GEORGE

ILISOLETHU

NMB URBAN DESIGN EXTENSION
2024-03-18



GEORGE ILISOLETHU

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Cadre reference	Prop/George LM/NMB urban design extension	

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1. The setting we



Ilisolethu in

development plan context

1.1 Introduction

Cadre Connect (Pty) Ltd was appointed end of 2022 by National Treasury to develop a Development Plan, Investment Plan and Area Management Strategy for the primary node of Thembalethu.

The boundaries of the project area are demarcated with the yellow dotted line over the aerial photo below. The main spine central to the node is Nelson Mandela Boulevard (NMB). NMB is also the only access road into Thembalethu.

The purpose of the project was to develop an implementable plan that is linked to an area management strategy and investment plan to create economic development opportunities and promote social infrastructure improvements in the Thembalethu "CBD" node.

During participation sessions with the community through the ward committee, a name for the precinct was proposed to be:

Ilisolethu – "Our Eye"

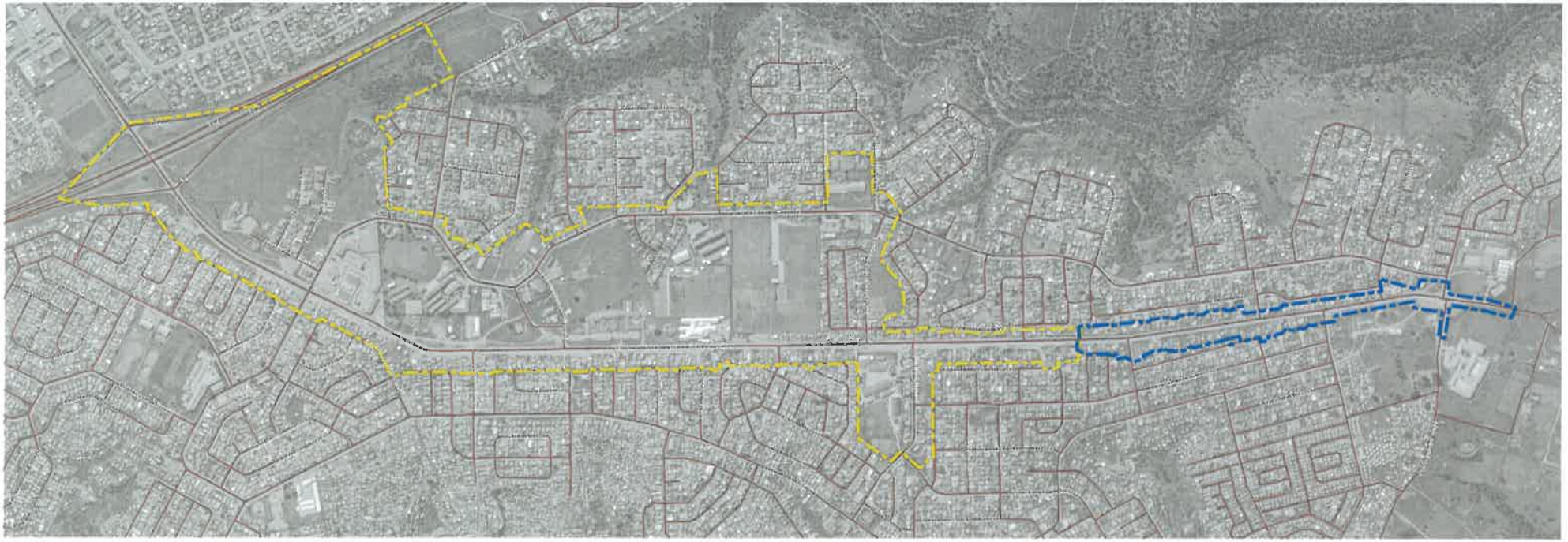
A logo was designed to be used in the branding of the node.

The Ilisolethu Gateway Node makes several proposals regarding priority projects that aim to create economic development opportunities and promote social infrastructure improvements.

As an extension to the original project, Cadre Connect (Pty) Ltd was further appointed end of 2023 by George Local Municipality for the concept design of the remainder of NMB towards the eastern end. The boundaries for the extended project area are indicated in blue.

This document serves as an addition to the original project. The aim with this project is to ensure continuity in the design concept proposed in the western portion of NMB.

GEORGE
ILISOLETHU



NMB URBAN DESIGN EXTENSION PROJECT AREA IN RELATION TO THE ILISOLETHU GATEWAY NODE PROJECT AREA

1.2 Study area in context

There are a number of existing plans and projects active within the Thembalethu area that this project needs to be cognisant of and connect cohesively to make one integrated plan for the area. The most important is the Ilisolethu Gateway Node Plan.

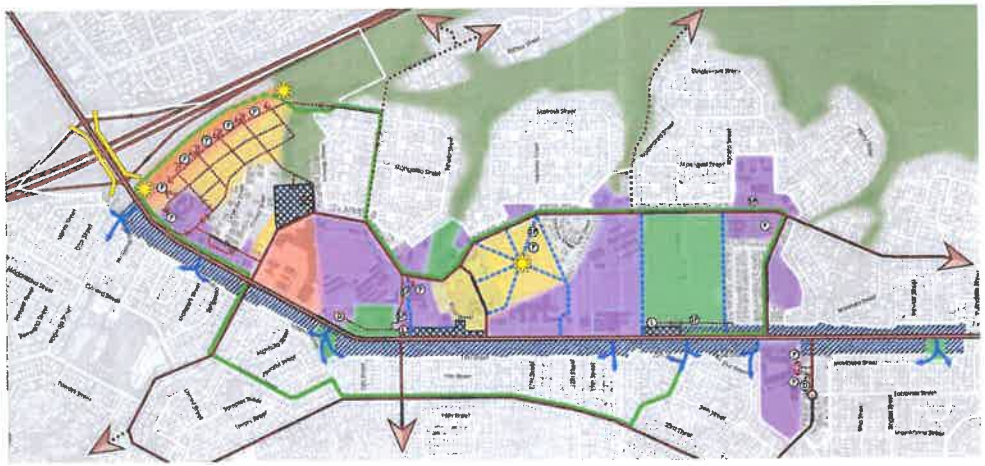
Ilisolethu Gateway Node (2023)

The development concept of the Ilisolethu Gateway Node envisions a well-designed central mobility and activity spine on Nelson Mandela Boulevard. Although cars are accommodated, the emphasis is on public transport, pedestrian movement, and cycling (the latter two are jointly known as NMT – 'non-motorised transport). As activity spine, the plan provides for economic activities along the route, thereby sustaining the livelihoods of SMMEs.

Development proposals further allow for the integration of a diverse range of economic and residential opportunities. Mixed-use residential and commercial opportunities are proposed for the large portions of vacant land, supporting a sustainable live-work-play node for the entire Thembalethu community. Infill development is proposed on underutilised smaller properties.

The development concept addresses the development of the whole node, with proposals (to a lesser or greater extent) made for development on all properties. The focus is, however, on 11 priority projects. Detailed investment packages were prepared for these projects. Below is an illustration of the development plan, detailing the proposed land uses, identity elements, pedestrian movement network and vehicle movement network.

This project is an extension of the Ilisolethu Gateway Node, however, with specific focus on the properties adjoining NMB. The purpose of the project is to extend the urban design plan for NMB, but no detailed projects for adjacent properties will be proposed. Proposals are made with regard to land uses around the traffic circle at the end of NMB to act as an anchoring node creating vibrancy and continuity throughout the entire NMB.



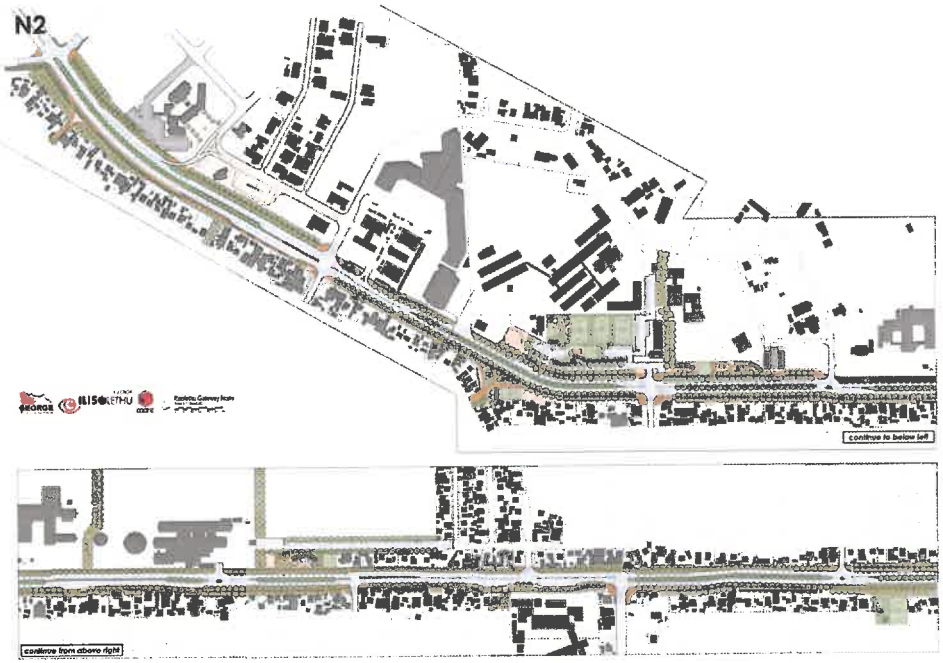
Land use
- Community Facilities
- Commercial Use
- Residential Mixed-Use
- Recreational Use
- Conservation Areas
- SMME Trading Spaces
- SMME Trading on Streetfront

Identity Elements
- Landmark Elements
- Gateway Feature
- Designed Facades Facing Highway

Pedestrian Movement Network
- Existing Walkway
- Proposed Walkway
- Recreation Route

Vehicle Movement Network
- Existing roads as main access routes
- Proposed external access routes
- Proposed internal additional roads
- Vehicle access
- (P) On-site parking
- (SP) Shared parking
- (D) Drop-off and pick-up
- (L) Loading zone for SMME trading

ILISOLETHU GATEWAY NODE DEVELOPMENT CONCEPT



NMB URBAN DESIGN CONCEPT PLAN

Priority Project 1 - NMB Multipurpose Identity Route (2023)

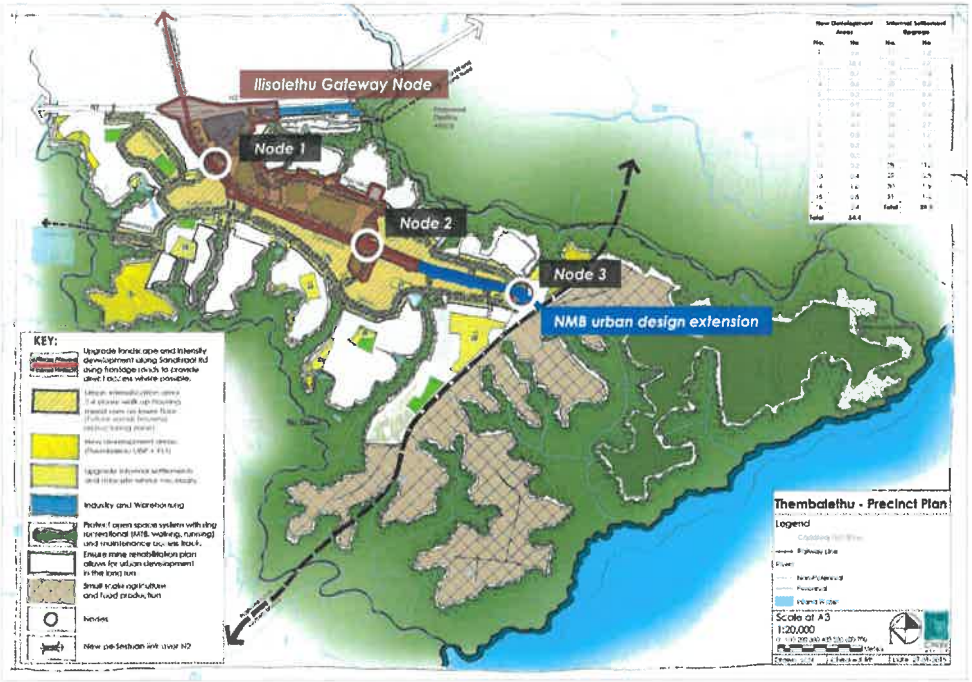
One of the priority projects identified in the Ilisolethu Gateway Node Investment Plan (2023) is the upgrading and widening of Nelson Mandela Boulevard to be a dual carriageway with wider external lanes to support public transport movement (see concept plan above). Together with this, the entire remaining space between the tarred road surface and adjacent property lines will be designed and paved as complete pedestrian-priority space to support high NMT traffic and create opportunities for more quality public open spaces as recreational spaces and dedicated spaces for SMME facilities.

The upgrading of NMB, therefore, serves a dual purpose. Firstly it should improve mobility for the existing traffic load and make provision for additional traffic generation and public transport services to support the growing node. Secondly, it should support the development of the street to act as an activity street – fostering mobility of pedestrians and cyclists, supporting livelihoods of SMME traders, and safeguarding the existing public open spaces from further encroachment while increasing open spaces through the creation of pocket parks where space permits.

The NMB urban design extension is a continuation of this priority project, extending the urban design concept up until the traffic circle at the end of NMB at the intersection with Jonga and Ngcakani Street. This project will follow the same methodology and approach in the design of the road concept.

Thembalethu Precinct Plan (2016)

The Thembalethu Precinct Plan notes how Thembalethu "exists as an island, cut off from the remainder of the settlement to the north by the N2 highway, and to the west and east by the deep V-shaped Skaapkop and Meul Rivers." Numerous proposals are made to reconnect Thembalethu to the remainder of George, most notably the support of the Nelson Mandela Boulevard as the main arterial road providing access to the township and connecting Thembalethu to the George CBD.



THEMBALETHU PRECINCT CONCEPT PLAN

The precinct plan identifies three nodes within Thembalethu along NMB (see illustration above):

- Node 1 towards the northern entrance of Thembalethu at the intersection of NMB and Tabata/Ngcakani Street (this intersection is often referred to as "Fourways"),
- Node 2 more or less at the centre of Thembalethu, around the dogleg street pattern where 26th Street and Zabalaza Street link up with NMB.
- Node 3 towards the eastern edge of Thembalethu, where NMB again intersects with Ngcakani/Tabata Street.

The precinct plan proposes that urban design frameworks be prepared for each of these nodes. It states the following: "These are important structuring nodes or growth points that offer the perfect location for mixed use development, local business, retail, government services and public transport interchange areas. Instead of allowing these to take shape informally, prepare urban design frameworks that will inform planning and land use allocation".

