

2020 Edition

CBD Urban Design & Regulations

Kigali Master Plan 2050



KIGALI YACU! OUR KIGALI!
The Centre of Urban Excellence



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PREFACE

Project Background

The 2019 Master Plan review for the City of Kigali has been drafted combining international best practices with a bottom-up approach, based on extensive socio-economic data collection and analysis and continued interaction with local and international stakeholders. This process led the City of Kigali One Stop Centre to draft a highly customised strategy to support Kigali aspirations to become the Centre of Urban Excellence in Africa.

Great attention was put in addressing the issues highlighted in 2013 Master Plan, introducing a more equitable, flexible, and incremental approach to City development, in line with the UNHABITAT New Urban Agenda, Sustainable Development Goals and with the latest and more innovative approaches being currently studied or implemented to guide the rapid urbanisation of African Cities.

Building on this approach, the “new” Kigali Master Plan aims at being more inclusive by facilitating higher degree of social and economic inclusion, allowing for more social and economic mix in the City, favouring small and large investors and facilitating the creation of a large variety of affordable housing solutions, hence supporting the growth of a healthy and well-balanced community.

The review process was designed to address the concerns raised during the first 5 years of

implementation, improving the methodological approach and the execution of planning activities, whenever needed, to achieve a more inclusive result. Key actions implemented in this review are listed below:

- A rigorous research methodology was applied to the review process with the objective to inform planning decisions. Extensive Primary Data collection was conducted to inform the socio-economic status quo analysis and the projections. Traffic counts were also conducted to address short term traffic issues in the City and inform future transport model. All available data and studies were also collected and incorporated into the Plan.
- An extensive stakeholders’ consultation process was carried out through focused Group Discussion, Stakeholders Meeting, and other digital platforms to investigate issues more in detail and find shared solutions.
- An intense consultation with international organizations (UNHABITAT, WORLD BANK, etc.) was conducted to align MP strategies with ongoing and planned activities in the City. Continued interaction was also ensured with other ongoing consultancies (BRT study, Water, and Sanitation MP, NLUMP, etc.)
- A wide research on world’s best practices on regulations (different zoning models), urban policies (land consolidation, incremental development, financing) and affordable development models were conducted to inform the MP. Each of this input was then adapted to the Kigali context and evaluated together with relevant stakeholders.
- A new transport and infrastructure model was developed to ensure that the service provision

strategy allow for high level of services, while still being affordable to the different income levels and neighbourhoods in the City.

- New Zones and Zoning regulations were studied to ensure affordability, flexibility and implementability of the plan. Minimum Plot size are reduced, plot coverage increased, typologies adapted to ensure incremental development and are now more in line with citizens’ purchasing power. Common facilities and public parks are suggested in suitable locations in a more flexible manner.
- Mixed use is suggested in most part of the City, allowing the creation of employment opportunities integrated with the neighbourhoods, thus allowing for a more inclusive economic development of the communities.
- On-street parking is allowed along local roads, collectors and minor arterials and shared parking facilities are encouraged to maximise the use of land and support better parking demand management in the optic of encouraging use of Public and Non-Motorised Transport.
- Incrementality will be encouraged to maximise current investment capacity without hindering future development potential.
- Inclusionary zoning for affordable housing will be encouraged and incentivised to increase affordable housing stock for low and moderate-income groups.



Urban Design Update



Kigali Nyarugenge CBD

The Update of the Urban Design for the Nyarugenge CBD followed and implemented the same principles of the overall master planning process and, for this reason, implied a deep review of the previous design. the Nyarugenge CBD Urban Design was first drafted in 2008 as part of the Nyarugenge District Master Plan and only minor changes were applied during the 2013 exercise that was primarily focused on Gasabo and Kicukiro Districts. After more than 10 years from its adoption, the Nyarugenge CBD Urban Design required major updates to align to the evolving socio-economic situation in Kigali, national and local policies, mutated market conditions.

Understanding the real-estate market in Kigali, through a dedicated study conducted in this Master Plan review, was at the base of the many changes applied by the design team to the previous Plan. A Real Estate Market Analysis, conducted in association with IPAR and supported by IGC revealed the many challenges that the implementation of the previous Plan was facing, as well as the difficulties that local developers and investors were dealing with in terms of high construction and land acquisition costs, low occupancy rates, and the limited size of the market.

The Focus Groups conducted during the Master Plan review process, and a dedicated Participatory Workshop focused on the Nyarugenge CBD, further supported the design team in identifying the changes required to facilitate the private sector in taking advantage of the opportunities offered by this prime location in Kigali. This process also provided clear indications on the Vision that the CBD should aspire to in terms of vibrancy, accessibility, affordability and inclusion.

The newly available inputs provided by the primary data collected, the interaction with stakeholders and the deep understanding coming from more than 10 years of implementation, guided the Design team towards the proposal of several improvements that will facilitate the future development in this area:

- Shifting from Government to Privately driven implementation. Previous Plan focused on the City of Kigali and other GoR institutions taking the lead by acquiring large parts of the CBD to implement the design. While the role of the City of Kigali will still be critical in guiding the implementation and the design of key areas, the private sectors is now seen as the key player for the successful implementation of the

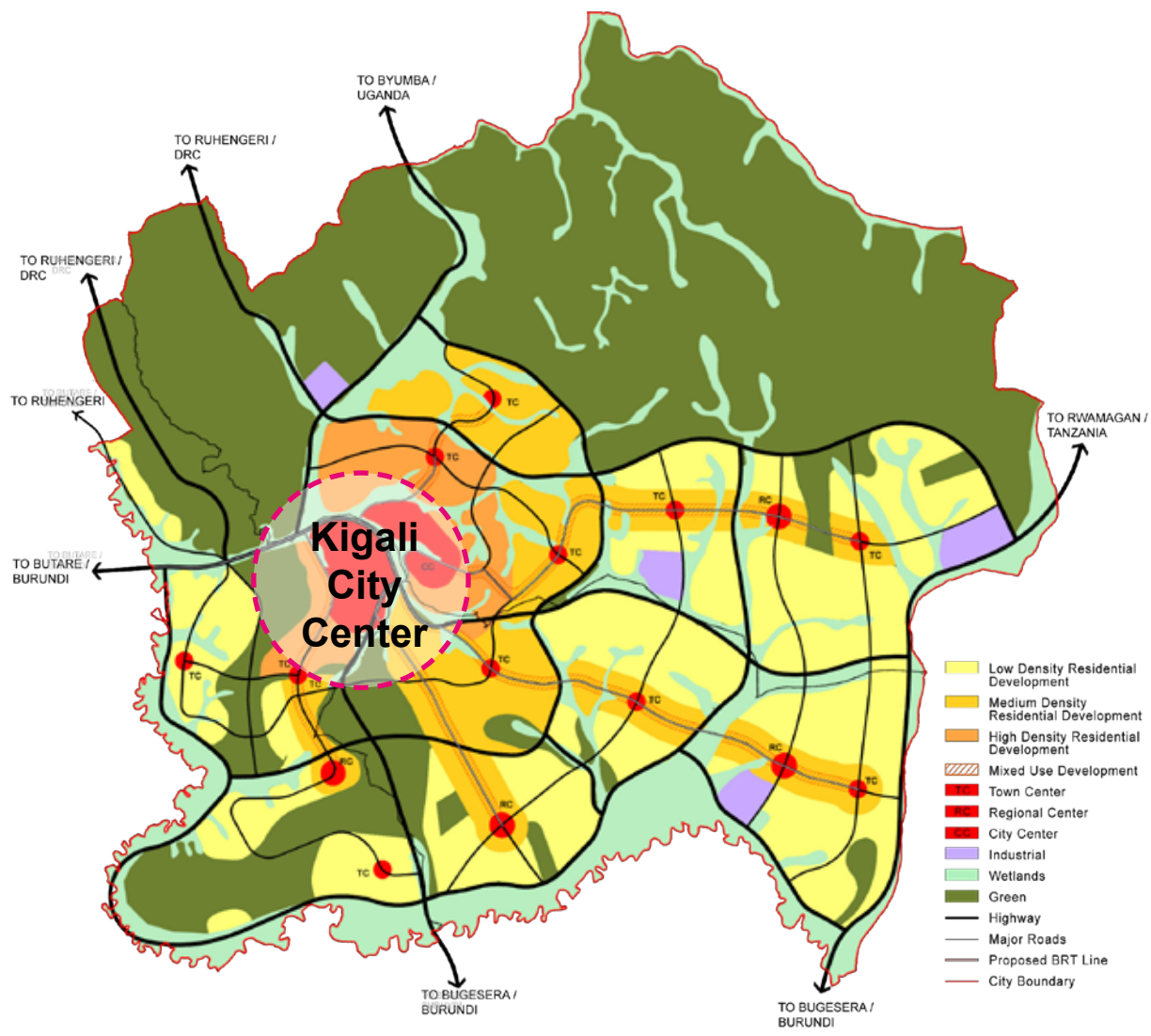
Plan.

- Building typologies, densities, minimum plot size and other key parameters have been adjusted to better fit with the existing situation, allowing for more privately initiated, small and medium scale development.
- Road alignments have been modified to follow the existing roads, as much as possible, in an attempt to limit the disruption to existing properties. Nevertheless, BRT routes, as established during the recently completed BRT feasibility study, are constrained by maximum gradients and their alignments required modification of the existing network in some areas.
- Incrementality is at the base of the implementation of the Kigali Master Plan and, hence, of the Nyarugenge CBD. Developers are now allowed to build in phases according to respective financial capacity and market demand.
- A substantial effort was made to map private and public open spaces and seamlessly integrate them into the structuring green

network of this updated design.

- Public and Private sector now share the responsibility to provide for public facilities and open public spaces. The implementation of each development should be conducted in a way that maximises the provision of public facilities in conjunction with private development. Incentive policies are suggested to promote this virtuous approach.
- Mixed use is encouraged and, in some cases, stipulated by Zoning Regulations to achieve a more vibrant ecosystem where residential and non-residential uses coexist in a harmonic distribution of functions to enhance the liveability of the neighbourhood.
- Inclusionary zoning, applied to the CBD, should ensure a healthy income and social mix, limiting the gentrification process currently ongoing and opening the CBD to all citizens regardless to their income.

0 INTRODUCTION



Positioning of Nyarugenge CBD in Kigali City

Nyarugenge CBD Urban Design Update

Kigali CBD is well-known in the region as one of the best organized, green and attractive places to establish new financial and economic activities. Nevertheless, its implementation is facing several challenges that can be summarized as follows:

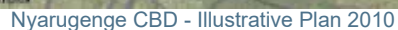
- Currently proposed implementation mechanisms mostly rely on Government's lead, demanding a substantial financial and management commitment by the City of Kigali and other Institutions.
- The completion of Phase 1 is demonstrating more challenges than expected due to limited private investment capacity and prescribed building typologies that don't always meet current market demand.
- The role of medium-sized private investors and developers is narrowed by the required large-scale developments and by their difficulties to source affordable finance.
- The development of mostly single-use commercial buildings centered on retail and office spaces, progressively eroded areas dedicated to other uses such as residential, recreational or public facilities, impoverishing the social mix and the attractiveness of the CBD during non-working hours.
- The competition coming from other parts of the City (Kacyiru and Kyimihurura for what concerns the high-end market and Kimironko for the medium-end) requiring rethinking of the development model for the CBD, towards a higher degree of use mix and with more attention to the affordability.

The Update exercise was focused on addressing these issues and required a substantial review of the 2008 design that drastically changed the

appearance of some parts of the Kigali CBD, from a high-rise financial district to a mixed-use, vibrant part of the city, with the objective to promote a more flexible, incremental and market-oriented development approach.

The specific objectives of this review are:

- Strengthening and rethinking the role and re-organizing the structure of the existing CBD in Nyarugenge;
- Provide key areas in CBD as mixed-use and entertainment precincts along main transit corridors to enhance the vibrancy and the attractiveness of the site.
- Develop urban design guidelines on key precincts to guide development of a vibrant and attractive environment
- Promote pedestrian and green links between the financial zone and the mixed-use area in Muhima, the renovated Nyabugogo bus terminal and the wetland park
- Incorporating all recent projects and aligning it with market trends.

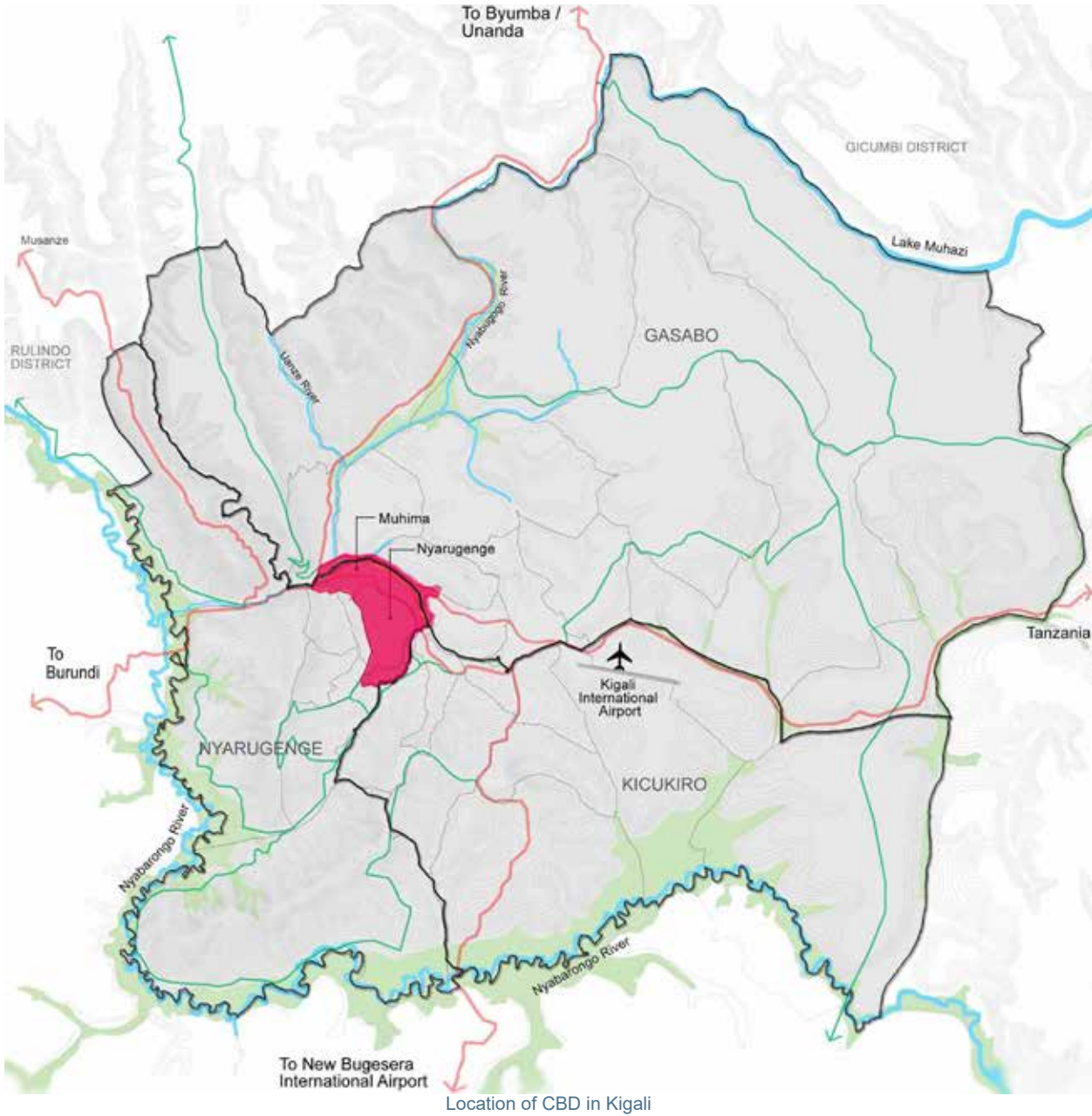


The planning process conducted for the review of the Kigali Master Plan included also the review of the Vision for the City. While the key statement, “The Centre of Urban Excellence”, remained, it was preceded by a new wording: “Kigali Yacu, Our Kigali” to underline the ownership of the plan by the Citizens and Stakeholder of Kigali and Rwanda. The same spirit has been applied to the CBD statement “Green Financial Hub and Vibrant Growth Centre of Kigali that, while remained unchanged, incorporated the inclusionary approach at the base of the overall Master Plan review.

1 ANALYSIS

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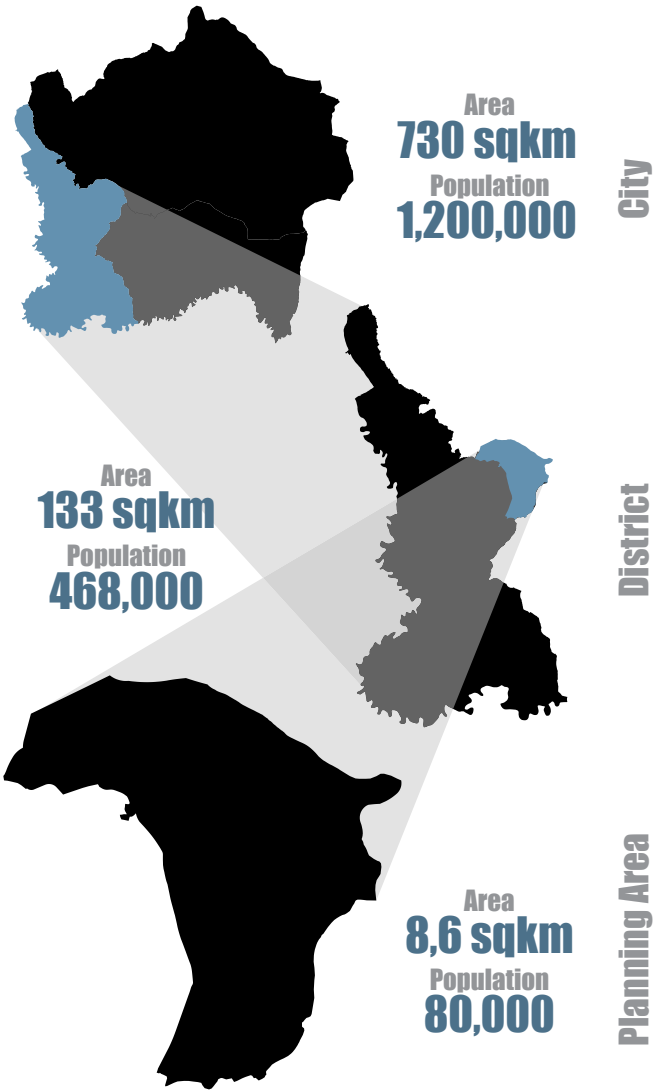
Location and Planning Area

The Kigali CBD is located in Nyarugenge District and, more specifically, it can be identified with Nyarugenge and Muhima Sectors.

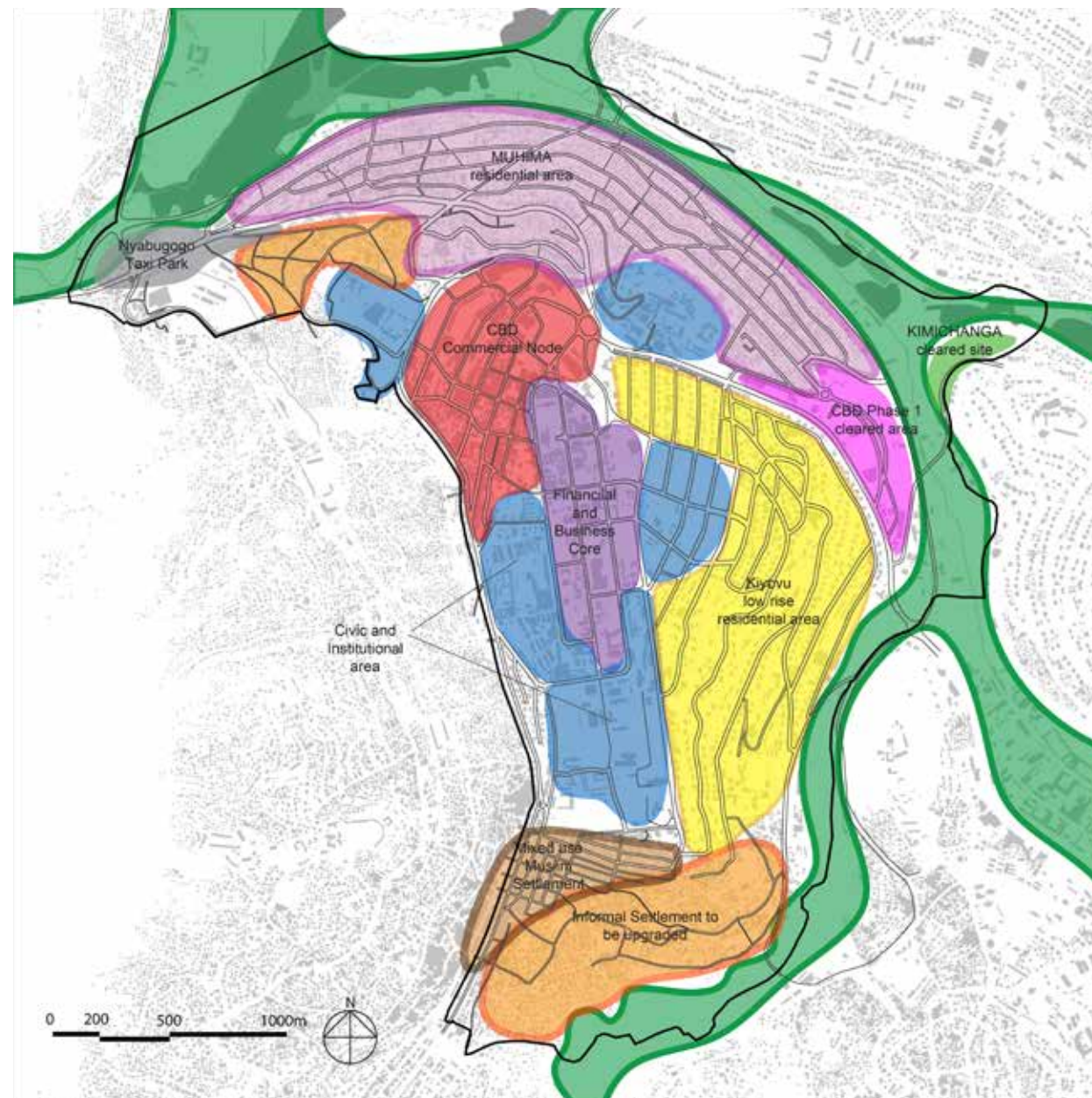
Nyarugenge Sector, especially due to its central location in the Country, has been its historical administrative center, making Kigali the preferred location to establish as the Capital of Rwanda, after independence in 1962.

Since then, this part of the city has been undergoing rapid and continued development, further encouraged by recent Master Plans which attributed to this area growing as an even larger relevance in the Country and Regional financial and administrative panorama.

The update of the Nyarugenge CBD covers an area of 8.6 sqkm. The planning area has been slightly modified to adapt to the changes that occurred in recent years and to include key areas that were considered critical for the completeness of the design.



Urban Planning Area **860 Ha**



Kigali CBD Areas Context Plan

Evolution of the CBD after 2008 Master Plan

Government and City's strategies have been focused in making Kigali CBD the "Green Financial Hub of East Africa". This ambitious plan was embraced and backed by the institutions and, to some extent, the private sector who started investing in the opportunities opened by the new land available for re-development in this prime location.



CBD - Phase 1

After 10 years from the 2008 Nyarugenge CBD Urban Design adoption, the skyline of the Nyarugenge CBD already shows impressive changes that transformed what was mostly medium-rise commercial and administrative center into an iconic financial district.



CBD

However, the implementation of the Nyarugenge CBD, if on one hand provided the city with an international class financial district-still in progress-, on the other hand faced some challenges, due to the nature of the developments (mostly commercial and office spaces) and their scale. Other parts of the CBD never really commenced the transformation, due to intrinsic local constraints, or lack of interest in redevelopment by the owners, who didn't see the large-scale development as a feasible opportunity, and did not want to embark in the land readjustment processes, being perceived as complex and potentially risky.

The lack of appropriate mix of uses and variety in opportunities for citizens of all income levels, transformed part of the CBD in a work-only area, depriving it from a vibrant atmosphere and confining it to a merely working environment.

The development of large scale high-end buildings pushed away small and micro enterprises, corporatizing substantially the area and further increasing the perception of an elitist space for white-collars. At the same time, the limited demand for such buildings due to the generally small size of Rwandan businesses, caused a high level of non-occupancy, as described in the Real Estate Market Study, included in the Master Plan Report.



Muhima Single Family Houses

Parallely, other parts of the CBD struggled to develop according to the plans. For example, in the case of **Muhima**, the existing small-scale, low-density residential fabric, resisted the requirements of the previous Plan, that was based on large plots and high-rise development.

The old commercial area, also known as **Quartier Commercial** and **Quartier Matheus**, constrained by its own dense fabric, struggled to become the “Historical Commercial District” as suggested in 2008. Whilst several developers attempted to implement renovation projects in respect of the heritage preservation prescriptions, the outcome was a hybrid between modernist buildings developed behind the 15 m preservation buffer and a non-refurbished shop front, further contributing to the untidy appearance of the area.



Quartier Matheus

Traffic congestion, lack of parking and conflict between vehicles, pedestrians and wholesaling activities, further contributed to delay the transformation of this potential vibrant asset in the city center.

Kimichanga area was selected as part of the CBD, due to its location near the CBD Phase 1, and with high potential to be integrated with the wetland park areas in the future. Previous Plan selected this area as suitable for a Cultural Center and, on this basis, the City proceeded with



Kimichanga Site

acquisition of the land. However, after 10 years, no realistic project has been presented to the City and the area remains vacant. A new opportunity arose in recent weeks and the Master Plan Update took it into consideration.

The **Wetland Front**, facing the busy KN 7 Road, also known as “Poids Lourds”, despite its unique



Wetland Front

potential is still lagging and no development have been initiated. Small-scale wholesale and commercial buildings, warehousing and single-family houses still represent the majority of uses along this high-potential strip.

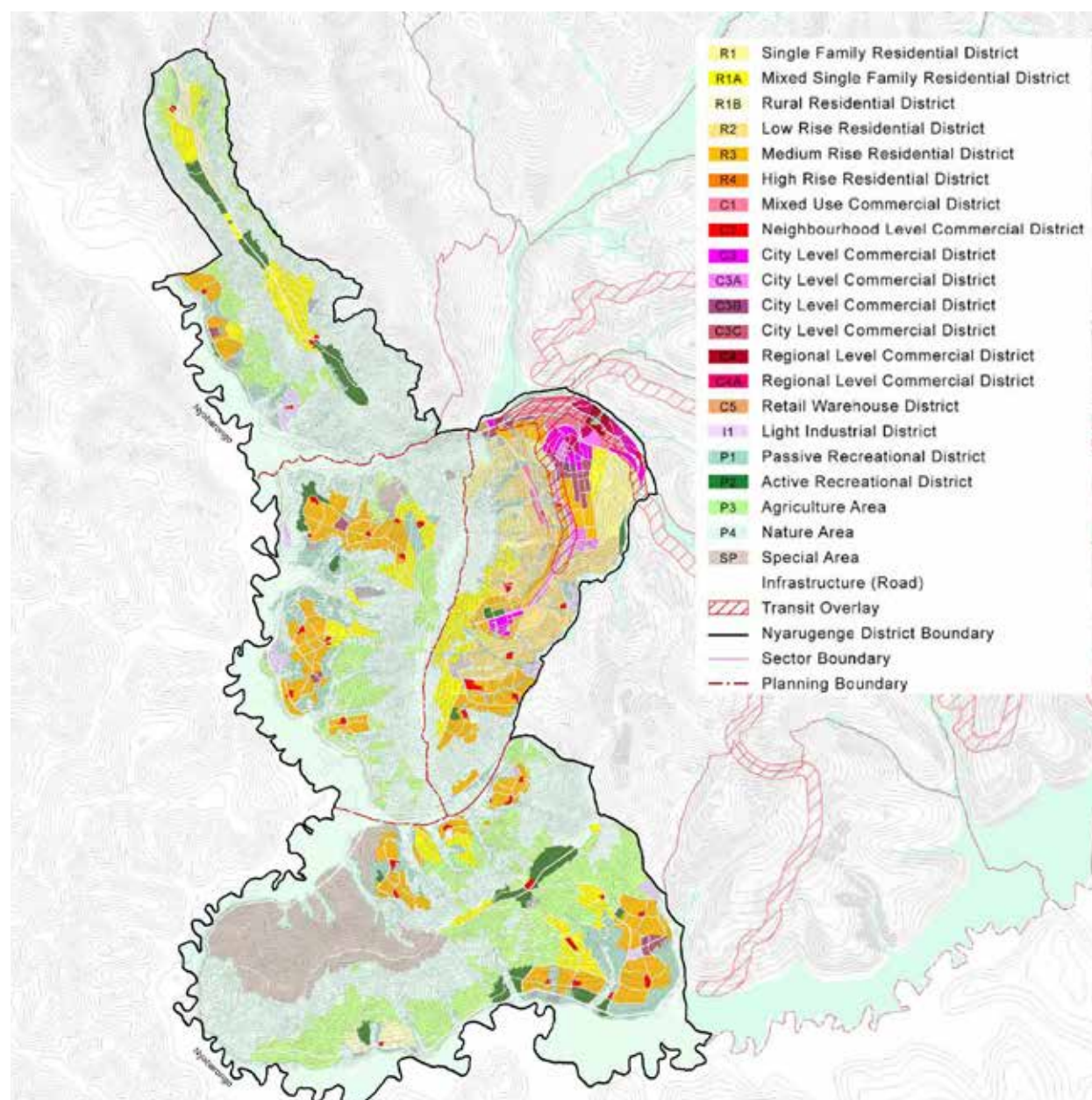
After the conclusion on 2013 Master Plan, the **Nyabugogo Bus Terminal** site was the target of another important project: the Nyabugogo Catchment study, which provided mode detailed design of the area, also considering the hydraulic aspects. In 2019 the Feasibility Study for the Kigali BRT network was also completed, making Nyabugogo one of the key public transport nodes in Kigali.



Nyabugogo Taxi Park

In general, the Planning Area has been affected by rapid development in some parts, while other areas have not seen relevant transformations in recent years. This could be attributed to several causes, briefly listed below:

- 2013 Master Plan and Urban design suggested the CBD to be implemented in phases. Some areas, are set to be implemented in following stages of development.
- Current market in Kigali is not big enough yet to take up the large amount of commercial and office space already provided, and therefore the pressure to develop new areas is limited.
- The typologies, building form and quantum are above current investors capacity, who prefer to wait before embarking in investments that may not be profitable.
- The fragmented structure of the land significantly complicates development of large scale complexes.



Nyarugenge CBD Zoning Plan - MP 2013

Analysis of Current Implementation Issues

2008 and subsequently 2013 Zoning Plan were drafted based on the ambitious objective of radically transforming current Muhima and Nyarugenge Sectors into a new world-class financial district, inspired by best practices and most iconic CBDs in the world. After 10 years, this ambitious objective needs adjustment, to better respond to market condition, local context and, more importantly, to Citizens' vision.

By analysing previous Zoning Plan, few key critical issues emerge to justify the challenges the implementation is facing:

- 2013 zoning regulations was generally prescribed for a relatively high FAR (Floor Area Ratio), large plot size and high maximum number of floors, focusing on a centralised implementation model (i.e. based on City of Kigali acquiring the land and then leasing it to private investors and developers, after conducting a tender process). This mechanism, implemented especially in CBD Phase 1, revealed to be extremely financially onerous for the City, attracted a limited number of investors (in most cases RSSB implemented the existing projects on the area) and has attracted a great deal of criticism from the Citizens, contributing towards damaging the image of the Master Plan, among the public.
- The lack of an incremental approach, allowing developers to implement their project in phases, considerably reduced the capacity for small local landowners, to cope with the sometimes-overwhelming size of the required financial exposure. In recent years, several joint ventures managed to implement their project by joining forces and creating the required critical mass. However, the limited

size of the private sector in Kigali, make this experience difficult to replicate extensively.

- The investment required, the dimension and the typologies of the buildings proposed, mostly attracted national and financial institutions, affecting the vibrancy of the CBD by establishing a series of commercial and office building, segregated from the public street, designed with limited attention to the mix of uses and the interaction with the public realm.
- The design of the road network revolutionised the exiting context, preventing de-facto small and medium private developments based on existing land structure. On-site Parking and landscape requirements also contributed to limiting the possibility to develop on some plot, due to the limited size, topography or existing urban fabric that could not accommodate such standards.

Proposed Strategies

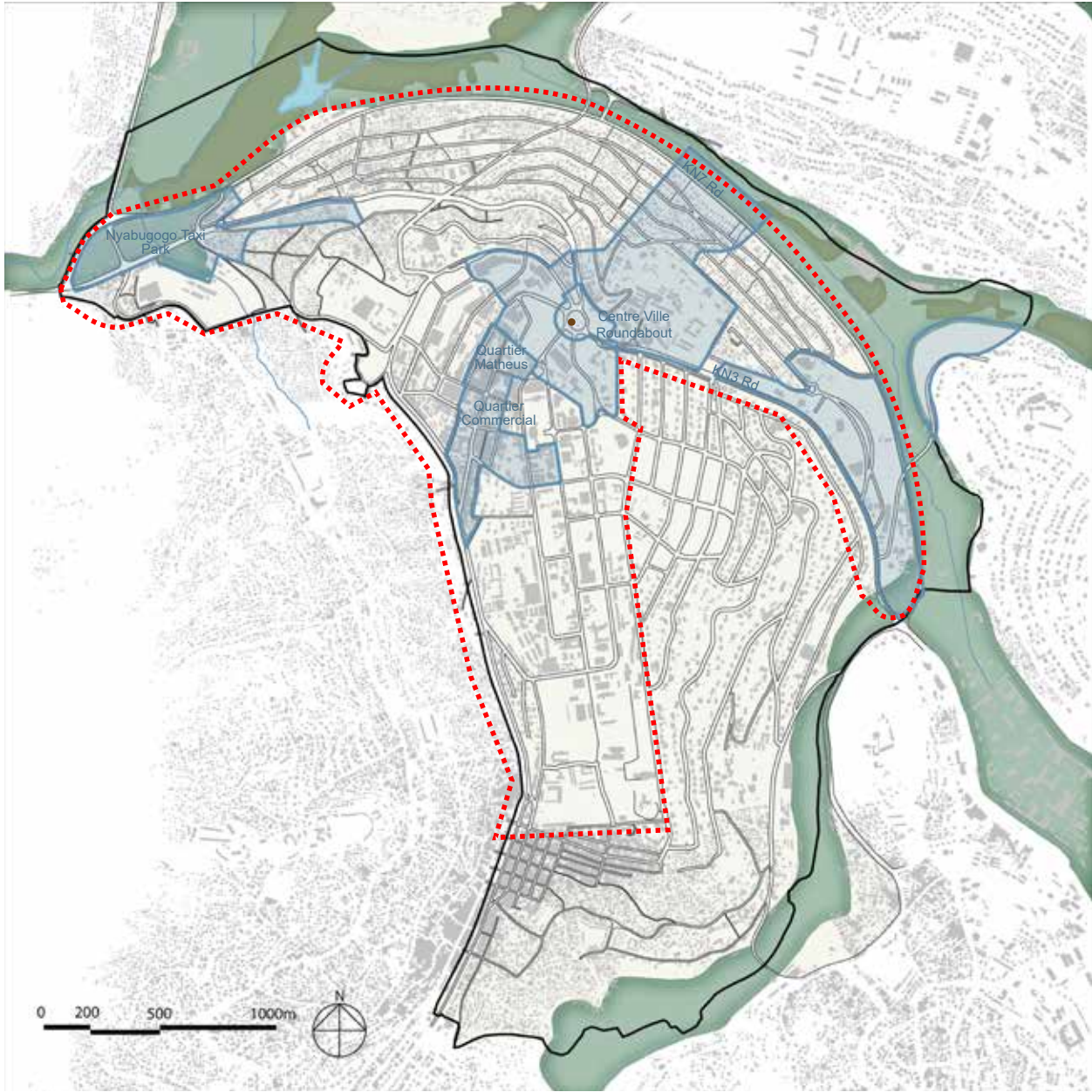
Almost 10 years down the implementation process of the CBD UD Plan, it highlighted several challenges but also provided good lessons to both the City and Stakeholder and, in turn, provided good and precise indications on what should have been changed in this update. Thanks to the inclusive and participatory approach followed in the Master Plan review, which made it possible to collect and elaborate several comments, highlight issues and suggest possible solutions. This approach, supported by the data-based knowledge provided by the House Hold Survey and the Real Estate Market Analysis, allowed the design team to formulate a new approach for the Master Plan and, consequently, for the Urban Design process:

1. Detailed analysis of the existing parcel structure, trying to minimise the need for drastic land readjustment in the built-up areas. Urban Design on areas such as Muhima is now focused on allowing development on smaller plots, suggesting but not imposing parcel amalgamation to implement smaller scale projects. Whilst land readjustment is still the key enabling strategy to provide for public spaces and facilities and green connectors, the majority of the site will now be developable by individual owners, in respect of Urban Design Guidelines.
2. The scale of the envisioned developments was also adjusted to fit into the context of Rwanda and its economic fabric. Large footprints and high-rise buildings were in most cases replaced by medium-rise, mixed-use buildings, supposed to encourage an incremental

densification of low-density settlements in prime areas of the CBD.

