighting;
- Mixed uses (vertically and horizontally) to create 24-hour urban phenomenon – live/work/play;
- Perimeter buildings with active street edges to encourage "security by design" through passive surveillance/" eyes on the street";
- "Build-to" lines, active street edges to avoid creation of recesses and corners along street edges;

Pedestrians and security elements, "eyes on the street"



Lighting to create safety

I3. ACCESSIBILITY AND MOVEMENT

Permeability

Permeability is the concept which ensures that persons of al modes of transportation to be able to move through or navigate space. It includes linkages between various activities and nodal points. The concept of permeability ties in with the concept of legibility which ensures that a space is easily read and understood. This can be achieved through signage which leads users to the direction of the activity or through the planting of trees, flowers or certain lighting which leads them to the spaces. The plan below highlights the areas where permeability needs to be advanced within the context of the study. It also shows the higher order and secondary and lower order of linkage routes. These are generally the routes that are used most often in each order.

Pedestrian crossing, decreasing the movement of vehicles, creating permeability

Accessibility

Accessibility is the ease in which activities are able to be reached. Access directly links to the above-mentioned concept of permeability whereby access is a component which creates a permeable space.

The general study area can be accessed through the N2 and Batting Road which is a predominantly vehicular access point but does have pedestrian pathways which is promoted to more safe. The site in itself and especially the various developments should be able to be easily accessed by vehicles (public and private transportation) as well as pedestrians. It should not limit or restrict any individuals such as the disabled. This relates to movement within the public realm specifically.

Accessibility also refers to pedestrian accessibility and movement. It is essential to provide a dedicated pedestrian walkway to ensure the safe movement of pedestrians. This needs to be differentiated from a cycle lane as the movement of cyclists are much faster and could be dangerous for pedestrians. The cycle lane should be raised so that they are not at a risk of getting run over by vehicles.

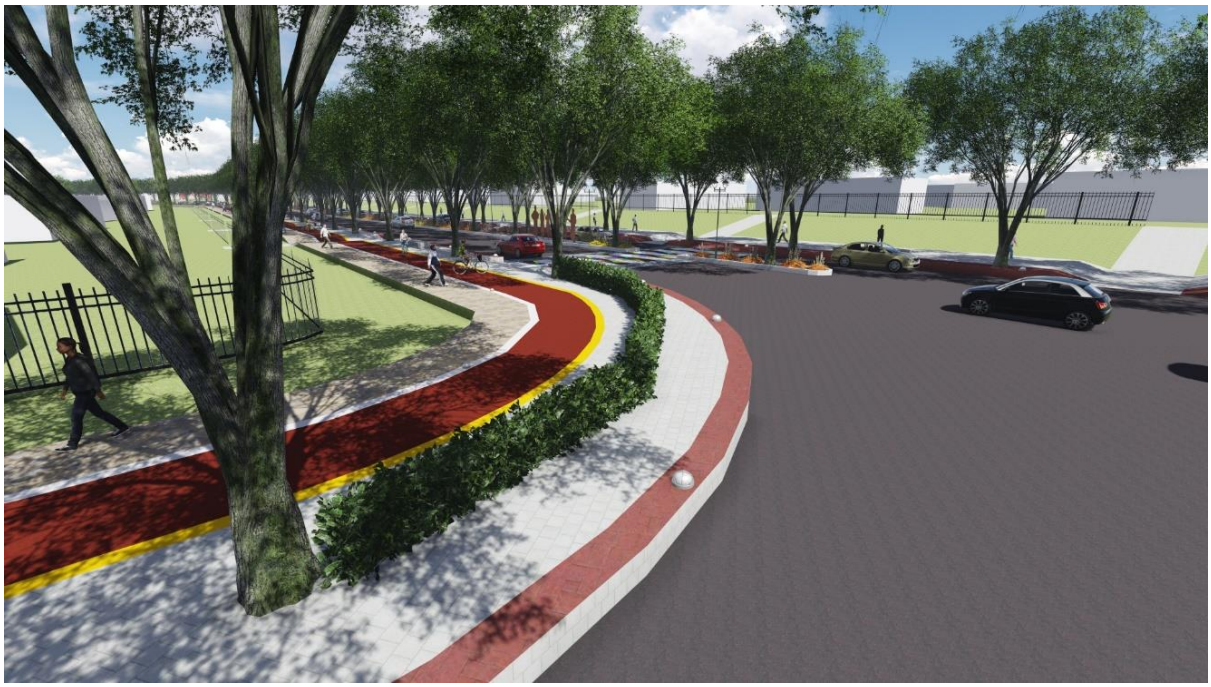
Pedestrian walkway allowing for pedestrian accessibility