The proposed urban design frameworks for Nodes 1 and 2 were dealt with in the Ilisolethu Gateway Node project. The NMB urban design extension project will focus on the portion of NMB not covered in the Ilisolethu study area, stretching from the 26th Street intersection up until the circle where NMB intersects with Jonga/Ngcakani Street (Node 3).

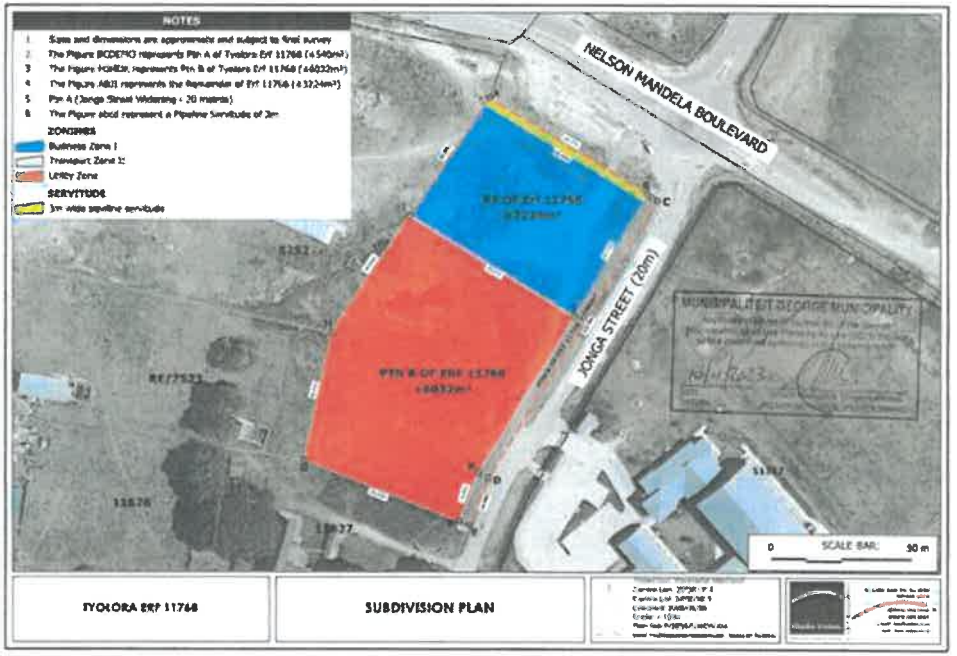
The precinct plan further proposes the following regarding the development of Node 3: "(the node) should be intensively developed to form a strong southern anchor to the NMB activity spine. This will create a dynamic tension along NMB that will increase movement thereby improving utilisation of the Go George transport service and increase formal and informal business and community facility thresholds along the entire route making all of these activities and services more viable."



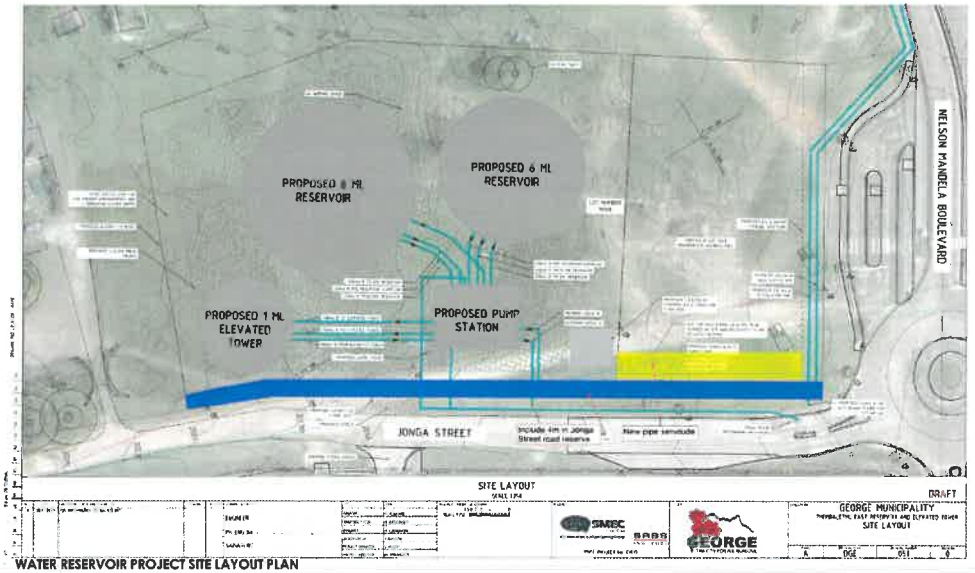
NODE 3 DEVELOPMENT CONCEPT PLAN

Water reservoir project

New water reservoirs are planned on a portion of Erf 11768 at the eastern end of NMB (see plans below). The remaining portion of the property directly adjacent to the traffic circle has subsequently been rezoned to Business 1, and a significant portion of vacant land (3200 m²) is therefore made available for business development. This has huge potential for the development of mixed-use residential and commercial activities, creating vibrancy in the area and anchoring this area as a eastern node for NMB.



WATER RESERVOIR PROJECT SUBDIVISION PLAN

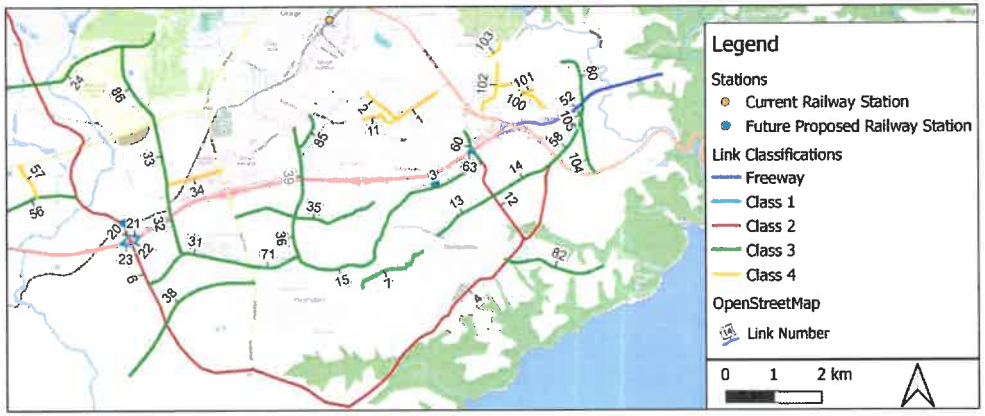


WATER RESERVOIR PROJECT SITE LAYOUT PLAN

CITP link road

One of the biggest concerns regarding movement networks in Thembalethu is that there is only one access road into the township – Nelson Mandela Boulevard. This needs to be addressed as a matter of urgency. Based on traffic modelling, potential connection routes have been proposed conceptually (see below). The biggest challenge is the prevalence of the rivers and valleys, making it difficult and costly to improve connectivity. Most of these connections are also on a conceptual level, making exact alignment within the respective study areas an issue remaining to be dealt with.

Nevertheless, the majority of the potential connection route alignment points have been captured within the Ilisolethu Gateway Node Investment Plan. There remains one proposed connection route to be addressed – link nr 4 on the map below. This is included conceptually in this extension plan.



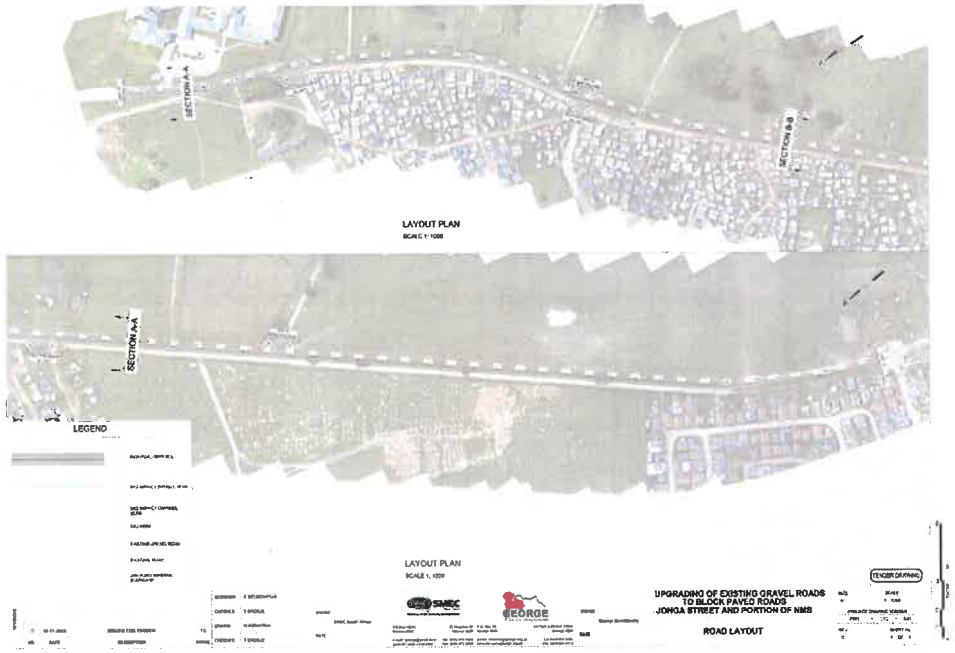
CONNECTION ROUTE ROAD CLASSIFICATION

Note that these are only conceptual linkages. If and when the recent Access & Linkages Plan is made available, more in-depth information will be available on the potential impact of these connections, not only to the NMB urban design extension area, but to Thembalethu as a whole.

Jonga Street upgrading

A service provider has been appointed to upgrade the entire length of Jonga Street. The road was originally a Provincial Road, but further investigation revealed that the municipality has ownership. There was no recognised road reserve and the service provider had to use certain services and place markings (such as the established fence of the cemetery) to identify and subsequently register the road reserve. The original servitude was 16m wide, but this has been increased to 20m. The upgrading project includes the entire length of Jonga Street, from the traffic circle intersection with NMB up until the last traffic circle approximately 1.5km down the road.

Being only appointed to upgrade the road, there is no budget to accommodate construction of NMT amenities. This is concerning given the pedestrian and cyclist orientation of the node, and specifically the number of learners that move within the area due to the proximity of the two schools. Further investment in appropriate NMT infrastructure is required to make Jonga Street more walkable for the mass of people living down and traveling on this road.



JONGA STREET UPGRADING PLAN

DHS social housing project & the urban edge expansion

A service provider has been appointed by the George Municipality to assist in the resettlement of households in areascurrently unsuitable for living to more suitably located and serviced areas within Thembalethuor. Part of their scope includes the upgrading of Informal areas.

Approximately 4 350 households have been approved for resettlement, with 2 500 households having already been resettled on serviced properties. Planning for a suitable location for the remaining households is still underway.

The urban edge has subsequently been expanded (as illustrated with yellow line below) to include a portion of agricultural land to the east of Jonga High School. The intention of the area is to serve as a decanting area providing temporary housing where beneficiaries of social housing projects are relocated to while upgrading projects in other areas are undertaken.





URBAN EDGE EXPANSION



INFORMAL SETTLEMENT ADJACENT JONGA STREET EARMARKED FOR RESETTLEMENT

DALRRD small-scale farming support project

The Western Cape Provincial Department of Agriculture, Land Reform and Rural Development has a footprint in Thembalethu in the form of providing support to small-scale farming cooperatives. The Department (together with the George Municipality and Department of Human Settlements) supports agricultural activities with peri-urban, youth and SMME development.

The project property is located at the eastern end of NMB. It is approximately 628ha, with support implemented across the entire property. They are currently in the process of developing a plan to guide the development of the property in phases. The initial focus of the project centres around the smallholdings adjacent to Jonga Street (1), with plans for the establishment of a vegetable market adjacent to the graveyard towards the southern end of Jonga Street. Negotiations regarding the location of this market might be necessary, as it might be more appropriate if this market is located at the traffic circle at the intersection of NMB and Jonga Street, diversifying the economic functioning of this node and making the produce more accessible given the proximity to the bus transfer station.

Plans for the area highlighted in image (2) is more ambiguous given that the urban edge has been expanded to include this area, and the municipal Department of Human Settlement's plan to use this area for temporary housing.

No concrete plans are available at this stage to provide more context on the work that the Department is doing. Further engagement with the Department should be scheduled in the form of a physical site visit to ensure the purpose of the project is understood and to clearly understand the needs this project might have regarding potential market spaces and connectivity to the wider Thembalethu and George areas.



DALRRD PROJECT AREA SOUTH OF NMB



DALRRD PROJECT AREA NORTH OF NMB

1.3 Project context summary

The Thembalethu Precinct Plan (2016) notes how Thembalethu is an island, cut off from the rest of George by the N2 highway and the deep V-shaped river valleys of the Skaapkop and Meul rivers. The importance of Nelson Mandela Boulevard cannot be underestimated, and therefore this road should be developed as the main arterial of the township. Together with this realisation is the identification of three nodes (Fourways Crossing, 26th Street and Jonga Street) along NMB that act as important anchor points that should be developed as mixed-use nodes supporting economic, government, residential and transportation uses. The precinct plan proposes that urban design frameworks be developed for each of these nodes to guide development instead of letting these nodes develop informally.

The Ilisolethu Gateway Node (2023) is the attempt at the creation of such urban design frameworks. The plan, however, surmised that NMB functions better as a linear spine with activities all along its length, rather than a road with activities concentrated at specified nodes. The project area for the Ilisolethu project encompassed what was previously known as Node 1 and 2. The purpose of the project was to develop an investment plan and associated priority projects that will facilitate the development of the Thembalethu area.

This project is a functional extension of Priority Project 1 – NMB Multipurpose Identity Route. The purpose thereof was to redevelop NMB into a dual carriageway to serve the dual purpose of facilitating mobility and connectivity throughout Thembalethu, while sustaining the livelihoods of SMME traders and increasing open space for use by the entire community. The purpose of the NMB urban design extension project is to connect the Ilisolethu study area to the proposed Node 3 at the end of NMB. The node is situated at the intersection of NMB and Jonga/Ngcakani Street.

The eastern edge of this node is anchored by two schools – Jonga High School and Thembalethu Secondary School – resulting in extensive pedestrian generation before school starts and after it ends. Additionally, numerous informal structures and housing developments located along Jonga Street also contribute to the pedestrian load at the intersection. It is therefore inappropriate for the Jonga Street upgrading to only focus on the road surface, with no budget allocated to construct NMT infrastructure.

The water reservoir project, with the resultant subdivision and allocation of business properties next to the bus transfer station at the traffic circle, creates an opportunity to stimulate economic activity within the node.