3. Pedestrian and non-motorised-transport design principles have been extensively applied to the entire CBD, transforming the street-scape and reversing the priorities between cars and pedestrians.
4. New green connectors, rich in functions that bring vibrancy to the area, are suggested to link the CBD to the wetland, creating synergies between this environmental asset and the urban development.
5. The commercial component is designed to accommodate both large scale commercial establishment and small retailers or market-vendors, providing a variety of opportunities for all population.
6. Historically relevant sites are valorised as part of an integrated network of public spaces and vibrant commercial precincts, where property values are expected to increase thanks to the uniqueness of this part of the City, justifying limitations in the redevelopment of these areas.
7. Art and cultural activities are blended with small retail and food&beverage establishment, aiming to create a 24h, vibrant and welcoming environment.

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Nyarugenge CBD - Existing Plan

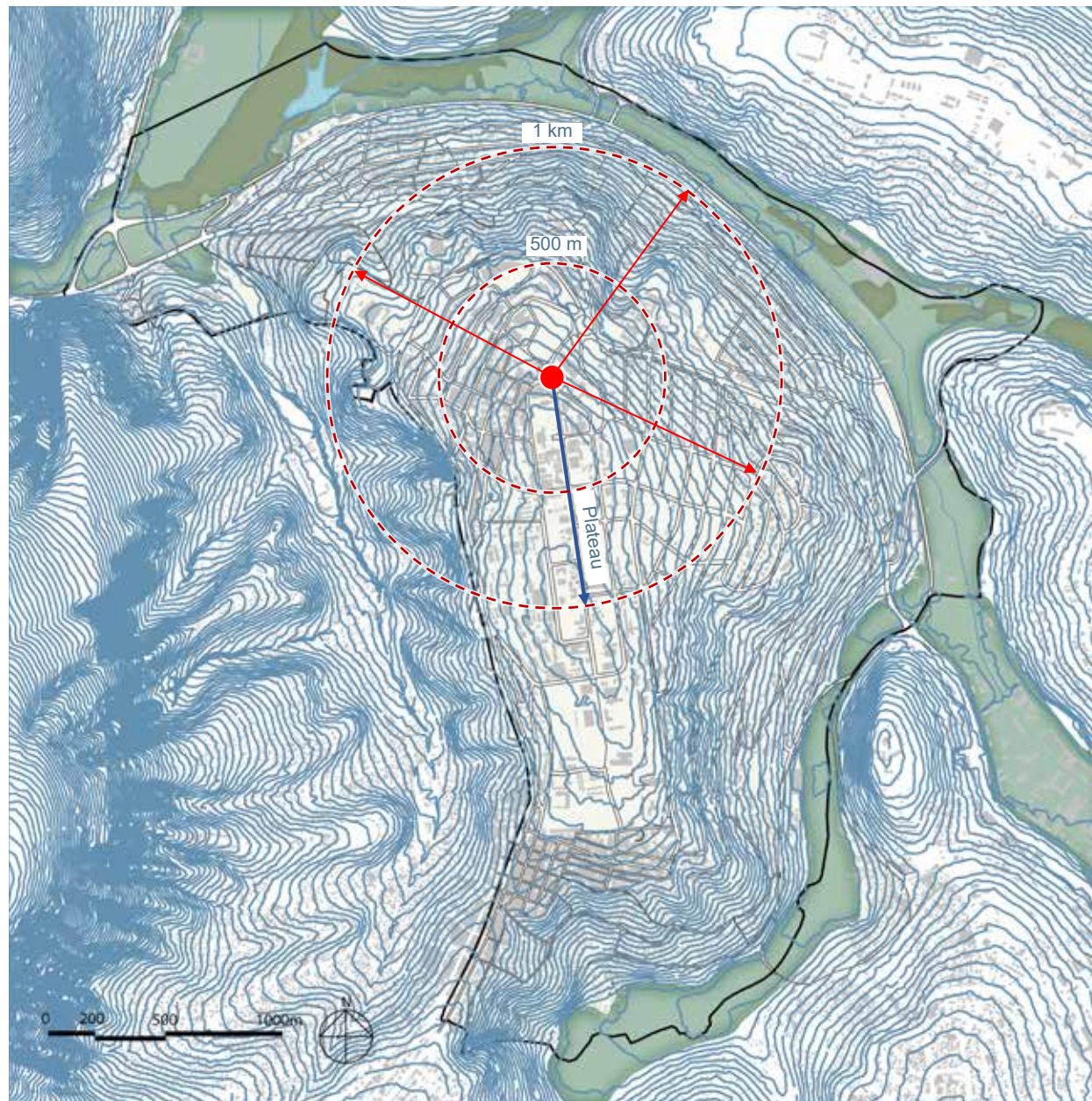
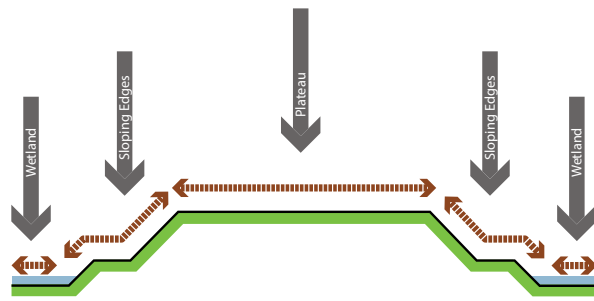
Physical Context

The main focus of this analysis is the area of Kigali Nyarugenge CBD defined by:

- City Center, including the Historical Commercial Node and the Financial Business core;
- Muhima Residential Area
- Wetland and Wetland Front area
- Urban Design Areas

The analysis is covering the following main topics:

- 1 Topography**
- 2 Open spaces**
- 3 Streetscape**
- 4 Wetland Front**
- 5 Connectivity**
- 6 Sign and legibility**
- 7 Utilities**
- 8 Buildings and Landmarks**
- 9 Recreational Activities and Vibrancy**



CBD - Topography Map

Topography

In Kigali the topography is both a blessing and a challenge. It gives the city a beautiful setting and creates magnificent views. But the topography is a challenge for pedestrians and bicyclists.

Everything in the CBD is within reasonable reach for pedestrians, but the steep topography on east-west and north-south connections needs to be considered in the design strategies.



Topography - Pedestrian connections

The topography represents a challenge also for developments and road infrastructure. In most of the cases site benching and levelling are adopted to increase plot densities and provide larger dwellings to optimize the economical



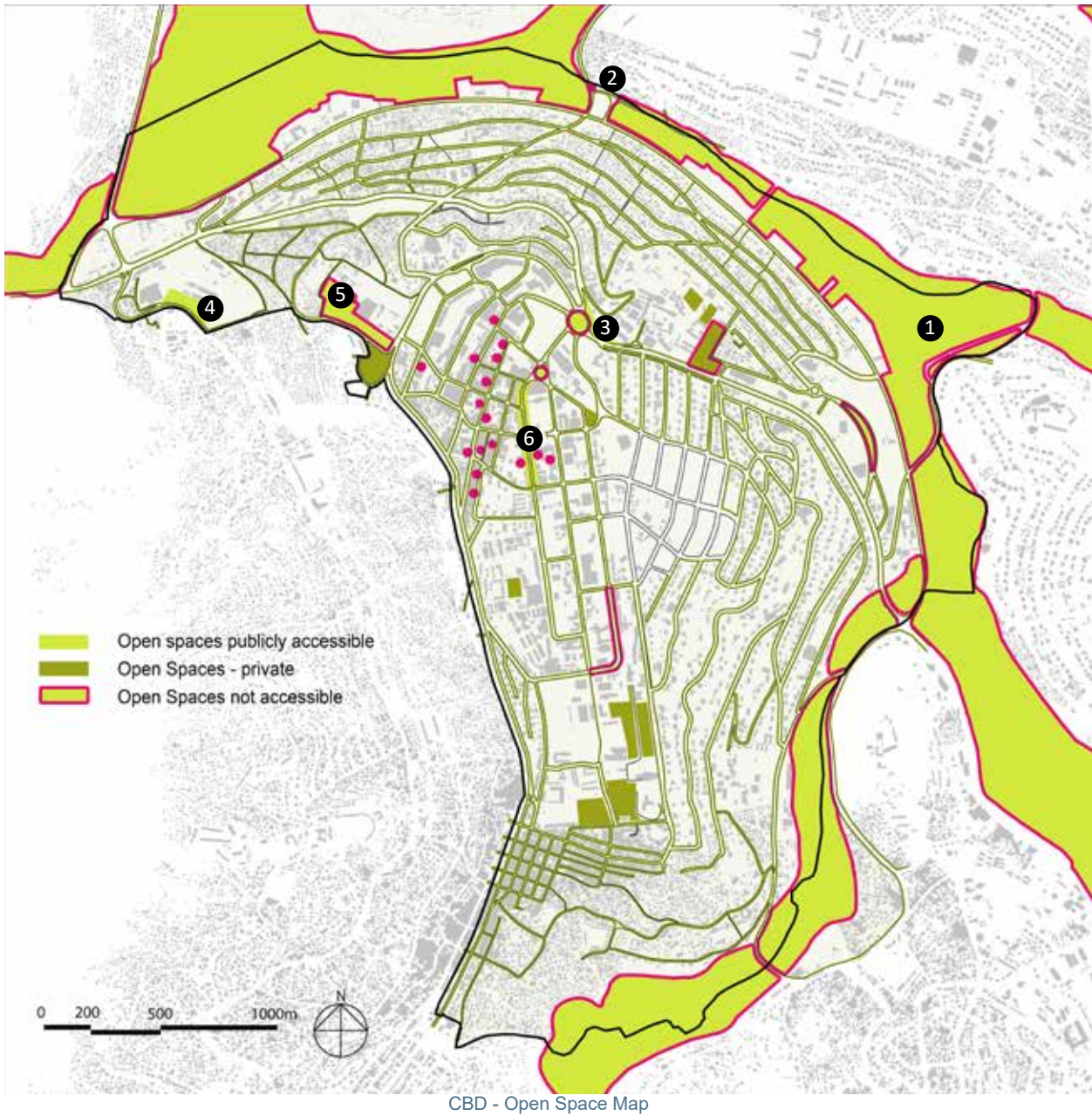
Topography - Excavation at construction site in CBD Phase 1



Topography - Road Infrastructure

investment, and new plot site grades are created using retaining walls on property boundaries to create plot level. However, expansive scale of urban benching generates negative biophysical and spatial consequences, and poor designed road infrastructures generate new barriers that separate portion of the city.

- A** East-West and North-South connections are a challenge
- B** Landform conservation strategies to avoid uncontrolled site benching and levelling
- C** Integrated design to avoid barriers



Open Spaces

Nyarugenge CBD is characterized by several open spaces:

- The Wetland ❶ is the most important green open space of the Nyarugenge CBD. It is part of the characteristic Kigali Landscape and offers scenic views of the hilly skyline of Kigali. There are few informal paths crossing the wetland and few areas to buy some flowers, or take a nice picture, like Kinamba City Garden ❷.
- There are green spots, mostly along the sidewalks, (green belt along Centre Ville Roundabout ❸, along KN20 Ave ❹ or the green area around Kigali Prison 1930 ❺) that have potential to become urban parks.
- Centre Ville Roundabout ❸ (also known as Tigo Roundabout) is one of the most famous roundabouts of Kigali. It is characterized by a well-maintained garden with a fountain in the middle. Usually roundabouts in Kigali are quite monumental places, and favourite locations for wedding pictures.
- Streets in Nyarugenge CBD, are lively, especially in Nyabugogo Bus Terminal area and Quartier Commercial, streets and sidewalks are some of the most vibrant and important public space for Kigali.
- Few gardens in private properties, some publicly accessible, are scattered within the CBD City Center.
- KN4 Ave ❸ has been recently closed to the traffic and aims to become the first pedestrian street in Kigali.

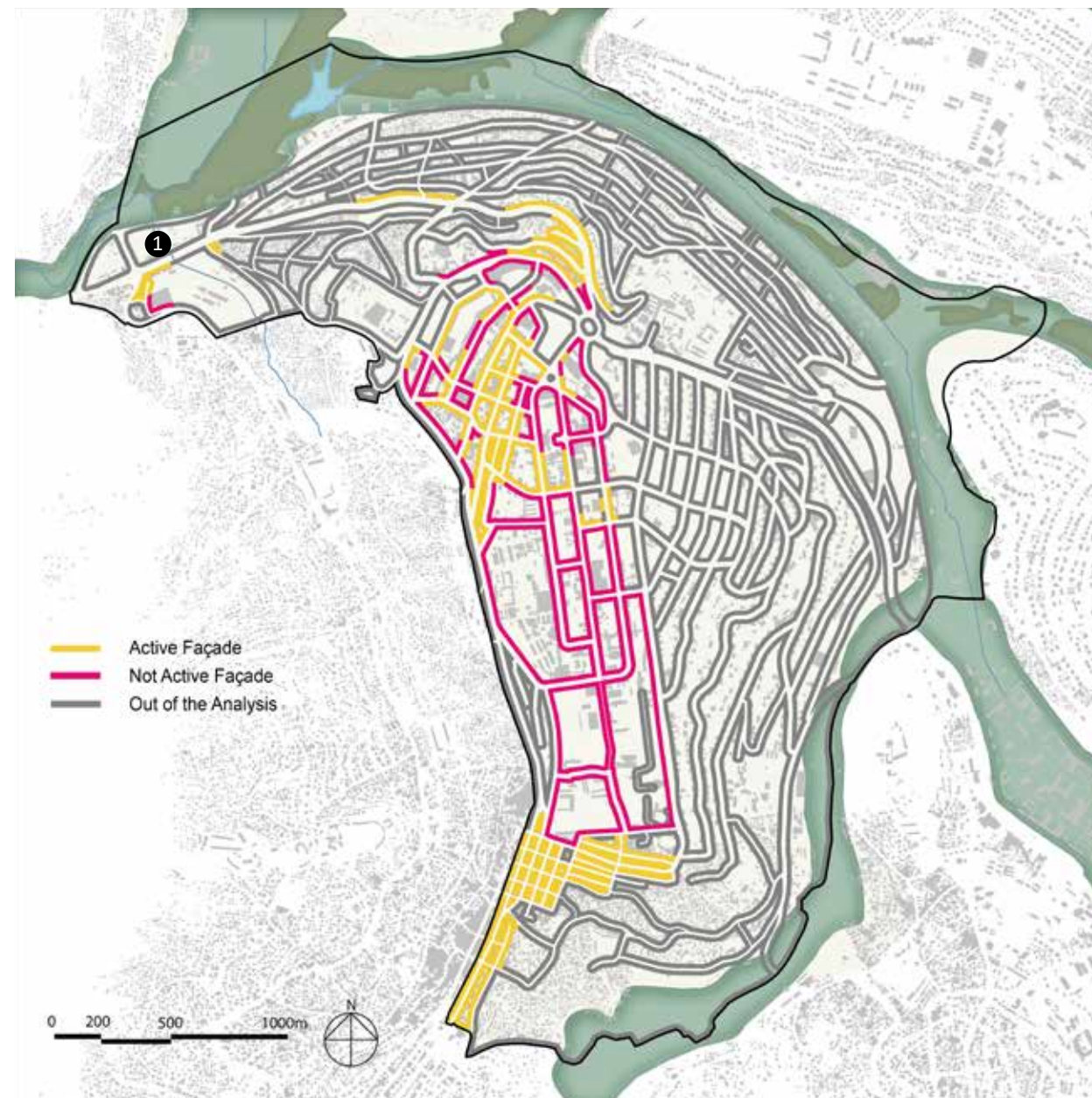
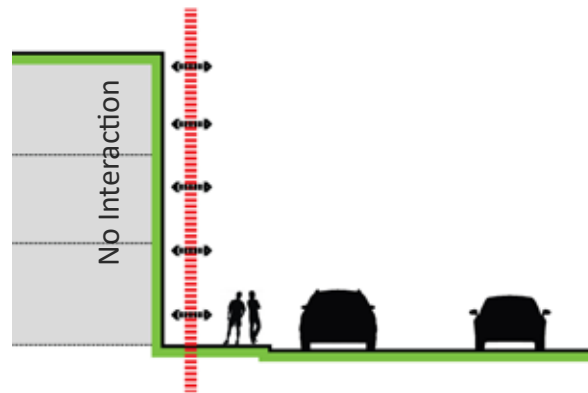
- The City Center is characterized by a system of alley ways, courtyards and undiscovered spots that represents an unexploited potential to become an evident part of CBD identity. These spaces represent also a valuable resource for expanding a culture of café and social eating in a more private space than the street, respecting a traditional habit specific to the Rwanda culture.

Existing open spaces are distributed throughout much of Nyarugenge CBD, however few public spaces manage to invite people to spend time for informal recreational purposes and leisure. In general:

- A public space network connecting spaces and the main pedestrian routes has not yet developed.
- There is no hierarchy of public spaces.
- Gardens and wetland are not easily accessible.
- Most of the public spaces seem underutilized.
- Very few public seating and no engaging activities are provided within public spaces.



Centre Ville Roundabout



CBD Streetscape - Facade Analysis

Streetscape

Street frontages

Active frontages are mostly concentrated along the historical commercial streets and around the area of Nyabugogo Taxi Park ①.

In other cases, long stretches of blank façades (commercial malls) or plot fence and walls create negative effects on public realm, unfavourable conditions for social interaction, vivacity, sense of belonging and are detrimental to the aesthetic values of a place.



Fence along the sidewalk

Sidewalk

In general, CBD's accessible and fairly wide sidewalks form a good base for strengthening public life in the streetscape. However the condition of some streets is highly unfavorable for universal accessibility. The continuity of the walkway is often interrupted by impervious surfaces, changes of level and unsolved connections between the street and the building access. To create a public space it is fundamental to firstly guarantee accessibility to all people and then resolve other kinds of problems.

In different situations, parking stalls and street



Parking stalls create barrier for pedestrian movement

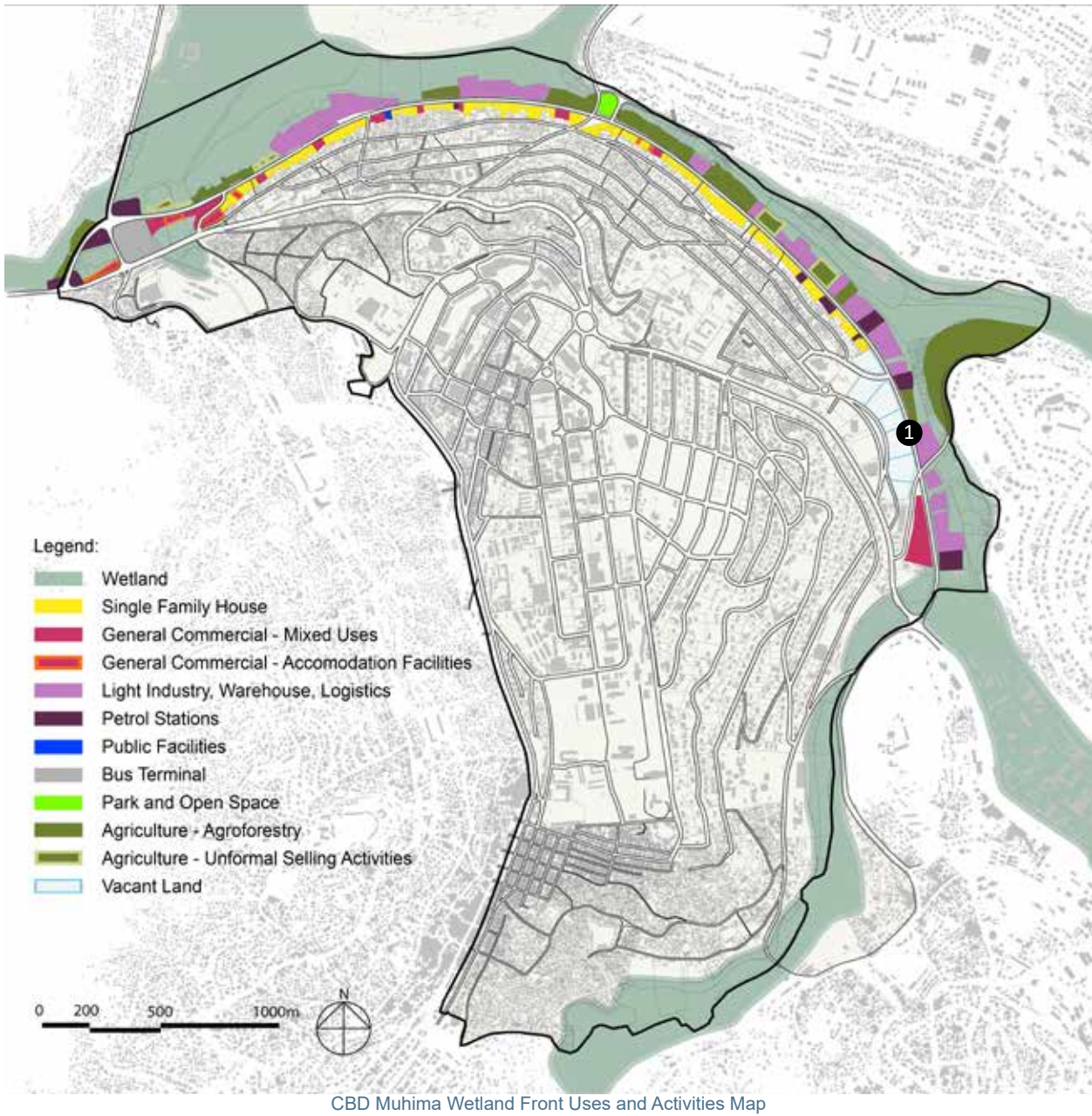
furniture such as, trees, lighting poles, etc. are creating obstacles for pedestrian movements.

Seating and street furniture's

There are very few public seating in the CBD. Due to the steep topography in Kigali, it is crucial that opportunities to sit are provided in the streetscapes. This will help to encourage people to walk, enjoy, and spend time in the City center.

Seating should be designed and organised to provide a variety of viewpoints (i.e. towards busy roads, calm areas, greenery, landmarks, and vistas) and for accommodating different activities (reading, relaxing, conversing, etc.) and seating preferences, accordingly to age and gender. Seating should be also distributed in relation with distance, providing rest stops, along major walking tracks and shading opportunities.

The Rwanda landscape is characterised by a luxuriant flora. Even in the City, trees, shrubs and flowers flourish and represent a source of beauty and relaxation. However trees and other form of shelters need to be incorporated into a streetscape to increase their benefits.



CBD Muhima Wetland Front Uses and Activities Map

Wetland Front

Muhima has a beautiful setting at the wetland's edge, however the City hardly interact with its wetland front and with the wetland in general. The wetland front is completely disconnected from the CBD, except for few informal pedestrian connections, partly due to the slope challenge.

Views and vistas to the wetland are often interrupted by structures at the edge of KN7 Rd ❶, hosting garages and small warehouses, and access routes to the wetland are few and uninviting.



Warehouse and commercial activities along the wetland front

The roadside along the wetland has potential to become a wetland promenade but currently has heavy traffic volumes and high noise levels.



Traffic along the wetland front - KN 7 Rd

KN7 Rd ❶ has no inviting places to sit and currently CBD is not taking advantage of its natural setting.

Wetland front has potentiality to become a safe and vibrant outdoor destination for residents and visitors, to attract new business and promote tourism.



KN 7 Rd - view

- A** The KN7 Rd has potential to become an active and attractive Wetland Front
- B** There are no direct connections between CBD and Wetland front
- C** Activities along the wetland front are not inviting

Connectivity

Rwanda has made significant achievements in developing transport infrastructure in recent years. The existing road network in the CBD forms the basis for a high-quality City network. However, poor junction design often leads to traffic jams.

Currently, roads are mostly designed for cars and motorists. Moto taxis are commuters' preferred choice of transport for short-medium distances, besides Bus Transport.

Recently some measures have been taken by providing red and white strips along pedestrian crossings on Kigali's major roads, to emphasize respect for pedestrian pathways, and general approach to prevent pedestrian road accidents.

The Continuity of walkways is often interrupted by impervious surfaces, changes of level and unsolved connections between the street and the building access.

Bus Transport facilities need to be improved in terms of accessibility, and the current Nyabugogo Bus Terminal is not yet well connected to the CBD.

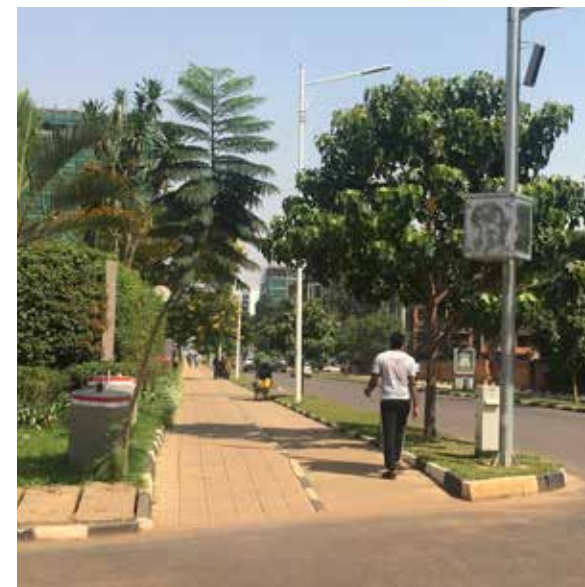
A Pedestrian network is now more related to the road network rather than a public space network connecting attractive destinations and places.

Rwandan streets have recently started to be designed with cycling lanes, but there is no bicycle network plan yet.

Government of Rwanda has already put in place several actions and activities to reinforce public transport (Bus Rapid Transit Plan) and NMT facilities.



Typical CBD Street



Bicycle lane in the City Center



Nyabugogo Bus Terminal



Pedestrian crossing in Kigali



Sidewalk - impervious surfaces

- A** Missing connections between destinations & places
- B** Poor connections to Nyabugogo Bus Terminal
- C** Missing public space network

Sign and Legibility

Legibility should be emphasized to orient people especially within Transit Node like Nyabugogo Bus Terminal, for both daily commuters and visitors.

Following, are some of the important topics that need to be addressed:

- Wayfinding – Understand how and which kind of transport is required to arrive to the final destination.
- A welcome to Kigali - When arriving in Kigali, people and visitor should feel welcomed and instinctively understand what routes will lead to the center of the City.
- Accessibility - Universal Accessibility should be guaranteed and friendly environment for all.
- Waiting and passing through - A transit area should offer convenient outdoor waiting facilities, outdoor refreshment areas or sitting on public bench, children friendly areas, etc.

Navigation from place to place is a fundamental human activity and an integral part of everyday life. Signage for wayfinding and information of pedestrians and cyclists are essential for creating a friendly city.

People use their knowledge and previous experiences to find their way in the built environment.

Signage has the function to inform people of the surroundings, therefore it is important it is comprehensive, clear and with a consistent visual communication system, concise and marking landmarks, and other relevant elements, to make that area more visible, and comprehensible in the human memory.



Nyabugogo Bus Terminal

- A Not easy to orient
- B Poor signage and information
- C No info point for citizen and visitors
No signage in Kinyarwanda

Utilities

Utilities provision is one of the key elements of a street. Aesthetic appearance of the public realm could not be effectively achieved if not supported by a streamlined network of underground infrastructure.

Lighting
Main roads in Kigali are well illuminated and lighting system is focused on carriage use for motorist safety.

Water Reticulation
There is a significant water reticulation network, with no centralized pipeline system.

Sewer
There is currently no existing waterborne gravity sewer reticulation within the City. Sewer from each site drains to their individual Water Treatment Plant (WTP).

Information and communication Technology (ICT) services
The layout of ICT infrastructure is arranged in a disorganized manner and in some instances, is placed in open stormwater channels.

Electrical Network
Most of the CBD medium voltage lines are underground, while most of the electrical lines in Muhima are still overhead. Existing underground electrical services are not always easily accessible as they do not always have dedicated channel.

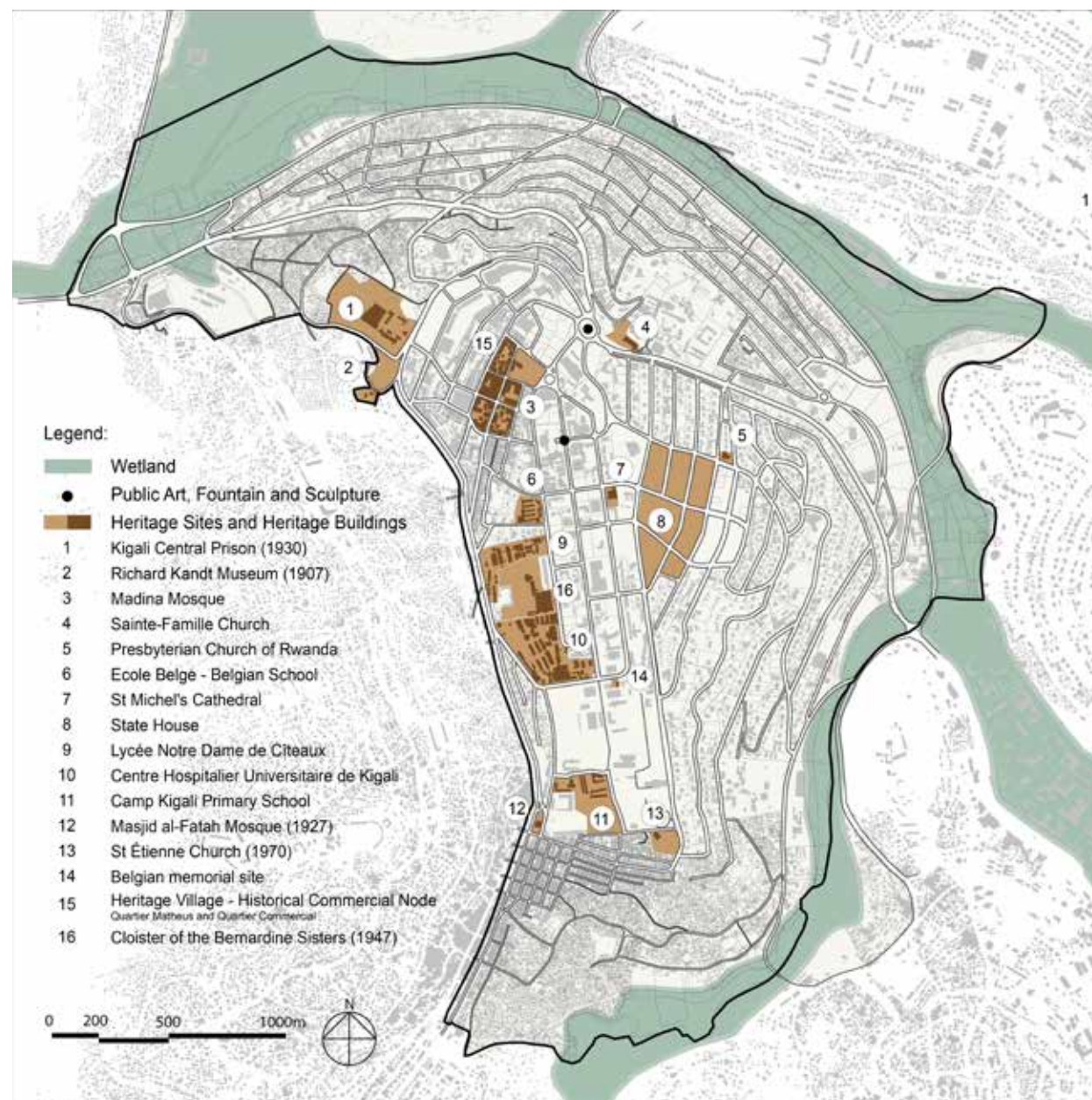
Storm Water
Storm water is conveyed via existing road surface, open channels and channels with concrete cover slabs. The stormwater is discharged from the site extents into adjacent manholes and channels that form the city's existing stormwater network.



Existing road infratstructure - storm water channel



Existing road infrastructure - storm water channel



Nyarugenge CBD - Art Forms, Heritage Sites and Buildings Plan (Heritage Sites Source: City of Kigali)

Buildings and Landmarks

Heritage and cultural sites

The majority of the Kigali heritage stock is concentrated in the CBD, in Nyarugenge Sector. Yet, there is no clear public space network linking all the Heritage sites, and in some cases Historical



St. Famille - Underutilized Front Yard

Buildings are not inviting, and valorized, due to the poor quality of adjacent open spaces.

Art forms

There are few public art works, sculptures or fountains. Rwanda visual heritage is rich and articulated and can be an inspiring source for patterns, forms and colour schemes, as well as the traditional materials could provide an opportunity to develop distinguished street furniture from locally available materials.

Buildings and landmarks

Along the CBD Streets there is a variety of building styles, materials and scales. People find themselves in different built environments, which provide diversity and vivacity to their urban experience.

The central plateau, which occupies the highest part of the CBD, houses institutional developments like the City of Kigali, Ministry of Finance and Economic Planning, and several financial Institutions and important hotels.



CBD Plateau - KN4 Ave

The Kigali City Tower, inaugurated in 2011, is still considered a landmark of the CBD.

Other new commercial malls have been established. They create a very different environment at street level whether the frontage is active or not. However, even the commercial complexes may offer new opportunities for new kind of retailing experiences. At ground floor level, openings can be created and terraces with views better utilised for international café and restaurants.

The City Center is also the historical commercial core of Kigali, a vibrant area characterized by small scaled commercial buildings with active facades.



CBD offers many opportunities to appreciate the urban landscape of the city as well as the gentle curves of Mount Kigali. Protecting those views, creating the conditions for appreciating them and addressing the importance of landmarks and City gates are key elements for the development of the CBD Urban Design.

- A** Marking landmarks and other relevant elements to make them more visible and comprehensible in the human memory
- B** Heritage and conservation area need to be valorised
- C** Commercial Complex versus Active Facade

Recreational Activities & Vibrancy

People flux in CBD tends to be restricted from Mondays to Saturdays and from 8 am to 7pm, mainly because of the nature of activities taking place in the buildings. Outside office hours, particularly at night and on Sundays, the CBD streets become much less attractive and comfortable.

The limited variety of activities along the CBD streets as well as the presence of non-active frontages, reduce enormously the potentials for a fulfilling and lively urban experience.

The majority of the open spaces lack any kind of landscaping and urban furniture, are poorly equipped in terms of shading, walking opportunities and character.

Nyarugenge CBD, with few recreational activities taking place mostly around Nyabugogo, has a hard time competing with the active and lively neighbourhoods like Nyamirambo.

Neighbourhoods play an important role in characterizing the identity of Kigali as a city. Strengthening CBD districts with a neighbourhood-like character of their own would explore this potential even further.