Vehicular accessibility into private properties

Vehicular and Pedestrian Movement

In addition to accessibility, vehicles and pedestrians should be able to easily move within the study. Adequate parking should be provided for users as well as adequate bus and taxi stops along Bonza Bay Road. Pedestrian mobility is imperative. Pedestrian crossings should be promoted and landscaping in order to provide a pleasing public pedestrian experience.

A key design feature to protect pedestrians is to accommodate raised hedges at street corners which add as a protective measure for vehicles and pedestrians.



Plant hedges to minimise the impact of accidents,

Raised curb heights

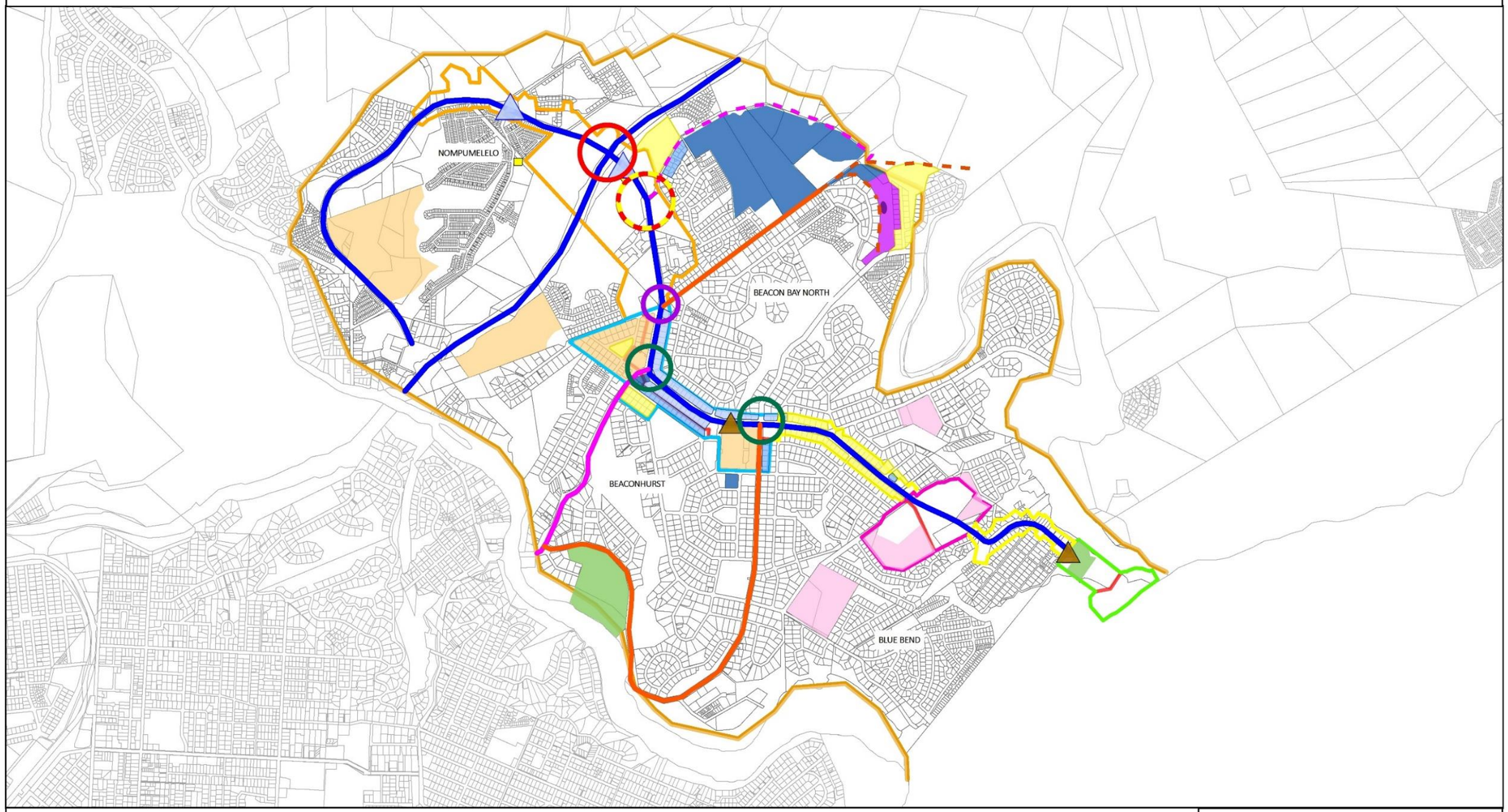
Another feature to add as protection to pedestrians and to force vehicles to slow down as approaching traffic circles would be to raise traffic circles, raise curb height as well as pedestrian crossings and to apply a cobble stone material feature to slow down traffic movement when approaching traffic circles.