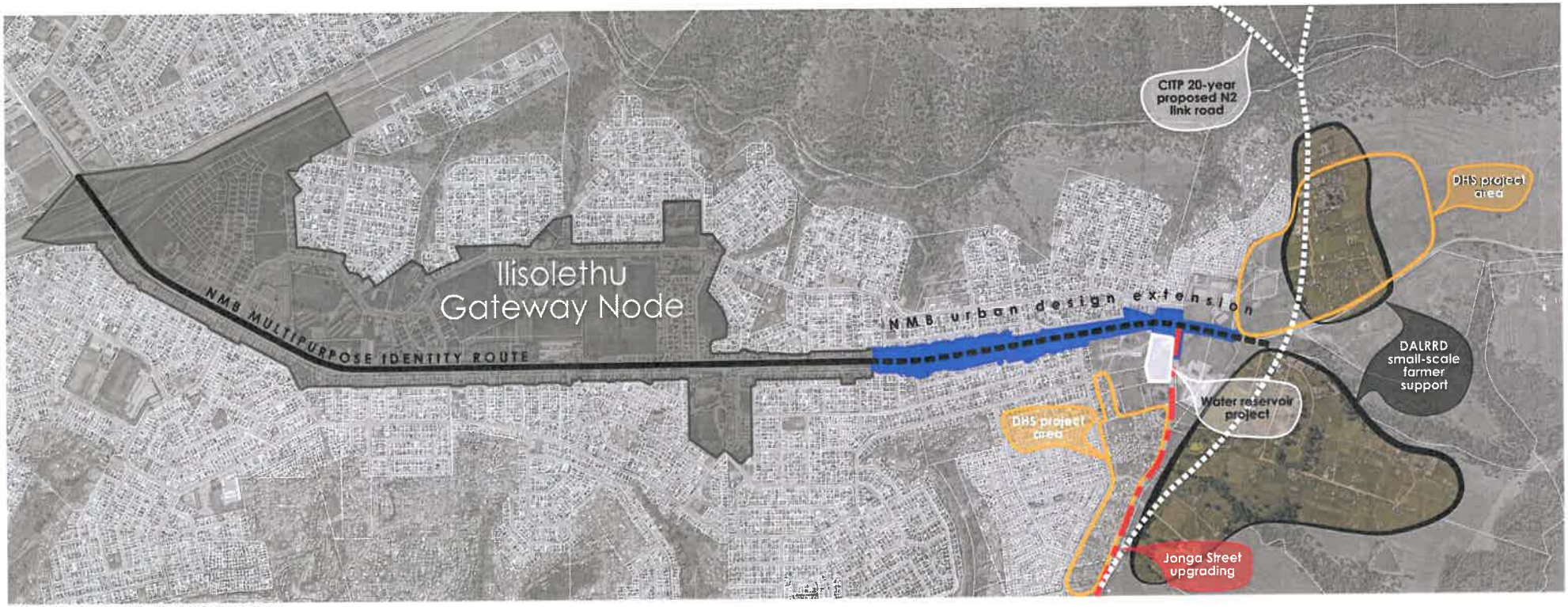
The presence of large tracts of vacant land within close proximity to the node creates an opportunity to complement the ongoing social housing project through the development of higher density residential housing typologies.

The existing DALRRD project has no specific impact on NMB or the proposed node given that the focus of the project at this time is regarding the smallholdings along Jonga Street. The potential for a vegetable market should, however, be acknowledged and incorporated into the design of the node.

Ambiguity exists within the area adjacent to Jonga High School as the Department of Agriculture is under the impression that the area is designated for development of temporary housing to decant areas where formalisation and social housing provision is planned (hence the extension of the urban development boundary to assist this process). The services providers appointed for the social housing project, however, believes that the property is owned by the Department of Agriculture and that the property is currently undergoing subdivision and transfer to a local consortium of small-scale farmers. Clarity regarding this is required.

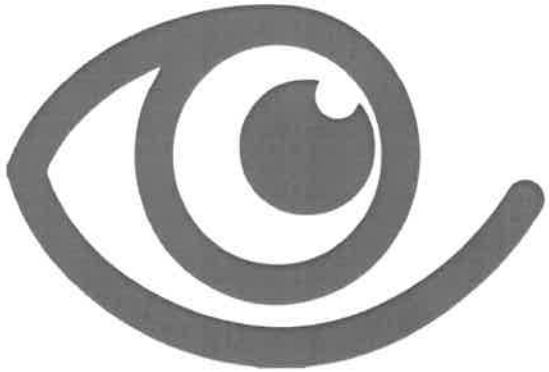
Given the above, the potential exists for this area to be developed as a TOD node centred around the bus transfer station, with an appropriate mix of land uses that will aid in anchoring the node as the eastern-most edge of Thembalethu.

Longer-term node accessibility planning, in accordance with the CITP Plan, will add to the functioning of the node through either adding an activity street to the node or creating an eastern development barrier. All of this is dependent on the size and position of the proposed road reserve.



STUDY AREA CONTEXT – EXISTING PROJECTS AND PLANS

2. Characteristics we



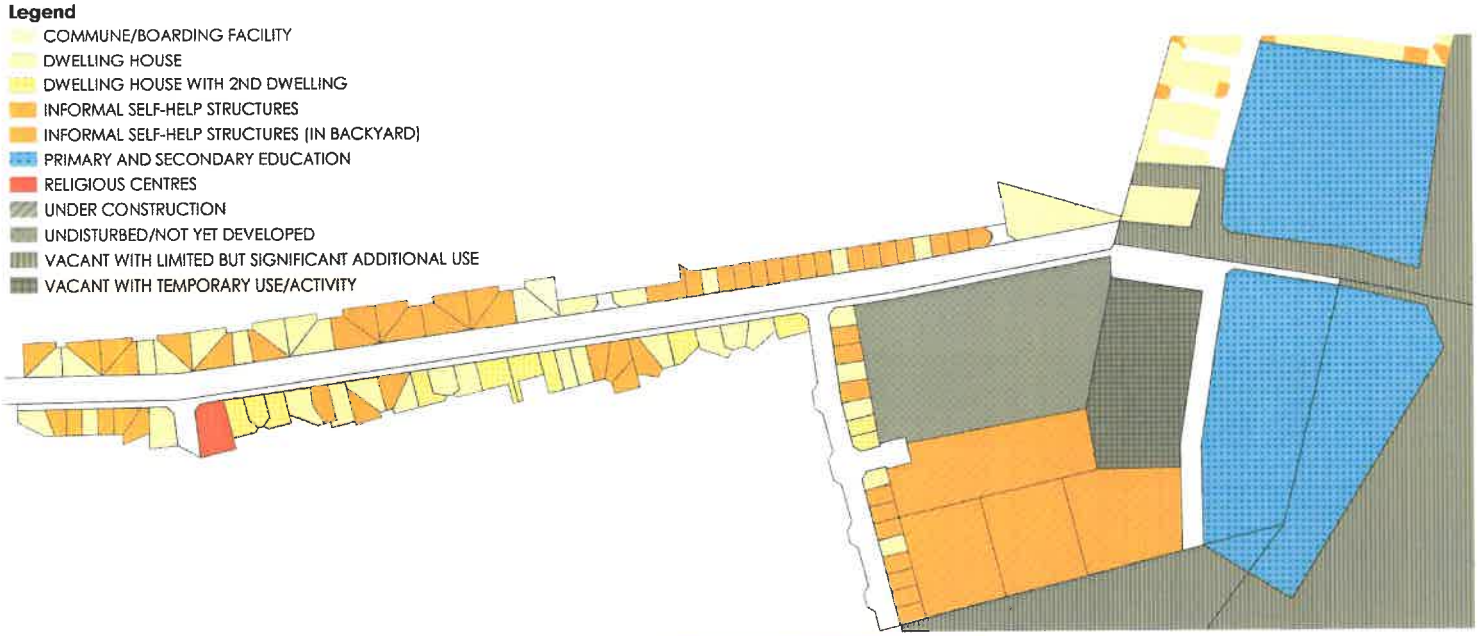
in Ilisolethu

2.1 Land use and zoning

Land use

As illustrated in the adjacent map, the majority of the study area along NMB is dominated by residential land uses. Though the area was originally laid out to be single residential properties, over the years the majority properties now accommodate more than one residential structure – be it formal or informal.

The two high schools dominate the eastern portion of the study area, and large tracks of underutilised land is available for development towards the eastern end. There is therefore potential to establish the traffic circle as an activity node with a high-density residential component.



PREDOMINANT LAND USE CLASSIFICATIONS OF STUDY AREA

Zoning

As with the land use, the majority of the area along NMB is dominated by residential zone 1 zoning. It is, however, interesting to note that the zoning does not correlate with the multi-dwelling nature of the area, and the residential zoning classification therefore is not representative of the land uses exercised on the properties.

Properties zoned for community use is also prevalent in the node.



ZONING DESIGNATIONS WITHIN STUDY AREA



Though currently zoned for utility use, the portion of the property fronting NMB has been subdivided and zoned "Business Zone 2". The project will need to capitalise on this opportunity to establish economic opportunities within this node and anchor this node in the Thembalethu area.

2.2 Environmental constraints

Environmental impact

Not only does the N2 highway create a barrier for the functional integration of Thembalethu with the greater George area, but the area is also cut off by the deep V-shaped Skaapkop and Meul River valleys. This makes access planning for future road connections difficult given the high cost (both monetary and environmental) of constructing access roads that will have to traverse these deep valleys.

The Meul and Skaapkop Rivers flow respectively along the north-eastern and south-eastern boundary of the township, with several non-perennial streams feeding the rivers from different low-lying areas in the township. A 64-meter buffer around the non-perennial streams act as an informal flood line (note –more formal flood line determination should be done to determine an accurate flood line). Most streams are located outside of the NMB urban design extension area.

Critical Biodiversity Areas (CBAs) are also prevalent in the area, although all are located outside of the study area boundary. CBAs must be safeguarded in their natural or near-natural state because they are critical for conserving biodiversity and maintaining ecosystem functioning. Thembalethu has three CBA sub-categories: Terrestrial; Forest and Wetland, none of which are impacted by the NMB urban design extension area.



ENVIRONMENTAL IMPACT AREAS IN RELATION TO THE STUDY AREA

2.3 Built form

Informality in built form

The area is characterised by built structure not following cadastral boundaries in many places. Encroachment of buildings and structures takes place between adjoining private properties. Private structures are also encroaching into the public space, including the street reserve and stands zoned for public uses.

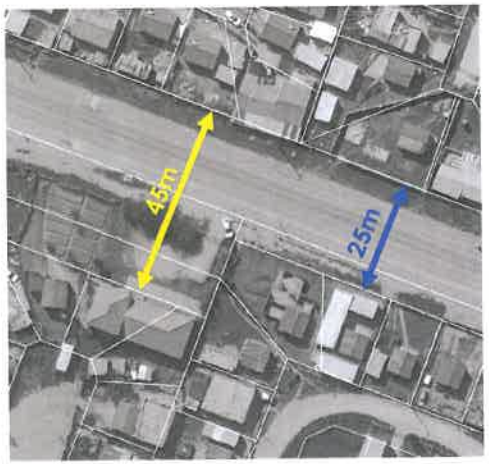
Encroachment and informality is a characteristic of townships which the Ilisolethu Gateway Node aimed to acknowledge, with designs working within these parameters. The road reserve on the western side is quite wide to accommodate many of the encroachments, whilst the reserve in the extension area is significantly narrower, dropping to 25m from 45m (see figure below). This poses a significant constraint on the continuity of the existing NMB urban design plan due to the limited space available to accommodate all the design principles.

However, the number of encroaching structures (and specifically informal trading structures) is a lot less than in the western side.





EXAMPLES OF MISALIGNED PROPERTY BOUNDARIES



ROAD RESERVE WIDTH REDUCTION BETWEEN THE ILISOLETHU AND NMB DESIGN EXTENSION STUDY AREAS

The following is indicated on the plan:

- Red: represent the boundary walls or fences as they are built. It is clear that almost none of them follow cadastral lines.
- Yellow: encroaching residential structures.
- Blue: encroaching trading structures.

The following is indicated on the extracted aerial image (circle):

- White lines: cadastral boundaries.
- Red lines: boundary walls or fences as built.
- Yellow lines: encroaching built structures.

RESIDENTIAL AND TRADING ENCROACHING STRUCTURES

Informality in building material

The area is characterised by various types of informally built structures along NMB.

Informal trading structures are made of a range of building materials. Some are small wooden structures, others are made of sheet metal, whilst many trading activities are conducted from refurbished containers.

Almost all residential properties contain at least one brick structure, but most erven have multiple informal residential units, with a few having informal trading units as well.







It is important to note the permanency of some of the encroaching residential structures. These structures are formalised and there is limited possibility for these structures to be moved to the interior of the original property. The proposed NMB design should therefore (as far as possible) attempt to accommodate these structures within the road reserve, and compromise on some design principles to fit the design parameters within an already narrower road reserve.

BUILDING MATERIAL OF ENCROACHING STRUCTURES

2.4 Economic activities

As much as formal retailers bring money into townships and provide access to goods of franchises and national commerce, it is important to acknowledge the role that informal traders play in supporting the economy. Some trade out of necessity given the unavailability of employment opportunities. Many informal traders often have entrepreneurial skills but lack the funds or support to formalise their business.