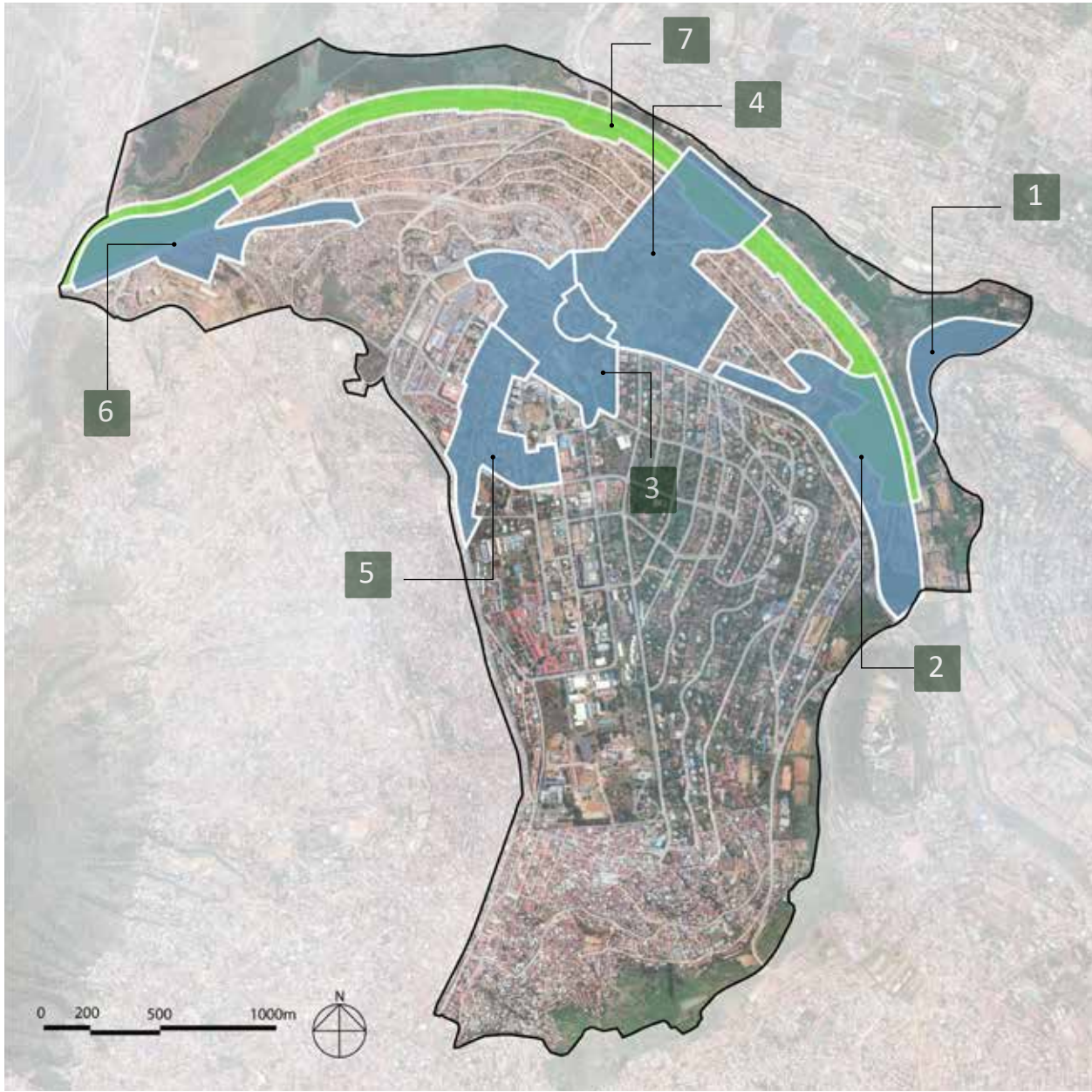
Even cultural activities are limited, except for the Kigali Conference and Exhibition Village, within the University of Rwanda compound, arts and cultural events are mostly taking place in hotels, which are not really accessible to the majority of the population.

The outdoor city culture is generally underdeveloped in Kigali and the city needs more instantly appealing and inviting public spaces. Lack of public life is a self-perpetuating process.

Higher levels of public life tend to generate more life while lack of public life has the opposite effect.

- A** Evening recreational activities are few and concentrated in specific areas
- B** Most people go to CBD with the main purpose of work
- C** Public spaces for celebration or gathering are very limited and not easily accessible

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Nyarugenge CBD - Urban Design Areas as they are today

The Urban Design Areas as they are today

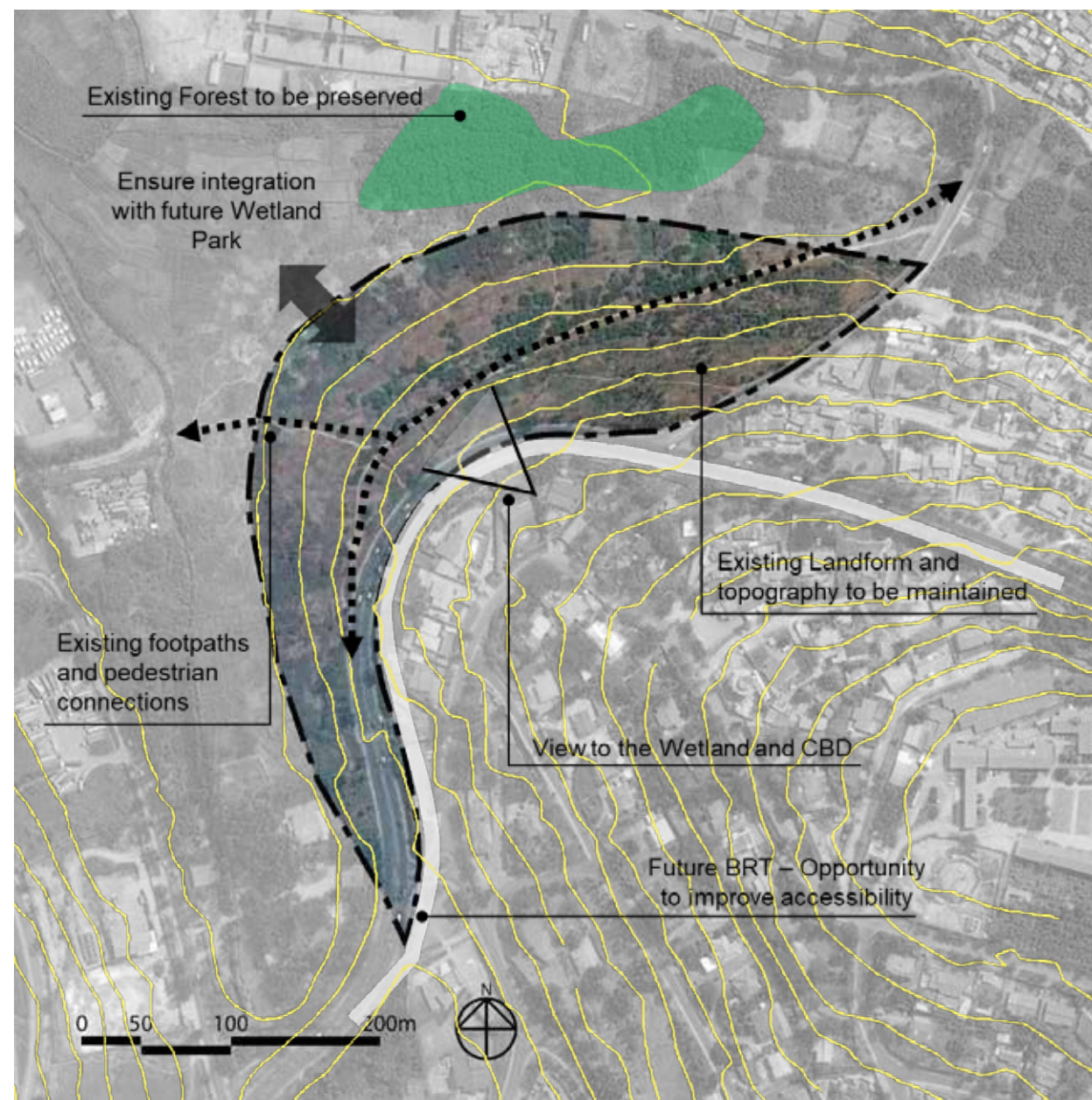
The Urban design areas proposed in the 2013 Master Plan have been updated and, in some cases, redefined with new boundary.

The Urban Design Areas are listed below:

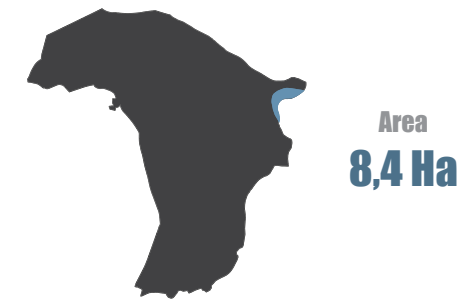
- 1 Kimicanga Garden**
- 2 CBD Office Precinct**
- 3 KN1 Station Plaza**
- 4 CBD Transect**
- 5 Historical Commercial Node & Conservation Area**
- 6 Nyabugogo Transport Hub**
- 7 Wetland Front**

- 1. Kimicanga Garden (Previous Kimicanga – MP 2013) - Kimicanga boundary is limited to the cleared area facing the Wetland. The area is now about 8.4 Ha.
- 2. CBD Office Precinct (Previous CBD Phase 1 – MP 2013) - The boundary of the CBD phase 1, now renamed as CBD Office Precinct, has not changed.
- 3. KN1 Station Plaza (Previous Centre Ville Roundabout Redevelopment – MP 2013) - The Centre Ville Roundabout has been renamed as 'KN1 Station Plaza'. The Boundary has been changed as illustrated in the map of Urban Design Areas.
- 4. CBD Transect (Previous CBD Core – MP 2013) - This is including the area previously named 'CBD Core' and portion of the Centre Ville Roundabout area. It is now covering a total area of around 46 Ha.
- 5. Historical Commercial Node and Conservation Area - The Historical Commercial Node is a new Urban Design Area within the City Center. It includes the Conservation Area already proposed in the 2013 Master Plan (previously named 'Heritage Village').
- 6. Nyabugogo Transport Hub - Nyabugogo Transport Hub boundary has been slightly changed as illustrated in the map of Urban Design Areas.
- 7. Wetland Front - The wetland front is a new Urban Design area, covering an area of 5 km along the existing KN7 Rd, in front of the Wetland.

KIMICANGA GARDEN



Kimicanga Garden - Analysis and proposed strategies



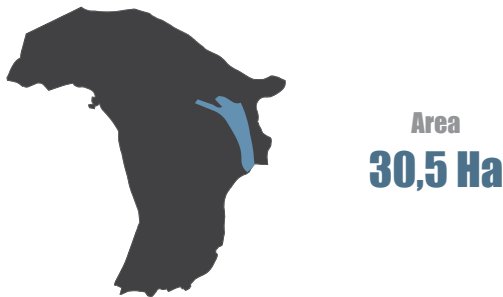
Kimicanga Garden - Current situation - view

EXISTING SITUATION

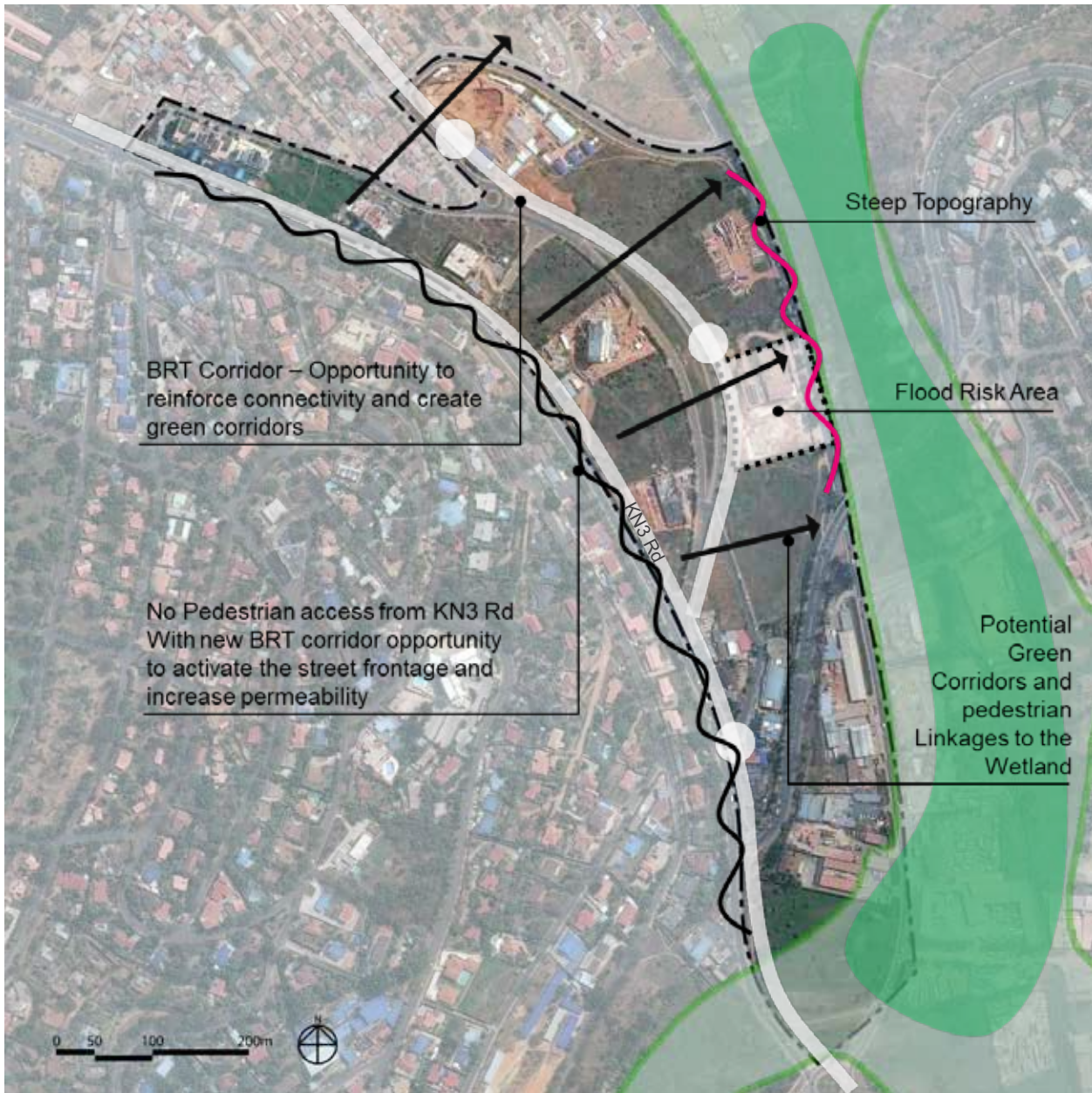
- The land has been already acquired by the Government.
- The site has been selected to become a recreational area.

PROPOSED STRATEGIES

- Allow public access to the wetland respecting existing pathways.
- Promote and strengthen the scenic landmark designation of Kimicanga Garden requiring high quality landscaping.
- Establish a new cultural and vibrant recreational area for CBD.
- Introduce activities and uses to make the garden safe, active, and multifunctional in all seasons, and at all times.
- Promote the area as new tourist destination in Kigali.



CBD Office Precinct



CBD Office Precinct - Analysis and proposed strategies



CBD Office Precinct - Current situation - view

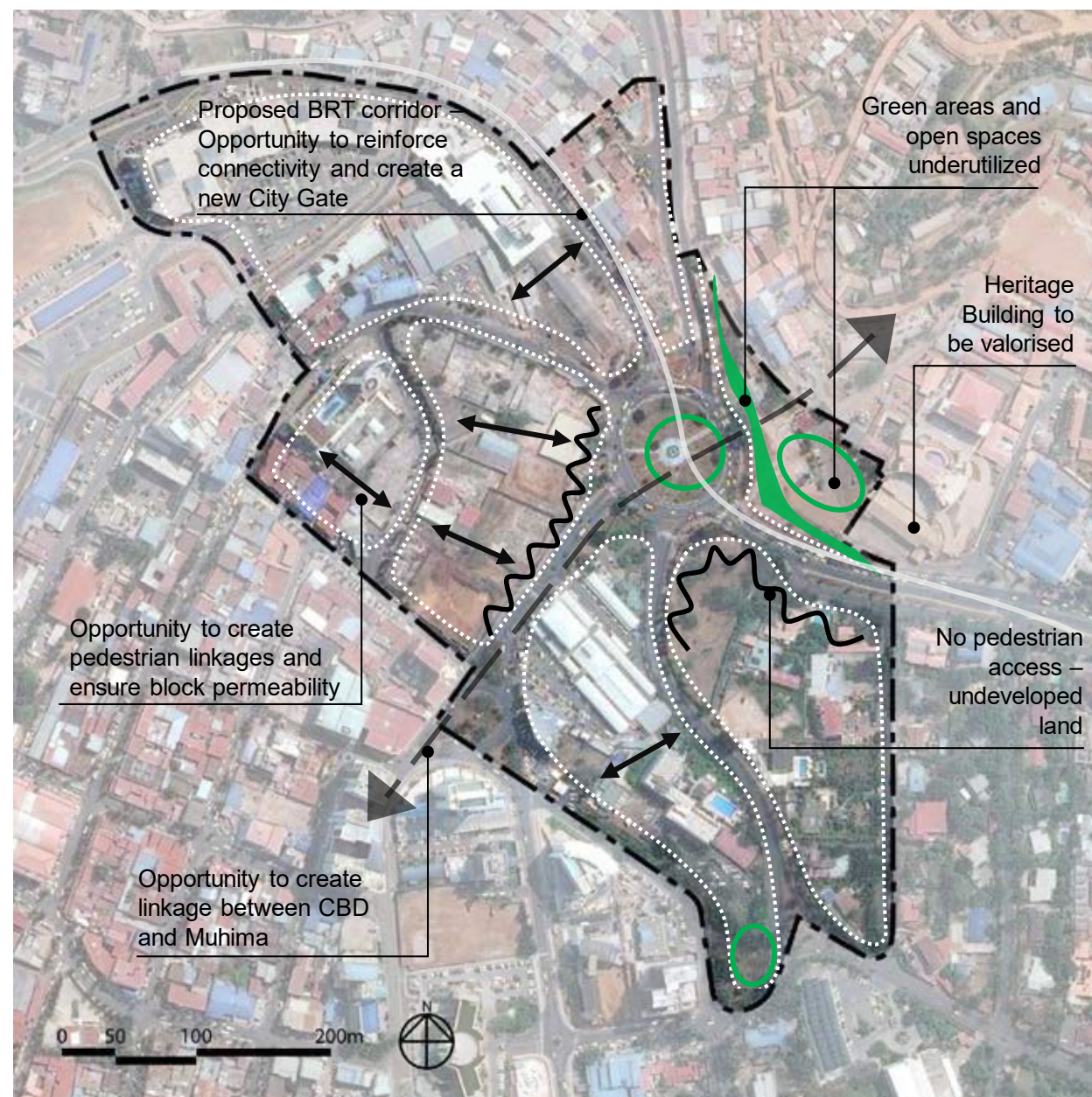
EXISTING ISSUES

- There is no pedestrian access from KN3 Road.
- Steep topography and flood risk represent a challenge for buildings and infrastructures development.
- Urban design is often implemented on plot basis.
- The lack of integrated implementation prevents creation of open spaces and active ground floors uses.

PROPOSED STRATEGIES

- Planting and green infrastructure represent an opportunity to prevent flood risk.
- Establish a measure of control over steep slope building practices.
- Reassess implementation strategies and phasing.
- Apply stricter design control with integrated approach.

KN1 Station Plaza



KN1 Station Plaza - Analysis and proposed strategies



KN1 Station Plaza - Current situation - Aerial view

EXISTING ISSUES

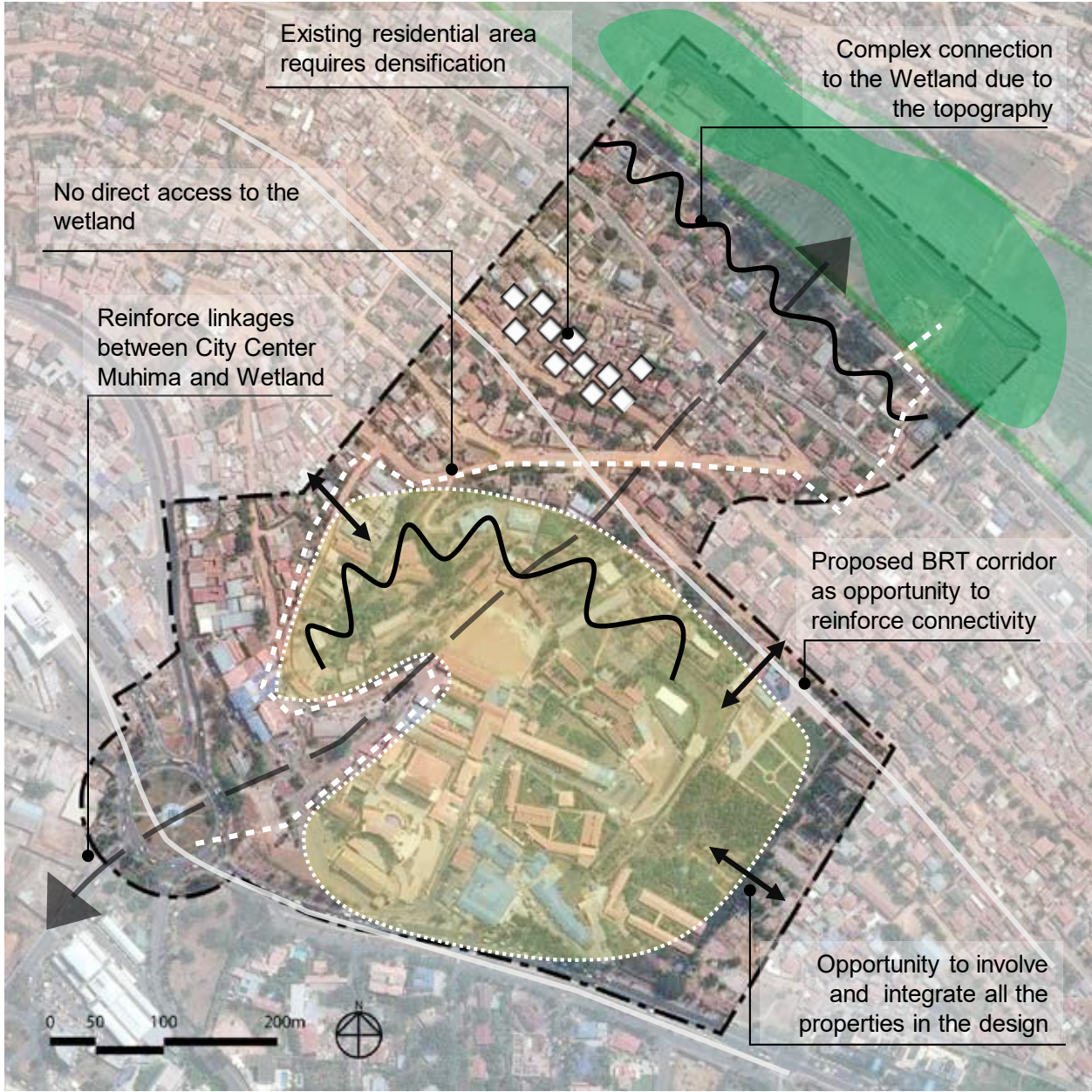
- Future developments facing the Centre Ville Roundabout need to be controlled in terms of block permeability.
- Urban design is often implemented on plot basis.
- Inaccessible Roundabout – the green open space in the middle of the roundabout represent an opportunity. At the moment, it is not pedestrian friendly, with limited public use.
- Steep topography on the north-east side represent a challenge, to connect the CBD to the StFamille area and Muhima.

PROPOSED STRATEGIES

- Redefine roundabout layout to facilitate Non-Motorized Transport (NMT).
- Integrate one BRT station module into the intersection design, to facilitate CBD accessibility.
- Transform a roundabout into a pedestrian and public transport gateway to the CBD.
- Improve connection to 'Imbuga City Walk' (KN4 Pedestrian Street), Historical Commercial Node, to the Saint Famille heritage site, and to the wetland.



CBD Transect



CBD Transect - Analysis and proposed strategies



CBD Transect - Current situation - view

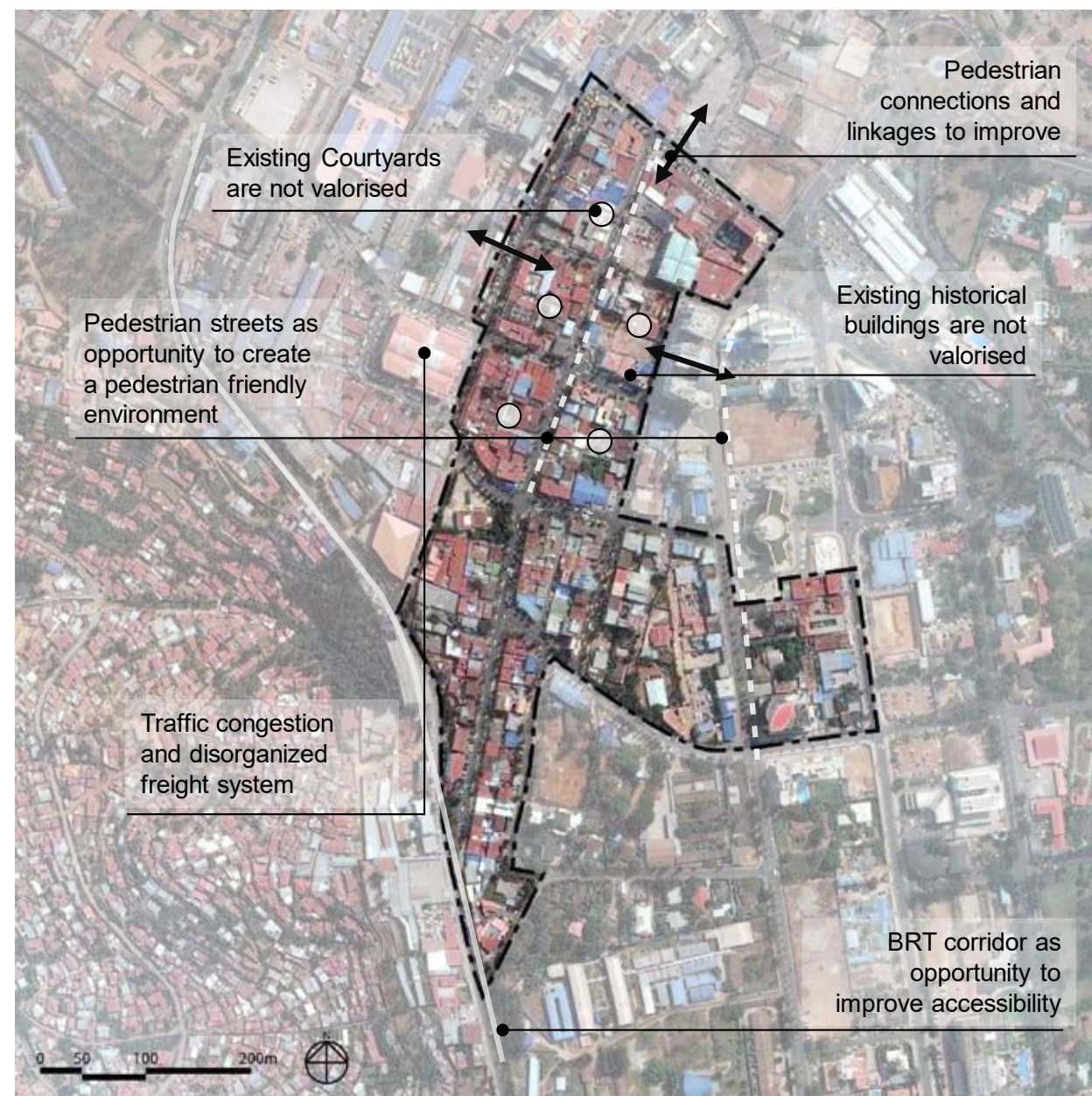
EXISTING ISSUES

- The connection to the wetland is complex due to topography, and existing settlements.
- Densification along Bus Rapid Transit corridor is recommended.
- Existing settlement will require urban renewal, to fit with proposed densification.
- Existing parcel structure requires land consolidation.

PROPOSED STRATEGIES

- Suggest incentives to promote consolidation and incremental development.
- Introduce typologies in line with current and future demand (incremental developments).
- Evaluate effectiveness of previous Urban Design and Land Subdivision Plan (Parcellation).
- Propose a new road network that optimize the road infrastructure.

Historical Commercial Node and Conservation Area



Historical Commercial Node and Conservation Area - Analysis and proposed strategies



Historical Commercial Node - Conservation Area - Current situation - Street view

EXISTING ISSUES

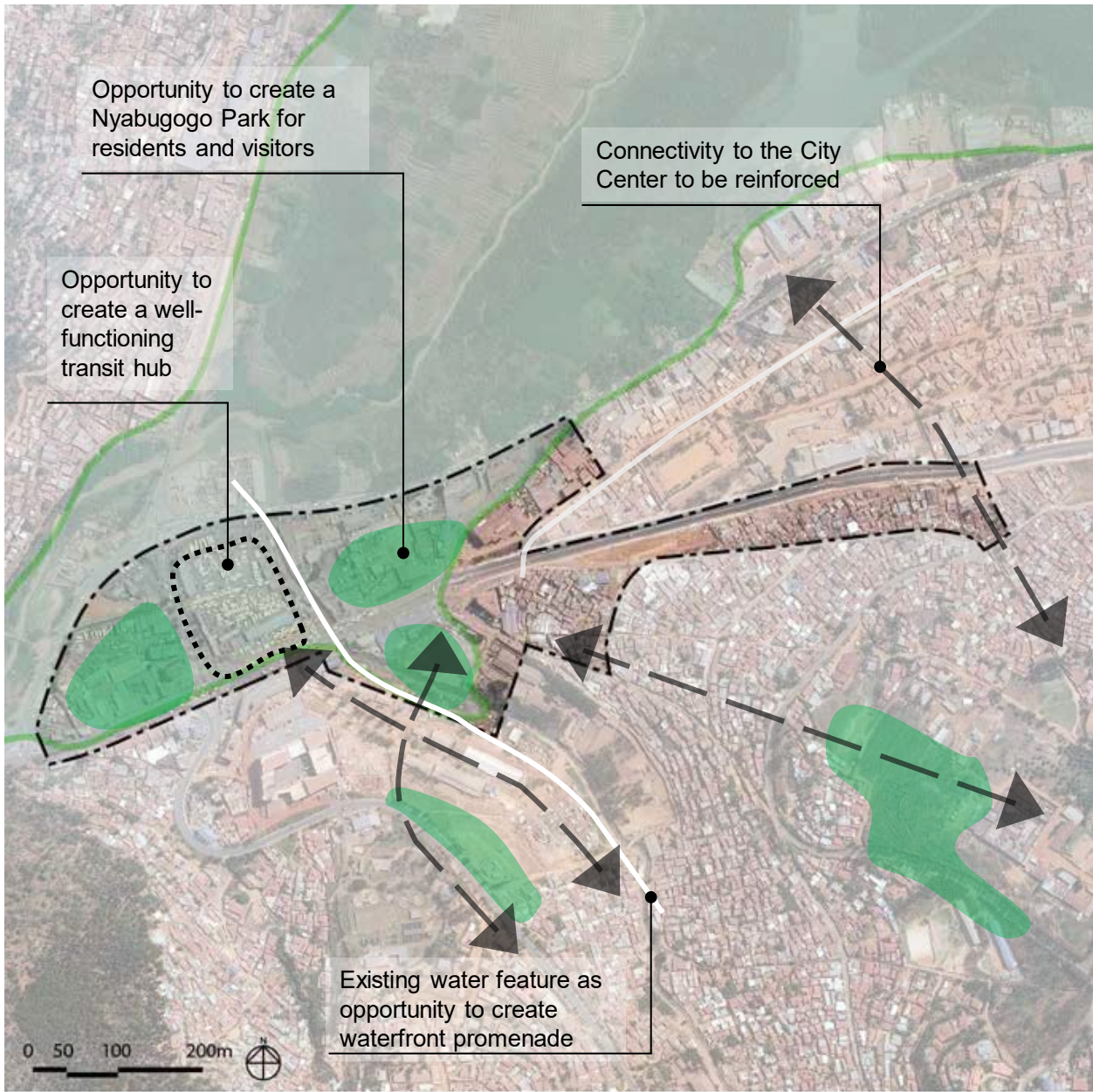
- Parcel size and zoning regulations do not fit with existing urban fabric.
- Lack of parking regulations.
- Missing open space network connections.
- The entire area is not pedestrian friendly.
- Freight and Service Operators are disorganized and create traffic congestion.
- Local businesses are struggling with new building typologies introduced.
- Alley ways and courtyards are not enhanced.
- Limited accessibility to ground floor facades due to the poorly designed walkways.

PROPOSED STRATEGIES

- Redefine zoning and urban design regulations to protect existing fabric, typologies, and propose suitable economic activities.
- Regulate and limit the access to wholesale activities to specific hours of the day.
- Provide alternative parking sites and improve public transport and Non-Motorized Transport (NMT) connectivity.
- Recommend Transfer of Development Right (TDR) as a tool to compensate limited development capacity.



Nyabugogo Transport Hub



Nyabugogo Transport Hub - Analysis and proposed strategies



Nyabugogo Transport Hub - Current situation - view

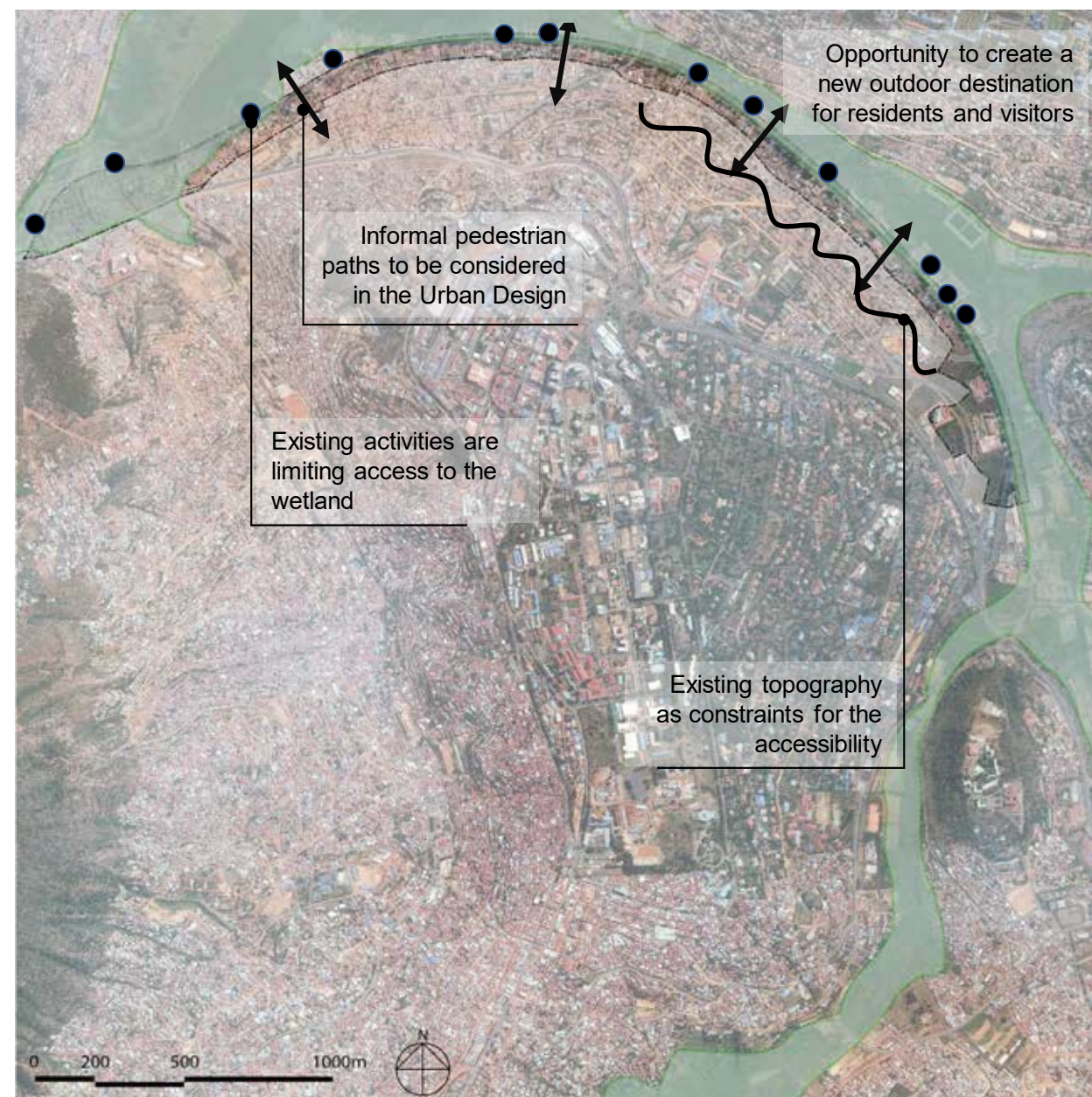
EXISTING ISSUES

- Environment constraints are limiting development capacity.
- BRT and Catchment study are defining a new design for the site.
- Lack of legibility and wayfinding.
- Poorly designed intersection and traffic congestion issues.
- Mpazi channel and wetland areas within the site are not valorized.
- Connectivity to the City Center should be reinforced.

PROPOSED STRATEGIES

- Incorporate BRT alignments and design requirements.
- Assess development regulations along BRT routes.
- Update design according to existing plans.
- Valorize existing natural features.
- Reinforce Non-Motorized Transport (NMT) and Public Transport connections to the City Center.
- Improve legibility and wayfinding.

Wetland Front



Wetland Front - Analysis and proposed strategies



Wetland Front - Current situation - view

EXISTING ISSUES

- Existing infrastructure and activities are limiting easy access to the wetland.
- Limited attractiveness of the wetland, due to incompatible uses along, and within the wetland buffer.
- Wetland requires environment restoration to allow recreational and leisure activities in respect of existing eco systems.

PROPOSED STRATEGIES

- Activate wetland frontage with suitable mix of uses (commercial, recreational, tourism).
- Improve Non-Motorized Transport (NMT) connectivity to the wetland.
- Introduce traffic calming measures to facilitate access to the wetland.
- Incorporate inputs coming from the upcoming wetland master plan, into the urban design areas.
- Introduce sustainable economic activities within wetland and the buffer.