Designated traffic stop outside of the Spargs complex

Pedestrian crossing, raised curb height, slope to accommodate wheelchair pedestrians

PLAN I: 1. Bonza Bay LSDF Plan

BONZA BAY ROAD
LOCAL SPATIAL DEVELOPMENT FRAMEWORK
BONZA BAY LSDF PLAN



Legend

Primary Node · Proposed Node · Secondary Node · Tertiary Node · Major Gateway · Minor Gateway · Primary Corridor · Proposed Secondary Corridor · Secondary Corridor · Proposed Tertiary Corridor · Tertiary Corridor

Primary Study Area · Secondary Study Area · Cadastre · Precinct 1 - Mixed Use Precinct · Precinct 2 - LIO & Medical Precinct · Precinct 3 - Residential Precinct · Precinct 4 - Institutional Precinct · Precinct 5 - Recreaction Precinct

Land Uses

Waste Site · Warehousing · Recreation · Proposed Low Intensity Office · Residential · Mixed Use · Institution · Existing Low Intensity Office · Business · Proposed Taxi Rank

BUFFALO CITY METROPOLITAN MUNICIPALITY

tshani CONSULTING CC

Project No.: EL 672
Date : MAY 2018
Scale : NTS

Limits of Warranty and Disclaimer

This data is for information purposes only. No liabity shall devolve upon the local authorities or its officials through the use thereof.

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SECTION J :
Implementation Plan

Proposal for Formalised Informal Trader Stalls outside Nompumelelo

J. Implementation Plan

The following 5-10 year Implementation plan has been drafted from the proposals discussed in the previous sections. The projects are proposed according to the land use proposals, traffic proposals and urban design proposals.

TABLE J 1. Implementation Plan

NO.	PROJECT DESCRIPTION	LOCATION	RESPONSIBILITY	BUDGET ESTIMATE	PHASING
3	Landscaping/Planting of flowers and shrubs along road island	Bonza Bay Road: From the intersection with Batting Road to Beaconhurst Drive and Quenera Drive to Edge Road	Community Services	R 200 000.00-R250 000.00	Medium-term
4	Widening of pedestrian walkway	Either side of Bonza Bay Road	BCMM Traffic Department		Short-term
5	Inclusion of cycle lane including the utilisation of different material	Western side of Bonza Bay Road	BCMM Traffic Department	R	Medium-term
6	Planting of trees along centre island and sidewalk	Bonza Bay Road	Community Services	R 350 000.00-R450 000.00	Medium-term
7	Design and building of structures including landscaping for traffic circles	10 traffic circles (Existing and proposed) along Bonza Bay Road	BCMM Traffic and Transportation Department	R 250 000.00 per traffic circle	Medium-long term
8	Inclusion of street furniture along pedestrian sidewalk (benches, bins, etc)	Either side of Bonza Bay Road	BCMM Traffic and Transportation Department	R 650 000.00	Medium-term
9	Solar street lighting	Bonza Bay Road	BCMM Electricity Department	R 3 000 000.00	Short-term
10	Beautifying the area outside Nompumelelo	Nompumelelo gateway	BCMM Community Services	R 600 000.00	Short-medium term
11	Development of public open space outside Spargs	Outside the Spargs Complex	PPP (BCMM and Spargs Group)	R 150 000.00	Short-medium term