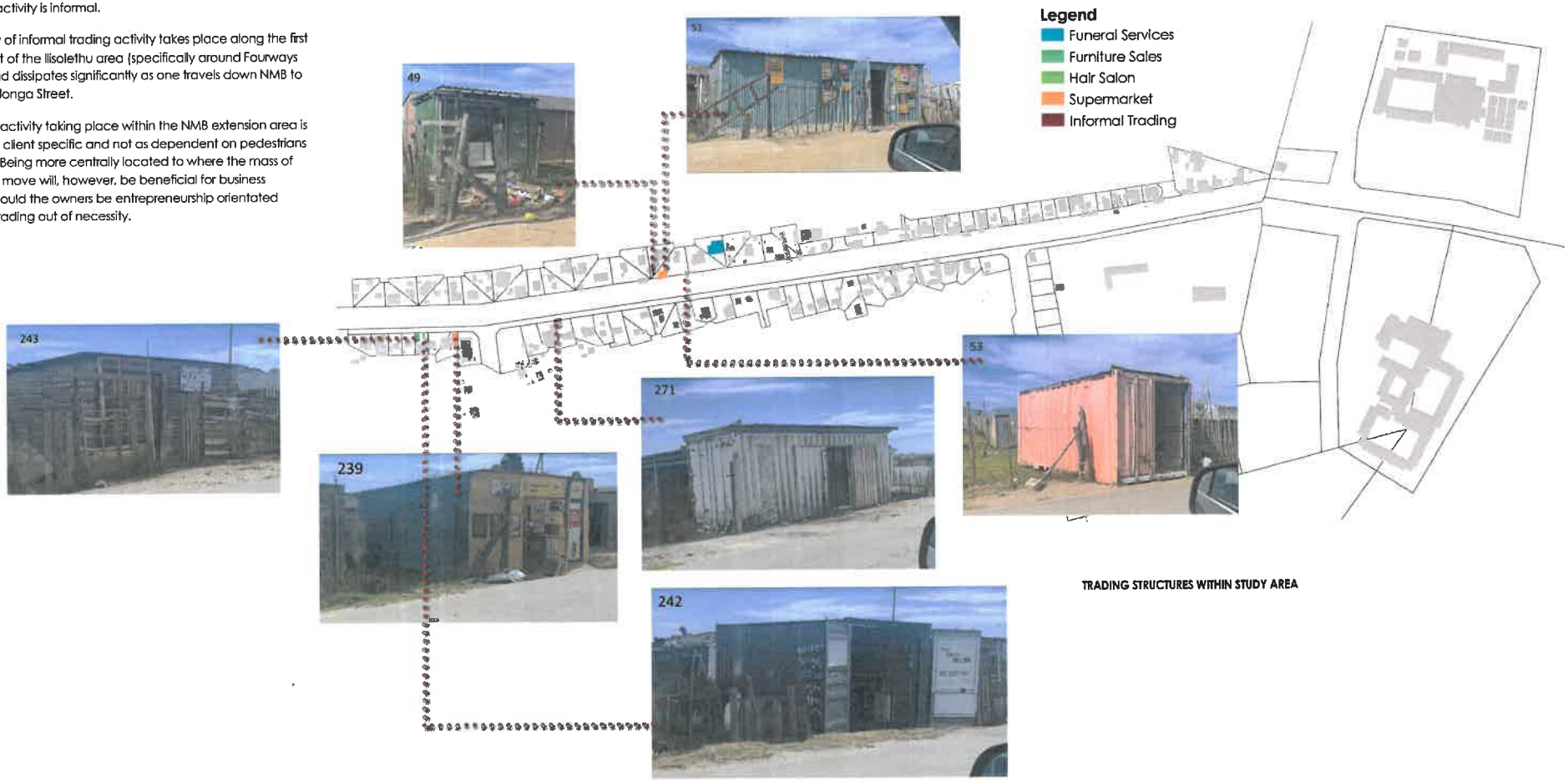
Informal economic activities within Thembalethu cover a whole range of services. The basic form of trading is where goods are displayed directly on the street, followed by mobile structures such as tables, fryers and umbrellas. A bit more permanent is some sort of structure on which to display goods, followed by enclosed structures made from temporary building materials. Lastly, there are permanent brick structures – even though the economic activity is informal.

The majority of informal trading activity takes place along the first western part of the Ilisolethu area (specifically around Fourways crossing) and dissipates significantly as one travels down NMB to the end at Jonga Street.

The trading activity taking place within the NMB extension area is much more client specific and not as dependent on pedestrians passing by. Being more centrally located to where the mass of pedestrians move will, however, be beneficial for business exposure should the owners be entrepreneurship orientated instead of trading out of necessity.



STRUCTURE CONCENTRATION DISCIPATES AS ONE TRAVELS EAST



TRADING STRUCTURES WITHIN STUDY AREA

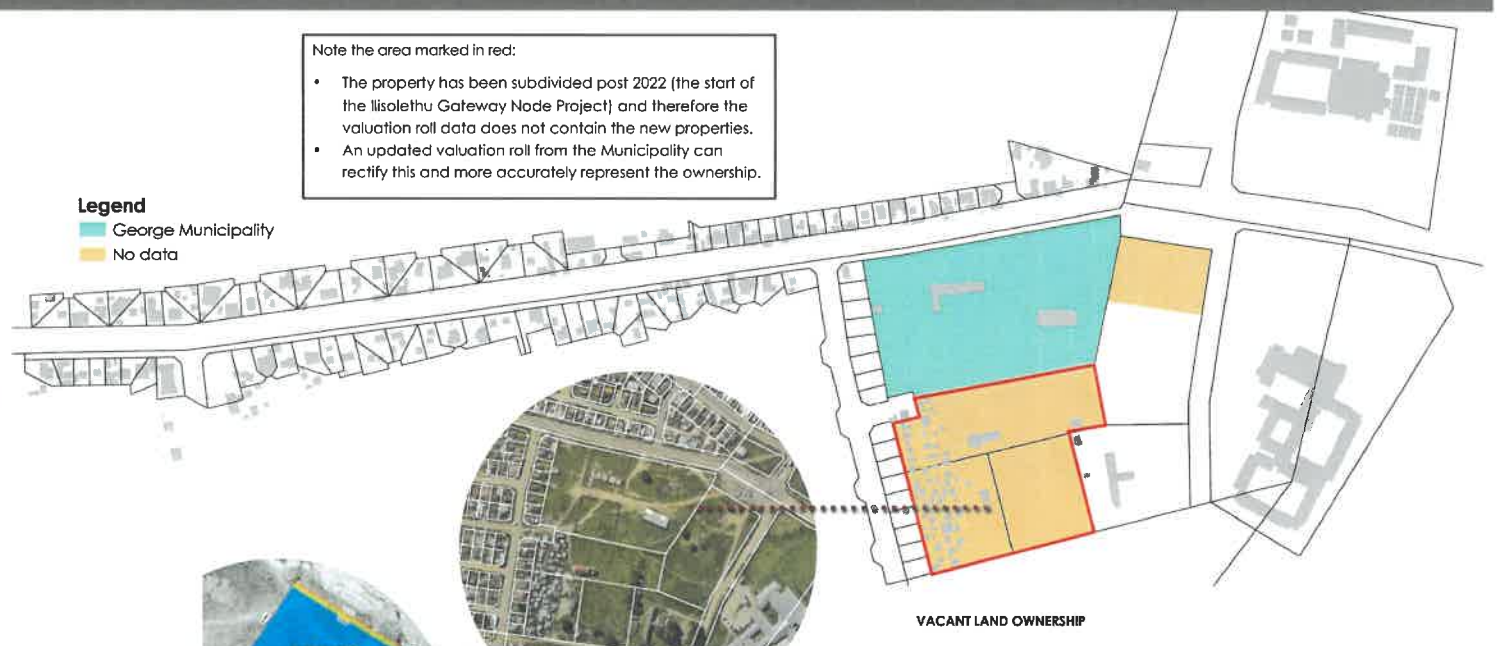
2.5 Vacant land

There are only "large parcels" (40 555 m²) as vacant land in the extension area. These portions are located on the eastern side around the traffic circle. These are large tracts of vacant land available for mega developments. Larger developments are most likely to bring in formal economic activities which would have the potential to employ members of the local community and provide more mixed-use development in line with the vision for the area.

Id	Vacant type	Zoning	Owner	Size (sqm)
1	Development (large)	Community Zone 1	George Municipality	19 645
2	Development (large)	Community Zone 1	No data	7 655
3	Development (large)	Community Zone 1	No data	5 011
4	Development (large)	Community Zone 2	No data	5 000
5	Development (large)	Business Zone 1	No data	3 224

Note the area marked in red:

- The property has been subdivided post 2022 (the start of the Ilisolethu Gateway Node Project) and therefore the valuation roll data does not contain the new properties.
- An updated valuation roll from the Municipality can rectify this and more accurately represent the ownership.



VACANT LAND OWNERSHIP



Even though the property has been subdivided as part of the water reservoir construction project, the cadastral data has not been updated at the Surveyor General's office (as of the 2024 updated database). Therefore, the vacant land development type is marked as "Infill" rather than "Development (large)".

An updated cadastral database from the municipality can remedy this.

VACANT LAND TYPE

3. Development we



for Ilisolethu

3.1 Premise for development

Nelson Mandela Boulevard as street or road?

CHARACTERISTICS AND CHALLENGES OF NMB

NMB is more than just an access road into Thembalethu, and more than just a road that should provide mobility (either for cars or buses) from one point to another. NMB is also a vibrant spine along which various economic and recreational activities are concentrated to the benefit of the local people.

With more than 10 000 pedestrians walking daily along NMB, and economic activities serving them for the largest part of the road, there is constant activity in the public space. To fulfil its role successfully, NMB should function (and be defined) as a 'street' (see graphic below for characteristics) with slow speed where a sense of place and a sense of community is experienced and prioritised. A street is not an ideal typology for a mobility spine.

On the other hand, being the only access route into Thembalethu, NMB experiences daily traffic congestion. It needs to move people via vehicles into and out of Thembalethu. To fulfil this role successfully, NMB should function (and be defined) as a 'road' (see graphic below for characteristics) with continuity in movement and fewer stops where mobility is prioritised. A road is not an ideal typology for an activity spine.

Due to this dual function, with no other option, NMB is neither a good functional street, not a good functional road. This is globally referred to as a 'stroad' (see graphic below) and is often, in general, considered to be a typology that is not feasible.

APPROACH AND PRINCIPLES

The current reality is that there is only one spine. This is accepted as a given, thus supporting the notion that NMB will be a 'stroad' compromising on both activity and mobility. The ***approach*** to the design of NMB is thus to provide for vibrant economic activities, recreational opportunities, and public transport mobility.

The following ***principles*** are supported:

- Preserve activity
  - Preserve as many built structures as possible, taking into account functionality and safety.
  - Fill in vacant portions of land with people-orientated uses.
- Support mobility
  - Support continuity in movement along NMB whilst reducing speed through design.
  - Approach road design without destroying livelihoods of existing traders.
- Accommodate accessibility
  - Facilitate vehicle access into properties along NMB from alternative streets to limit the impact on mobility.
  - Maximise NMT access to and across NMB.
- Enhance identity
  - Design engineering elements (e.g. traffic circles) to also act as identity features.
  - Involve the local community in placemaking.
- Promote sustainability
  - Prioritise innovative green infrastructure.





Informality as reality

CHARACTERISTICS AND CHALLENGES OF THE PRECINCT

Informality is an integral part of the identity of many townships. Informality is evident in the manner in where and how people move around, in how trading takes place, in how structures are constructed, and also in where trading and residential structures are put up. Encroachment of informal (yet often permanent) structures into the public domain is one of the biggest challenges that must be dealt with.







APPROACH AND PRINCIPLES

The following ***principles*** are supported:

- Accept the fact that informality supports/sustains livelihoods. Don't destroy this but protect is as far as possible.
- Accept the fact that informality is a reality and will probably always be prevalent in our cities. Don't fight this but aim to create synergy with formal interventions.
- Accept the fact that informality contributes to vibrancy in the public domain. Don't kill this but build on it through creative actions.
- Accept the fact that informality creates identity. However, do no romanticise this, but think creatively about how to – as a priority – improve people's lives whole keeping identity in mind.

The following is supported as an overall ***approach***:

Do not formalise the informal.

Formalise AROUND the informal.



3.2 Development plan

The development concept for the Ilisolethu Gateway Node (to the right) envisions a well-designed central mobility and activity spine on Nelson Mandela Boulevard. Although cars are accommodated, the emphasis is on public transport, and pedestrian movement and cycling (the latter two are jointly known as NMT – non-motorised transport). As activity spine, the plan provides for pedestrian-focused economic activity along the route, thereby sustaining the livelihoods of SMMEs. No vehicle access is provided from NMB.

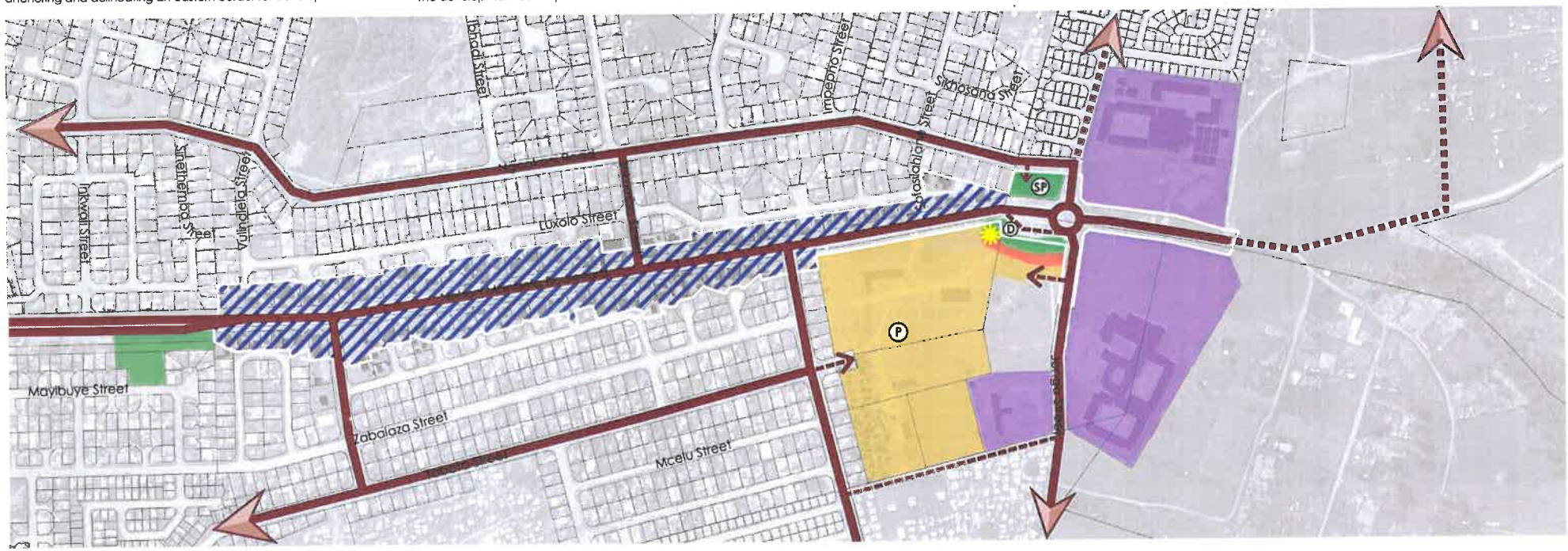
As a functional extension of the NMB Multipurpose Identity Route project, the NMB urban design extension area adopts all the same principles and parameters put in place for the design of the central boulevard. However, given the narrower road reserve (and the dwindling activity along this portion of NMB) the dual-carriageway is reduced to a single lane road up until the traffic circle at the end of Jonga Street. It is more important for this area to maintain the same width of the proposed cycling and pedestrian lanes than it was to accommodate the double lanes.