CBD Urban Design - Participatory Workshop

Public Engagement Outcomes

Public Engagement Process

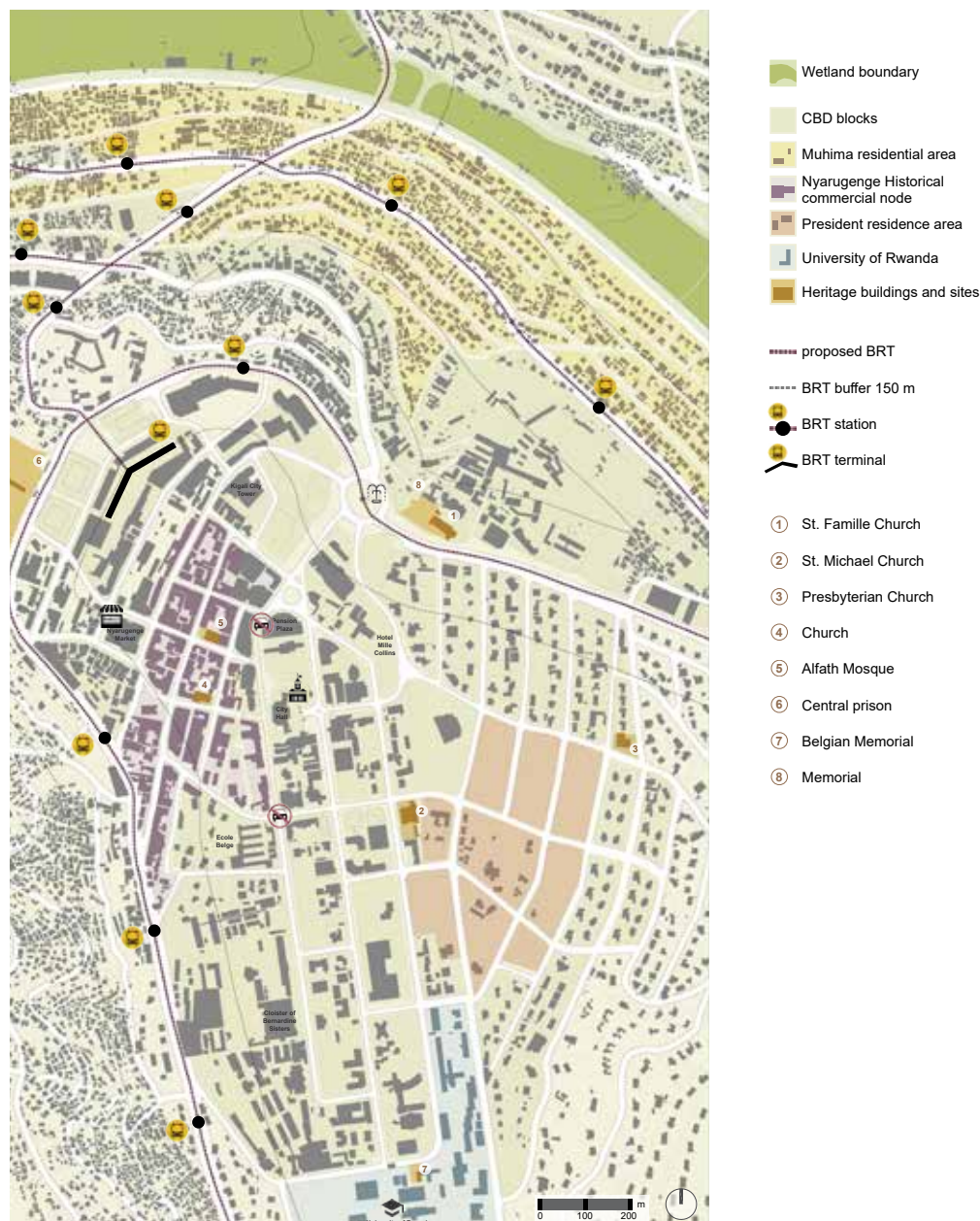
Following the inclusive approach applied to the overall Master Plan review process, a Participatory Workshop for the Nyarugenge CBD Urban Design Plan was proposed. At the beginning of the CBD plan update process, a full-day workshop offered the opportunity to engage with more than 30 relevant stakeholders in an innovative experience of urban design and planning for Kigali, and Rwanda.

Supporting the achievement of UN SDG #11¹ and the principles of integrated and inclusive planning promoted by UN-HABITAT, the public engagement initiative for the Urban Design Plan of the Nyarugenge CBD applied participatory tools, and methodologies to involve citizens, and key actors in the design of the future growth, and development of the CBD.

The Participatory Workshop organized during the Analysis phase, helped the Planning Team to gain an important insight into the local knowledge and collect significant contributions from different parties, to complement the comprehensive analysis conducted. The consultative meeting improved the perception and identification of main issues in selected target areas and key planning topics and focused the collaborative work in drafting shared strategies for the new CBD Urban Design Plan.

It is internationally recognized that, an engagement process has positive effect in establishing a two-way communication among the parties, and in improving the results, with the contribution of new ideas and resources. The Urban Design workshop allowed the City of Kigali, together with the Planning Team, to interact/communicate with the stakeholders on the achieved results and shared aspirations, building a greater sense of trust and ownership, over the Urban Design review, and the planning practice.

¹ United Nations Sustainable Development Goal number 11 aims at promoting inclusive, safer, resilient and sustainable cities.



CBD Urban Design - Participatory Workshop - Map of key selected areas

The Planning Team proposed to focus the Workshop on key selected areas, which needed an intense planning review and offered a greater opportunity to introduce innovation and new approaches.

The target areas were:

1. Muhima residential area
2. Historical Commercial Node in the city Center, which includes the Quartier Matheus and the Quartier Commercial
3. The Wetland Front (along KN7 Rd)

The consultation workshop aimed at:

- ensuring a common understanding of the urban design target areas and the physical environment;
- guiding the interaction on selected thematic topics;
- discussing key issues and opportunities for each topic;
- developing shared strategies for the CBD future development.

To achieve these objectives, a selection of key actors were invited to the meeting. Representatives² from the City of Kigali, National Institutions, Professional Bodies and Private Sector, Research Institutes and University, Local and International organizations, as well as Private Developers were involved in a full-day consultative workshop, to collect their inputs in understanding the challenges of the CBD area, and to work together in guiding the improvement of the Nyarugenge CBD.

The full-day meeting was split in two sessions, applying two different methodologies. During the morning session, a TRANSECT WALK³ format was proposed to lead participants through a walk in selected key areas of Nyarugenge CBD, starting from the commercial node, and ending at the wetland front. The walk enabled all invitees to share their inputs and impressions on the different sites, holding informal interviews with CBD residents and workers, taking pictures and notes on the map provided.

² OSC; City of Kigali / Dept. of Infrastructure; Rwanda Institute of planners; GGGI; MININFRA; Nyarugenge District; Skat; Architect Association; Institute of Engineers; PSF; PSF/RIA; Century Real estate; IPAR; Rwanda Art Initiative; MASS Architects, REMA; RDB; University of Rwanda; RHA; ITDP; RTDA; People with disabilities Association; Rwanda Women Network; Eglise Catholique Rwanda; The Green Fighter Rwanda; Rwanda National Police; Institute of National Museums of Rwanda; RLMUA; MINISPOC (in charge of heritage sites); RIA; SU Architects Ltd; IFC; UDL; FONERWA; REBEL.

³ 'Transect Walk' is an internationally adopted tool to engage local people in a systematic walk along a defined path (transect) across the project area to explore a defined topic by observing, asking, listening, looking and, eventually, producing a transect diagram.

During afternoon session, the Thematic Working Group Tool was planned to guide the interaction in the comprehension of the CBD challenges and opportunities, and to propose practical and innovative development strategies. The Planning Team briefly presented the main features of the target areas, and the participants were divided into five groups of discussion, focusing on the following key topics:

- 1. Urban Densification (residential/ mixed use - BRT corridor)
- 2. Historical Commercial Node
- 3. Heritage
- 4. Mobility
- 5. Wetland front

Five local facilitators helped with exchanging of ideas, through simple questions and with the support of materials like maps, sheets of papers etc..

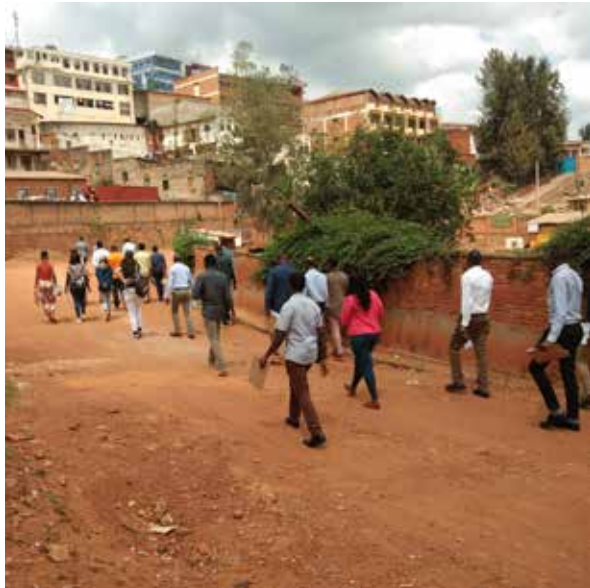
A plenary discussion was organized to summarize the main outcomes from each group, and share defined strategies with all participants, before closing the workshop. Facilitators and Master Plan Team helped capturing the proposed ideas and establishing agreed planning approaches for the Urban Design review.



Transect Walk Map



Transect Walk - Centre Ville Roundabout



Transect Walk - Muhima streets



Participatory Workshop - Transect Walk



Participatory Workshop - Transect Walk



Participatory Workshop - Transect Walk

Main Outcomes

For each topic, key strategies have been discussed and identified to guide the PlanningTeam in the review process of Nyarugenge CBD Plan.

Urban Densification

The residential areas facing the Wetland has the potentiality to contribute to the new development of the CBD. Some challenges have been identified, but great emphasis was put on the opportunity of promoting densification and incremental development and enhancing the integration with the CBD core.

Strategies:

- I. Support a mixed-income and medium density development, strengthening the mixed-use approach;
- II. Enhance the potentiality and vitality of the area, to become the vibrant CBD driver;
- III. Drive the development on both sides of the wetland.



Participatory Workshop - Thematic Working Group - Urban Densification

Historical Commercial Node

This area contributes in creating a vibrant business environment, which can support the achievement of mixed-use and mixed income development. The value of the urban and architectural heritage needs to be recognized with appropriate regulations and could foster the development of the CBD.

Strategies:

- I. Enhance and capture the value of the socio-economic environment.
- II. Preserve the uniqueness and vibrancy of the area, converting it in economic value.
- III. Define what is heritage and promote the transfer of development rights (TDR) mechanism.



Participatory Workshop - Plenary discussion - Historical Commercial Node

Heritage

The CBD area includes several historical buildings and heritage sites, which needs to be recognized and preserved. They could offer an important opportunity to enhance economic development and vibrancy of the CBD area.

Strategies:

- I. Clearly define what is Heritage and how to preserve the value of the buildings and sites;
- II. Introduce incentives and policies to recognize the heritage and its economic value;
- III. Educate and raise awareness on the value of heritage preservation, at all levels.



Participatory Workshop - Thematic Working Group - Heritage

Wetlands

The Wetland offers an excellent environment to drive the development on both sides and enhance the potentiality of the Wetland front, by adopting mixed-use and sustainable development. It provides the opportunity to plan open public spaces, foster green economic development and improve the mobility in the CBD.

Strategies:

- I. Planning open public spaces and green infrastructure;
- II. Enhance the connectivity and integration with the CBD and promote non-motorized movement;
- III. Introduce wetland categorization, to boost sustainable development and 'smart' preservation.



Participatory Workshop - Thematic Working Group - Wetland front

Mobility

The CBD streets network and the public transportation system needs to be deeply improved. The review process offers the chance to promote and prioritize the pedestrian movement and Non-Motorized Transportation, fostering the mix-used development, and the vibrancy of the streets and the ground-floors.

Strategies:

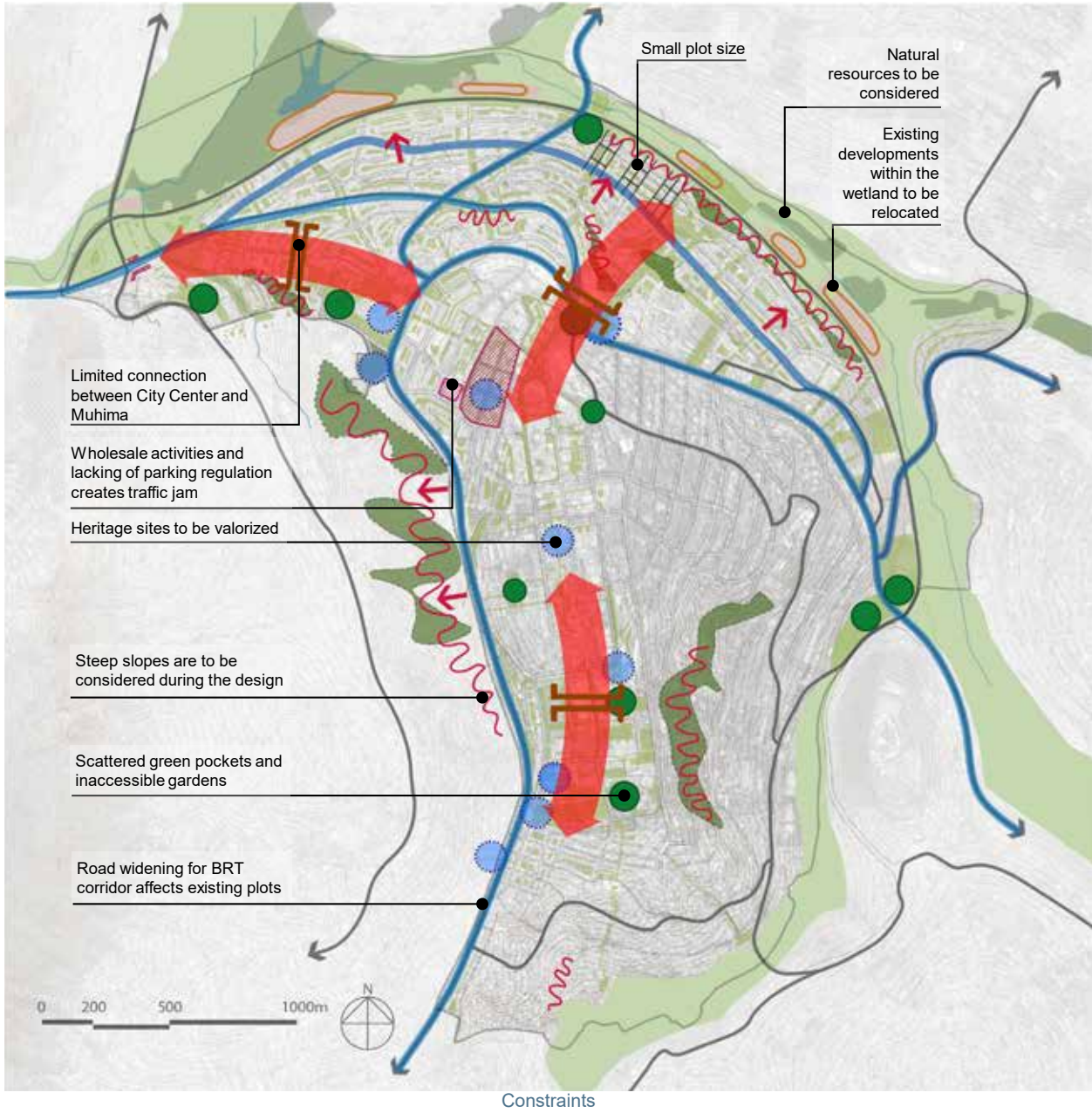
- I. CBD strongly oriented towards people and pedestrian movement;
- II. Promote development along and near high quality Public Transport;
- III. Introduce new parking and roads usage regulations, to plan for a sustainable mobility.



Participatory Workshop - Plenary discussion - Mobility

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2 MAPPING THE POTENTIAL



Constraints

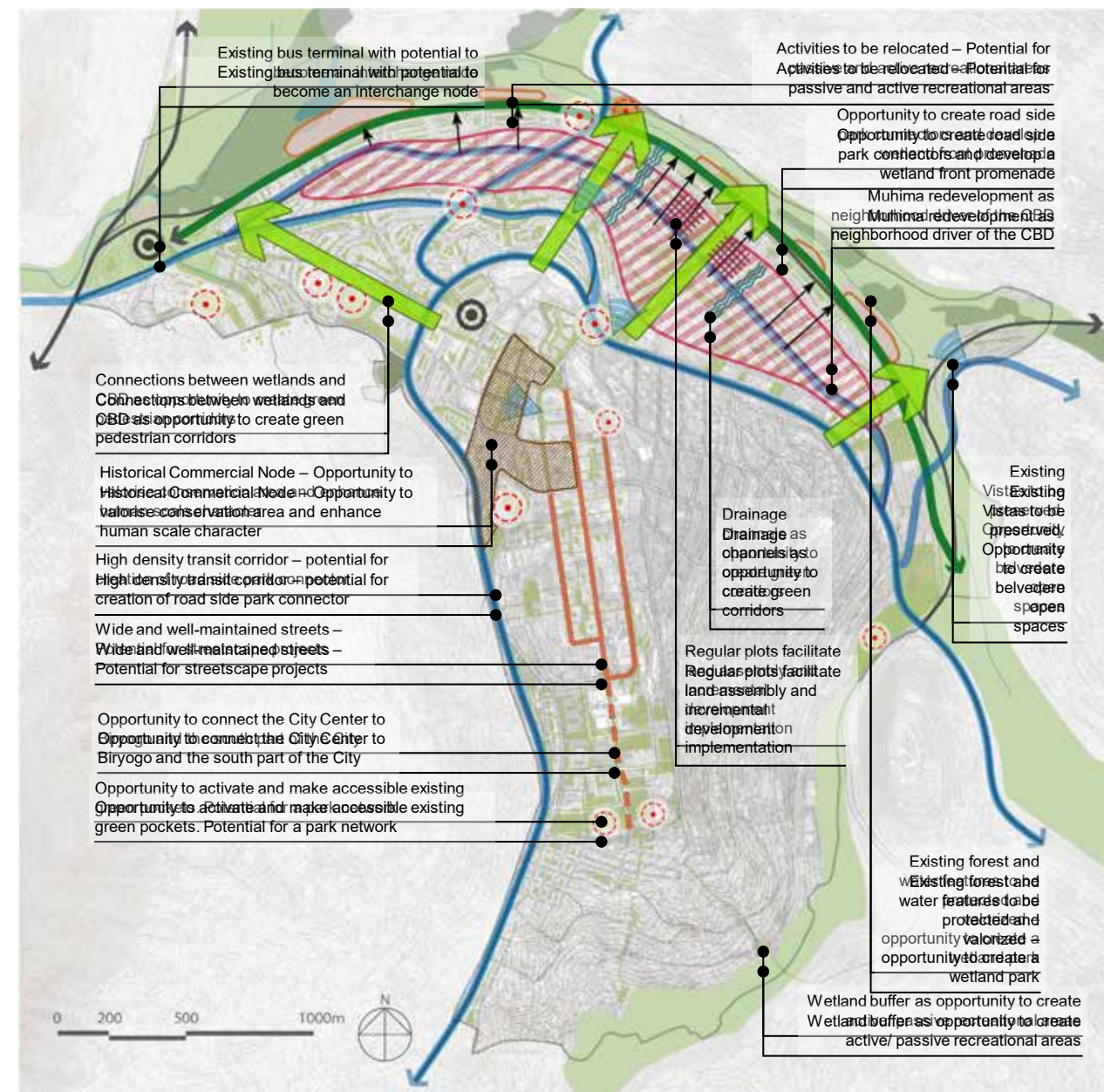
- There are no connections between Muhima and Nyarugenge City Center.
- Green pockets and gardens are scattered throughout the city, and in most of the cases are not publicly accessible.
- Public spaces for celebration or gathering are not available.
- Small parcels make it difficult to assemble land for the implementation of the Master Plan.
- Streets are designed mainly for cars.
- Wetland is not easily accessible.
- There are few bicycle lanes in the City Center that are not integrated into a cycle network.
- There is no clear pedestrian network.
- Impermeable city blocks constitute a barrier for pedestrian movement.
- Cultural/ Heritage sites are not valorized, and there is no legible map of the city.

- Ground floor facades are often not active – Fences and boundary walls create physical barriers.
- Topography is a challenge.
- There is no night life in the CBD.
- Traffic issues in Nyabugogo is a challenge, when arriving in Kigali.
- Lack of parking and freight strategy.
- Activities within and along the wetland are not attractive, and affect wetland accessibility.
- Road network in Muhima needs to be potentiated and completed.
- Existing destinations and point of attractions are scattered throughout the CBD, and should act as base structure for the pedestrian network.
- The City is not legible. It is not easy to orient due to the poor signage and lack of information for citizens and visitors.

Opportunities

- CBD has a fantastic setting. The hills and the wetlands represent as great elements of Kigali's identity. This characteristic needs to be explored to its fullest potential.
- Existing gardens and green pockets could be an opportunity to create new urban parks integrated into an open spaces network.
- Green corridors represent an opportunity to link different parts of the CBD.
- Regular plots in some parts of Muhima residential area could facilitate the redevelopment.
- BRT is an opportunity to accelerate densification of its corridor, transforming it into vibrant transit-oriented development area.
- Proposed BRT corridor has the potential to increase accessibility, facilitate Non-Motorized Transport implementation and increase the land value.

- Existing CBD streets constitute a good baseline to invite more people to walk by, adding extra layers to improve walking experience, like attractive ground floor facades, invitations to sit and rest along the streets, etc.
- Topography is an opportunity to manage stormwater runoff by slowing or collecting storm water through stepped rain gardens or linear parks.
- Wetlands in front of Muhima, with their natural features, have the potential to become the CBD wetland park, one of the main outdoor destinations in Kigali.
- Existing Muhima road network and street alignment constitute a good baseline for the urban design and redevelopment of the area.
- CBD is very active during work hours. Many people commute to CBD for work, which creates activity. This can be explored further to make CBD more inviting and make people stay even longer.



Opportunities

3 VISION AND STRATEGIES



CBD Vision

The planning process conducted for the review of the Kigali Master Plan included also the review of the Vision for the City. While the key statement, “The Centre of Urban Excellence”, remained, it was preceded by a new wording: “Kigali Yacu, Our Kigali” to underline the ownership of the plan by the Citizens and Stakeholder of Kigali and Rwanda. The same spirit has been applied to the CBD statement. While the statement “Green Financial Hub and Vibrant Growth Centre of Kigali” remained unchanged, it incorporated the inclusionary approach at the base of the overall CBD Urban Design review..

VISION

The Green Financial Hub of East Africa

GOALS

- 1 To become the sustainable financial hub of the East African Region.**
- 2 To consolidate the role of CBD as the vibrant Kigali City Center, providing services and attractions for workers, citizens and visitors.**
- 3 To transform the CBD into a benchmark for green and sustainable development.**

GOAL 1

To become the sustainable financial hub of the East African region

Objectives

- I. To sustain the economic growth of the city through a market-oriented strategy, capable of guiding the private sector towards integrated and incremental development.
- II. To create a sustainable mix of financial institutions, economic activities and a variety of residential solutions in a culturally stimulating environment.
- III. To promote the creation of a mixed-use, mixed-income and medium density precinct, attracting residents and visitors alike.

Strategies

- Transform Office focused CBD into a centre active during all hours, by promoting mixed use, enhancing precinct's character, increasing night time use and providing attractions and diversifying activities.
- Engage community stakeholders in all the important detailed design and implementation stages, to create a welcoming and equitable CBD for all.
- Create a sustainable and vibrant mixed-use development in Muhima CBD, without disrupting existing parcels, and existing built up environment.
- Provide densification through incremental development, promoting flexible solutions to facilitate land consolidation, and encouraging city block developments with common shared spaces at the service of the neighborhood.
- Complement the Muhima redevelopment/ densification by improving and reinforcing Rwanda cultural heritage, through the implementation of new open spaces, and community and civic facilities.
- Create a physical, social and economic linkage between Muhima and Nyarugenge CBD.
- Reinforce open spaces network to facilitate developments and attract investors.
- Build on public-private partnerships and business network, involve important players in further developing city culture, and encourage events and temporary interventions.

GOAL 2

To consolidate the role of CBD as the vibrant Kigali City Center, providing services and attractions for workers, citizens and visitors.

Objectives

- I. To establish a system of Landmarks, Views and Gateways to reinforce the identity and the landscape, creating a seamless network of public spaces and amenities, interconnecting all different functions and uses.
- II. To preserve and enhance the historical and cultural values of the CBD by establishing suitable regulations and incentives.
- III. To promote the establishment of a variety of uses dedicated to entertainment and recreation, to achieve a work, live and play environment.

Strategies

- CBD “welcome gate-way” for residents and visitors to create vibrant commercial and services nodes by implementing Nyabugogo Transport Hub and KN1 Station Plaza projects.
- Create new spaces for cultural and recreational activities by establishing an open space network, enhancing the public transport and reinforcing the bicycle network, improving wetlands’ accessibility, promoting mixed use developments, activating and creating the new wetland-front, and valorizing heritage and cultural sites.
- Ensure a diversity of uses and activities during the day, week and throughout the year where people of all income levels, age and cultures should feel welcome.
- Provide Green Corridors to create a network of greenways, to complement the green infrastructure framework, to unify and actively connect all parts of the city including historical, educational and recreational areas.
- Focus on the development of Historical Commercial Node, CBD Transect, CBD Office Precinct, BRT Corridor, and Wetland Front, as areas for generating more mixed-use functions, and a diverse user group.
- Encourage provision of a public amenity, visual or performing arts spaces, and cultural spaces by providing incentives and bonus;
- Apply Transfer of Development Rights (TDR), as market tool to conserve eco-fragile land, privately owned historical buildings, and other valuable resources.

GOAL 3

To transform the CBD into a benchmark for green and sustainable development

Objectives

- I. To focus on non-motorized, and public transport, and on universal accessibility in both private and public spaces.
- II. To enhance and interconnect, all areas of CBD through a network of public spaces linked by pedestrian and green corridors.
- III. To strive for an integrated network of resilient and green infrastructure.

Strategies

- Implement a public space network that links public spaces, streets, and recreational sites.
- Create strong links between CBD and the Wetland front.
- Upgrade the wetland front to strengthen and celebrate Kigali CBD as a Wetland-front city.
- Ensure integrated planning of landscaping and green infrastructure with planning of utilities and street infrastructure. Select native species to best suit local climates, and reinforce the character and identity of each CBD precincts.
- Provide transportation system that ensure full accessibility, and gives priority to transit, pedestrians and cyclists.
- Ensure accessibility and permeability by maintaining and reinforcing existing pedestrian connections, and ensuring through blocks connections, enhancing and regenerating existing courtyards.
- Promote city blocks developments composed of sequence of buildings aligned along the main corridors, and ensure building edge interaction with street and open spaces by introducing active and animated ground floor, continuous, well designed and universally accessible arcade, and encouraging first floor terraces.
- Encourage city block developments with common shared spaces at the service of the neighborhood.
- Promote public engagement as a good practice to ensure transparency in decision making, provide significant contributions to urban space policy, helping to create more equitable public spaces, that are consistent with the needs and demands of the population.

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4 URBAN DESIGN FRAMEWORK

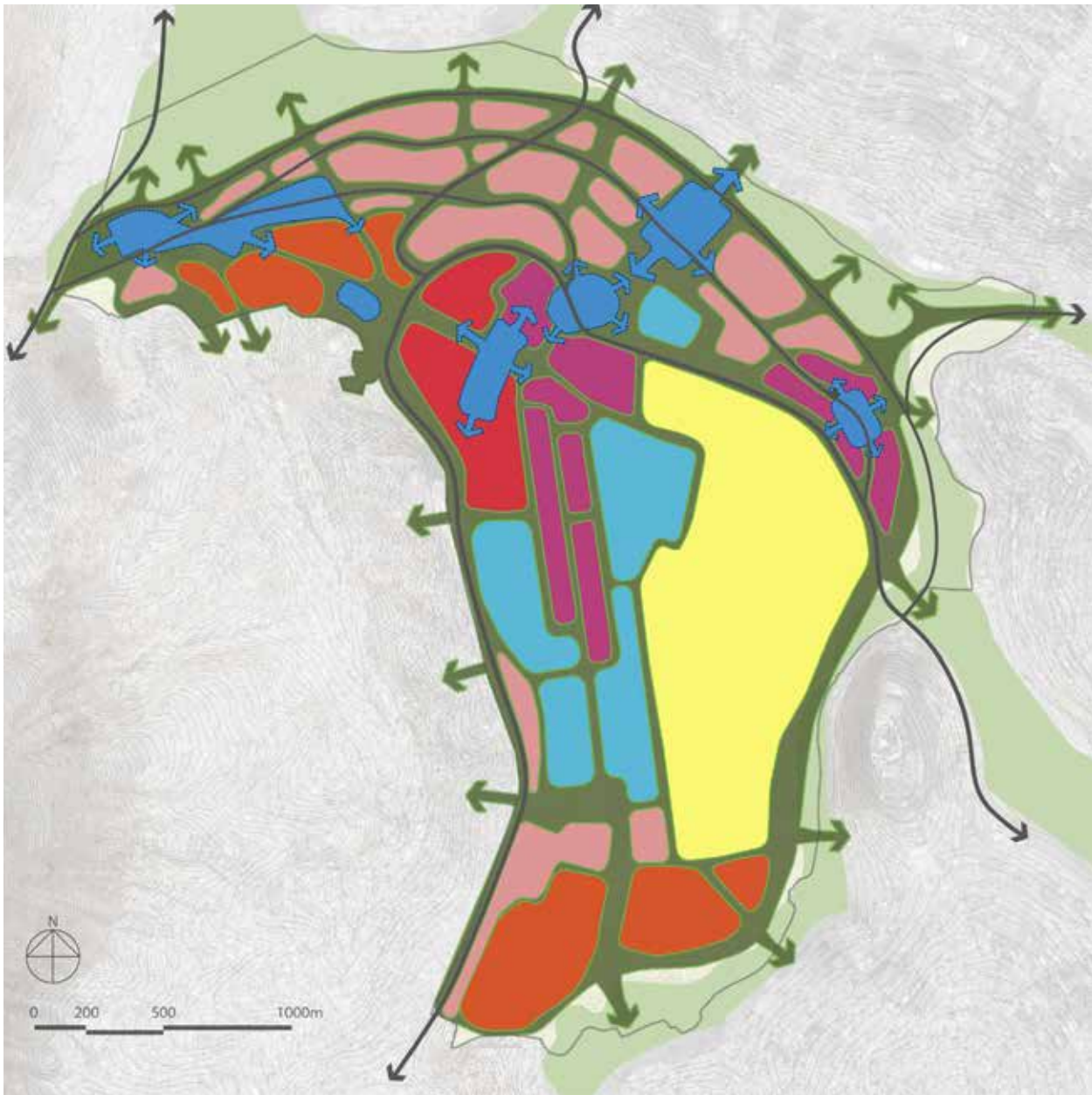
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CBD Concept

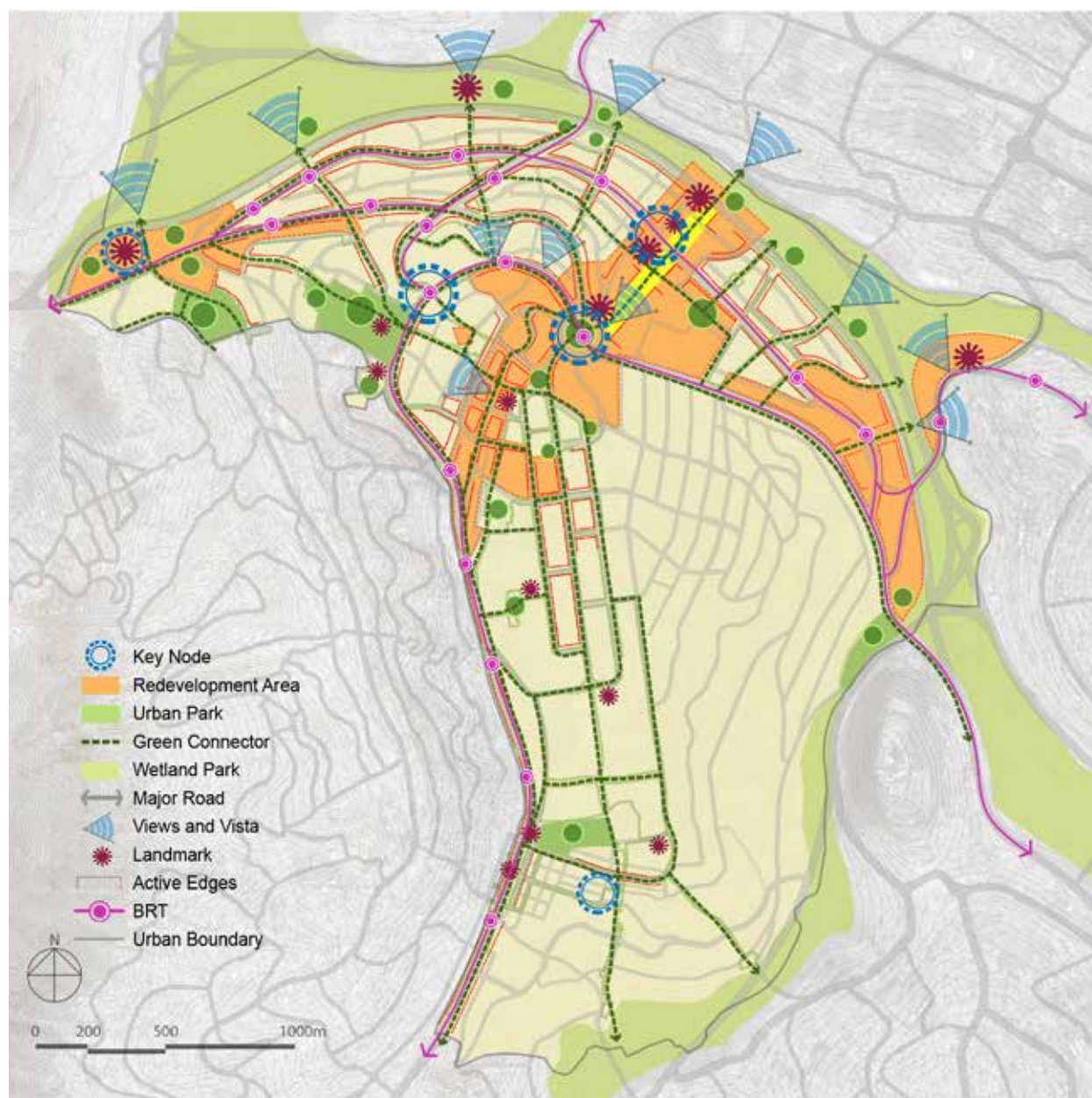
Building on the Vision and Goals, the concept is to develop a vibrant and attractive CBD and neighbourhood center. The key focus is on having a compact CBD development, characterized by distinctive precincts, with their specific character linked with green corridors, catalyst projects in correspondence to key nodes, and a new active wetland front.

- Key Node
- CBD Commercial Node
- Financial and Business District
- Residential Zone
- Mixed Use Zone
- Upgrading Zone
- Public Facilities
- Green Connector
- Wetland Park
- Major Road



Nyarugenge CBD - Concept Plan

Structure Plan



Nyarugenge CBD - Structure Plan

The Proposed Structure Plan for Kigali, established the structure of the development areas, and location of the key activities within each part of the City. At an Urban Design Scale, the same Structure Plan was further detailed to provide more indications. Some of the key proposals included:

- Incremental redevelopment of Muhima Sector as the new Mixed Use Vibrant Precinct of Kigali City Center;
- Development of a CBD transect extending from the Centre Ville Roundabout down into the wetlands;
- Redevelopment of the existing dense and unplanned housing areas near the CBD into medium-density medium rise residential areas;
- Requalification of the historical commercial area of the City Center, and establishment of a conservation area;
- Development of a vibrant and attractive Wetland Front;
- Creation of new green corridors to connect different precincts and destinations of the CBD;
- Conservation of existing forest and wetlands. Afforestation in very steep slopes; and
- Utilization of the wetlands and nature areas for tourism development, as well as for integration into the precincts as recreational destinations.

The Urban Design proposal addresses these issues and strengthens the vision.