12	Painting of approximately 5 zebra crossing	Bonza Bay Road and Beaconhurst drive	BCMM Traffic and Transportation Department	R 80 000.00	Short-term
13	CCTV Surveillance	Outside Spargs complex	BCMM Traffic and Transportation Department	R 20 000.00	Long term
14	Upgrading of beach facilities	Bonza Bay Beach area	BCMM Community Services	R 400 000.00	Short-term
15	Maintenance of street furniture, and beach facilities	Bonza Bay Road and Bonza Bay Beach	BCMM Community Services	R 200 000.00	Continuous
16	Maintenance and cutting of grass along sidewalks and centre islands	Bonza Bay Road	BCMM Community Services	R 250 000.00	Continuous
17	Landscape Design policy	Bonza Bay Road Corridor	BCMM Community Services	R 200 000.00-R250 000.00	Short-term
18	Stormwater Assessment, Demand, proposals Study	Bonza Bay Road Corridor	BCMM Engineering	R 550 000.00-R650 000.00	Short-medium term
19	Waste water Assessment including Sewer Capacity Assessment	Bonza Bay Road Corridor	BCMM Engineering	R 400 000.00	Short-medium term
20	Roundabout	Bonza Bay Road / Coad Road intersection		R 1 500 000	Medium term
21	Roundabout	Bonza Bay Road / Lagoon View Drive intersection		R 1 500 000	Medium term
22	Converted into left-in, left out	Bonza Bay Road / Pell Street intersection		R 500 000	Medium term
23	Two lane roundabout	Bonza Bay Road / Beaconhurst Drive intersection		R 1 000 000	Medium term
24	Two lane roundabout	Bonza Bay Road / Major Square Road intersection		R 1 500 000	Medium term
25	Converted into left-in, left out	Bonza Bay Road with Myall Road and Shire Street		R 500 000	Medium term
26	Two lane roundabout	Bonza Bay Road / Batting Road intersection		R 1 000 000	Medium term
27	Extra lanes	Bonza Bay Road / Edge Road intersection		R 1 000 000	Medium term
28	Relocate interection	Bonza Bay Road / Quenera Drive intersectin		R 2 000 000	Medium term

29	Traffic signals	Bonza Bay Road / N2 interchange – southbound ramps		R 500 000	Medium term
30	Two lane roundabout	Bonza Bay Road / N6 intersection		R 2 000 000	Short term
31	Roundabout	N6 / Homeleigh intersection		R 6 000 000	Short term
32	Roundabout	Batting Road / Sherwood Avenue intersection		R2 000 000	Medium term
33	Either 0.6m or 1.4m wide (estimate on 0.6m)	Central constructed island along Bonza Bay Road		R 5 000 000	Medium term
34	Two lanes in each direction	Increasing the number of lanes along Bonza Bay Road		R 5 000 000	Short – medium term
35	Two lanes in each direction	Bonza Bay Road bridge over the N2		R 20 000 000	Medium term
36	Three westbound lanes	Bonza Bay Road between Quenera Drive and the N2 southbound ramps		R 3 000 000	Medium term
37	Four lane single carriageway	Batting Bridge and approaches to the NEX on-ramp		R 20 000 000	Medium – long term
38	Introduction of this fourth leg	Bonza Bay Road / N2 NB on-ramp		R 20 000 000	Long term
39	Upgrade of existing road	M10 / R102 upgrade		R 10 000 000	Medium term
40	Red no-stopping lines and enforcement	Prohibiting stopping and on-street parking along Bonza Bay Road		R 500 000	Short term
41	Paved walkway, informal trading facilities, etc.	Bonza Bay Road taxi rank adjacent to Spargs		R 1 000 000	Short term
42	Relocate taxi embayment	Taxi embayment on Bonza Bay Rd between Beaconhurst Dr and Pell St		R 500 000	Short term
43	Taxi embayment's	Taxi embayment's on both sides of Bonza Bay Road at all intersections		R 5 000 000	Short – medium term
44	Taxi embayment	Taxi embayment between Major Square Road and Beaconhurst Drive		R 1 000 000	Short term