The context, existing plans and availability of land at the eastern end of NMB create an opportunity for the development of a TOD node centred around the bus transfer station, future connector route to the N2, and the schools. Mixed-use residential and commercial opportunities are proposed for the large portion of vacant land, supporting a live-work-play node for the eastern edge of Thembalethu, anchoring and delineating an eastern border for development.



ILISOLETHU GATEWAY NODE DEVELOPMENT CONCEPT

The development concept for the extension area is illustrated below.



NMB URBAN DESIGN EXTENSION DEVELOPMENT CONCEPT

3.3 Road design

The development concept for NMB envisions a well-designed central mobility and activity spine. Although vehicle mobility is catered for, the emphasis is on public transport, pedestrian movement, and cycling. As activity spine, the plan provides for economic activities along the route, thereby sustaining the livelihoods of SMMEs.

Below is a concept plan for the urban design extension of NMB. Note that this is just a concept and further engagements with the municipality and engineers are needed.

Given the narrower road reserve, only one lane in both directions can be accommodated. Thus, where public transport stops were previously accommodated in-lane, embayments might need to be considered to reduce traffic impact and improve movement continuity. Engagement with GoGeorge specifically will be required to discuss locations of potential embayments.

As with the original NMB design concept, the following *design principles* were followed:

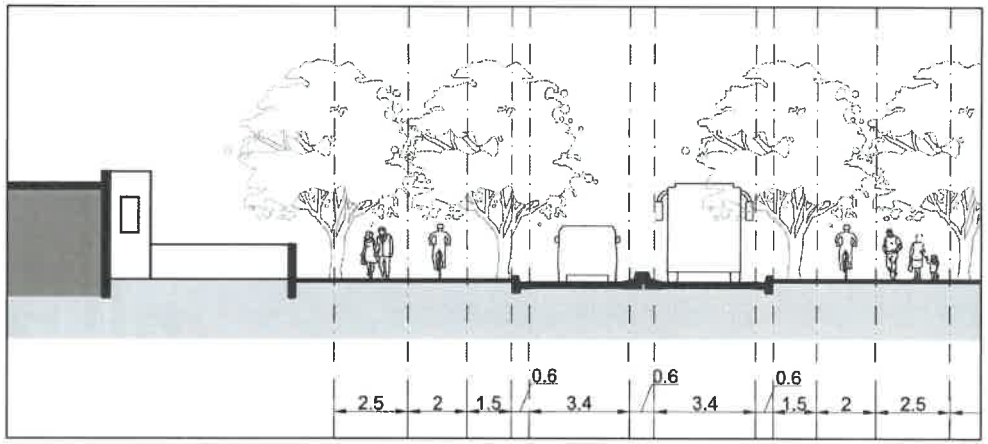
- Continuity in and continuous width of vehicle, pedestrian and cycle lanes are prioritised. This principle allows for the mobility of vehicles, cyclists and pedestrians to coexist in the same space.
- Flexibility in the design of the rest of the road space is guided by the placement of encroaching structures, with the aim to keep as many of those, that support pedestrian use, intact.

The following *design parameters* were also applied in the design of NMB:

- Separation of pedestrians, cyclists and vehicles with the latter two accommodated on the sidewalk.
- Continuous cycle lane of 2m wide on the sidewalk along the curb.
- Continuous walking lane of 2,5m on the sidewalk closer to the road reserve edge.
- Continuous paving of the remaining space between the edge of the pedestrian lane and adjacent property boundaries.
- Remove encroachments where minimum basic design cannot be achieved.
- Limit NMB access to individual properties and investigate alternatives where the current layout allows for such access.

Due to this portion of NMB having a narrower road reserve, a few of the original design parameters had to be adjusted:

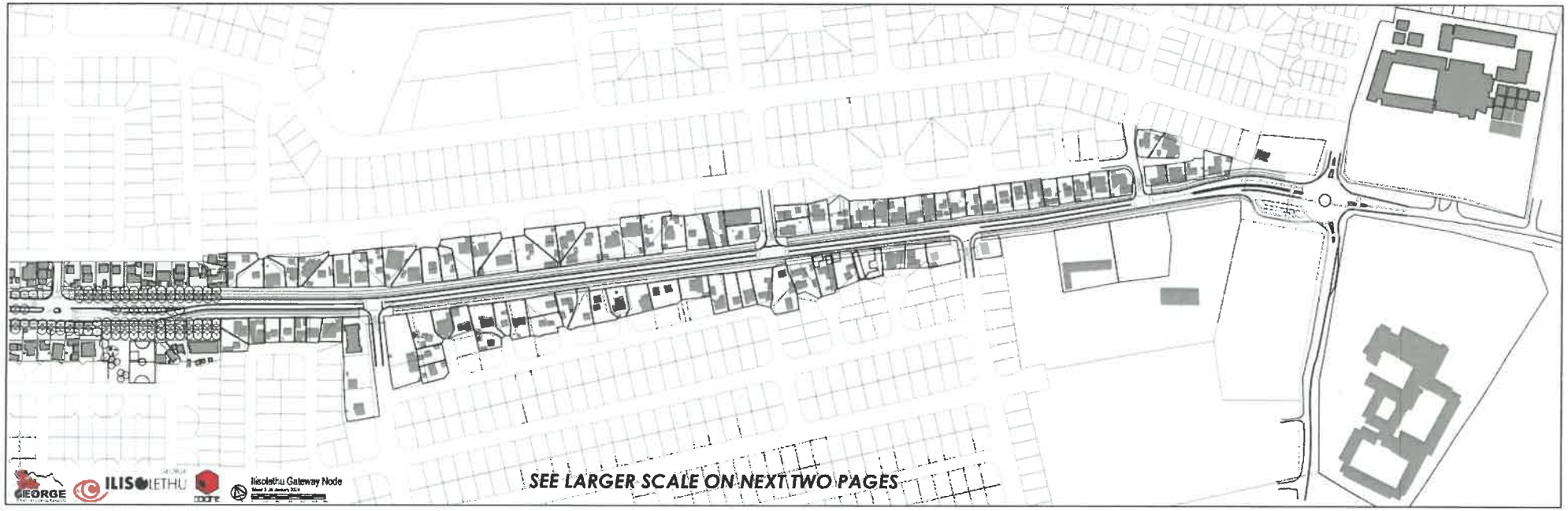
- To maintain continuity of movement for pedestrian and cyclists, this portion of NMB will only accommodate one 3,4m wide lane in both directions.
- Similarly, the standard 4m median will be reduced to 0,6m.



NMB CROSS-SECTION

The draft concept plan for the road design (below) and a section through the road (above) are herewith provided.

Further engagement with the municipality, engineers and GoGeorge might result in changes to the concept (specifically to accommodate embayments to better facilitate the GoGeorge public transport services, amongst others).



NMB DRAFT URBAN DESIGN CONCEPT


GEORGE
THE CITY FOR ALL REASONS
GEORGE
ILISOLETHU
cadre
Ilisolethu Gateway Node
Sheet 3 25 January 2024



3.4 Node proposals

Although the Thembalethu Precinct Plan (2016) identified three prominent nodes along NMB, the Ilisolethu Gateway Node (2023) project determined that NMB functions more as a linear spine with activity all along its length instead of a road with clearly defined activity nodes.

Nevertheless, there are areas where activity is more concentrated and diverse than others, including the following (see adjacent graphic):

- The Ilisolethu Interchange Gateway Development provides formal economic and affordable residential opportunities within a well-designed and integrated development.
- The Multimodal Transport Social Cluster serves as the concentration point for various community and social services in Thembalethu, made more accessible via the extensive pedestrian network and integrated multimodal transport station.
- The NMB Sports Node provides additional sports and recreation facilities within the node. A social cluster is also accommodated to make additional social facilities accessible from NMB.
- NMB SMME trading spaces provide dedicated trading facilities for some of the informal traders that had to be moved to accommodate the NMB redesign, or that had to move because of the type of land uses that are not compatible with the pedestrian-focused strip along NMB. These spaces function as multifunctional open spaces and support a range of recreational and economic uses.
- The newly proposed TOD node at the end of the extension area provides for residential and economic opportunities centred around the bus transfer station and a well-designed community square.
- The proposed southern node provides space for limited economic opportunities serving the farming settlement and community removed from the NMB activity space.

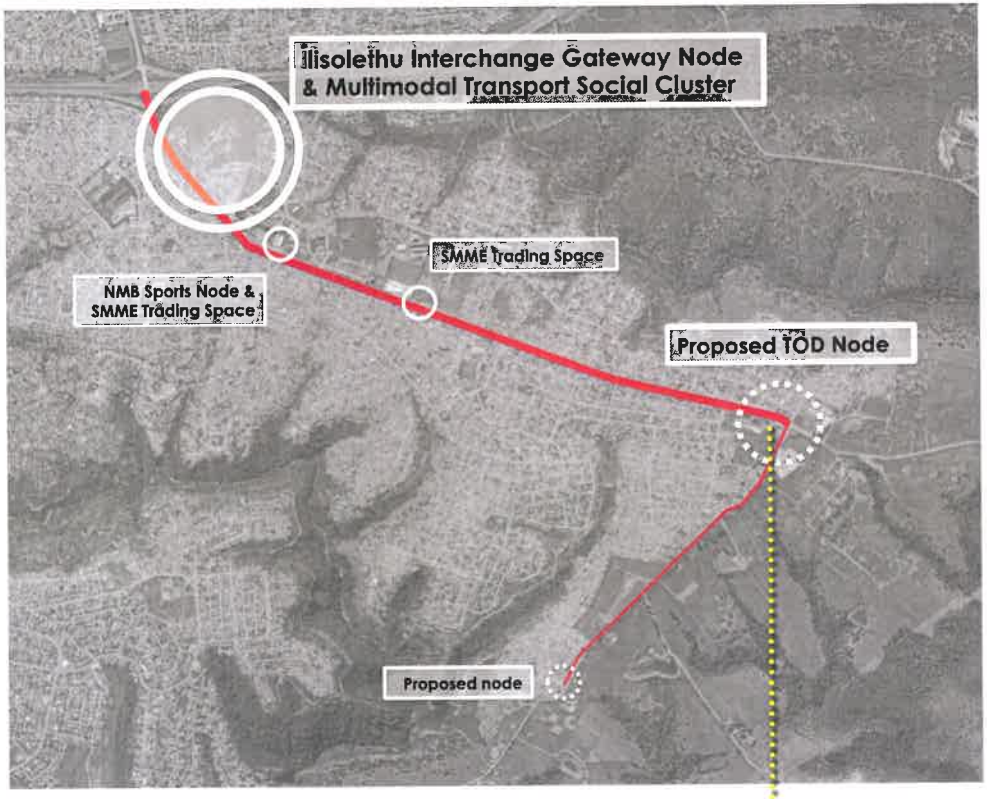
Proposed TOD node

The proposed TOD node will be centred around the bus transfer station located at the end of NMB and its intersection with Jonga Street and Ngcakani Road. It envisions a well-designed community square that supports a range of functions, including serving as a waiting area for public transport, and an extension of the recreational spaces offered within the Thembalethu area. ,

The public square will be framed by a landmark building, creating identity and a sense of place, with active interfaces on the ground floor to activate the public realm.

The two schools will provide for activity throughout the day, while the proposed social housing development will serve to activate the space during the nighttime. Balconies looking out onto the public space and NMB will aid in passive surveillance.

Appropriate land uses should ensure that the space remains vibrant throughout the day.



NODES OF THEMBALETHU



VACANT LAND AVAILABLE FOR DEVELOPMENT

Social housing development

The vacant land within the node provides an opportunity for the diversification of the housing typologies offered within the area. Situated next to the central spine and bus transfer station, it is ideally located for the development of social housing in the form of 3-4 storey walk-ups with commercial space located on the ground floor.

The George Social Housing Design Guidelines (2023) should be consulted for guidance on the development of high-quality residential opportunities to create thriving communities and comfortable living environments.

The following are provided as examples.

Hlangani Gardens, Roodepoort — 2,51 ha
283 residential units
Creche, community room



Brickfields, Johannesburg — 1,02 ha
345 residential units
21 commercial units

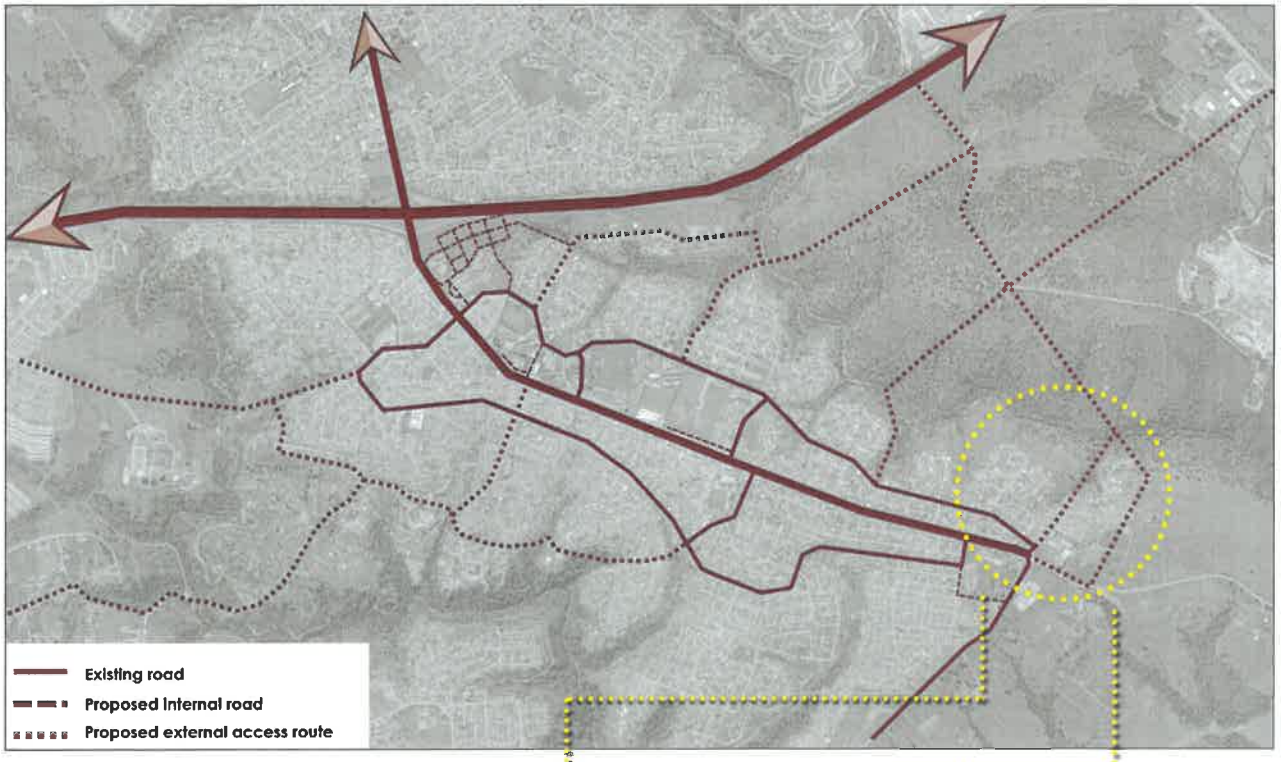


3.5 Movement network

Accessibility to and from Thembalethu is an issue that requires immediate attention if the node is to be developed to its full potential. External accessibility is, however, hampered by the presence of deep river valleys, making it difficult and costly to construct.