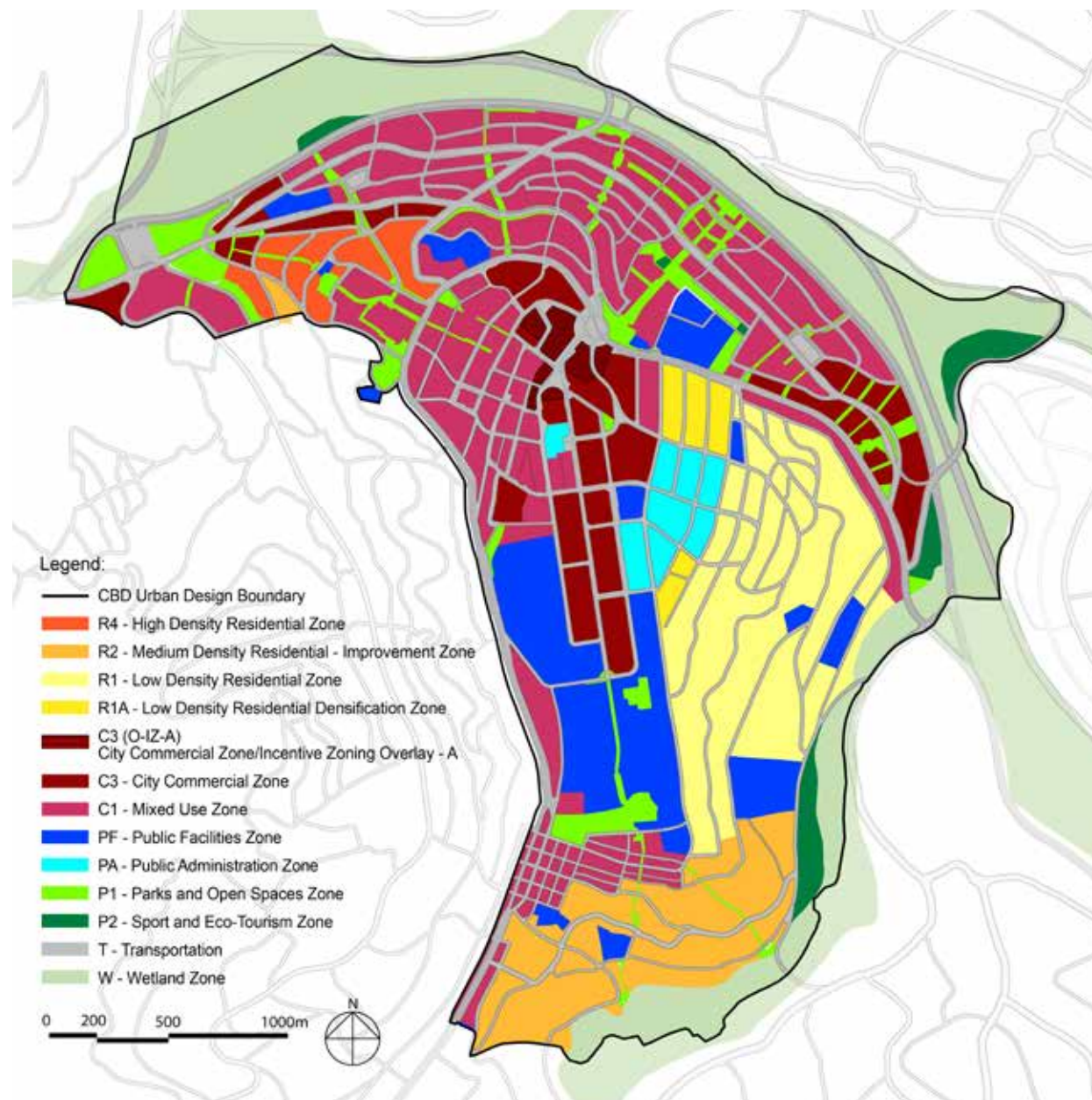


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DETAILED DESIGN

Zoning Plan



Nyarugenge CBD - Zoning Plan

Zoning

The 2019 revised zoning plan for Nyarugenge CBD captures the enhanced approach to City incremental, mixed-use, medium density development.

Muhima and “Downtown” areas are now almost entirely zoned as C1 – Mixed Use, providing property owners with a large variety of development opportunities which should promote organic and flexible redevelopment of the area.

The Office Precinct (previous CBD – Phase 1) and the Plateau areas retain their large-scale office-oriented nature as per C3 - City Level Commercial but enhanced regulations now allow for a larger mix of uses promoting vibrancy to the otherwise monofunctional area.

Large parts of Kiyovu also retain their R1 low-density nature but, R1A regulations, promoting densification, allow property owners and developers to develop or re-develop with higher degrees of flexibility in building typologies, with increased development intensity.

Key educational, health and religious facilities are appropriately zoned according to their function as PF1, PF2 and PF3 respectively.

The wetland fronting the Muhima CBD is largely dedicated to passive and active recreational activities, hence mostly following in P1 and P2 zones. Close coordination with Kigali Urban Wetland Master Plan ensures consistency in regulations and synergies between the urban and the natural environment.

Pockets and corridors of passive and active recreational uses are also identified to ensure connectivity between the up-hill development and the wetland as well as the possibility to implement pedestrian areas in the city centre.

Overlay Plans

Overlays play a relevant role in the 2019 Kigali Master Plan. Nyarugenge CBD is affected by several overlays that further guide its development:

Heritage Overlay identifies key sites that need to be preserved and valorized.

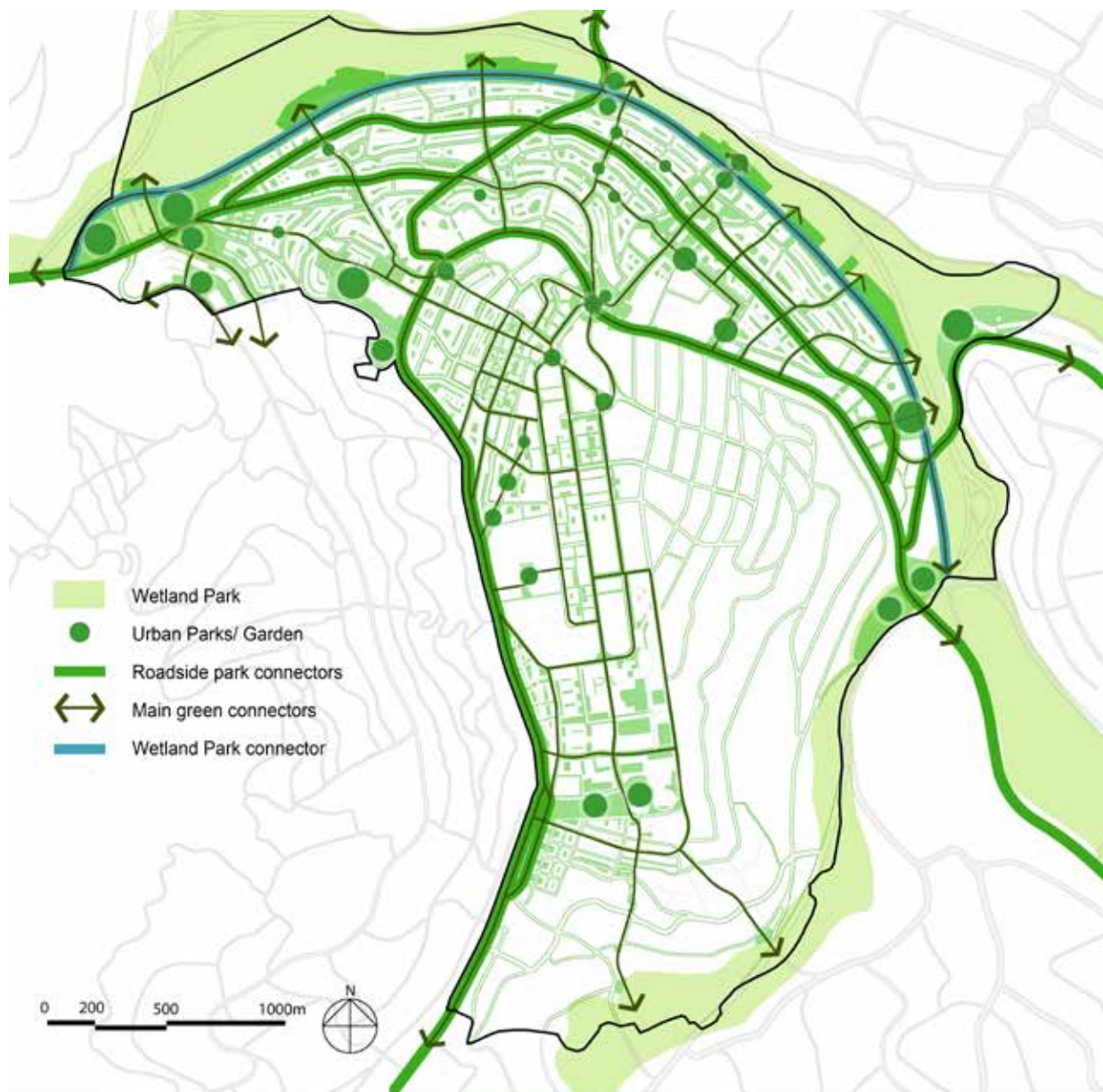
Urban Design Areas benefit from the Incentive Zoning overlay, allowing extra floors and floor area in exchange for amenities or facilities for the community.

C2 – Neighborhood Level Commercial Overlay enable large portions of currently low-density areas to upgrade into mixed-use, higher density zones, bringing vibrancy to the area and capitalizing on their prime location.

Slope Overlay provides clear indications regarding the need for further assessment when developing in relatively steep areas, particularly subject to landslides and soil erosion. This overlay can be found mostly in Muhima and in most the unplanned settlements surrounding the Plateau.

Medium and High Voltage overlays identify corridors where powerlines need to be transferred underground or minimum distance need to be respected when developing.

Green Strategies



Nyarugenge CBD - Green Strategies

The main green strategies adopted are:

1. Green corridors

They are composed of:

- Green ways that connect the City to the wetland;
- Green Street and roadside green corridors;
- Wetland front promenade.

2. Green infrastructures

The green infrastructure, such as street trees, and planting, bio swales, rain gardens, permeable paving, help retaining runoff and reducing water pollution by absorbing, and filtering storm water. Green infrastructure simultaneously provides a natural relief to the built environment, improves the street aesthetic, and delivers benefits to the community.

Green infrastructure is recommended in CBD urban streets, and along all the green corridors. Green Infrastructure must be carefully coordinated to avoid conflicts with transportation and utilities infrastructure and can be combined with storm water system, in order to collect storm water and reuse it for passive irrigation, whenever possible.

3. Green Buildings

All developments in Kigali shall be guided by the Rwanda Green Building Minimum Compliance Guidelines (GBMC). Minimum green requirements highlight on:

- Site management and neighborhood planning
- Building placement and orientation
- Use of local construction materials and recycling materials

Green building and energy efficiency solution shall be required for buildings along main green corridors, and along the wetland-front.

Green walls, to improve visual character of parking structures, green and/or social fences, are recommended along public spaces.

Enhancing Connectivity



Nyarugenge CBD - Pedestrian Network

Pedestrian Network

The CBD Nyarugenge Urban Design aims to provide safe, comfortable, and enjoyable pedestrian network, based on the analysis of the existing urban fabric, and the new proposed built up area. Various types of pathways and open spaces that can work together have been proposed, to create a comprehensive and continuous network.

The proposed design of pedestrian network aims to be connected and permeable by:

- Creating continuous clear path, that incorporates universal accessibility, free of barriers.
- Providing new pedestrian links through large blocks, to improve connectivity.
- Ensuring link between existing courtyards and alleys.
- Providing multiple routes to move between key destinations.
- Ensuring walking distance between main destinations, such as BRT stations, plaza, parks, promenades, commercial streets and neighbourhood main streets.

Accessible, comfortable, and safe by:

- Ensuring a well design sidewalk networks, and clear pedestrian path for higher pedestrian flow.
- Mixed use streets with possibility to have outdoor refreshment area, commercial activities, and landscaping.
- Ensuring walkways, and view corridors free of obstructions.

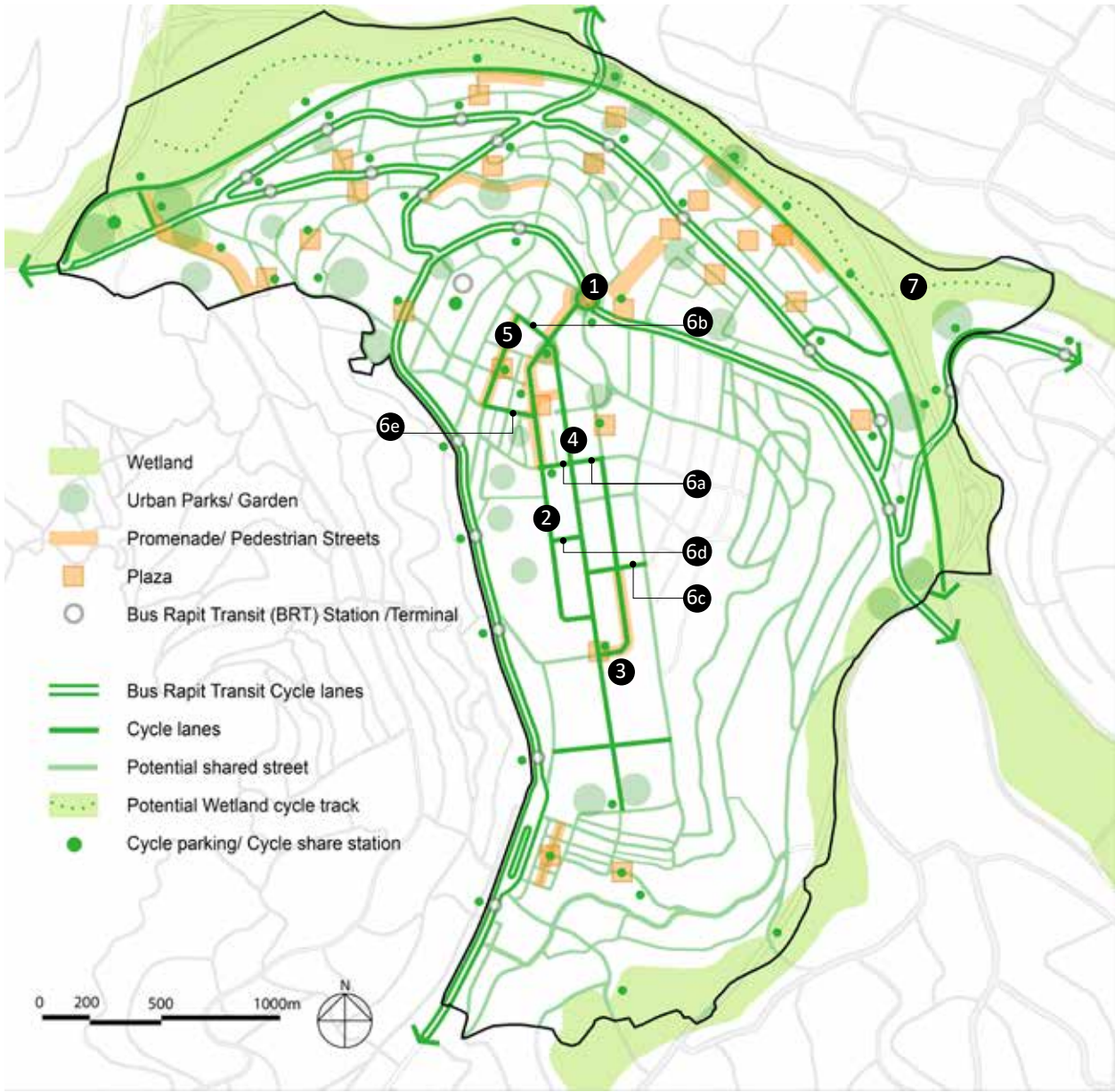
- Giving priority to pedestrians in intersections.

And contextualized by:

- Providing human scale buildings along main open spaces and pedestrian corridors by ensuring active ground floor and arcade/ covered walkways to increase comfortable walking.
- Reinforcing character and identity of each different Character Areas of the CBD: CBD City centre, Historical Commercial Node and Conservation Area, Muhima Mixed Use and Neighborhood Area, BRT Corridor Front and Wetland Front.
- Taking advantage of the topography to provide views and vistas, combine steps and ramps with rest areas and landscaping.
- Selecting native species to best suit local climates. Green corridors can help reinforce the character and identity of a neighbourhood.
- Providing clear signage and wayfinding in Kinyarwanda. Give Rwandan name to new plaza and relevant open space.

Main pedestrian accessible open spaces are:

- Roadside along BRT
- Sidewalks
- Wetland Promenade
- Promenades
- Pedestrian streets
- Plaza
- Urban Park and garden
- Courtyards and alleys
- Midblock and through-block pedestrian walkway



Nyarugenge CBD - Bicycle Network Plan

Bicycle Network

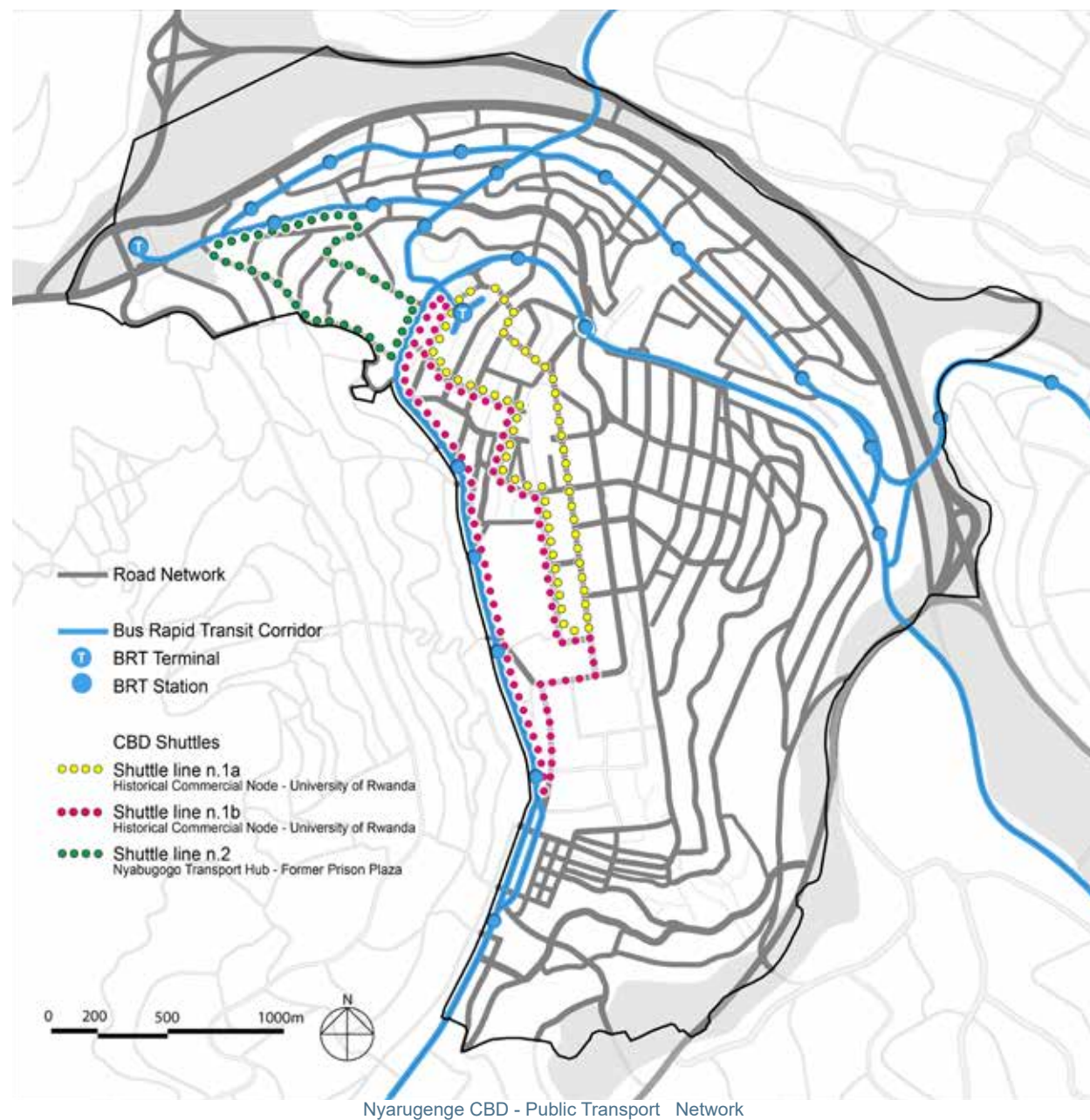
The CBD Nyarugenge Urban Design aims to provide safe, comfortable, and enjoyable pedestrian network, based on the analysis of the existing urban fabric and the new proposed built up. Various types of pathways and open spaces that can work together have been proposed to create a comprehensive and continuous network.

The proposed design of bicycle networks aims to:

- Ensure that the network covers all neighbourhoods, and offers equitable access to bicycle facilities and infrastructure.
- Direct connections between transit stations, schools, parks, markets, community centers.
- Ensure continuous cycle facilities.
- Complement cycle networks with cycle parking spaces, clear wayfinding, cycle share programs, and connections to collective transport infrastructure.
- Provide trees to add protection and shade.

The CBD Nyarugenge bicycle network is composed of:

- Bicycle lanes along the Bus Rapid Transit corridors.
- Wetland front bicycle lanes.
- Existing and proposed bicycle lanes within the CBD Plateau:
 - Entire KN4 Ave **2** starting from KN1 Station Plaza **1** (Centre Ville Roundabout) passing through KN4 Pedestrian Street (Imbuga City Walk) and arriving at the University of Rwanda **3** North Main Entrance.
 - KN3 Ave **4**.
 - KN 59 St Pedestrian Street **5**.
 - KN 63 and 69 St **6a**, KN 70 St **6b**, KN 73 St **6c**, KN 65 St **6d** and KN 76 St **6e**.
 - New recommended bike tracks crossing the University of Rwanda compound **3**.
- Potential shared streets have been highlighted both for Muhima area and CBD City Center.
- Potential bicycle tracks should be evaluated in the CBD Wetland Park Master plan **7**.



Public Transport Network

The proposed public network for CBD Nyarugenge is composed of three level of services, to facilitate trips both long and short, crosstown and local:

- Bus Rapid Transit (BRT) corridors, with high-capacity, limited-stop service, running on dedicated transitways. The BRT service will ensure all the major CBD destination access. BRT stations are strategically located in correspondences to pedestrian and green corridors, to serves all communities.
- Local and regional bus services will complement the BRT service based on contextual considerations and demands. Local bus services can use shared transit streets.
- CBD shuttles. Small collective transport vehicles are recommended to serve the area of the City Center, connecting remote parking structures to key nodes and complementing the BRT service.

Integrated transit services are recommended to extend network connectivity and increase the area covered by transit, encouraging modal shifts, and destination access network well linked to main public transport hubs.

Night-time bus and shuttle services should be promoted to ensure accessibility to the night-life of the City Center.

Bus Rapid Transit (BRT)

In 2016, City of Kigali commissioned a study 'Feasibility Study and Preliminary Design for a Bus Rapid Transit (BRT), System for the City of Kigali' (Third interim report delivery 15th March 2019), conducted by SPEA and LOGIT consultants.

The CBD Nyarugenge Urban Design incorporates the indications coming from the study respecting proposed alignments and proposing few variations to better fit the BRT proposal into the new Urban Design:

- BRT stations location along line IV, Sopedrad-Amahoro- Nyabugogo corridor, have been adapted to the new proposed design, with BRT consultancy approval, and in line with their recommendations.
- In order to increase road side walk along BRT corridor, BRT double platform stations type IV are proposed to be replaced with staggered station (Type III), whenever possible.
- The underpass road proposed in correspondence to Centre Ville Roundabout ① has been replaced by a grade-level road with a new BRT Station. The new open space proposed for Centre Ville Roundabout ① is an opportunity to create a well-functioning transit hub, at the gate of the CBD. After consultation with the BRT Study consultancy, the new BRT Station proposed can be easily obtained without changing the number of BRT Stations proposed in the study:
- The Station type II no. 17 (ST II/17) along KN2 Ave, in front of CHIC complex ②, can be converted into a station type I (ST I/17a) reducing the number of stations from two to one;



Map of the changes made to the BRT Stations locations
BRT Original Base Map - Source 'Feasibility Study and Preliminary Design for a Bus Rapid Transit (BRT), System for the City of Kigali'

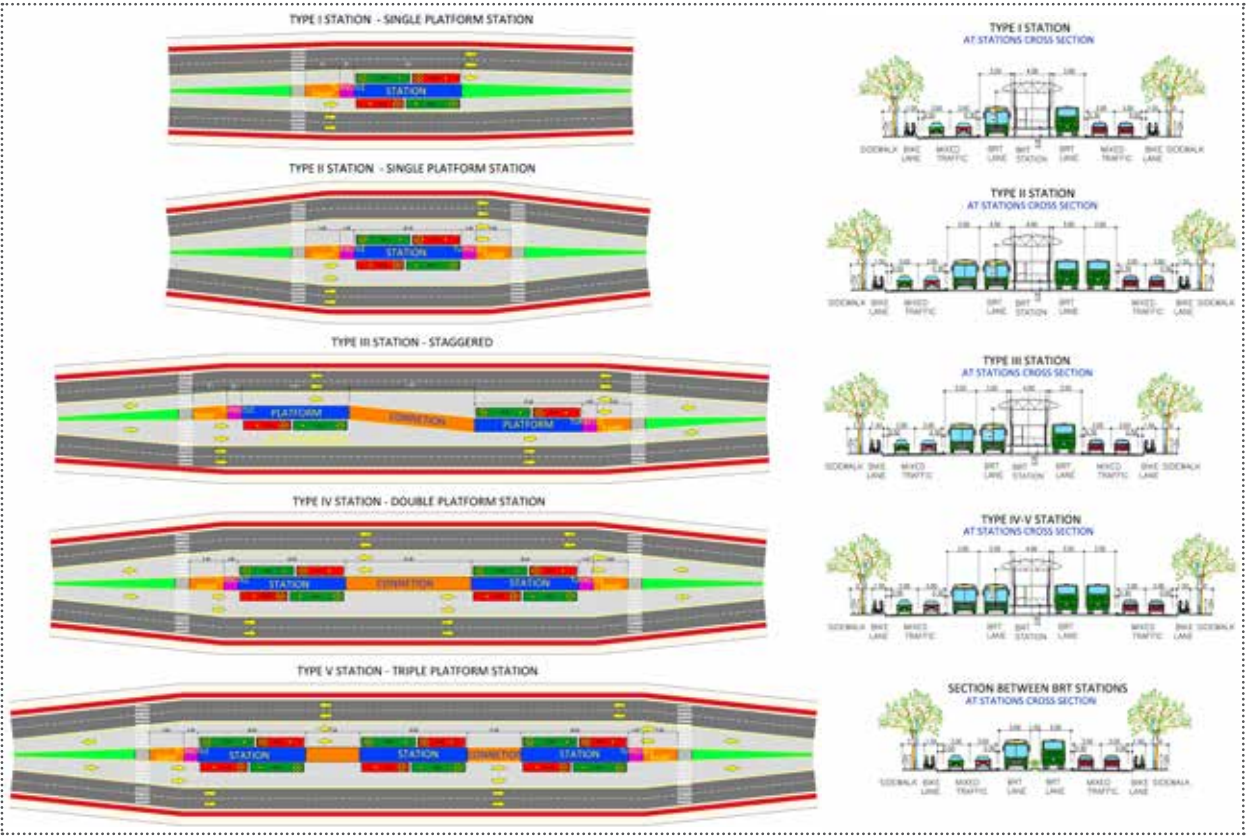
- The additional station can be shifted to the new proposed location within the Centre Ville Roundabout ❶ intersection. Typology and number of stations need to be defined with a detailed study/design of the new proposed intersection.

Nyabugogo BRT Terminal TI/2 in Down Town CBD ❸ and TIII/2 in Nyabugogo ❹ have been incorporated into the CBD Nyarugenge Urban Design.

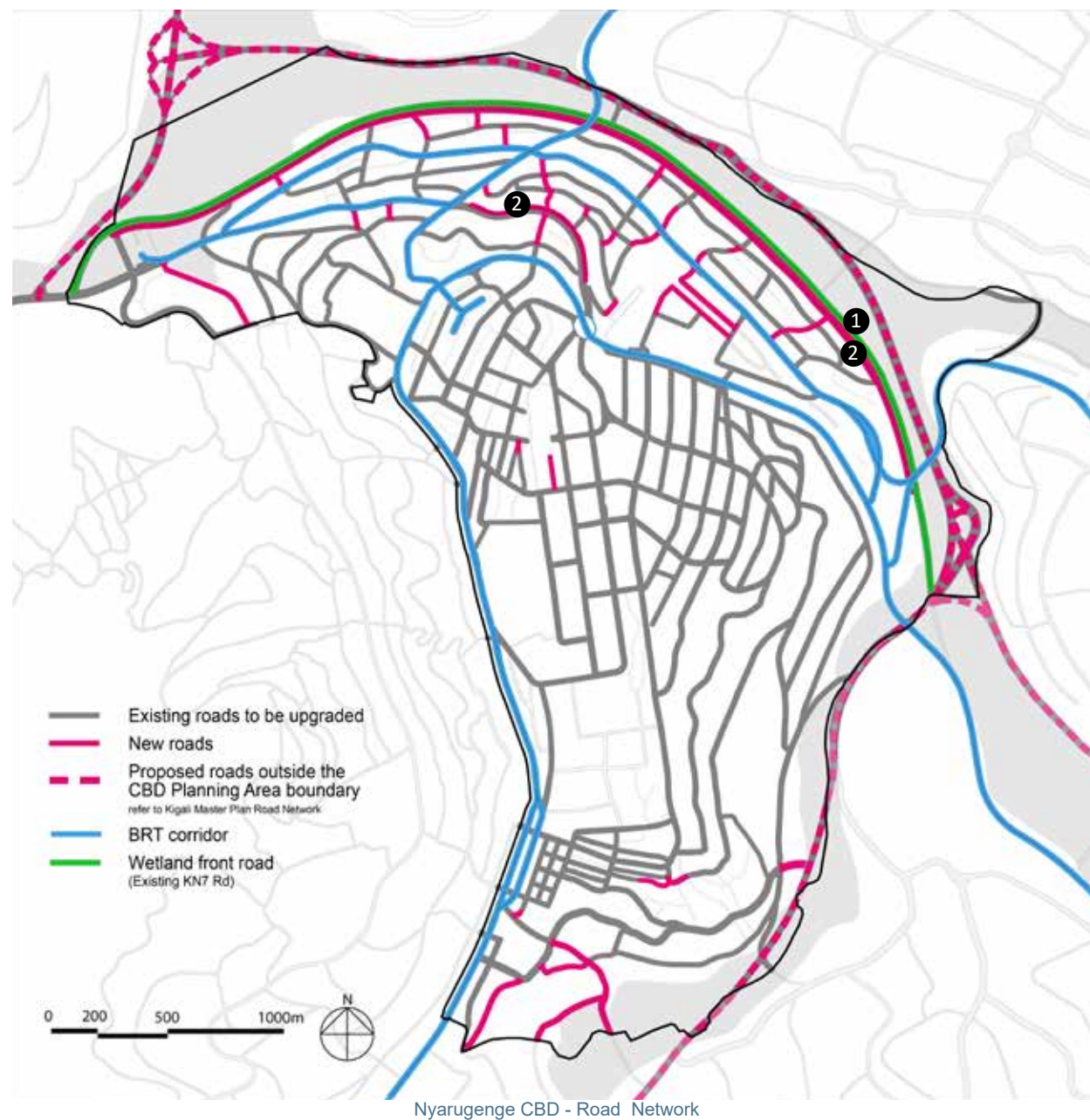
Nyabugogo Terminal ❹ will be the major Transport Hub of Kigali on the regional and national road

network. It is a critical node that requires a detailed study to ensure the best quality in terms of road and intersection design, to address and avoid traffic congestion and to facilitate integrated land-use developments related to the evolution of the transport city-hub.

The revision of the road infrastructures in the 2019 Master Plan update, need to be considered also in the road intersections proposed in the BRT Feasibility Study (e.g. Intersection proposed along KN8 Ave ❺ within Rwampara Wetland).



Type of BRT Stations - Plan and Cross sections
Source BRT - Feasibility Study



Road Network

The CBD proposed road network is substantially following the existing road network. The main interventions are:

Muhima road network

The Muhima road network has been revised following as much as possible existing road network and existing topography, trying to minimize disturbance to the existing private properties.

CBD City Center roads upgrading

The majority of the CBD City Center roads are in good conditions and they do not need to be extended. However, integrated design with green infrastructure should be applied and implemented to improve streetscape experience.

BRT Corridors

BRT corridors are following the BRT feasibility study indications. Refer to section 'Bus Rapid Transit (BRT)'.

Wetland Front road

The existing KN 7 Rd ① has been extended/ widened and upgraded to become the new wetland front promenade of Nyarugenge CBD.

Service roads ② have been proposed strategically along few main corridors to solve parking issues, and facilitate the pedestrian accessibility and connectivity.

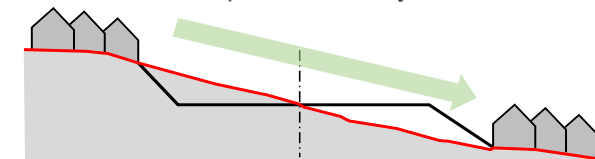
Street Design Considerations

Topography

Considering the existing topography there are three type of roads that have been identified:

Type 1 - Roads in CBD Plateau, flat area (refer to 'CBD- Topography Map' in the chapter 1 Analysis - Topography section).

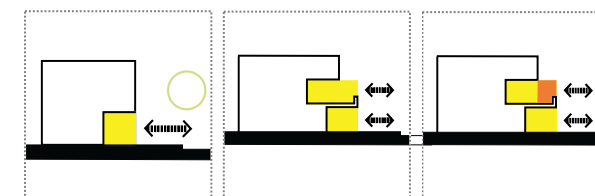
Type 2 - Roads following the contour map. Most of the existing and proposed roads to be upgraded are following the existing topography. However, the design of the street needs to control grade and alignment carefully and ensure the connectivity between the two parts of the city.



Type 3 - Steep Road. All the proposed steep roads have slope less than 30%. However, feasibility study of the steep roads design needs to be conducted and verified on the ground.

Building Interaction with the street

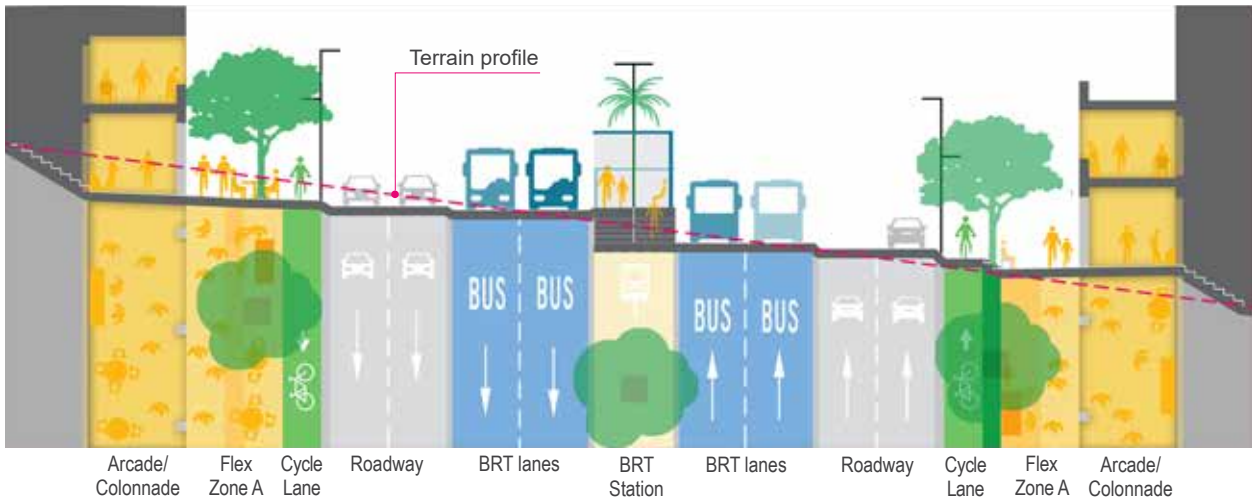
Along main commercial and green corridors - Building edge alignment with arcade at the ground floor and terraces or balconies at the first floor will offer an opportunity of interaction with the street.