45	With associated informal trading facilities, absolutions, etc.	Large taxi rank near the entrance to Nompumelelo		R 3 000 000	Short – medium term
46	Taxi embayment	Batting Road just south of its intersection with Bonza Bay Road		R 500 000	Medium term
47	Extended by approximately 20m	Bonza Bay Road, just west of the Quenera Drive intersection		R 500 000	Medium term
48	Raised pedestrian tables (estimates part of intersection)	Raised pedestrian crossings at the proposed roundabouts			
49	Tactile paving (estimates part of intersection)	Tactile paving on kerb edges at crossing points			
50	Sidewalks	Converting of the damaged sidewalks along Bonza Bay Road to concrete		R 4 000 000	Short – medium term
51	Sidewalks	New sidewalks along the sections of Bonza Bay Road where none exist		R 2 000 000	Short – medium term
52	Raised pedestrian tables	All the approaches to the roundabouts and traffic circles			
53	Checking of existing water storage reservoirs	Beacon Bay Reservoir and the Homeleigh Halt	BCMM Water Services		
54	Sanitation High Level Study	Beacon Bay region	BCMM Sanitation Department		Medium-Term
55	Development of the Waste Recycling Centre	Northern Beacon Bay			
56	Stormwater Management Plan	The entire study area	BCMM Roads Department		
57	Studies on the Electrical Capacity	The entire study area	BCMM Electrical Services		
58	Upgrading of the Boardwalk	Bonza Bay Beach			
59	Maintenance of the Nature Reserve				
60	Signage for the Nature Reserve				
61	Hiking trails	Recreational site next to the Beacon Bay Country Club			

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SECTION K :
Development Levies & LVC

Proposal for the intersection of Bonza Bay Road and Major Square Road

K. Development Levies and the Land Value Capture Concept

K 1. BACKGROUND

Local authorities all over the world and in South Africa have the same challenges in terms of providing road capacity and other essential services. Cities need new solutions if they are to carry on growing whilst also improving their liveability. The cost of infrastructure is high. A large and expensive component of a infrastructure is the provision of transportation capacity within a city. Transportation is a unique feature of urban environments. It has the power to shape and define cities becoming increasingly important as population grows. Without spare capacity city growth cannot occur. Growing cities need increasing and continued investment in transportation, but this is expensive.

In current economic and political times funding expensive transport projects can be difficult.

The shortfall in funds collected from regular rates and service levies need to be supplemented. Cities are increasingly looking for more ways in which they can fund the much needed infrastructure in order to provide sufficient capacity of service networks, particularly relating to new developments to unlock economic growth.

Consequently, Land Value Capture(LVC) is a funding mechanism that has been getting significant attention. Core to value capture is the premise that transport is one of the most powerful catalysts of urban land value increase, and when new infrastructure is built, land prices can rise rapidly; even before projects are completed. When value uplift is created following a transport project being completed, the land owner or holder of the development rights experiences a windfall gain in the value of their asset. These gains are very rarely the result of active participation or action on the part of the windfall recipient. Value capture is the process by which a local authority can capture some of this land value increase and then use the funding to finance further transportation projects. Broadly, value capture is able to be achieved through direct taxation as one off fees, development levies or ongoing special taxation; developer extraction, or through land asset management. This can be broad reaching and district wide or can be land parcel specific.