The adjacent graphic illustrates the external linkages that are supported to improve accessibility to and from Thembalethu. It aligns with the CITP proposals, with the recognition that these placements are conceptual and that further investigation regarding the viability and probability of these external route implementation still to be done.

The graphic further illustrates the importance of NMB as the main arterial of Thembalethu with Tabata Street and Ngcakani Road serving as critically important internal distribution routes. NMT infrastructure adjacent to these routes needs to be maintained, upgraded and designed to support large numbers of pedestrians and cyclists on appropriately sized sidewalks and NMT through routes cutting across large portions of land that hamper accessibility to NMB.



ROAD PLANNING AND EXTERNAL LINKAGES

The road indicated on the image below should be formalised to enhance access to the proposed social housing development by creating a potential second entrance for the development.

This road will also relieve some of the pressure from the traffic circle with some traffic re-routed directly to Tabata Street from Jonga Street.

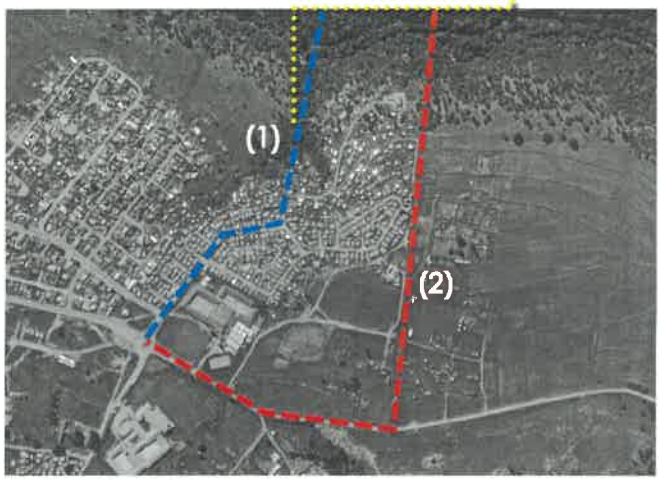


FORMALISE ROAD CONNECTING JONGA AND TABATA STREET

Building appropriate pedestrian infrastructure along Jonga Street should be considered given the pedestrian orientated nature of the node.

The position and size of this proposed external access route can serve one of two functions (adjacent graphic):

- Position 1 – linking up with the existing traffic circle at the intersection of NMB and Ngcakani/Jonga Street.
  - Here the road would act as an activity street, resulting in a narrow road reserve, slower speed, direct access into properties and potential economic activities (formal or informal) encouraged along its length.
- Position 2 – linking up with NMB on the eastern side of the Jonga High School.
  - Here the road would act as a connector route, resulting in a wider road reserve, higher speed, and no direct access into properties.
  - This location will also serve to define an eastern development edge for the township.



LINK NR 4 – POTENTIAL CONNECTION TO NMB

4. Implementation we



for Ilisolethu

4.1 SMME trader location

The approach to informal trading in the area (to a large extent encroaching into the public space) is based on the following ***principles***:

- The livelihoods of people with limited other income streams should be protected. Informal traders are located along pedestrian walking routes and are thus mainly concentrated along NMB. To move them to a piece of vacant land in an attempt to formalise them would be to rob them of their livelihoods. This principle requires as many traders as possible to be allowed to trade at the spot, or in the vicinity of where they are currently trading.
- The identity and vibrant character created by informal trading activities should be acknowledged and enhanced. This principle requires the design to include the informal activity and the informal and unique spatial attributes that SMME trading brings into the street space.

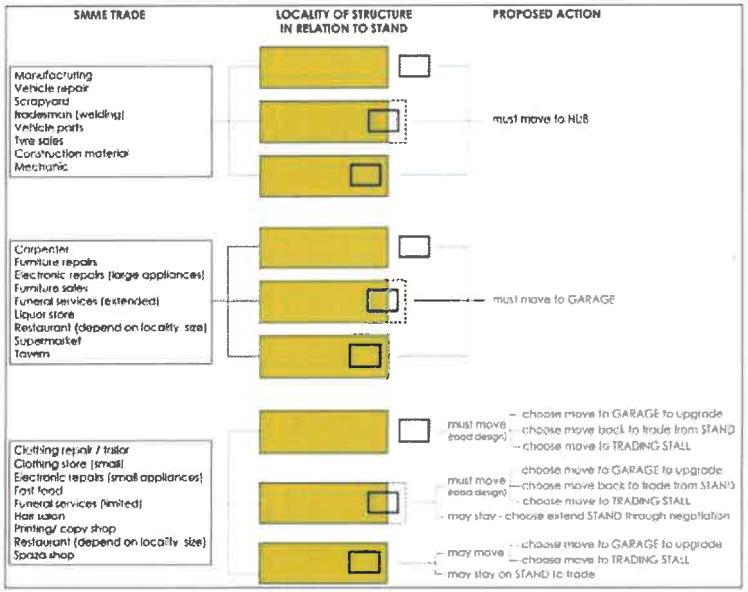
The ***approach and decision-making*** regarding the removal of a specific informal trading structure is set out in the flow diagram below.

- Firstly, the use was assessed and dealt with as follows:
  - If a manufacturing/industrial type of use or car-related use was identified, it was decided that a trading stall must be moved to the SMME Hub. These uses are focused on and dependent on cars and often generate truck traffic that is not conducive to a living environment. NMB also limits (and mostly prohibits) vehicle access from the street.
  - Where an activity is not necessarily disturbing for the surrounding environment, but also relies on trucks and vehicles to load and offload merchandise and equipment, a trading stall must be moved to an allocated garage type of facility.
  - Where a trading stall supports people (either the surrounding residents, or pedestrians passing by) and does not cause a nuisance to the area, the stall could stay in that vicinity.
- Secondly, the decision was based on where the trading stall is located and whether it encroaches into the street space. A trading stall could be located completely within the road reserve, partly in the road reserve, or completely on the property. The different choices within each of these scenarios are indicated in the diagram.
- As a third consideration, other factors have also been taken into account, as illustrated with the following two examples:
  - Where it was decided that a structure could stay, but it is in the way of the road alignment as planned, the structure was proposed to be removed.
  - Where a use that is in line with the approach above is proposed to be moved to a garage, but is housed in a large brick structure, it was decided that the structure could stay. In this instance, specific access arrangements and other requirements should be negotiated.







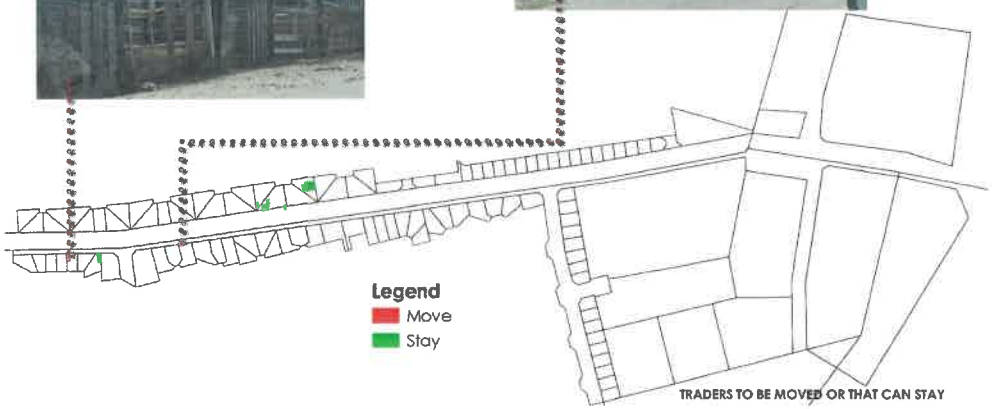


TRADER MOVEMENT METHODOLOGY

Based on the approach, two traders were identified to be moved. Though these traders are not necessarily encroaching within the road reserve, their associated activity relate more to the typology facilitated within the "Garage" trading stalls and are thus more suitably located in one of the designated trading facilities.

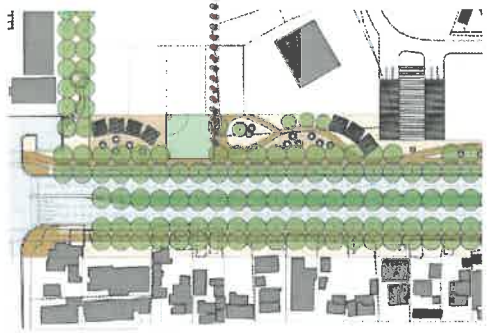


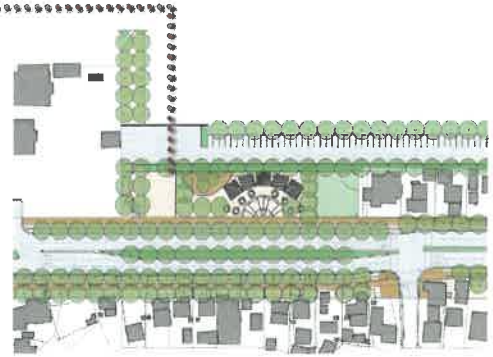




TRADERS TO BE MOVED OR THAT CAN STAY







The Ilisolethu Gateway Node makes proposals on the development and design of designated SMME trading facilities. Regarding the garage trading stalls, two distinct areas were identified to act as trading facilities: (a) adjacent NMB below the Inkcubeko Youth & Science Centre, and (b) adjacent NMB below the Thembalethu Stadium.

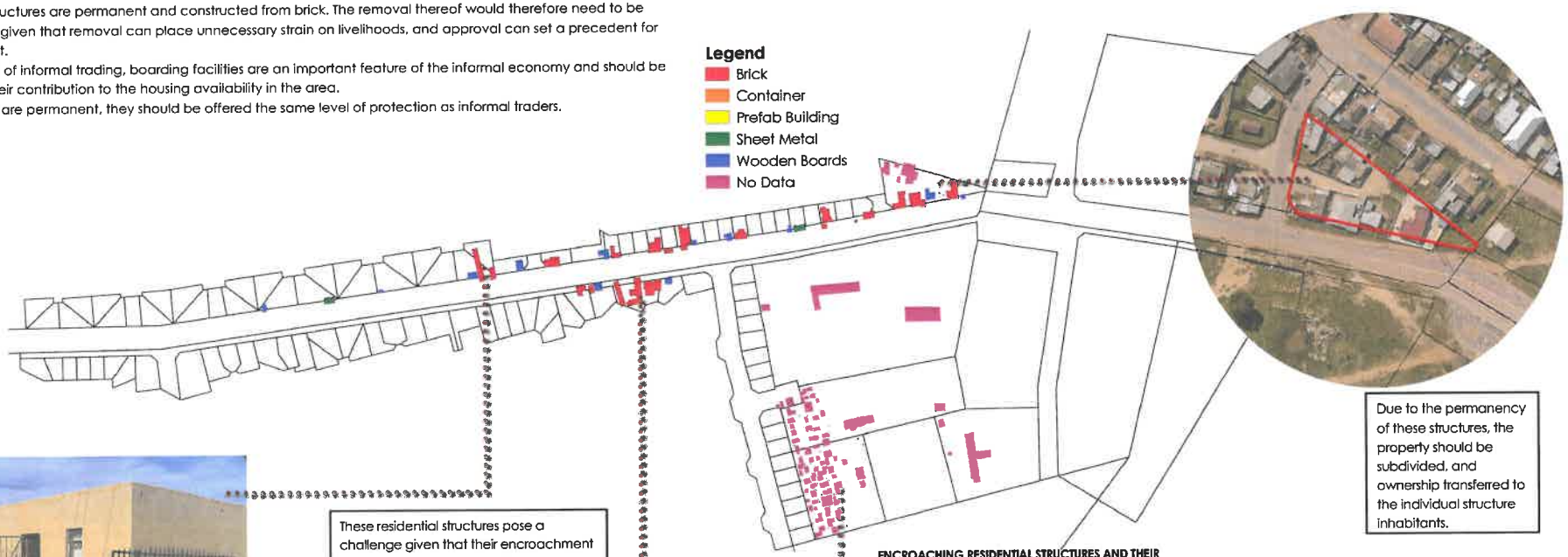
Trading facilities should be made available for these identified traders.

NMB SMME TRADING SPACES – CONCEPT DESIGN

4.2 Residential structures

The approach to encroaching residential structures in the area is based on the following ***principles***:

- A majority of these structures are permanent and constructed from brick. The removal thereof would therefore need to be considered carefully, given that removal can place unnecessary strain on livelihoods, and approval can set a precedent for further encroachment.
- Though it is not a part of informal trading, boarding facilities are an important feature of the informal economy and should be acknowledged for their contribution to the housing availability in the area.
- Where these facilities are permanent, they should be offered the same level of protection as informal traders.





These residential structures pose a challenge given that their encroachment into the road reserve complicates the implementation of the range of design parameters set out for the road concept design.

Attempt should be made to "curve" the road within the reserve to avoid these structures, while the encroaching portion is transferred to the inhabitants.

DHS should be involved in these negotiations.



ENCROACHING RESIDENTIAL STRUCTURES AND THEIR BUILDING MATERIALS

Due to the permanency of these structures, the property should be subdivided, and ownership transferred to the individual structure inhabitants.

Potential negotiation with DHS on resettlement of the households in these structures to accommodate the full social housing development. Households can then either be accommodated in flats within the development, or somewhere else where social housing is being constructed on a single residential stand methodology.



4.3 Urban design guidelines

The intention of the project is two-fold. Firstly, to extend the urban design concept planning for NMB from the Ilisolethu study area up until the eastern end of the road. Secondly, to provide guidelines on the potential establishment of a TOD node to anchor the area as the eastern development edge for the township and capitalise on the existing development synergy.