Street Configurations



BRT CORRIDOR: 40,3 m WIDE - BUILDING SETBACK: 3m

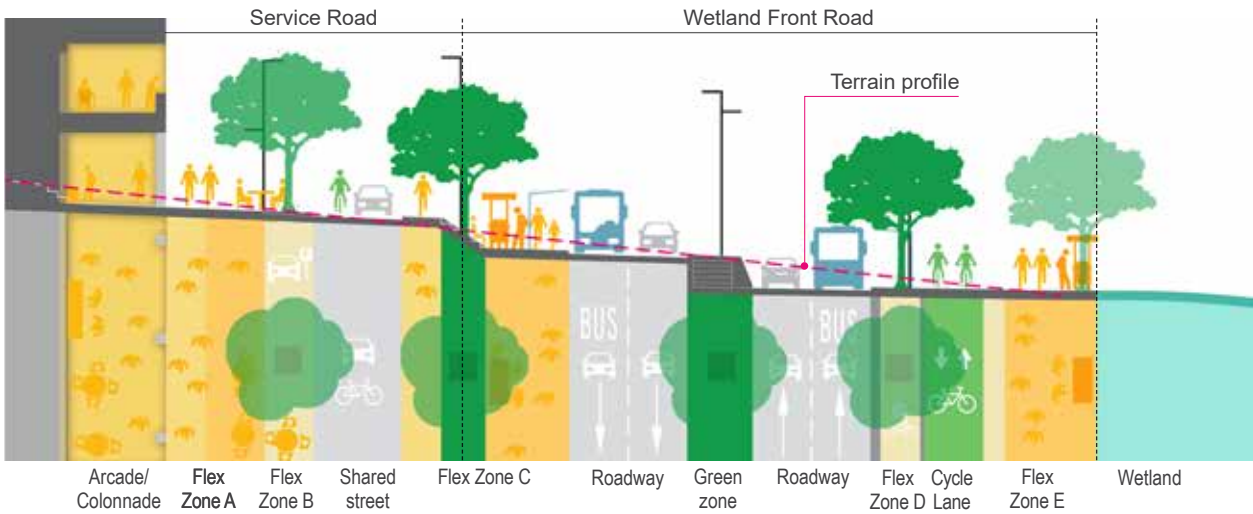


Flex Zone accommodates: pedestrian walkway min 2m, outdoor refreshment area, eating area, green pocket and trees, street market.

BRT corridor - Typical cross section at the BRT Station



TYPE 1 - ROAD INFRASTRUCTURE FOLLOWING THE COUNTOURS



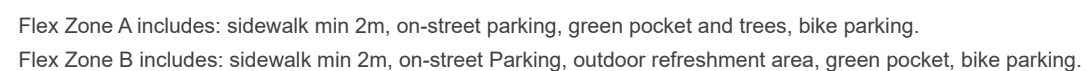
Flex Zone A includes: pedestrian walkway min 2 m, outdoor refreshment area, seating area, green pocket and trees.
Flex Zone B includes: on-street parking, green pocket and trees, outdoor refreshment area.
Flex Zone C includes: pedestrian walkway min 2 m, bus stop, seating area, green pocket and trees, street market, etc.

Flex Zone D includes: bus stop, seating area, green pocket and trees, bicycle parking.
Flex Zone E includes: pedestrian walkway min 2m, seating area, green pocket and trees, street market.

Wetland Front Promenade with Service Road - Typical cross section

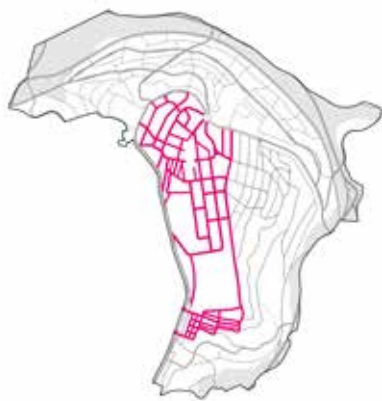


Muhima Neighborhood Roads - Typical cross section





TYPE 1 - ROAD FOLLOWING THE COUNTOURS



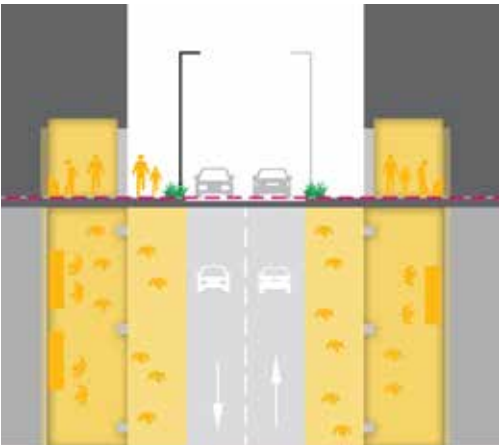
TYPE 2 - HISTORICAL COMMERCIAL NODE AND CBD PLATEAU



Arcade/ Colonnade Flex Zone A Flex Zone B Shared street Flex Zone C

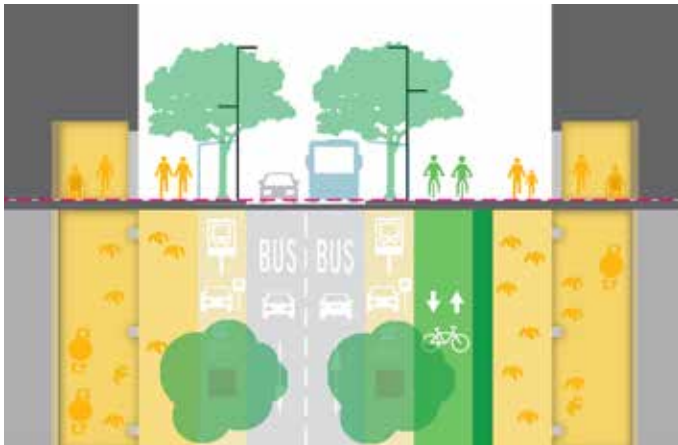
Flex Zone A includes: pedestrian walkway min 2 m, outdoor refreshment area, seating area, green pocket and trees.
Flex Zone B includes: on-street parking, green pocket and trees, outdoor refreshment area, bike parking.
Flex Zone C includes: pedestrian walkway min 2 m, bus stop, seating area, green pocket and trees, street market.

Service Road- Typical cross section



Arcade/ Sidewalk Roadway Sidewalk Arcade/ Colonnade min 3m min 3m

Historical Commercial Node - Typical cross section



Arcade/ Sidewalk Flex Roadway Flex Cycle Sidewalk Arcade/ Colonnade min 3m Zone B Zone B Lanes min 3m Colonnade

Flex Zone B includes: bus stop, on-street parking, green pocket and trees, outdoor refreshment area, bike parking.

CBD Plateau - Typical cross section

Infrastructure

Street design and the upgrading of existing roads must be conducted in coordination with basic utilities. Consider adopting energy saving and efficient utilities and green infrastructure such as bio swales, pervious strips and porous pavements.

The stormwater system

The stormwater system collects precipitation and runoff. Design the street in order to collect stormwater and reuse it for passive irrigation. Combine stormwater system with green infrastructure.

Gravity sanitation/sewer

With hilly terrain, gravity can be used as an advantage for sewer drainage and treatment systems requiring little to no energy input. Sewer pipeline should follow proposed road network.

Public toilet/rest room

Provide public toilet facilities along main corridors to allow access to clean sanitation facilities for all.

Electricity and ICT lines

Most of the electrical lines in Muhima are overhead. The lines are recommended to be put underground following the road network and green corridor alignments, and in coordination with other utility agencies. Solar panels and public WiFi hotspots are recommended along main commercial corridor and open spaces.

Lighting

Ensure safe, continuously illuminated streets for all users, particularly in pedestrian areas and conflict zones such as pedestrian or bicycle

crossings and intersections.

Wayfinding and signage

Wayfinding technologies and universal accessibility signage shall complement the street design.

Water supply and Firefighting

Clean and potable water should be distributed throughout the city by a comprehensive network of water supply pipes and reservoirs using the principles of gravity. All water lines should be constructed within the road reserve. Provide drinking fountains with fresh, potable water within main open spaces.

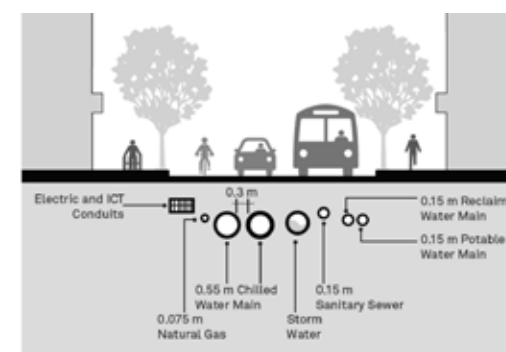


Diagram showing utilities installed under the roadbed.

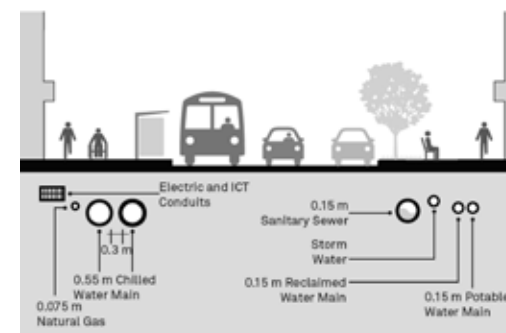


Diagram showing utilities installed adjacent to roadbed.

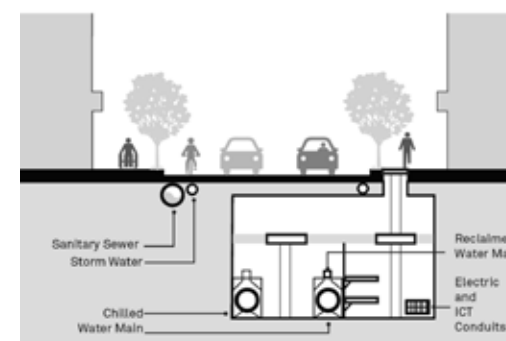
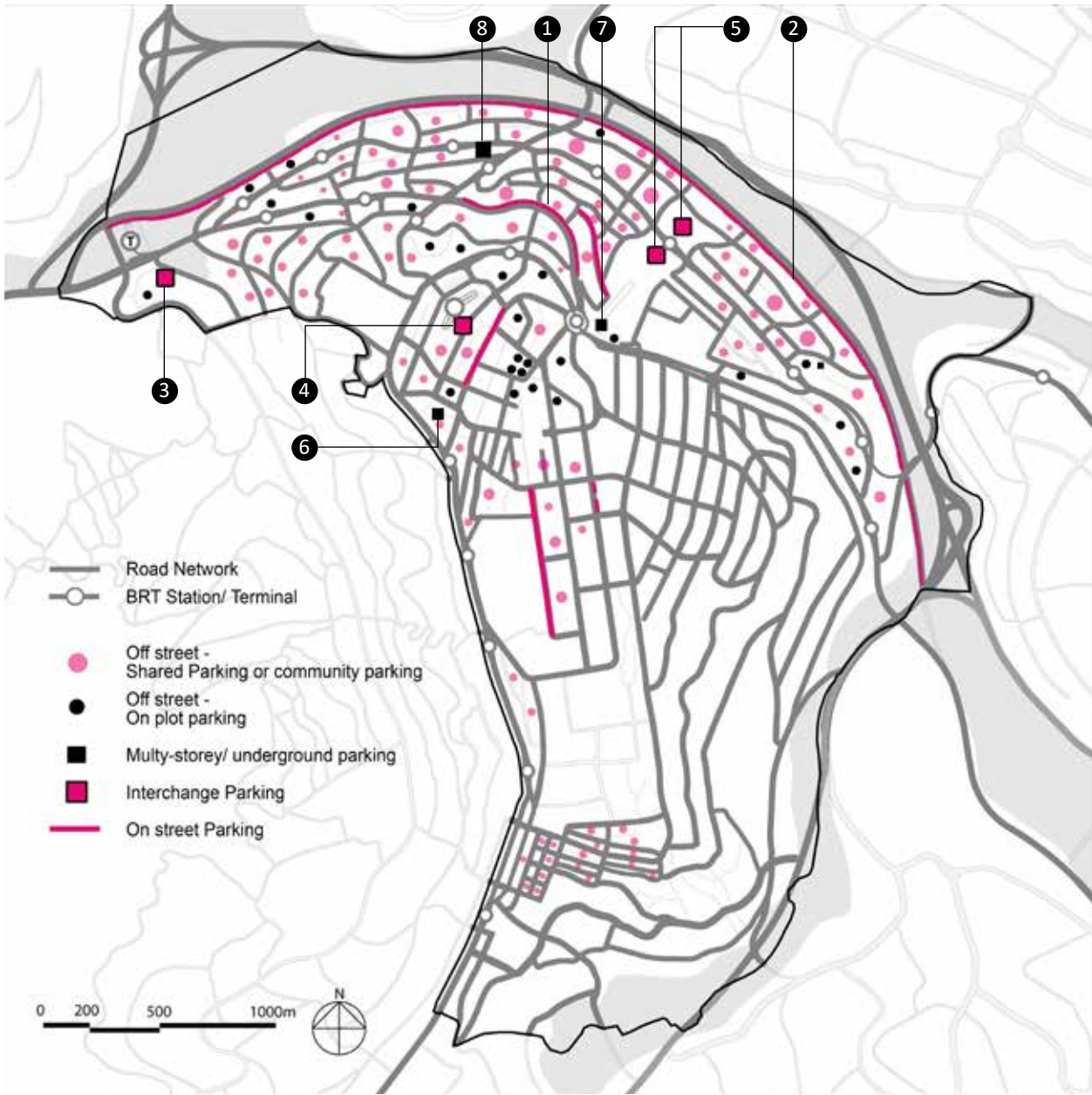


Diagram showing utilities installed in an underground corridor.

Underground Utilities alternative solutions
Source: Global Street Design Guide



Nyarugenge CBD - Parking Strategy Plan

Parking Strategies

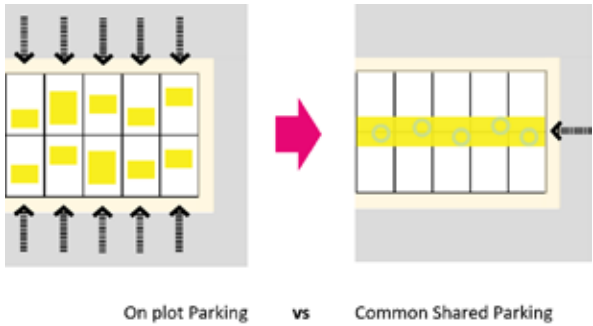
Parking strategies are based on the assumption that parking demand will considerably reduce with the strengthening of public transport system and by promoting Non-Motorized Transport (NMT) strategy in Kigali.

The parking system proposed for CBD Nyarugenge is composed of:

- Off-street - on Plot Parking - On plot parking in Nyarugenge CBD are advisable only for big development in large plots and should not be allowed within the Historical commercial node. On Plot Parking are recommended to be replaced by common shared parking, whenever possible.
- Shared Parking and/or community parking - are recommended for new developments in mixed use areas, especially in Muhima, and for land consolidation/ pooling process. Entry to shared parking and community parking should be from mid-block or service roads, avoiding multiple driveway entrances along the street and consequent conflicts with pedestrian walkway. The advantage of common shared areas is to have a larger space at the service of all residents or businesses with possibility to have common shared facilities (green pocket, playground area, etc.).
- On-street Parking Plan and Management for the entire Nyarugenge CBD needs to be implemented. On street parking are proposed lengthwise on the proposed service roads along KN1 Rd ① and the Wetland Front ②, within the City Center according to COK plan, and are potentially suitable along all neighbourhood

roads in Muhima. Within on street parking, parking spaces need not be continuous and can be interspaced with facilities such as parklets, planting, and cycle share stations. On street parking stalls can be shared with city services and freight vehicles.

- Interchange Parking are proposed in correspondences to main key transport nodes:
 - Nyabugogo Terminal ③
 - Downtown Terminal ④
- Within the CBD transect in correspondence to Muhima Market and Cultural Center BRT Station ⑤
- Additional Multi-storey parking/ underground parking are recommended to serve:
 - Historical commercial node ⑥
 - KN1 Station Plaza and St Famille plazas ⑦
 - Muhima Hospital ⑧



Taxi and Moto-Taxi

Taxi and moto taxi parking shall be provided in proximity of BRT Terminal/ Station and at the entrances of main pedestrian corridors. Designated areas will need to be identified to avoid uncontrolled and informal parking within the City.

Loading and City Services

Freight operators and service providers are people driving vehicles that move goods or conduct critical city services. These users must benefit from dedicated curb access and allocation of space for easy loading and unloading as well as dedicated routes and hours of operation.

Emergency responders and cleaning vehicles need adequate space to operate, which must be accommodated while ensuring the safety of all other street users.

Many commercial activities require frequent delivery and pick-up services. These areas present conflicts between high pedestrian volumes and large delivery trucks.

The following strategies should be considered to address the impacts (congestions, noise, pollution, etc.) of freight logistics in the CBD:

- Designate urban areas outside the City Center where goods may be transferred from large vehicles to smaller vehicles appropriate for the scale of city streets (e.g. electric micro vans or cargo bikes);
- Movement and hours-of-operation restrictions to be implemented to manage the best possible street usage.
- Limit access for commercial delivery to off-peak or night-time hours, when streets are less busy.
- Provide dedicated loading bays within 'on street parking' areas to prevent delivery vehicles from blocking sidewalks or cycle lanes, avoiding areas with heavy night-time pedestrian activity.

- Develop curb side management strategies that include purpose-based zones, time limits for parking and deliveries, and pricing strategies.
- Remove on-street parking spaces for other uses when competing needs and priorities are identified.
- Loading zones in mixed uses area must be included within the common shared parking area and should be time- or permit-restricted.

City level measures should be adopted to make urban freight logistics more sustainable¹, by establishing:

Regulatory measures

Time access restrictions; parking regulations; environment restrictions; size/load access restrictions; freight traffic-flow management, etc.

Market based measures

Road pricing, congestion charging and parking charges; taxation and tax allowances; tradable permits and mobility credits; incentives and subsidies designed to encourage more sustainable and energy-efficient urban freight transport

Infrastructures measures

Adapting on-street loading zones; using building code regulations for off-street delivery areas; nearby delivery areas; upgrading central off-street loading areas; collection points; etc.

New technologies

Traffic control; Real-Time Information Systems; etc.

Eco-logistics measures

Eco-driving, modal shift, staggered work hours, etc.

¹ Ref. 'Smart choices for cities - Making urban freight logistics more suitable.' CIVITAS WIKI - Policy notes

CBD Vibrancy and Identity

One of the objectives of the proposed Nyarugenge CBD Urban Design update is to create new spaces for cultural and recreational activities by establishing an open space network, enhancing the public transport and reinforcing the bicycle network, improving wetlands' accessibility, promoting mixed use developments, activating and creating the new wetland-front and valorizing heritage and cultural sites.

The result is a new vibrant CBD with its own character and Identity, capable of offering a variety of activities and opportunities to all, attracting residents, families, workers, visitors and tourists.



Developments along Muhima Green Corridors



Wetland Front Developments



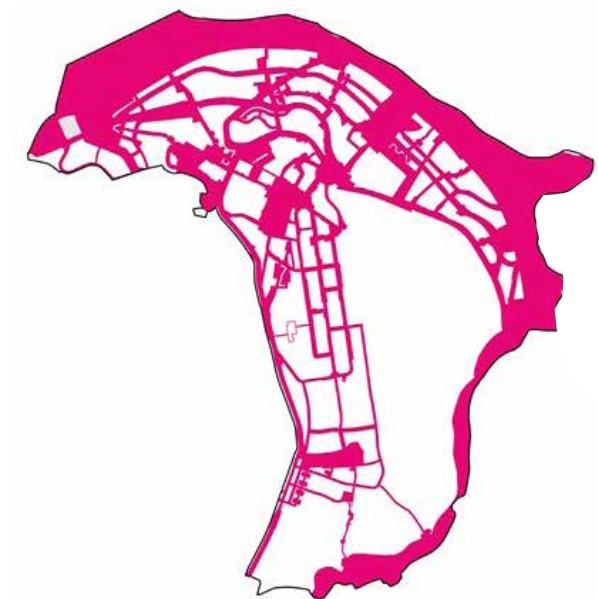
Heritage and Cultural Sites



Developments along BRT Corridor



Historical Commercial Node



Open Space network (Green Corridors and Wetland)



Urban Forms

CBD Urban forms are characterized by compactness (in various forms), focusing on increasing the density development, ensuring mixed uses and interconnected street layouts, supported by strong public transport networks and passive solar design.

Some of the principles for the urban form adopted are:

- Urban form steps down to the wetland, with building and open spaces working with slopes.
- Creation, protection and enhancement of view corridors along the slopes.
- Compact developments and densification with possibility to apply the principle of incrementality.
- Redevelopment or conversion of existing buildings in existing built up area.
- Mid- rise and mixed use, diversity, and highly integrated urban form that minimize traveling distance and time, contribute to protecting green spaces, contribute to reducing construction material usage and promote economies of scale. Mixed use to renew life in many parts of the city and enhance security in public spaces.
- Use of passive energy through orientation of buildings, layout design, urban densities, and landscaping to optimize use of solar gain and microclimatic conditions, and to minimize the need for space heating or cooling of buildings by conventional energy sources.
- Clear street edge along the commercial corridors with active uses at the ground level.
- Urban form that is easily walkable, pedestrian friendly, capable to provide the variety of

opportunities and social interaction, and access to services and facilities that constitute a rich urban life.

- Integrated transportation network and pedestrian oriented design.
- Accessible streets, attractive streetscapes, streets with human scale, public spaces and community open spaces that create attractive outdoor rooms, within fine grained, mixed use areas.
- Height, form, massing, and scale of development to have a balance between consistency and variety.

Different areas within the Nyarugenge CBD Main actions to address urban form in are:

1 Muhima redevelopment

The combination of Muhima built elements, open spaces and topography give it a unique identity. The natural terrain of the site provides for a distinctive backdrop for a unique skyline which emphasizes the natural land form. Vista and views are defined along the main green corridors crossing the hill.

Mixed uses and density, active building front along main commercial streets are the main elements that define the Muhima urban form.

Site design determines the massing of buildings and their relationship to topography, open space and the overall city fabric. Each building plays a role in the block, set of blocks, and street environment and should support the larger existing patterns of open space, circulation, uses, access to sunlight, and pedestrian experience. Buildings combined to create compact city blocks with shared space at the service of the residents.

2 BRT and Wetland front corridor

Continuous buildings edge composed by combined facades of buildings to define the public realm and active ground floor uses to promote pedestrian activity are proposed along main commercial streets.

View corridors needs to be preserved and enhanced in correspondences to green corridors and main BRT Stations.

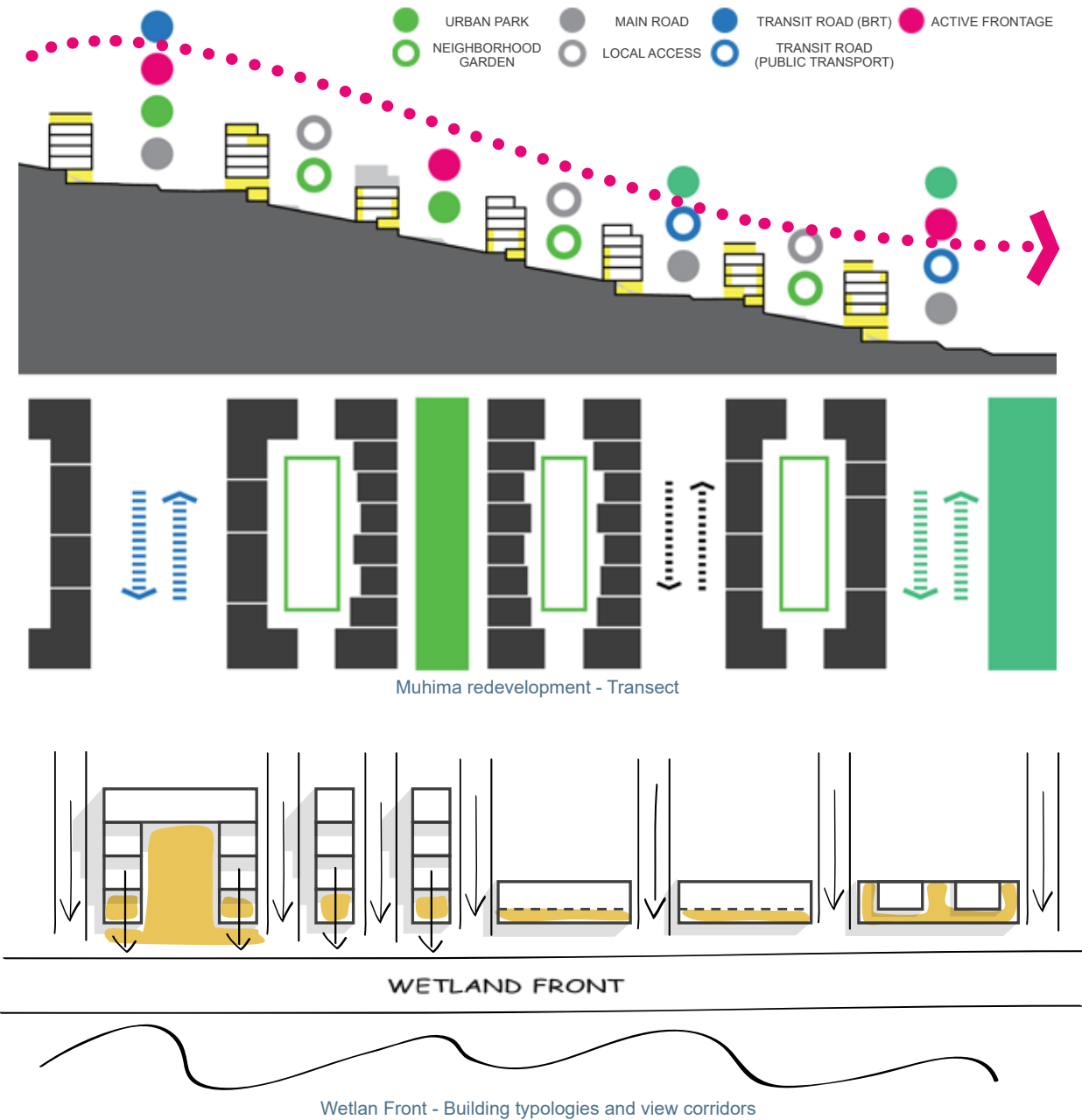
Extra GFA and additional floors can be granted along these corridors in order to create distinctive buildings or landmarks by providing public amenity, affordable housing, open spaces publicly accessible or art and cultural spaces.



1 Muhima Neighborhood Blocks



2 Developments along BRT and Wetland



3 Landmarks

Landmarks contribute to define the urban form. Landmarks can be architectures or art installations, can involve private developments or public spaces.

The CBD offers many opportunities to appreciate the urban landscape of the city as well as the gentle curves of Mount Kigali. Protecting views, creating the conditions for appreciating them and addressing the importance of gate are key elements for the development of a memorable project.

The landmarks identified are:

- a. Existing landmarks, like the former prison (Kigali Prison 1930) or the open space in front of St. Famille, that need to be upgraded and enhanced and to be incorporated in the urban fabric and open spaces network.
- b. Proposed and potential landmarks are not referring necessarily only to architectures, but can be art installations, can involve private developments or public spaces.

4 High rise developments

Tall buildings are proposed in the existing central business district of the city center and in the CBD office precinct. Design framework like buildings alignments, active ground floor, through-block pedestrian connections and integration with the green and pedestrian network have been established to incorporate harmoniously those buildings within the city fabric.



3 Existing and Proposed Landmarks



4 Tall Buildings

5 Existing Built-up

A consistent part of the city is characterized by existing buildings that need to be considered into the design. The CBD Nyarugenge Urban Design has identified the existing built up that needs to be upgraded and integrated into the open space network. Buildings includes:

- Buildings with blank walls or poor visual character exposed to prominent public view needs to be improved with green walls or art forms.
- Commercial complex versus active frontage. Commercial complexes may offer new opportunities for new kind of retailing experiences. At ground floor level openings can be created and terraces or roof terraces with views better utilized for international café and restaurants
- Fences and gates impede access and create unfavourable conditions for social interaction, vivacity, sense of belonging and are detrimental to the aesthetic values of a place. Evaluate possibilities to transform or disguise fences to mitigate their negative effects on public realm by introducing social fence, green walls, art forms.
- Evaluate the possibility to reuse existing buildings to improve functionality and change of use more compatible with urban context.



5 Existing buildings to be upgraded



6 Courtyards and small alleys to be preserved

6 Courtyards, undiscovered spots and alleys as part of the open space network

The necessity of creating a pedestrian friendly city centre pushed for the discovery of the secluded, hidden spaces within the Historical Commercial Node and the Conservation Area. This represent a valuable resource for expanding a culture of café and social eating in a more private space than the street, respecting a traditional habit specific to the Rwanda culture. Existing courtyards and small alleys need to be preserved, improved and enhanced as part of culture and character of the area.

The new developments, not only within the Historical commercial node, should aim to provide a positive spatial contribution to their context as well.

Encourage the improvement or creation of new private, semi-public and public open spaces within the urban fabric since they increase the quality, amenity and attractiveness of the neighborhood and contribute to a potential open space network, providing new or improving existing links that increase the permeability and accessibility of the urban fabric.

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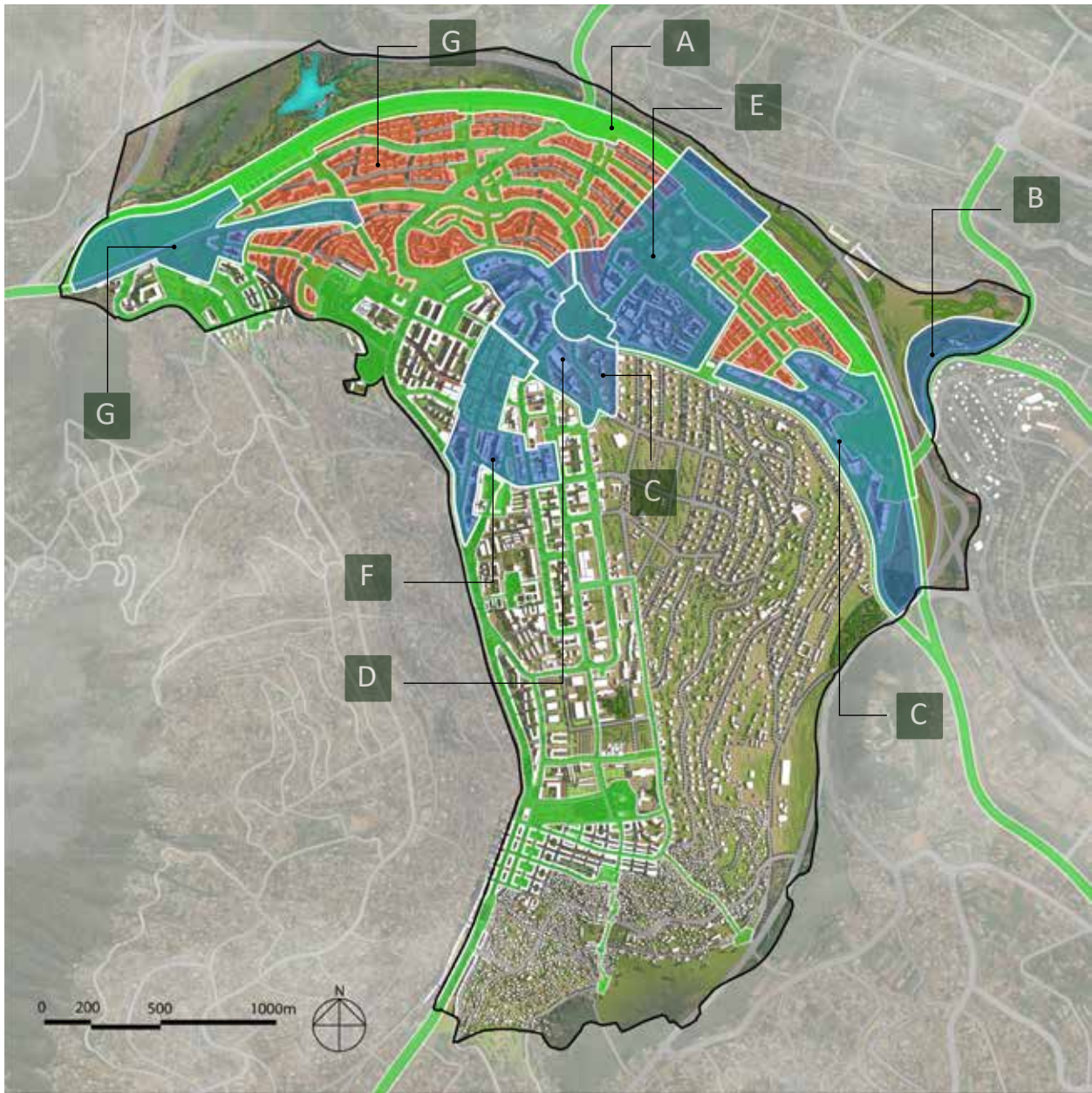


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5 URBAN DESIGN AREAS

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| | Urban Design Areas | 69 |
| A₁ | Green Corridors | 70 |
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Urban Design Areas

Urban design Areas

The Urban Design areas have been detailed at three levels: Green Corridors, Distinct Precincts and Support Precincts.

The **Green Connectors** are developed with the purpose of tying together all the different areas of the site. The Waterfront and the Green Corridors act as a tying element to hold the different parts together.

The **Distinct Precincts** in CBD have special roles and uses which will attract different activities. The three key areas are:

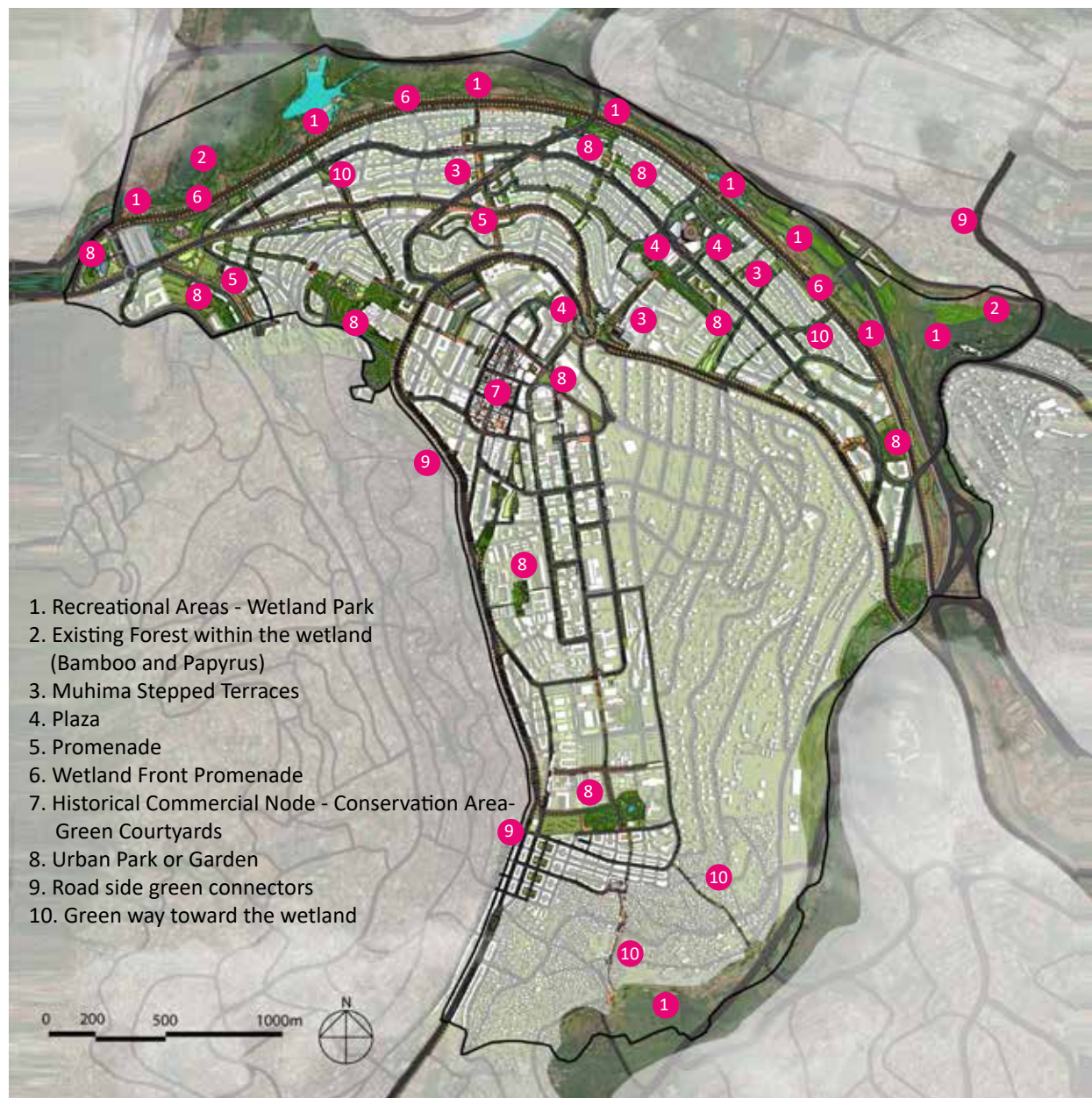
- CBD Office Precinct (previous CBD Phase 1)
- KN1 Station Plaza (previous Centre Ville Roundabout)
- CBD Transect (previous CBD Core)
- Historical Commercial Node
- Nyabugogo Transport Hub

The **Support Precincts**. Choices in living areas and convenient location of amenities and facilities are provided for the population living in Muhima.

| | | |
|---|-----------------------------------|--------------------|
| A | Green Corridors and Wetland Front | Green Connectors |
| | | |
| B | Kimicanga Garden | Distinct Precincts |
| C | CBD Office Precinct | |
| D | KN1 Station Plaza | |
| E | CBD Transect | |
| F | Historical Commercial Node | |
| G | Nyabugogo Transport Hub | Support Precincts |
| H | Muhima Mixed Use | |

A₁

Green Corridors



Nyarugenge CBD - Green Corridors - Illustrative Plan

Nyarugenge CBD open space network is identified by two main open space categories: Wetlands bordering the CBD (CBD Wetland), and the green corridors cutting through it and generating important Non-Motorized Transport (NMT) links.