As mentioned above development levies are one component of the broader Land Value Capture Concept. Buffalo City has previously identified the need to introduce development levies for road improvements required as a result of increased traffic volume due to developments. These development levies have been facilitated by the approval of Local Spatial Development Frameworks. The Local Spatial Development Frameworks identify precincts within which additional zoning rights may be permitted under certain conditions. The subsequent development levies are tied directly to the road improvements

that have also been identified in the specific LSDF to accommodate the accumulative trips generated by the various possible developments identified in the relevant LSDF.

In general, development levies relate to trips generated from a development in proportion to the overall trips generated by other developments in that LSDF area, plus any other specific requirements.

K 2. LEGAL FRAMEWORK OF DEVELOPMENT LEVIES/CHARGES

2.1 Constitution of the Republic of South Africa

Section 229 of the Constitution empowers municipalities to impose rates on property and surcharges on fees provided by or on behalf of the municipality

2.2 Municipal System Act

In terms of section 75A of the Municipal Systems Act, municipalities have the power to levy and recover fees, charges or tariffs in respect of any function or service provided by municipality.

2.3 Spatial Planning and Land Use Management Act

SPLUMA assumes the existence of development charges in sections 49(4) and (5).

Section 43 of SPLUMA specifically empowers municipalities to approve land development applications subject to conditions, one of which is that development charge be paid.

K 3. DEVELOPMENT CHARGE AS AN INFRASTRUCTURE ACCESS FEE

Development charge is not a tax but a once-off infrastructure access fee imposed by a municipality on the developer as a condition of approval of a land development that will result in an intensification of land use and an increase in the use of or need for municipal engineering services infrastructure

- They are designed to reflect as closely as possible a user charge
- They are only associated with the development process, covering the costs of the initial installation of bulk infrastructure for economic growth (social infrastructure if funded through grants)
- They do not cover the on-going operating costs of associated services or the costs of the rehabilitation or replacement of this infrastructure

Development charges are imposed by a municipality to recover the cost of providing

external engineering services

The developer is liable for the payment of development charges as a condition of getting the land development application approval.

K 4. PRINCIPLES OF THE DEVELOPMENT CHARGES

4.1 Equity and Fairness

Development charges should be reasonable, balanced and practical so as to be equitable to all stakeholders

4.2 Predictability

Development charges should be a predictable, legally certain and reliable source of revenue to the municipality for providing the necessary infrastructure

4.3 Spatial and economic neutrality

A primary role of a system of development charges is to ensure the timely, sustainable financing of required urban infrastructure. They should be determined on identifiable and measurable costs

4.4 Administrative ease and uniformity

The determination, calculation and operation of development charges should be administratively simple and transparent

K 5. BENEFITS OF DEVELOPMENT CHARGES

Development charges promote:

- Predictability- They enable developers to accurately estimate their liabilities and hold municipalities to account for the timely delivery of required infrastructure.
- Fairness- ensure that the developers pays only for the infrastructure investments which they benefit from.
- Transparency- They ensure equitable and transparent allocation of the costs of the infrastructure installed and its quality.
- Timeous provision of infrastructure Development charges unlocks development.

K 6. FORMULATION OF AN INTEGRATED DEVELOPMENT LEVY

National Treasury is in the process of formulating policy to standardise the application and subsequent use of Development Levies within municipalities.

Until such time as new policy is implemented the status quo will remain.

It is proposed that BCMM the broader further explore the potential of Land Value Capture especially as it relates to the provision of Public Transport.

Portions of this section adapted from: 'Land value capture to fund transport investments in cities' by Malcolm Campbell, Joshua Neville, Ria Dionisio and Simon Kingham. The University of Canterbury.

ANNEXURES

Annexure 1: Development Perspective

Annexure 2: Traffic Management Plan