The following specific guidelines are provided to aid in developing the node:

- TOD node,
- Pedestrian infrastructure;
- NMB interface;
- Integrated trading facilities;
- Landmark buildings; and
- Community square.

More generic guidelines are also provided to ensure that this section of NMB and the adjacent developments support the character of the Ilisolethu project, and that the area is developed as one cohesive whole.

A TOD node

A Transit Orientated Development (TOD) node is a highly walkable mixed-use node where higher density residential typologies are integrated with non-residential uses. These nodes should be established next to prominent transport hubs (like the bus transfer station on the main arterial road of the township) to provide easy access for more people to public transport. In general, a TOD node is planned to cover an area with a radius of 400-800m around the station, depending on the context. In this instance the immediate development takes place within a 200-300m radius.

Typical characteristics of a TOD are defined as the three **D**'s: **D**ensity, **D**iversity of land-use patterns and activities, and habitable **D**esign. In terms of design, one of the most important principles is to create a vibrant, walkable environment. This calls for a permeable layout, mixed uses with commercial activities on ground level and residential on upper storeys, and well-defined and good quality public spaces.

Example designs of buildings in a TOD node



Permeable layout with a combination of well-designed spaces and pedestrian walkways providing shortcuts through the block. A distance of between 50-150m is adequate to support pedestrian permeability.



Perimeter buildings differ in shape and design. Placed on the street boundary with an active interface towards the street and adjacent public spaces.



Well-designed public spaces, supporting various activities and public furniture to act as entertainment and waiting area for the bus transfer station.



Medium-rise buildings with a variety of designs and uses. Most important is the commercial space on the ground floor with residential on upper-storeys. A variety of flat sizes should be offered to cater for a wide demographic.

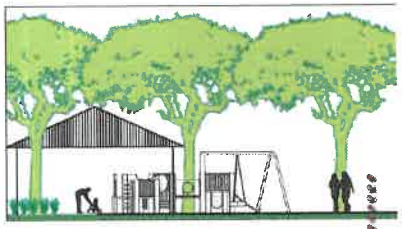


Pedestrian infrastructure

In general, road reserves are over-designed and often much wider than what is required to fulfil the function of a specific road. Even though this is the case, the road is then designed with vehicle lanes and curb lines, and a strip of pavement along the road verges. This leaves small strips of gravel, or even large portions of dirt surfaces within the remaining road reserve. These areas become "ignored" spaces of the city where rubble is gathering, weeds are growing, and pools of water and mud are found when it rains. In general, these portions become no-man's land with nobody taking responsibility for the cleaning thereof. This wasteland is even more problematic in an area with such a high number of pedestrians where the paved sidewalk in inadequate.

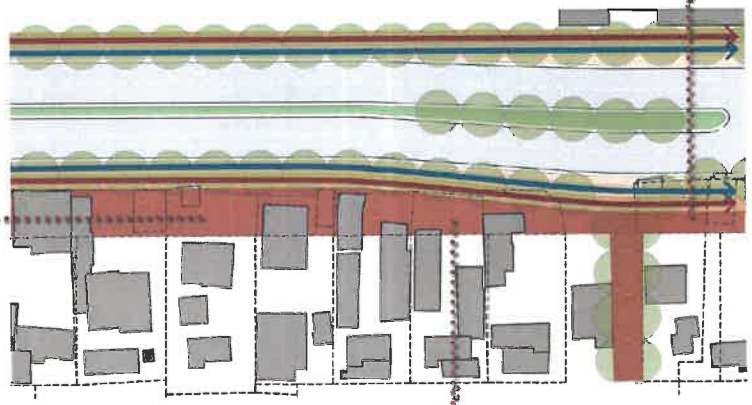
To address this problem, it is critical that the whole reserve be designed and upgraded as one unit. Paving with landscaping (trees and street furniture) up to the edge of the road reserve (property boundary) should be implemented. Through this, the street becomes a linear public space that could accommodate various activities (see adjacent example of Medellin, Colombia).











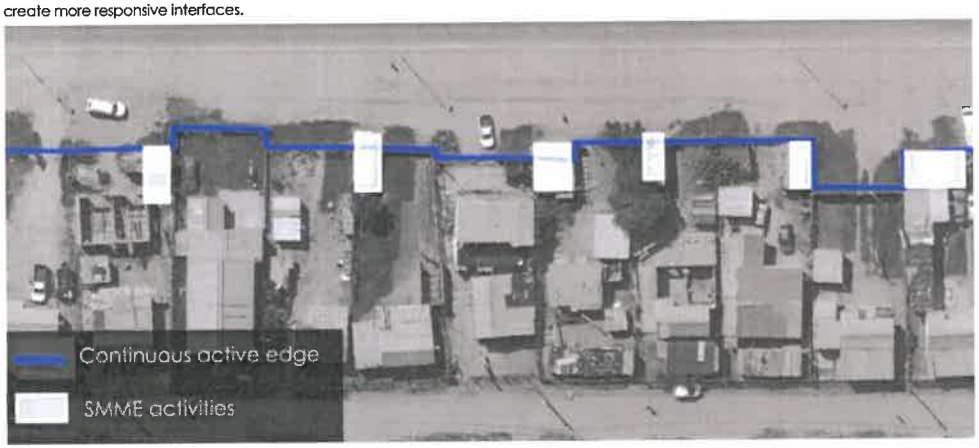




NMB interface

Properties adjacent to NMB will play a vital role in the vibrancy of activities that takes place within the NMT open spaces. Though currently the properties are mainly single residential units, guidelines should be provided in the event that future development takes place along the road. Future development on existing developed poperty must preferrably have an active interface on the street. It should, however, be a prerequisite for new developments on vacant land to have an active interface on the street front.

Adjacent residential properties are encouraged to have a transparent fence to provide passive surveillance within the public space. Property owners are also encouraged to allow SMME trading on the boundary of their properties to aid in creating activity and vibrancy within the public realm – to form a continuous active edge across multiple properties. Requirements for the design of a specific type of boundary is addressed in the generic guidelines sheet "interface design guidelines" and can be consulted if property owners wish to create more responsive interfaces.



Integrated trading facilities

Small formal spaces (the size of a standard garage or smaller with roller doors) could be integrated into the design of a building, thereby contributing towards an active interface. DHS (or other developers) should be encouraged to integrate small trader facilities into the social housing development planned for the node. These facilities could accommodate a wide variety of activities and services, such as small-scale service trades (tailors), selling of larger articles (furniture), permanent display and retail, cooking (for take-away or sitting down) or services (hairdresser). It integrates the retail service with on-site storage and can be linked with individual services such as water and electricity. Communal ablution facilities could also be incorporated.





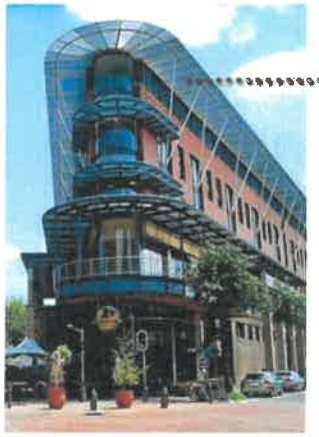


Landmark building

Landmark buildings play a significant role in defining public spaces and contributing to the character and identity of a place.

This building would specifically need to have a well-designed façade, with commercial space for SMMEs defining the ground floor with an active interface. Additional residential opportunities can be accommodated in 2-3 storeys above the commercial spaces. It is, however, important that the building has balconies that front onto the public space to aid in passive surveillance.









NODE PUBLIC OPEN SPACE DESIGN CONCEPT

Community square

The adjacent graphic illustrates how the property could potentially be developed. Placing the building a distance from the boundary next to the bus transfer station creates space for the construction of a community square.

This square can also be perceptually connected to the proposed square in front of the Thusong Centre, thereby strengthening the character of the area through design and anchoring both ends of NMB within open and well-designed community spaces that are serviced by integrated public transport facilities.

Below are some guidance on elements that can be implemented to strengthen the design of the public square:

- Walls that define the space should have active interfaces and should frame the space.
- Floors can be made up of hard or soft landscaping.
- 'Ceilings' in the form of covered walkways along buildings and ample street trees should provide protection from the elements (e.g. sun and rain).
- Design elements should include a central public art feature and some form of landmark building to define the space.
- Adjacent properties should provide appropriate land uses to activate the space (e.g. take-away or sit-down restaurants; retail services; social services, etc).
- Ample public seating should be provided to create waiting spaces within close proximity to the bus transfer station.













Generic urban design guidelines

Apart from the urban design guidelines presented on the previous pages, the Ilisolethu Gateway Node investment packages contained generic urban design guidelines which were provided to aid in development considerations regarding the following:

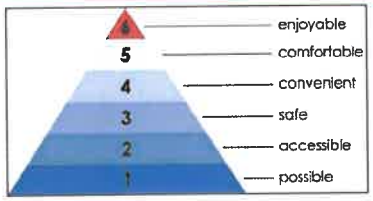
- NMT through routes design guidelines;
- Interface design guidelines;
- Parking design guidelines;
- Placemaking design guidelines;
- SMME trading spaces; and
- Open space design guidelines.

Even though this appointment only relates to the urban design extension of NMB, some generic design guidelines are included here to assist in developing the node to firstly, match the character that is being established in Ilisolethu, and secondly, strengthen this and establish the node as an eastern anchor for the township.

NMT through routes design guidelines

Walking and cycling (referred to as non-motorised transport- NMT) together with public transport create more sustainable urban spaces by providing movement options beyond individual motorised transport.

Walkability refers to the user-experience of walking and how conducive an area is to NMT movement. Adjacent is the hierarchy of needs for walkability. The following spatial factors impact on walkability and should be kept in mind when implementing NMT through routes:



Possible
- Human factors (age, health, mobility)
- Spatial factors (barriers – wide highways, steep slopes)

Accessible
- Reasonable walking distance between destinations
- Number of environmental barriers
- Completeness of pedestrian network

Safe
- Pedestrian-scale lighting
- Absence of grime (litter, graffiti, broken windows)
- Traffic management
- Unrestricted line of sight
- Public-private interfaces that support pedestrian safety

Convenient
- Permeable, pedestrian-scaled walking grid
- Wide sidewalks
- Shortcuts through large areas

Comfortable
- Covered walkways or shade
- Pedestrian-scale lighting
- Intact walking surfaces
- Public amenities (ablutions)
- Street furniture

Enjoyable
- Public art and design elements
- Active spaces supported by land uses activating the street
- Buildings defining the space
- Presence of people without overcrowding

Width	• Through routes should at a minimum be 7m wide, increased to 10m when walkways are longer than 70m.	
Security	• Pedestrian-scale lighting – ensuring the through route is adequately lit at night. • Security booths may protrude 1m into the through route to assist with surveillance of both the private property and the through route. • Landscaping should not impede line of site.	
Adjoining property interface	• Through routes should predominantly be flanked by transparent fencing or buildings with active interfaces. • Where solid walls are however required to provide privacy, no solid wall may be longer than 7m before it is altered with transparent fencing.	
Hard space design	• Some walkways are small and only serve to make the area more permeable. These spaces should be completely paved, including public furniture, art and landscaping to soften the space.	
Soft space design	• Some walkways will serve more than one purpose, providing permeability as well as additional public space. In those instances, the through route should be designed to include linear park guidelines as proposed in generic guidelines sheet "public open space design guidelines".	

Interface design guidelines

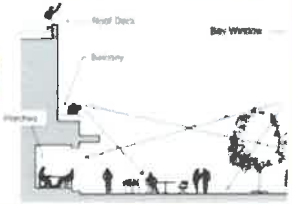
The purpose of interface guidelines is to ensure that a building has a responsive street edge that could support passive surveillance and safety of/in the street. The rationale behind the proposed interface guidelines is to ensure building edges that activate the public space, or at least provide a visual connection between the inside of the building and the public space on the outside.

A responsible design of a building façade is critical, as the façade is not only part of the individual building but also part of the bigger urban whole. The aim of the façade is to weave the building and the street space together and not to act as a barrier between the inside and outside. A good public-private interface supports activity and transparency.









Below an illustration on how interface guidelines are incorporated into the development of an area:

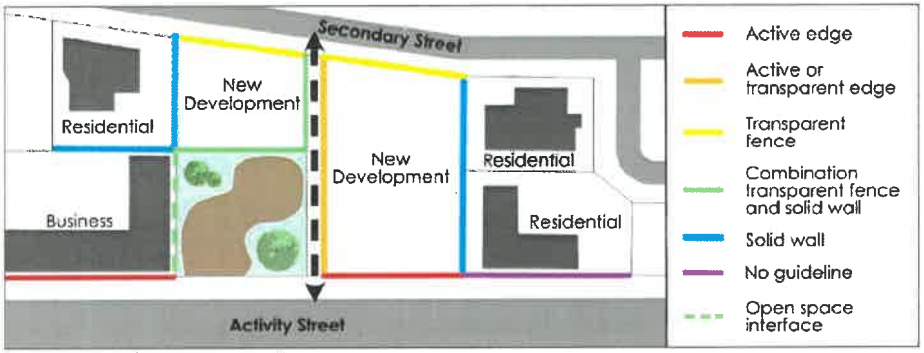


Figure 5-2: Application of interface guidelines

Active edge

Intention is to ensure that buildings contribute to the activity in the public space. To create an active edge:

- At least 75% of the ground floor should have openings (doorways or shop windows).
- No solid wall should be longer than 5m.
- One building entrance per every 10m length of building.
- A covered walkway provided along the edge of the building.
- Upper storeys should have balconies looking out onto the adjacent space (street/open space).





Active or transparent edge

Where buildings do not provide an active edge, the intention of a transparent edge is to still provide a visual connection between the inside of the building and the outside space. To create a transparent edge:

- At least 75% of the ground floor should have visual openings (windows).
- No solid wall should be longer than 10m.
- Balconies on upper storeys are encouraged.





Transparent fence

Although it is preferred that buildings frame the public space, the intention with a transparent fence is to improve security of the site, while also supporting environmental-design-for-safety principles with a visual connection between the erf and the public space.



Combination transparent fence and solid wall

The intention with solid walls is to screen off loading zones and service yards and create privacy for facilities involving vulnerable communities. The combination of solid walls and transparent fencing should be provided accordingly:

- Solid walls may not be longer than 30m where it should be altered with transparent fencing.
- Walls should have articulated features to create visual interest.
- No precast concrete structures are allowed.



Solid wall

The intention with a compulsory solid wall is to screen off private areas facing another property. Solid walls should be provided accordingly:

- Walls should be at least 2m high.
- No precast concrete structures are allowed.
- In the case of adjacent residential properties, see additional residential design interface guidelines.



No guideline

No specific guidelines for these interfaces are required. Property owner can choose.