Wetland

Wetlands represent as the most important and productive ecosystem for Kigali, and Rwanda. They are vital for human survival and play a valuable role in providing numerous economic, ecological and wellbeing benefits, known as wetland ecosystem services.

Some of the exceptional benefits provided by urban wetlands include: Water supply, flood regulation, climate moderation, wastewater treatment, pollution reduction, habitat for biodiversity, agriculture and aquaculture, and also tourism, recreation and leisure, education, culture and heritage, research and human wellbeing.

It is in this context that, despite the fact the CBD wetland detailed plan is not part of the scope of this urban design, it has been considered as a key component of the design for their relevance in the environmental and physical context.

The CBD Wetland consists of Nyabugogo, Rwezangoro and Rwampara wetlands. The objective of this Plan is to improve their accessibility, by establishing a physical and visual connection through green corridors, and creating a new Kigali CBD wetland front.



Kigali CBD Wetland - Bamboo Forest

The plan is considering the inputs coming from the ongoing Wetland master plan, and identifies the following possible actions to transform the wetlands into a wetland park:

- Conservation and restoration of encroached wetlands, waterbodies and natural drainage network;
- Conservation of existing natural vegetation and forest;
- Relocation of settlements and incompatible activities encroaching or endangering wetlands;
- Remediation of contaminated area and possible reuse for recreational and green economy activities.

A wetland zoning has been established to identify the plots within the wetland with potential to become recreational areas ¹. Only those parcels within the wetland, located in Nyabugogo and reserved for the future development of the BRT Terminal, has been assigned as Mixed-Use - Commercial District (C1), to allow for the upcoming new transport infrastructure (Refer to Zoning Plan).



5A1 Example of Wetland Park - Birdwatching structure

Green Corridors

Green Corridors are an essential component of the cities' ecological networks as they represent a strong response to environmental problems. In addition to their ecological role in creating a pristine landscape, and helping people to live in better communities, they provide access routes and improve the quality of life, particularly social life. Therefore, they should be viewed as part of the overall network of habitats throughout the city.

Green Corridors' designs produce a subsidiary network of greenways to actualize and complement the green infrastructure framework, to unify and actively connect all parts within the city's fabric including historical, educational and recreational areas. This will create new channels for population-distribution, provide more economic opportunities and increase the potential value of land ¹.

Nyarugenge CBD Green corridors have been identified through the inventory of available nature corridors in the City, complemented by new proposed green-ways. They include:

- Green ways that connect the City to the



5A2 Example of Urban Park

wetland using the topography, to enable water to flow towards strategically sited rain gardens and green street elements.

- Wetland Front promenade.
- BRT corridor road-side.
- Streets with potential for a streetscape and landscaping improvement.

Green corridors include:

- Urban Parks:
 - The natural areas which have been identified for protection such as steep slopes and natural drainage corridors, are developed as open green spaces or Urban Parks.
 - Existing green area, not accessible or underutilized, that can be enhanced to become potential publicly accessible Urban Parks.
- Existing and proposed urban gardens and green pockets.
- Promenade, Plaza, Pedestrian streets or alleys and Courtyards are part of the green corridors.



5A3 Street landscaping

The proposed Green corridors aim to:

- Maintain and improve environmental quality through nature protection.
- Increase economic development through appropriate activities, recreation development and historic conservation.
- Create high land value potential through a well distributed population.
- Create a dynamic network to provide sustainable transportation, through walking and finding the right of use of riding, cycling, and light motorized transportation.

General requirements² have been established for developments along green corridors:

- Active ground floor with arcades (colonnades) or galleries to provide shelter along promenades, plazas, main pedestrian corridors.
- High quality architecture and energy efficient buildings.
- Pedestrian connectivity to publicly accessible open spaces.

¹ WIT Transactions on Ecology and the Environment, Vol 138, © 2010 WIT Press

² Refer to Green Corridors Urban Design Regulations

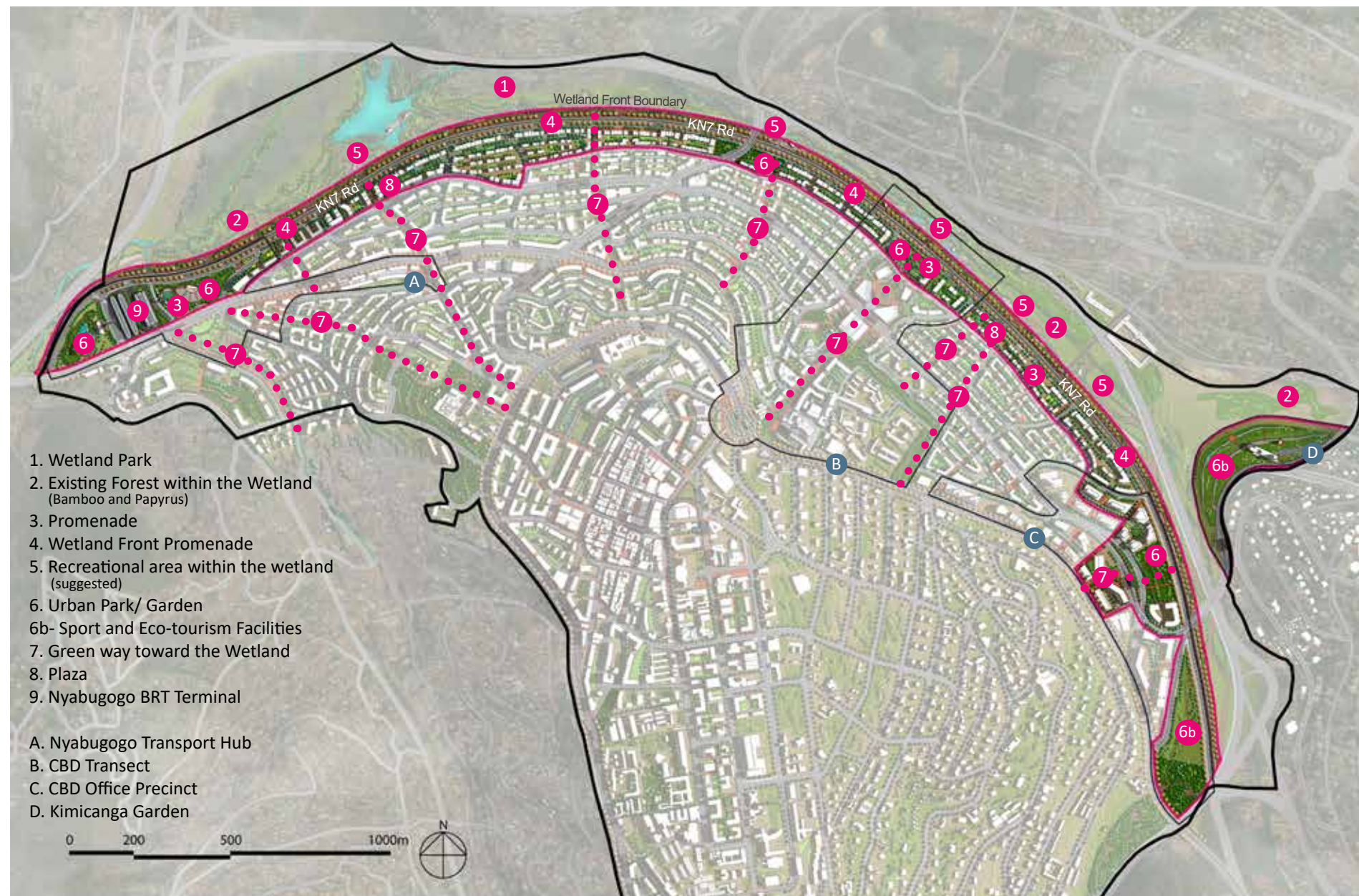
5A1 © 'Hong Kong Wetland Park 2017-04-09'-Image courtesy of Edward Yeung under Creative Commons License, Attribution-NonCommercial-ShareAlike 2.0 Generic (CC BY-NC-SA 2.0) - <https://www.flickr.com/photos/139984845@N03/33938535571>

5A2 © 'Union Square, playground'-Image courtesy of La citta Vita under Creative Commons License, Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) <https://www.flickr.com/photos/la-citta-vita/5185732742>

5A3 © Piazza Nember View - Image courtesy of Stradivarie Associated

A₂

Wetland Front



Nyarugenge CBD - Wetland Front - Illustrative Plan



Wetland front planning and development is crucial to capitalize the benefits provided by urban wetlands. Wetland front development is not only about economic development, it is also an opportunity to shape people's life style and type of activities in Kigali.

People's preferences for outing destinations are often constrained by the facilities, services, accessibility and available open spaces. For this reason, development of the wetland front should adhere to the notion that the wetland front is an inherently public asset.

Planning a wetland front development, requires envisioning a network of well-connected, multi-use public spaces that fit with community's shared goals. By orienting wetland front revitalization around public spaces, new urban design should enhance the quality of existing destinations, which would result in enhancement of whole city identity.

Design Strategies

Ease of movement

- Provide easy access to, from and through the water front, locally and regionally;
- Ensure active transportation as integral part of Water front life;
- Provide and enhance connections between Nyarugenge CBD, wetland front, and future wetland park by establishing physical and visual public access to and along the wetland front.

Activities and Liveliness

- Transform the Wetland front into a first outdoor destination for people of Kigali and visitors by offering high quality, safe and vibrant outdoor destinations, to attract new businesses and promote tourism.
- Promote and strengthen the unique character of the “CBD wetland front” area as a prime location for wetland front-related commercial and recreational development and help attract a useful cluster of shops, restaurants and related activities, which will complement and enhance the area.
- Take maximum advantage of the beauty of the Nyabugogo, Rwezangoro and Rwampara wetland and future wetland park, thereby best serving the Muhima community, by ensuring an open space network comprised of parks, public open space and public access areas.

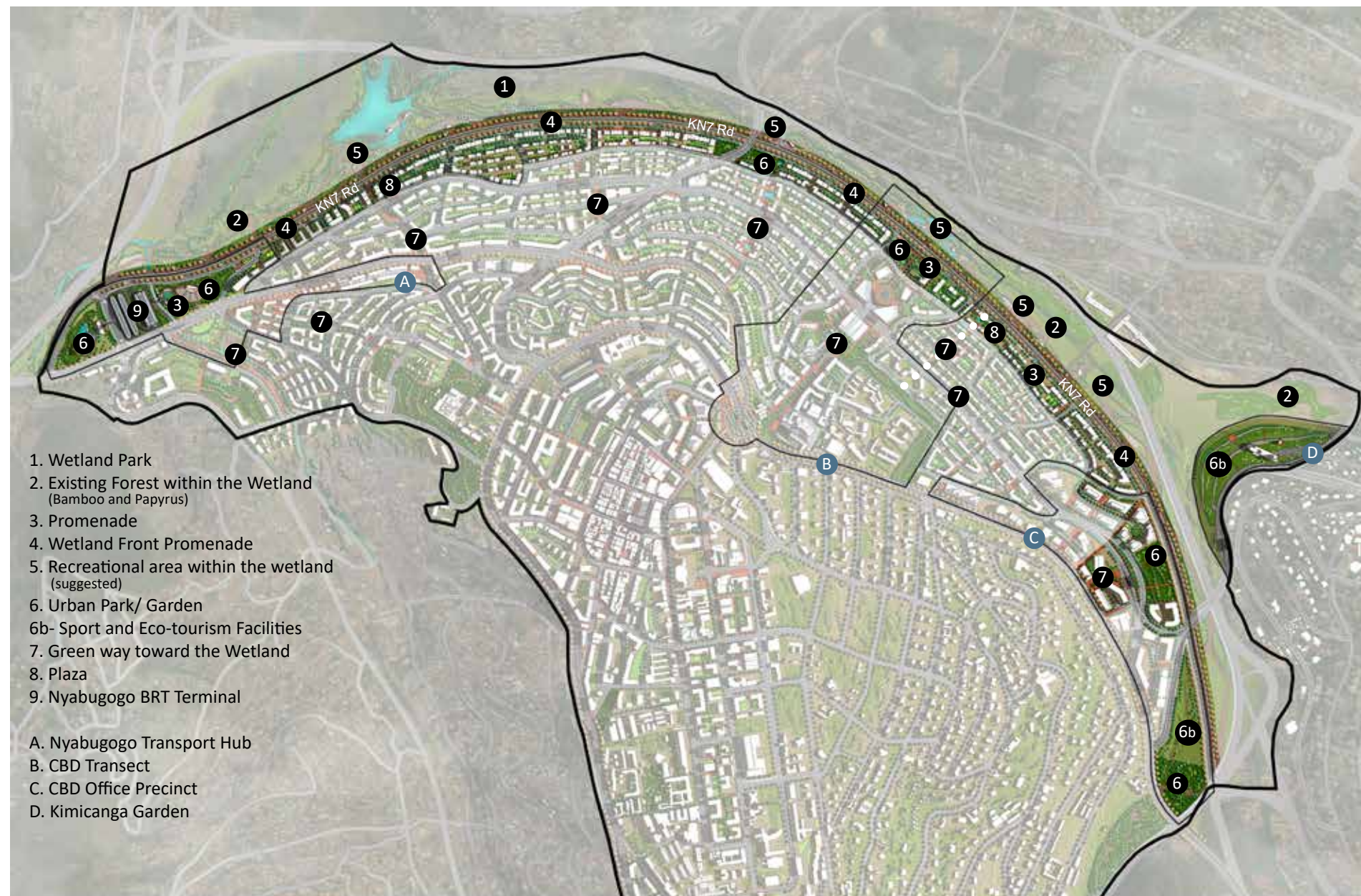
- Provide flexibility on architectural design within limits, established to assure adequate access to public access areas, and thus encourage more attractive and economic building forms.
- Focus higher-density development in appropriate locations along wide, mixed-use corridors with good access to transit.
- Create a lively and attractive built environment that will provide amenities and services for the use and enjoyment of area by residents, workers, and visitors ,and providing regional recreation.
- Ensure a diversity of uses where people of all income levels, age and cultures should feel welcome.

Character and Identity

- Transform the Wetland front into a place that are well loved, with its own unique character.
- Encourage well-designed development that will strengthen and protect the unique character of the wetland front, which will become the transition area between the Muhima mixed use redevelopment and the wetland, with its natural and recreational resources.
- Encourage public art installations, and participation of arts community.
- Preserve and interpret the tangible aspects of the history of the wetland, in order to provide character and meaning to its front development.
- Develop a site-specific architectural vocabulary that connects to the City’s particular wetland-front, and reflects Kigali’s unique urban character.



CBD - Wetland Front Promenade



1. Wetland Park
2. Existing Forest within the Wetland (Bamboo and Papyrus)
3. Promenade
4. Wetland Front Promenade
5. Recreational area within the wetland (suggested)
6. Urban Park/ Garden
- 6b- Sport and Eco-tourism Facilities
7. Green way toward the Wetland
8. Plaza
9. Nyabugogo BRT Terminal
- A. Nyabugogo Transport Hub
- B. CBD Transect
- C. CBD Office Precinct
- D. Kimicanga Garden

Nyarugenge CBD - Wetland Front - Illustrative Plan

Design Framework

The wetland front development is closely related to the Muhima redevelopment concept. The urban design for the wetland front aims to revitalize the front to create a new attractive area for the residents and visitors, improve the accessibility and the connections between upland and wetland.

5A4 © 'Hammarby, waterfront recreation'-Image courtesy of La Citta Vita under Creative Commons License, Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) - <https://www.flickr.com/photos/la-citta-vita/4758188317>

5A5 © West Harlem Waterfront Park - 'fountain 3'at West Harlem Piers Park - Image courtesy of K. B. R. under Creative Commons License, Attribution-NoDerivs 2.0 Generic (CC BY-ND 2.0) - <https://www.flickr.com/photos/gezellig-girl/3691812491>

5A6 © 'Yuka over the Kamo River' - Image courtesy of einalem under Creative Commons License, Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) - <https://www.flickr.com/photos/einalem/863067268/>

Wetland Front Promenade and Green Corridors as part of the Public Space Network

The CBD wetland front promenade ④ covers five kilometers (5km) along KN 7 Rd, from Nyabugogo Bus Terminal area ⑨, to the CBD Office precinct B.

The promenade comprises of large sidewalks along the wetland front. Both road sides are connected by pedestrian crossways at a regular distance, in response to the green corridors ⑦ connecting the CBD upland to the wetland.

On the wetland side, a continuous pedestrian and cycling route along the wetland should be integrated with the future wetland park design ①, increasing potential uses by expanding the promenade towards the wetland.

On the opposite side, along the buildings facing the wetland, sidewalk alternates to a sequence of open spaces, promenade, parks and plazas.

In correspondence to each open space, physical and visual corridors (through the green corridors) connect the wetland front to the wetland, on one side, and to the upland, through Muhima redevelopment, on the other side.



5A4 Waterfront - Recreational area

Upland Connection and Visual Corridor

Upland Connection and Visual Corridor ⑦ shall be maintained along the green corridors. Minimum landscaping provision requirements shall be established by a streetscape regulation of the green corridors.

In no event shall fencing be permitted in any open area of the visual corridor. Exceptions will be evaluated by the City of Kigali by introducing social fences or applying screening requirements.

Wetland Front Promenade

The wetland front promenade ④ should become a vibrant public park and an active multimodal corridor, with wide, high-capacity cycle tracks, wide walking paths, and high-quality transit stops and service.

Promenades, urban parks, gardens and plaza are suggested in convenient locations along the wetland front promenade, mostly in relation to the green corridors.



5A5 Waterfront Park

Streetscape provision

Each green corridor and open area along the wetland front may include the following elements:

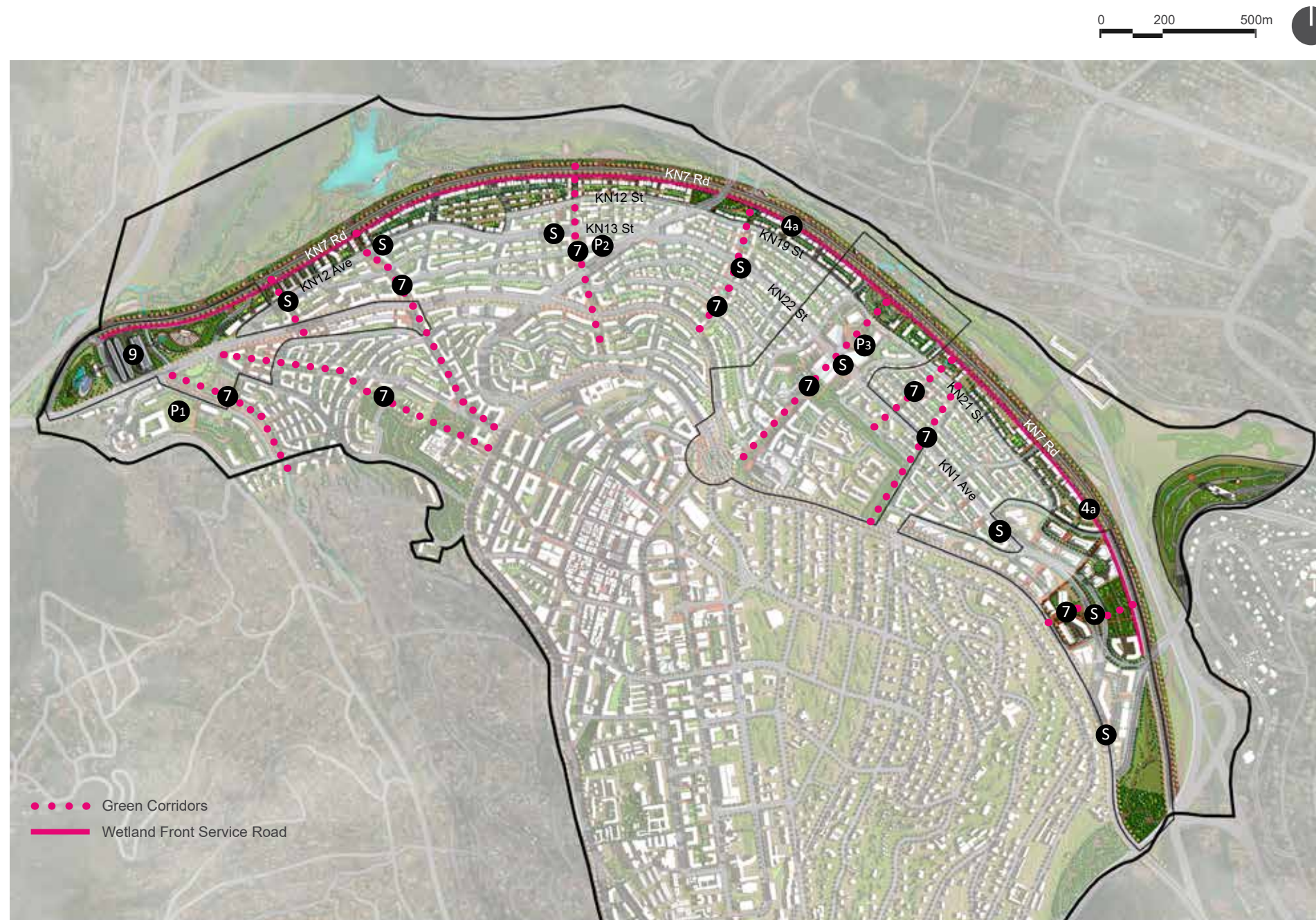
- Streetscape amenities including, street furniture, seating, tables, benches, trees, landscaping, cycle racks, and water fountains;
- Streetscape-enhancing amenities including lighting or sculptural artwork;
- Entertainment amenities including water features, children's play areas, game tables, courts or skateboard parks, etc.;
- Unenclosed outdoor refreshment area;
- Drinking fountains with fresh, potable water to offer sustainable alternatives to bottled water and ensure an essential water source in many communities.
- Services and dedicated spaces for vendors, food stalls, and other establishments along the wetland's edge;
- Public toilet infrastructure along wetland front, and green corridor, to improve quality of life by maintaining access to clean sanitation facilities, for all.



5A6 River front - active terraces

Building Edge and Uses

- Mandatory Building edge alignment along the wetland front promenade and open spaces.
- Revitalize wetland front edges by providing active ground floor with arcade (colonnade) or gallery to provide shelter along the building front edge.
- Ensure an intimate and comfortable scale along the wetland front and secure good walking conditions and create many attractions for recreational activities.
- Promote healthy activities, environmental education, and social interaction.
- Bringing the city to the wetland with retail and restaurants/café's/bars, along the wetland promenade can ensure security, create a sense of ownership, and encourage diversity in activities.
- Ensure vertical variation in uses (mixed-use), so all most all buildings have commercial activities, offices and dwellings.
- Ensure diversity of uses, to create a work-live-play-shop-environment where getting into a car is not necessary. A diversity of uses will extend the day/night life and vibrancy of the wetland front;
- Create buildings front variation along the wetland promenade, but adhering to a solid design framework, that establish a coherent building style.
- Ensure energy efficiency developments, with the widespread use of alternative energy.



Nyarugenge CBD - Wetland Front - Illustrative Plan

Road network and Parking strategies

The road network along the wetland front is following the existing road alignment. A service road **4a** is proposed on the south side of the wetland front road, to serve the Muhima developments, and the developments facing the Wetland. The service road is proposed to be elevated along land portions facing the wetland, with higher slope gradients, in order to facilitate the connections between Wetland Front road (KN 7 Rd) and the upper roads (KN 12 Ave, KN 19 St, KN 21 St).

On-street Parking are recommended along the service road, with interruptions in response to the open spaces (urban parks, promenade or plaza). All Muhima neighborhood streets are potentially available, to accommodate on street parking, subject to CoK evaluation. Appropriate parking fees strategies should be evaluated to favor local residents (free car parking for resident).

Accessibility to the wetland front will be facilitated by providing a transit-way along the wetland front and by implementing the new BRT corridor on the upper level. Eight BRT Stations **S** and the Nyabugogo BRT Terminal **9** are proposed at convenient distances (along KN 12 Ave, KN 13 St, KN 22 St, and KN1 Ave). Each BRT Station is located corresponding with the green corridor **7**, in order to facilitate and increase the quality of pedestrian connection to the wetland-front. The distance between each BRT Station to the wetland front varies between 70 m to 250 m.

Three Interchange Parkings are proposed to serve Nyabugogo BRT terminal **P1**¹, the BRT stations in Amahoro **P2**², and the BRT Station in correspondence to the CBD Transect **P3**³, in front of the new Muhima Market and Cultural Cluster.

Finally, a specific design guidance should regulate the wetland front road design by including the following design strategies ⁴:

- Reduce the number and width of travel lanes to widen promenade space.
- Dedicate space for collective transport to increase the street capacity. Transit can be accommodated in a side-running transitway, with no crossing conflicts.
- Add taxi drop-off areas and selected parking areas for accessible parking, and locate these to minimize conflict with transit, cycle, or travel lanes.
- Design specific gateways to access these destinations, as safe intersections between all users.
- Provide pedestrian refuge islands between the cycle tracks and transit lanes to shorten crossing distance.
- Raise pedestrian crossings, to slow traffic speeds, and prioritize pedestrians, and adopt traffic calming strategies.
- Add landscaping on the side median, and along the wetland front or park, to improve the pedestrian experience.

¹ Nyabugogo BRT terminal is identified as TIII/2 in the BRT Base Map*.

² The BRT stations in Amahoro are serving the corners marked by KN8 Ave and KN13 St are identified as St IV/11 and St I/21 in the BRT Base Map*.

³ The BRT station in correspondence to the CBD Transect, in front of the new Muhima Market and Cultural Cluster identified as St IV/9 in the BRT Base Map*.

* BRT Base Map - Source 'Feasibility Study and Preliminary Design for a Bus Rapid Transit (BRT), System for the City of Kigali '. Refer to Chapter 4, 'Public Transport Network' section of this report.

⁴ Reference: 'Global Street Design Guide' - Global Designing Cities Initiatives - NACTO

B Kimicanga Garden

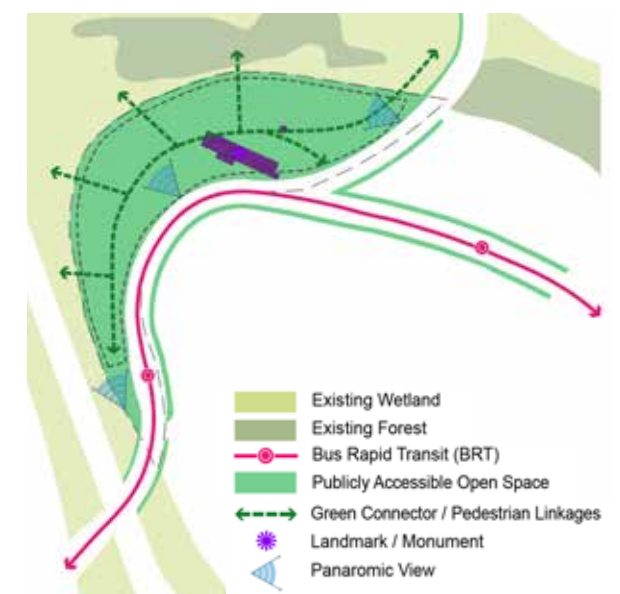


Nyarugenge CBD - Kimicanga Garden - Illustrative Plan

Concept

The Kimicanga Garden is surrounded by the Rwampara Wetland, identified as potential urban green space, with an astonishing view to the Wetland and Muhima CBD. It has been selected to become a new fully publicly accessible Open Space, with recreational and cultural activities.

Kimicanga Garden, for its environmental characteristic and location has the potential to become a prototype of open and recreational space, to be included and connected to the CBD Wetland Park, and to be designated as tourist and educational destination, for both visitors and residents.



Kimicanga Garden Precinct

The Kimicanga Garden aims to provide social and cultural benefits to the residents and visitors, enhancing the quality of the area, increasing the value of the adjacent properties and facilitating the developments and the densification of Kimicanga area along the BRT corridor.

Design Strategies

Ensure connectivity and accessibility achieving the following objectives:

- Encourage the creation of a comprehensive bicycle and pedestrian network.
- Improve legibility and wayfinding.
- Provide integrated public transit systems with clear information and convenient connections.
- Preserve existing footpaths and enhance wetland accessibility.
- Preserve view and ecological corridors.

Promote following activities to enhance the Kimicanga Garden experience:

- Introduce activities and uses to make the garden safe, active, and multifunctional in all seasons and at all times.
- Provide places for exercise and physical activity.
- Provide places of respite and community gathering place, to socialize and meet.
- Provide a space for children to play and learn.

in order to:

- Provide value to local tourism.
- Foster development of green jobs, technology, and practices.
- Increase adjacent property values, and support nearby businesses.
- Attract new businesses and residents.

Fostering sense of place, culture, and Identity:

- To promote and strengthen the scenic landmark designation of Kimicanga Garden requiring high quality landscaping
- To preserve hillsides having unique aesthetic value to the public.
- Increase community environmental awareness.
- Preserve land having qualities of exceptional recreational or educational value to the public.

Ensure environmental sustainability:

- Improve air and water quality.
- Guide development in areas of outstanding natural beauty in order to protect, maintain and enhance the natural features of such areas.
- Protect biologic, botanic, geologic and topographic features having ecological and conservation values and functions.
- Reduce hillside erosion, landslides and excessive storm water runoff associated with development by conserving vegetation and protecting natural terrain.

Design Framework

Kimicanga Garden site, currently owned by the City of Kigali, is designated as ‘Parks and open spaces’ zone in the 2019 Master Plan Review.

Museums, libraries, gallery, memorial site, cultural and tourism centers, places of worships, public restrooms are some of the uses allowed and recommended for this area. Landmark, art installations and monuments, water features, are some design elements that can contribute to make this area visible and attractive. Microenterprise, commercial and retail use are conditional uses subject to evaluation and approval by COK.

The goal is to guide development in this area of outstanding natural beauty and strategic location to protect, maintain and enhance its natural features, while introducing cultural and economic value to it.

Accessibility to the area is ensured by two BRT stations ④ strategically located at the south east and north-west edges of the site. Walking and cycling accessibility is ensured along the BRT corridor ⑤, KN 5 Rd, and the major arterial KG

3 Ave. Pedestrian footpaths and bicycle trails within the garden and the future wetland park, should be planned to be connected to Kigali pedestrian and bicycle network.

The area will be restricted to motorized transport, while adequate space for drop off and pick up at visitors’ area shall be provided at the entrance of the Garden.

CBD OFFICE PRECINCT



Nyarugenge CBD - CBD Office Precinct - Illustrative Plan

Concept

The CBD Office Precinct (formerly known as CBD Phase 1) is the natural extension of central business district in the City center, location for office and government buildings, major academic and cultural institutions. The Urban Design objective is to promote and support the continued growth of the Office Precinct as a unique mixed-use area, introducing new green corridors toward the wetland, and active retail corridors along KN3 Rd, KN1 Ave, along the main green corridor and along the wetland front.

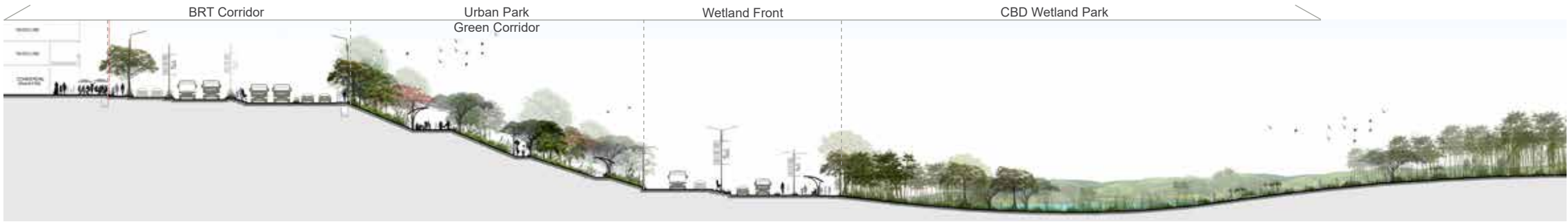


CBD Office Precinct

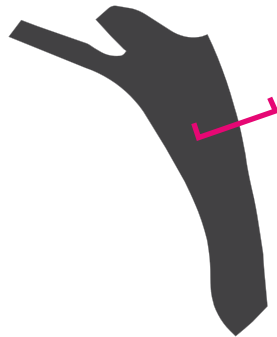
Urban design guidelines have been established to ensure a continuous active frontage along the new BRT corridors ⑤ and the Wetland front ⑨.

New green corridors have been introduced to reinforce visual and physical connection to the wetland. A higher quantum of mixed-use has been introduced to increase the vibrancy of the area, currently almost entirely occupied by offices, to enhance its livability along the duration of the day and to provide a greater amount of market solutions. While the prominence of office use remains, this additional mix use should improve site's vibrancy and attractiveness, increasing market values, facilitating security during the night, and providing a more palatable location for different economic activities.





CBD Office Precinct - Stepped garden - Cross Section



Design Strategies

Ensure accessibility, connectivity and city block permeability achieving the following objectives:

- Provide quality public access areas along green corridors, plaza, CBD Office Precinct Park and wetland front.
- Preserve, protect and prevent obstruction of outstanding scenic views as seen from a mapped public park or open space directly accessible to the public.
- Increase pathway, publicly accessible through block connection and greenway connectivity ensuring direct connections to the wetland-front and wetland area.
- Reduce physical barriers to accessing the site, such as fences or visual obstructions in view. corridors, and include wayfinding features to draw visitors throughout the site and wetland front. Signs should include information on direction, walk time, amenities, and wheelchair accessibility.
- Ensure affordability of amenities, and activities for lower-income visitors, to access and fully experience the site.

Functions and uses

- Strengthen the business core of CBD Office Precinct by improving the working and living environments.
- Activate ground floor usages: provide community facilities, recreational and arts facilities, retail spaces, cafes and restaurants that service residents, workers and visitors;

provide diverse programming and passive educational features.

- Provide amenities like restrooms, rest areas, bike pumping stations, food vendors, and community gardens along publicly accessible open spaces.
- Provide shade or sheltering structures to expand use in times of hot sun or light rain.
- Provide a high-quality and attractive environment that support local Businesses along BRT and green corridors, and wetland front.
- Ensure quality greenery design to encourage outdoor activity, including walking, cycling, and other recreation.

Culture and Identity

- Provide iconic paving, consistent design for public benches, lamp posts and street furniture to strengthen CBD Office District character.
- Ensure greenery, and quality public access, select native species to best suit local climates, planting productive and aesthetic greenery for ecological and visual values.
- Increase the sense of place by introducing public art and special events, to enhance the main green corridor and wetland front use.
- Promote and strengthen the scenic view to the wetland by requiring landscaping along the main green corridor.

Design Framework

Accessibility at local and Regional level is guaranteed by the BRT corridors ⑤ and two BRT stations located respectively along KN3 Rd, in proximity of KN3 Rd, and KN5 Rd intersection ④a, and one in the midway of the main green corridor ④b, toward the wetland along KN1 Ave, facing the main plaza ⑧ crossing the hill on one side, and the new Urban Park ② on the other.

Vehicular access has been strategized to cope with the slope challenge of the area, and to preserve the main pedestrian corridors by using service roads.

Main publicly accessible spaces network has been established for the entire area. Through-block connections ⑥ to privately owned publicly accessible interior spaces, provide alternative routes for pedestrians.

CBD Office Plaza and Urban Park

A main plaza ⑧ at the KN 3 Road level descends toward the wetland with a series of stepped gardens.

A linear garden ③ at the BRT Station level acts as resting and recreational area.

Finally, the new CBD Office Park facing the wetland, aims to:

- Mitigate environmental impacts created by the built environment through sustainable design practices;
- improve the physical and emotional health of residents, workers, and visitors and
- provide economic benefits and support the local economy in increasing property values,

and providing green jobs to the community.