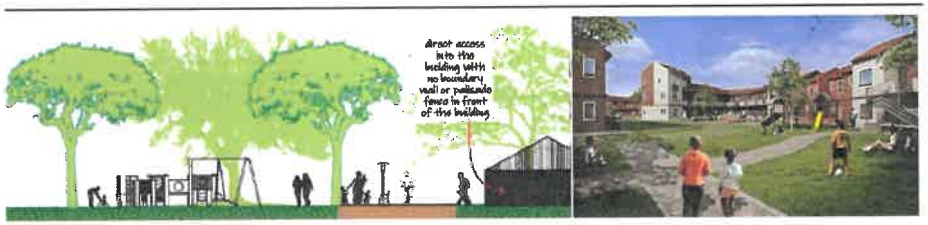
Open space interface guidelines

The purpose of this open space interface guidelines is to ensure that a new, higher density development provides passive surveillance over the public open spaces, and that the design of buildings incorporate design-for-safety elements.

Open space interface

Intention is to increase the safety of public spaces through passive surveillance offered by the intended development. Building designs should adhere to the following:

- A building should front onto the public space and no building should have any backside turned to any part of the public space.
- Entrances into buildings should be provided directly from the public space.
- Security measures should be located at building entrances (e.g., biometric access) and not property boundaries.
- Windows and balconies should look out onto the public space.
- No solid wall or palisade fence may be erected in front of the building.



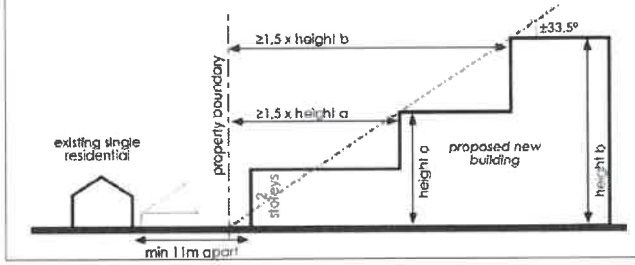
Residential design interface guidelines

This interface refers to the transition line between new developments and existing residential properties behind and adjacent to it. The purpose of this residential interface guidelines is to ensure that a new, higher density development minimises the potential negative impact on adjacent single residential properties, by respecting the privacy and solar access of these properties.

Residential interface

The graphic illustrates how buildings adjacent to residential properties should be constructed. In summary:

- A 2m high boundary solid wall with a row of trees should be provided on the shared boundary.
- No service yards should be closer than 5m from the shared boundary.
- No balconies may be provided on the sides facing the single residential property.
- Height of new buildings should step up from the shared boundary.
- New buildings should be located at least 1,5 times the height of the new building away from the shared boundary.



Parking design guidelines

OP

Parking on-grade

To enhance pedestrian quality, on-grade parking should not be provided in front of buildings, along important routes, or adjacent to public spaces. The following should also be adhered to:

- At least one indigenous, drought resistant tree/landscaped patch per every four parking bays.
- Parking to be provided at the back of buildings.
- Larger parking lots should be divided into parking pockets with ample trees/landscaping to soften the space.
- Parking provided along transparent fences facing the street should be provided in pockets with a 2m strip of landscaping along the boundary.
- Parking pockets should not be longer than 25m and should be separated by a minimum 5m width landscaped patch.



BP

Parking in/on building

It is preferred that parking be provided inside, underneath or on top of buildings. Where this is possible, the following should be kept in mind:

- Only active uses are to be provided on ground floor – not parking.
- Where parking is provided in a raised basement, the ground floor should not be raised more than 1 meter above the sidewalk.

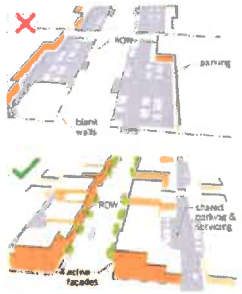


SP

Shared parking

Due to the proposed functioning of the node as a pedestrian-prioritised environment, creative thinking around a shared parking system is proposed. The following guidelines are therefore proposed:

- As a site is developed, a reduced ratio of parking spaces is provided.
- Overflow parking can then be designated to a close-by vacant piece of land.
- When the overflow parking lot is developed, additional parking is provided at a different site.
- It is believed that as the node becomes more developed, the public transport and pedestrian character will dominate, and less parking would be required.
- Shared parking lots should be designed according to the "parking on-grade" guidelines above.



Placemaking design guidelines

Sense of place (or identity) refers to the intrinsic distinctiveness of a place and the meaning people give to that place. Certain unique characteristics can make a place distinctively different and thus more interesting and memorable. When there is a sense of place, residents feel a connection and a sense of belonging. This has both social advantages (residents love their area and therefore take better care of it) and economic advantages (businesses are attracted to that area).

Questions around a sense of place should be structured around private developments and the design of buildings, the interface between public and private spaces, and the design and functioning of public environments. It's the collaboration and mutual support between public and private that create vibrancy within spaces.

Private developers should think about a sense of place in terms of how does the building/development (1) respond to and reinforce the locally distinctive character; (2) create a sense of significance to the local community, and (3) respond to and reinforce the locally distinctive activity structure and spirit.

The public realm should be designed in such a way that developers can easily read the sense of space within a community. The public realm should: (1) set the standard of development, (2) be responsive to local character, (3) be respectful of heritage, and (4) protect the natural environment.

CHARACTER OF THE PLACE

- Built form
- Patterns of development
- Streetscape
- Interface design
- Heritage elements
- Landmark elements
- Public art
- Environmental elements

QUALITY OF THE PLACE

- Quality of public spaces (hard and soft, linear and nodal)
- Architectural quality
- Infrastructure services
- Vehicular movement and parking
- Non-motorised movement
- Universal design
- Public facilities

SPIRIT OF THE PLACE

- Sense of community
- Sense of safety
- Community events
- Vibrancy in public spaces





Street furniture and lighting

- To be provided along all NMT through routes, public open spaces and the NMB pedestrian priority route.
- Furniture should be designed to be robust and low maintenance, using materials such as concrete or steel.
- Seating should be orientated to provide passive surveillance within the public space.
- Where possible, the branding of the Ilisolethu node should be incorporated into the design of street furniture.
- The design and placement of furniture should keep design principles such as rhythm, texture, form and colour in mind to establish a sense of place.
- Lighting should be pedestrian scale and adequately illuminate public spaces.
- Lighting should not adversely impact adjacent properties.
- Public transport facilities should be well lit at all times.
- Solar lights should be explored to reduce the load on the electrical grid.





Hard and soft landscaping

Hard landscaping (such as paving) plays a critical role in defining and creating continuity between different public spaces. The following should be kept in mind with hard landscaping:

- Paving should "spill out" onto public open spaces where pedestrian walkways connect.
- Design principles such as texture, form and patterns should be used to differentiate between different activities.
- Paving intersections to serve as traffic calming measures and prioritise pedestrian movement.
- Follow universal accessibility principles, ensure that hard landscaping is non-slip and even.

Soft landscaping is necessary to soften public spaces and incorporate nature back into cities. Vegetation and tree cover can also greatly increase the attractiveness of open spaces by providing shade and a sense of enclosure. Soft landscaping guidelines include:

- Indigenous and drought resistant vegetation should be encouraged.
- Care should be taken when planting low shrubs as to not impede visibility and to avoid creating concealed spaces.
- Design principles such as rhythm and harmony can be incorporated into the planting of trees to better enhance the character of public spaces.





PUBLIC ART AND URBAN ACUPUNCTURE OPPORTUNITIES include the following:

Community sidewalk mosaic



Mural painting



Community gardens



Painted parking lots



Pocket play spaces



Commissioned public art



SMME trading spaces

The Ilsolethu Gateway Node (and in fact the entire Thembalethu township) consists of a number of SMME traders. The purpose of these guidelines is to attempt to provide some structure within the informal economy and to provide traders with formalised trading structures in designated trading spaces that offer them exposure to Nelson Mandela Boulevard and the numerous pedestrians and cyclists that travel along this road. The intention is also to provide vibrancy and activity within public spaces to improve the overall walkability of the node and support the character of Ilsolethu.

TA

Type A
Trading on boundaries

Trading takes place directly from the boundary of residential properties – through the fence or a hatch it the wall. Typology is intended for:

- Small-scale trading (sweets, cold drinks, take-aways).
- No on-site seating provided.
- Use existing on-site services.



TB

Type B
Trading stalls

Coherently designed open trading stalls, either specifically provided by the municipality or allowed within designated trading spaces:

- Selling general goods (clothes, small electronics, food stuffs).
- People-centred services.
- Off-site storage facilities, communal water points and ablution facilities are catered for within the vicinity.



TC

Type C
Refurbished containers

A lot of trading already takes place within containers. Although no containers will be provided by the municipality, SMMEs may place containers on private properties.

- Small scale service traders, selling of larger products, cooking (for take-away) and services.
- Integrates retail services with on-site storage.
- Use of existing on-site services.
- Communal ablution facilities would be required.



TD

Type D
Garage stores

Small spaces the size of a standard garage, which can be integrated into buildings to contribute to active interfaces.

- Designated trading spaces are identified, and private developers are encouraged to incorporate this design into their buildings.
- Can support small-scale service traders, food services (take-away and sit-down), permanent display and retail.
- Integrates retail services with on-site storage facilities.
- Individually serviced with water and electricity.
- Communal ablutions facilities would be required.



TE

Type E
SMME hub

Clustered small units of trading facilities within a well-designed structure with adequate open space.

- Larger manufacturing and vehicle-related activities.
- Permanent workshops for manufacturing, light engineering works, and car-related services.
- Individually serviced with water and electricity.
- Varying sized units can be provided to suite different trading needs.



Open space design guidelines

Components of good public spaces

An urban space can be defined in terms of the following components:

- The walls defining the space (e.g. buildings enclosing the space, a continuous row of trees);
- The floor covering the space (e.g. paved patterns, grass);
- The roof covering the space (e.g. a built structure, sky);
- The elements arranged in the space (e.g. street furniture, landscaping, trees, public art); and
- The activities taking place in the space (e.g. formally organised, informal and spontaneous).



Shared space

Shared space is a relatively new urban design concept with the aim to minimise the segregation between vehicles, pedestrians, and bicycles through continuous paving over the street and sidewalk. The theory is that it creates a sense of uncertainty, making it difficult to read who has priority in the space. This in turn would lead drivers to slow down, engage with the environment, and make eye contact with pedestrians.

Walls	Preferred that adjacent properties have active interfaces, or at least a transparent interface
Floors	Paving of entire space, removing distinction between streets and walkways.
Ceilings	Covered walkways along buildings are encouraged. Street trees to provide shade.
Elements	Removal of street clutter (kerbs, road surface markings, traffic signals). Incorporating street furniture, public art, and amenities.
Activities	Adjacent properties should provide appropriate land uses to activate the public realm (restaurants, social services, retail, etc).





Public squares

A square is provided to act as focal point for social and cultural life in the node. In general, a square draws its vibrancy from the activities and uses in the buildings surrounding the space, from the interaction between the buildings and the space, as well as activities taking place within the space itself. A public square also provides an opportunity to establish a unique mix of commercial and social services to establish a distinct identity. A setting facing onto a square also provides the opportunity for a civic building where the square acts as a reception space for people to sit and wait to be served.

Walls	Preferred that adjacent properties have active interfaces, or at least a transparent interface. Buildings should frame the space.
Floors	Hard and soft landscaping within a well-designed public space.
Ceilings	Covered walkways along buildings are encouraged. Street trees to provide shade.
Elements	Central public art feature around which the public space is orientated. Incorporating street furniture, public art, and amenities.
Activities	Adjacent properties should provide appropriate land uses to activate the public realm (restaurants, social services, retail, etc).



Sports facilities

Where possible, multi-sport sports fields should be incorporated into all public open spaces. Where appropriate, transparent fencing around sports fields may be provided. The sports fields should however form an integrated part of the entire open space, and the design of the space should therefore follow the guidelines of soft and hard public spaces. Varying ages should be catered for – providing bigger and smaller versions of the fields.



Soft public spaces

Soft public spaces are well-designed with ample soft landscaping elements to soften the space and integrate natural elements.

- Space preferably defined by active building interfaces, however transparent fencing or a line of trees can also define the space.
- Paved areas with interspersed soft landscaping.
- Ample trees to provide shade.
- Public art, street furniture, pedestrian-scaled lighting, formal and informal trading activities.



Hard public spaces

Hard public spaces include the network of pedestrian sidewalks and bicycle lanes, as well as the dedicated trading spaces and public open spaces that are spread along NMB. Trees, street furniture and public art must be incorporated to soften the space.

- Space preferably defined by active building interfaces, however transparent fencing or a line of trees can also define the space.
- Paving patterns to define different activity spaces.
- Trees to soften the space.
- Public art, street furniture, pedestrian-scaled lighting, formal and informal trading activities to create a sense of place and vibrancy.



Linear parks

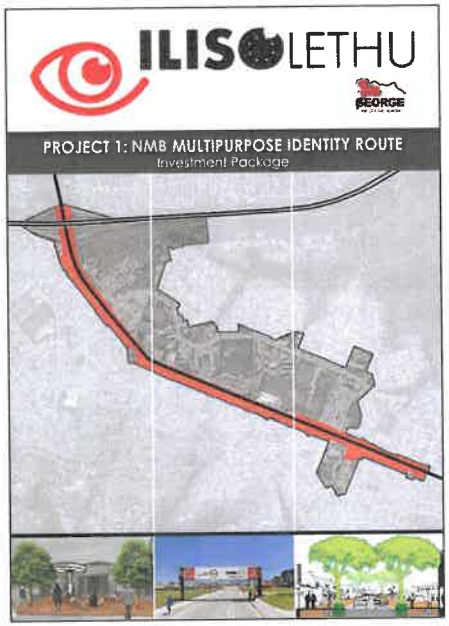
Applicable to pedestrian walkways and through routes. Depending on the length of the walkway, might be hard or soft spaces.

- Transparent fencing to border the space.
- Paved areas with interspersed soft landscaping.
- Ample trees to provide shade.
- Public art, street furniture, pedestrian-scaled lighting, formal and informal trading activities.



4.4 Project implementation





The main question regarding project implementation is whether the NMB urban design extension will be seen as a part of the Ilisolethu Gateway Node Investment Plan, and subsequently part of the priority project 1 – NMB multipurpose identity route (the implication thereof being an extension of the contract with the appointed engineers currently busy with this projects' implementation). This would also result in the updating of the project investment package.

If this project is, however, seen as an independent project, then a separate investment package would need to be prepared.

The ultimate decision on this lies with the municipality.