The CBD Office Park is part of the Wetland Front redevelopment Programme proposed to revitalize and promote the Wetland front redevelopment, and to facilitate wetland accessibility.

KN3 Rd Building Edge

The new BRT corridor ⑤ entails to activate the buildings edges along KN3 Rd and KN1 Ave. Inviting and active frontages, arcades and galleries should provide an engaging and enjoyable walking experience.

Permeability and through block connection regulations will contribute to reinforce the network of open spaces within the CBD Office Precinct.

Extra precautions when developing the site

Considering the recent case of landslide, that has been affecting plot n.18 and portion of KN1 Ave, the District is subject to special slope regulations and restrictions (refer to 'CBD Office Precinct - UD Regulations').

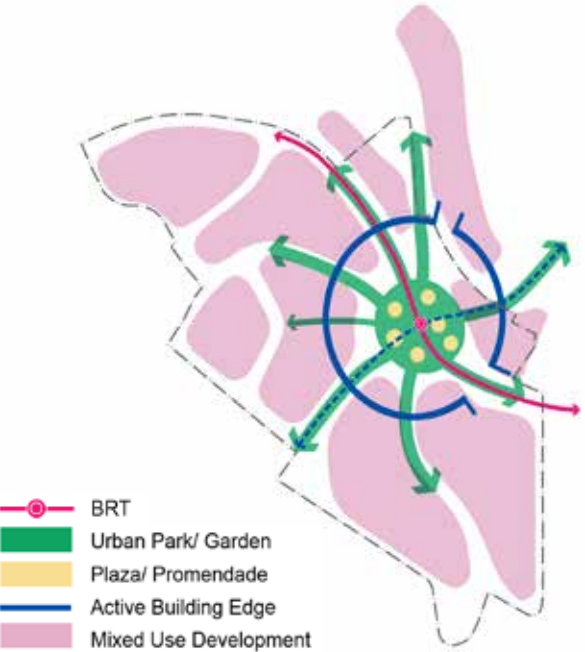




Concept

The KN1 Station Plaza aims to convert a space that is currently monopolized by cars (known as Centre Ville Roundabout) into a vibrant social space at the service of the neighboring residents, businesses and CBD users.

The KN1 Station Plaza is designed to be a Key-node, characterized by a center-running Bus Rapid Transit line and dedicated Station to facilitate access to the City Center and represents a “welcome gate-way” for residents and visitors.



KN1 STATION PLAZA D



Nyarugenge CBD - KN1 Station Plaza - Illustrative Plan



Nyarugenge CBD - KN1 Station Plaza - Illustrative Plan

KN1 Station Plaza **A** is envisioned to function as gate-way to the CBD and represents a nodal link between the City centre, the northern and eastern part of the city. From KN1 Station Plaza, people can easily access the Historical City Center, passing through the KN4 Promenade **B**, and KN4 pedestrian Street **C** (currently known as Car Free Zone) or the vibrant commercial street along KN2 St **D**, and KN1 Rd **E** or to the new mixed-use district of Muhima **F** on the north-east side.

KN1 Station Plaza District

The KN1 Station Plaza regulations have been established to revitalize the Centre Ville Roundabout, facilitate the development of the blocks facing the roundabout and along KN4 Ave, reinforce the connection to the KN3, and KN4 Ave and the Historical Commercial Node. For its present location and context and accessibility, it has the potential to become a high-rise mixed-use district with requirements for retail continuity and pedestrian circulation spaces at the ground level.

Design Strategies

Ensure accessibility and connectivity achieving the following objectives:

- A well-functioning transit hub.
- Improved pedestrian and bicycle links including KN1 Station Plaza in the bicycle network.
- Improved legibility and wayfinding by implementing a consistent sign strategy and using high quality design to communicate links and to guide people through the spaces.
- Integrated public transit systems: clear information and convenient connections.
- Great connections to the rest of the city.

Propose diverse uses and activities to attract people:

- New edges and activities in the spaces, introduced with the installation of small kiosks, selling newspapers, drinks, fruit etc.
- Upgraded, open and activated ground floor facades.
- New, interesting and appealing buildings on corner plots, that are not yet developed.
- A pleasant experience while using and waiting for public transit.

Create unique urban experience:

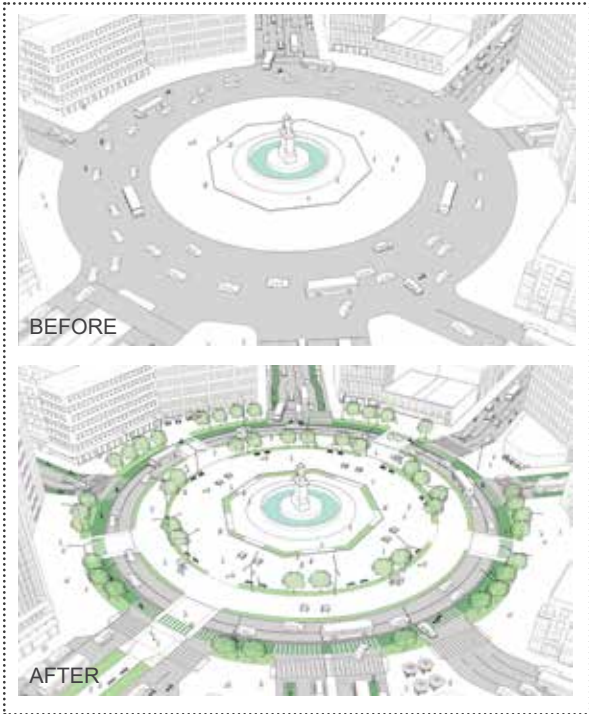
- A strong sense of place, and a series of welcoming spaces with clear identity.
- Adjacent spaces with recreational features.
- High quality materials and design to transform the spaces into places that Kigali can be proud of.

Design Framework

Intersection redesign

The intersection **A** redesign aims at facilitating better movements for all users, and to improve usability, safety and quality of the new central open space. Main design interventions are described below:

- Raise the pedestrian crossings to ensure safe access, while slowing vehicular traffic.
- Reduce the roundabout to two vehicular lanes, decreasing the number of conflicts and lane changes, currently occurring in the roundabout.
- Sidewalks and the central plaza are widened, dedicating additional space to pedestrian active uses, adding greening, trees, seating, lighting and other street furniture to make the central space more attractive and functional.
- Clearly demarcated paths for cyclists throughout the intersection. Cycle lanes are located on the outside of the roundabout to reduce interaction with vehicles, with different marking pattern, at points of potential conflict.



5D1 Example of road iteration transformation



5D2 Example of transformation of a roundabout into a public space

KN1 Plaza

The central Plaza **A** is designed to become a vibrant place where different activities and opportunities are available to the users. It is conceived as a flexible zone, a place for different activities, from transient seating, outdoor dining or trading, playing, or temporary creative cultural and entertainment events, creating a variety of ambiances and characters.

5D1 © Image extracted from 'Global Street Design Guidelines' - NACTO. Note: for illustrative purposes only.

5D2 © Piazza Nember - Image courtesy of Stradivarie Associated

The main design elements are:

BRT Station

The station plaza **A1** has potential to create new urban core and includes the transportation facilities, enhanced landscape and service facilities.

Cycle parking and cycle-share station

Cycle parking and cycle-share station **A2** as part of NMT strategies, are in proximity of the BRT station **A1** to facilitate multimodal connections.



Nyarugenge CBD - KN1 Station Plaza - View

Car Parking

Car parking **G** is located across the road at the entrance of St Famille Plazas.

Landscaping

Landscaping best practices should be applied, using indigenous trees, and green infrastructure to support stormwater harvesting.

Urban Furniture

Artworks, seating areas, cycle racks, lighting, water features, children's play areas, drinking fountains with fresh, potable water, to add character, and support a range of activities

Public Toilet and Kioks

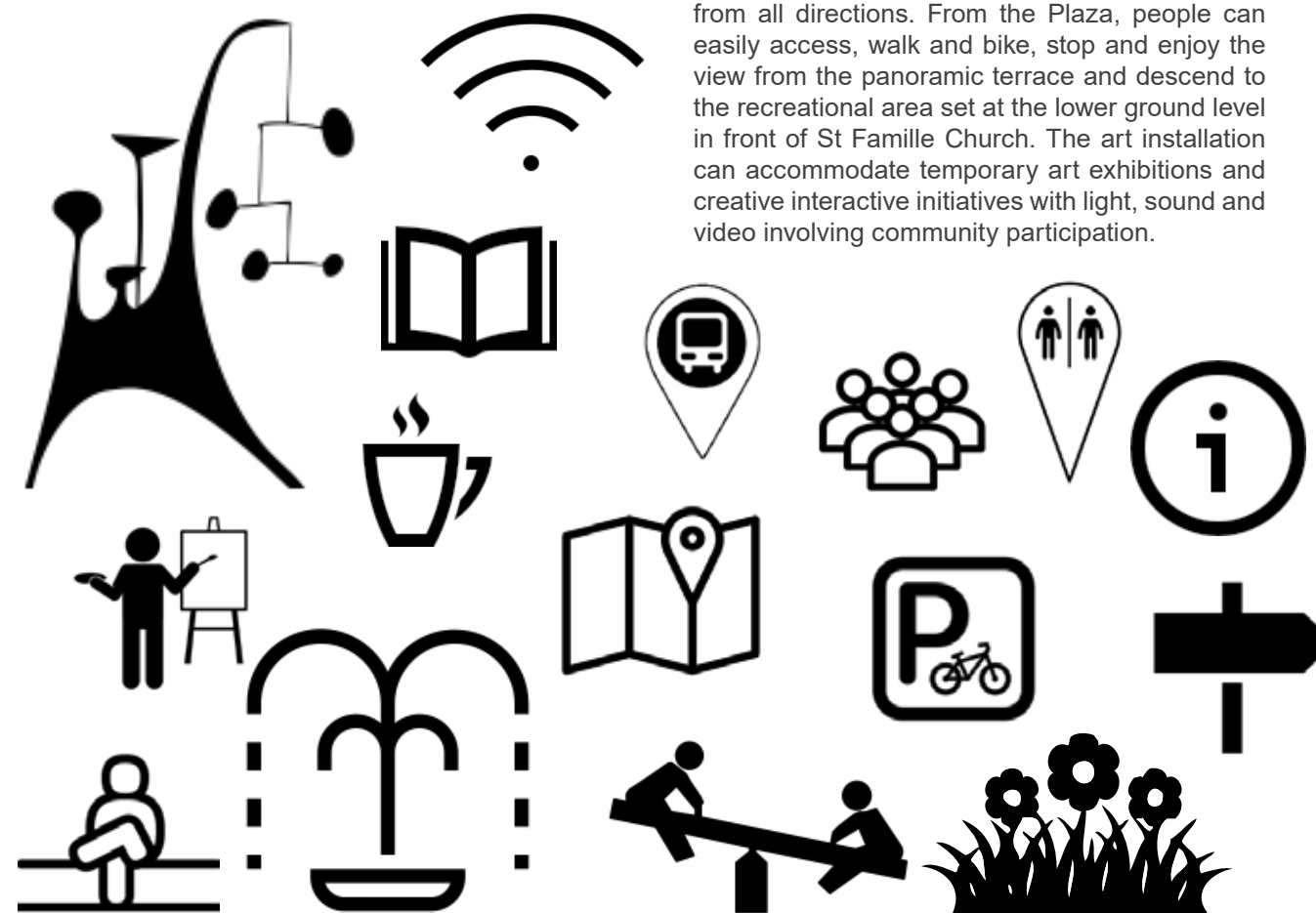
Public toilet at BRT Station service, and kiosks to support micro-entrepreneurs and street market.

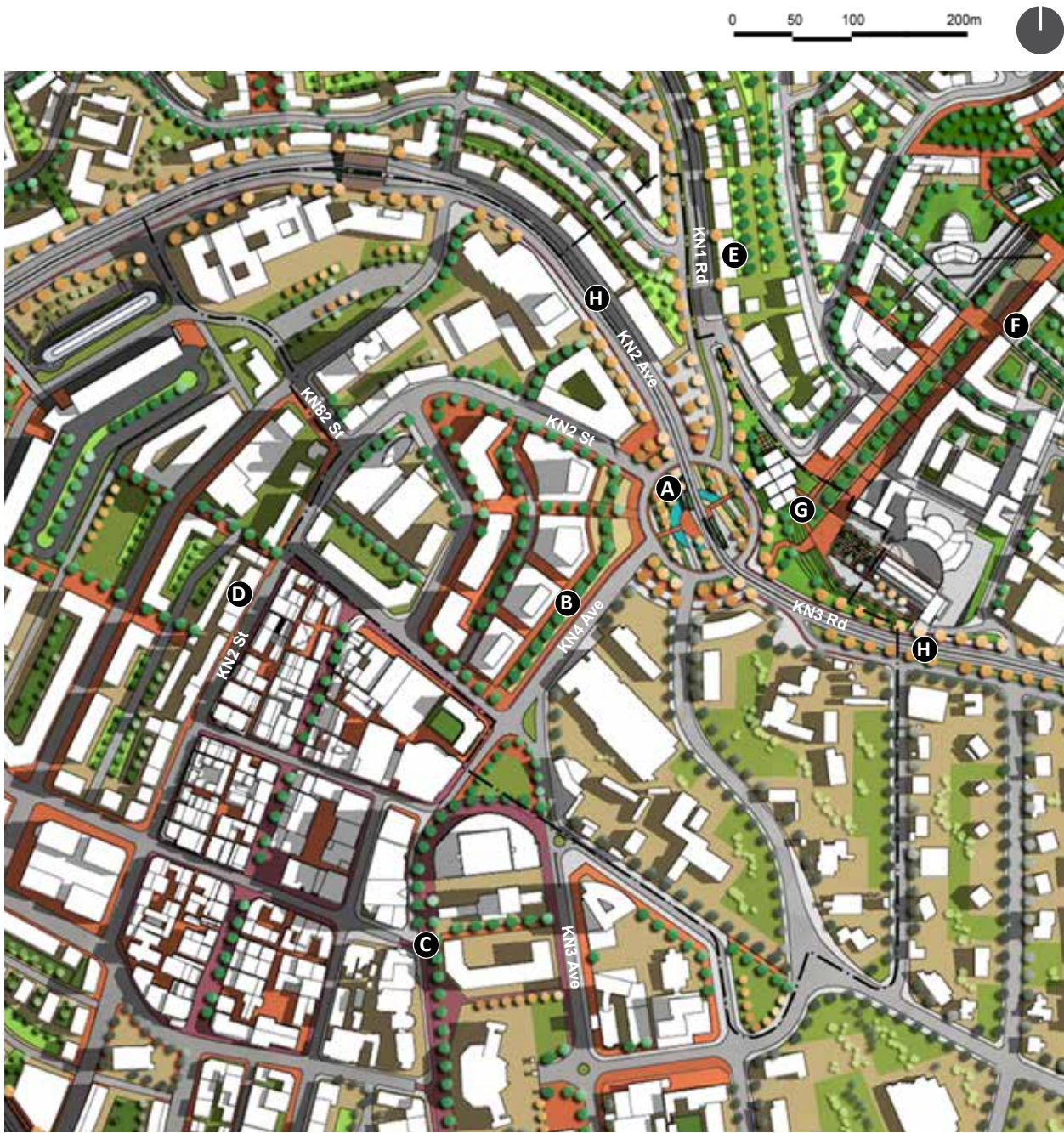
Info Point

A network of conveniently located info points in Kigali should be established to facilitate orientation and to provide key welcoming spot for visitors and citizens, providing tourist and cultural event information.

Art works

Playing with forms of artwork demonstrates the value and variety of Rwanda art production, and provides an interesting and fulfilling visual experience in the city spaces. The main proposed art installation **A3** for KN1 Plaza is a functional element, an interpretive element and landmark. Located outside the plaza, in the open space at the beginning of the Muhima plaza, it also acts as connector and active point of reference, visible from all directions. From the Plaza, people can easily access, walk and bike, stop and enjoy the view from the panoramic terrace and descend to the recreational area set at the lower ground level in front of St Famille Church. The art installation can accommodate temporary art exhibitions and creative interactive initiatives with light, sound and video involving community participation.





Nyarugenge CBD - KN1 Station Plaza - Illustrative Plan

KN1 Station Plaza and KN4 Ave Building Edge

The buildings edges marking the Centre Ville intersection **A** and along the KN4 promenade **B** will house activities that engage people walking along the streets. Inviting and active frontages, arcades and galleries along KN4 Ave, KN2 St, KN 1 Rd will provide an engaging and enjoyable walking experience.

To enhance public sidewalks as pedestrian priority, KN1 Station Plaza Urban Design area should provide unobstructed views to the public realm, frequent entrances, appropriate transparency levels, visual variation, and textures that contribute to shaping an enticing street environment.

Permeability and connectivity regulations for KN1 Station Plaza Urban Design area will contribute to reinforce the network of streets and open spaces, pursuing the overall objective of creating a city of seamlessly connected centres.

Parking Strategies

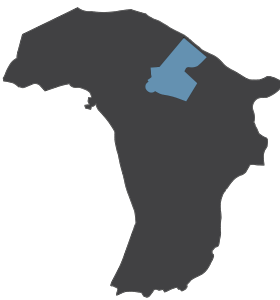
No on-street parking is allowed within KN1 Station Plaza, along BRT Corridor **H**, KN 4 Ave and the first portion of KN2 St (road section between KN1 Station Plaza and intersection between KN2 St and KN 82 St).

Common shared parking is strongly recommended to serve multiple parcels and avoid multiple entrances to city blocks in the area.

A service parking **G** for the Public spaces is located across the KN1 intersection on the North east side in front of the St. Famille Church.

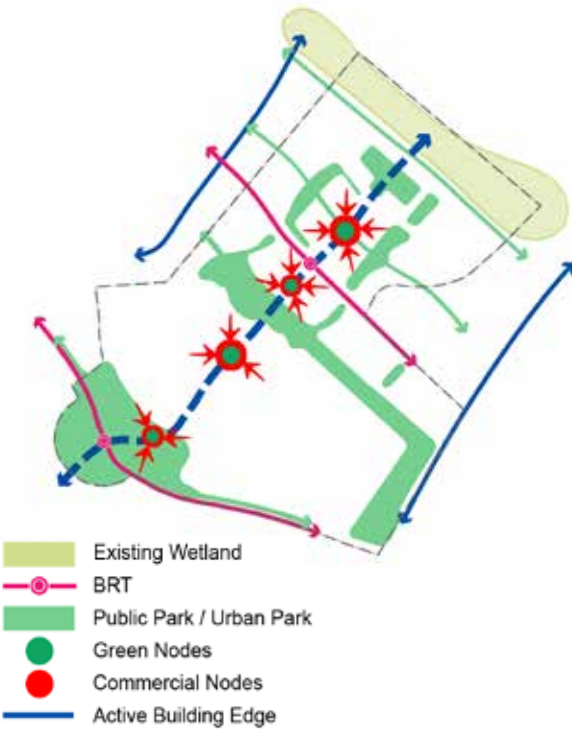
Kigali's objective is to increase Modal split for public transport, and Non-Motorized Transport, sensibly reducing the demand for car parking, in the long term period.





Concept

The CBD Transect is the main green corridor that connects the City Center on the hill-top to the Wetland, crossing Muhima neighborhood. The CBD Transect Urban Design objective is to connect visually, physically and socially two portions of the city that are currently completely disconnected, providing a walking experience through a sequence of active open spaces that reflect the existing characteristics and proposed diversity. The aim is to create public spaces, capable of catalyzing developments around them, integrating environmental, social and economic aspects.

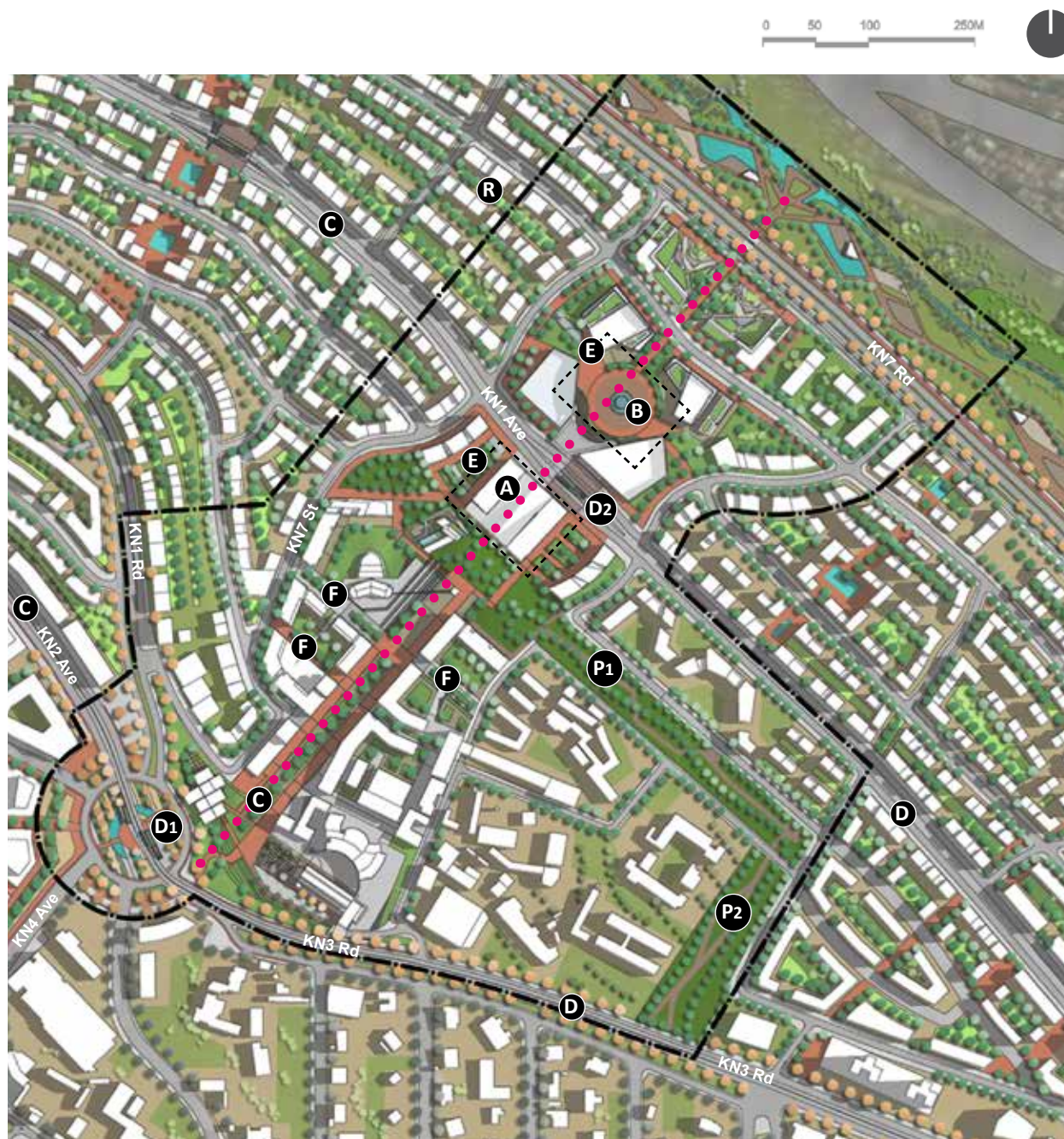


CBD TRANSECT E

1. KN1 Station Plaza
 2. Urban Park/ Garden
 3. Linear Park
 4. Plaza
 5. St Famille Plaza
 6. Muhima Central Pedestrian Street
 7. Stepped Gardens
 8. Muhima Market
 9. Muhima Cultural Center
 10. Belvedere
 11. Monument/ Art Installation
 12. Wetland Front Promenade
 13. Recreational area within the wetland
 14. Linear Park
 15. BRT Corridor - roadside green connector
 16. BRT Station
 17. Mixed use developments
- A. Historical Node
B. Education and Religious Cluster
C. New Central Market
D. Muhima Cultural Cluster
E. Muhima Belvedere
F. Wetland Park



Nyarugenge CBD - CBD Transect - Illustrative Plan



Nyarugenge CBD - CBD Transect - Illustrative Plan

CBD Transect – The New Vibrant Medium-Rise, Mix-Use District

CBD Transect regulations have been established to foster the re-development and densification of Muhima residential area, provide new publicly accessible open spaces, and create opportunities for new vibrant mixed-use communities.

The CBD transect planning area regulates all developments along the articulate sequence of public spaces, ensuring the provision of public and civic facilities at the service of the neighborhood, and the City at large.

Special Projects like the “Market Plaza” **A** and the “Cultural Center” **B** have been selected as catalyst projects to revitalize Muhima Neighborhood and activate the CBD-Muhima-Wetland corridor **C**.

Design Strategies

To ensure accessibility, connectivity and city block permeability in achieving the following goals:

- Provide quality publicly accessible areas along green corridors, plaza, promenades and on the wetland front.
- Increase pathway and greenway connectivity ensuring direct connections to the wetland-front and wetland area.
- Improve pedestrian and bicycle links by integrating BRT corridors, wetland-front and main neighborhood roads in the open spaces and NMT network.
- Reduce physical barriers to the site, such as fences or visual obstructions in visual corridors, and include wayfinding features to draw visitors throughout the site and wetland-front. Signs should include information on direction, walk time, amenities, and wheelchair accessibility.

Functions and uses proposed:

- Activate ground floor usages: provide community and recreational facilities, and arts installations, retail spaces, cafes and restaurants at the service of residents and workers.
- Provide diverse programming and passive educational features.
- Incorporate “passive” or landscaped features (e.g. lawns or picnic areas) and “active” recreational features whenever allowed (e.g. sports facilities), to accommodate diverse

- needs for people of all ages, physical capabilities, preferences, and interests.
- Provide amenities like restrooms, rest areas, bike pumping stations, food vendors, and community gardens.
 - Provide shade or sheltering structures to expand use in times of hot sun or light rain.
 - Provide a high-quality and attractive environment that supports local Businesses along BRT and green corridors and wetland front.
 - Ensure quality greenery design to encourage outdoor activity, including walking, cycling, and other types of recreation.

Culture and Identity

- Increase the sense of belonging by introducing public art and events, creating a variety of sizes and types of spaces to attract and accommodate people from all ages, gender and background.
- Historic sites, promenades, and green corridors can strengthen the character of a neighborhood through a unique street furniture, wayfinding, landscaping, paving, signage, and lighting.
- Ensure greenery, and quality public access, select native species, to best suit local climates, planting productive and aesthetic greenery for ecological and visual values.

Design Framework

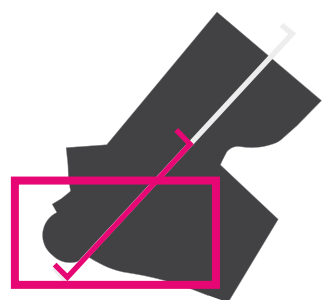
Accessibility at local and Regional level is ensured by the BRT corridors **D** and two BRT stations located respectively within the existing Centre Ville roundabout (KN1 Station Plaza) **D1** and one midway from the CBD Transect, along KN1 Ave **D2**, in front of the new proposed Local Market **A** and Cultural Center **B**.

Vehicular access has been strategized to preserve the proposed central pedestrian corridor **C** by using service roads at the perimeter of the CBD Transect and providing parking facilities in proximity of the BRT stations. Two main Parking Interchanges **E** have been proposed respectively within the Muhima Central Market area **A** and Muhima Cultural Cluster **B**.

Main public access spaces network has been established for the entire area. Through-block connections **F** to privately owned publicly accessible interior spaces, provide alternative routes for pedestrians.



CBD Transect - St. Famille Plazas



CBD Transect - St. Famille Plazas - Illustrative Plan

The CBD Transect is articulated along sequence of urban spaces as following:

St Famille Redevelopment

The underutilized area in front of St. Famille Church is proposed to be transformed into a dual space identified by two main Plaza:

St. Famille Art Plaza ^{G1}, located along the new linear vertical park (green belt) ^H surrounding the east side of the Centre Ville intersection ^I. The art installation ^I, connected to the KN1 Station Plaza, is the interactive and community project that animates the area. The aim is to create a recreational cultural space at the entrance of the CBD seamlessly connected to the Muhima walkway corridor ^C.

St. Famille Memorial Plaza ^{G2}, is the new monumental plaza that incorporates the existing

memorial site, transforming the space in front of the church into a celebrative and commemoration site.

Three main pedestrian linkages have been provided from KN1 Station Plaza, two of them (^{K2} ^{K3}) follow the existing paths and an additional one (^{K1}) passes through the Art installation.



CBD Transect - St. Famille Art Plaza



CBD Transect - Art Installation



CBD Transect - St. Famille Memorial Plaza

Education and religious cluster

The education and religious cluster has been established to incorporate and valorize, through a sensitive redevelopment of the area, the current school ^L and religious facilities ^M for the existing and future neighborhood communities. The Urban Design regulations allow development and conversion, that are consistent with the existing scale and character of the consolidated built up area.

Two main publicly accessible open spaces have been provided along the central axis ^C of the CBD Transect and transversally ^N, along the steep slope, that separate Education and Religious cluster area from the proposed new Central Market ^A, respectively.



CBD Transect - Muhima Central Pedestrian Street - Illustrative Plan



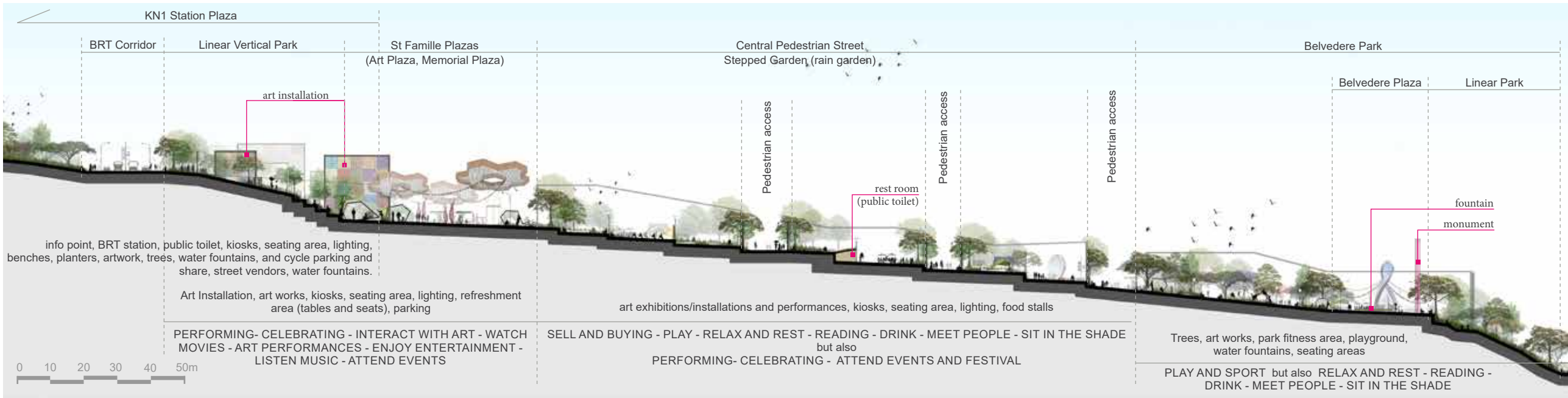
CBD Transect - Muhima Central Pedestrian Street - Stepped Garden

Muhima Central Pedestrian Street ^C is a wide pedestrian corridor characterized by stepped terraces and gardens. Starting from the St. Famille plazas ^G, gently slopes down toward the wetland, with a sequence of spaces that can host several passive recreational activities as well as some small entrepreneurship activities. Building alignments, edges, pedestrian linkages and publicly-accessible open areas regulations have been established to control developments along the pedestrian street. The walk corridor culminates into a plaza ^O with a panoramic view on the valley, at the top of the new park ^P. A monument/sculpture would be located at the center of the Belvedere Plaza ^O, a new landmark visible from the top and the bottom side of the CBD transect.

Muhima Belvedere Park ^P is a new Urban Park that connects the “CBD Office Precinct” to KN 7 St. The park includes the green section ^{P2}, already proposed in the 2013 CBD Urban Design. A new linear park ^{P1} has been created to connect west and east side of the CBD Transect, and to convert a steep slope area into a protected green area.

The existing road network within Church properties on the south-east side of the area has been rationalized ^Q, and incorporated into the proposed road network.

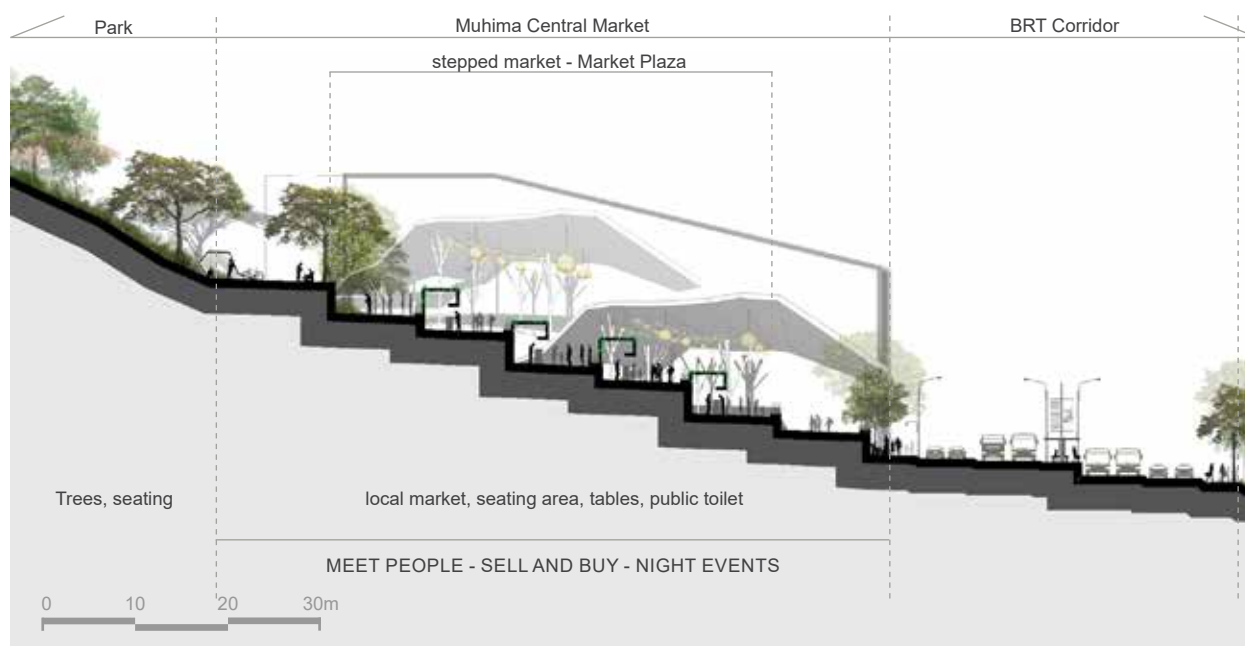
A network of publicly-accessible open areas, building edge and active frontages regulations has been established to ensure permeability, connectivity and vibrancy at the street level.



CBD Transect - Stepped garden - Cross Section



CBD Transect - Muhima Central Market - Illustrative Plan



CBD Transect - Muhima Central Market - Cross Section

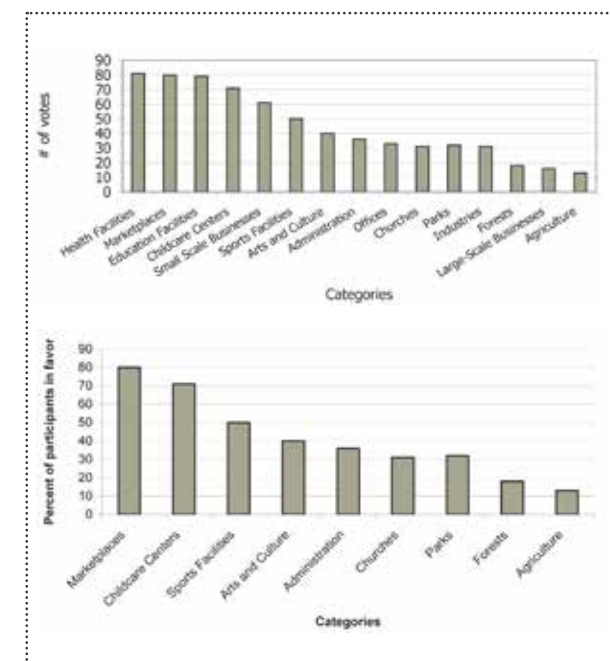
Muhima Central Market

Besides the acknowledged cultural, social and economic value of the “market places” in Rwanda, considered with all its own vitality as natural plaza/ place of meeting and exchange, “Market places” are also considered a priority in terms of citizen needs, after Health and Education

The Muhima Central Market **A1** has been identified as catalyst project with opportunities for cross-funding by commercial developments, due to its component of mixed-use. Public Private Partnership may be implemented, combining the market with more commercially attractive functions.

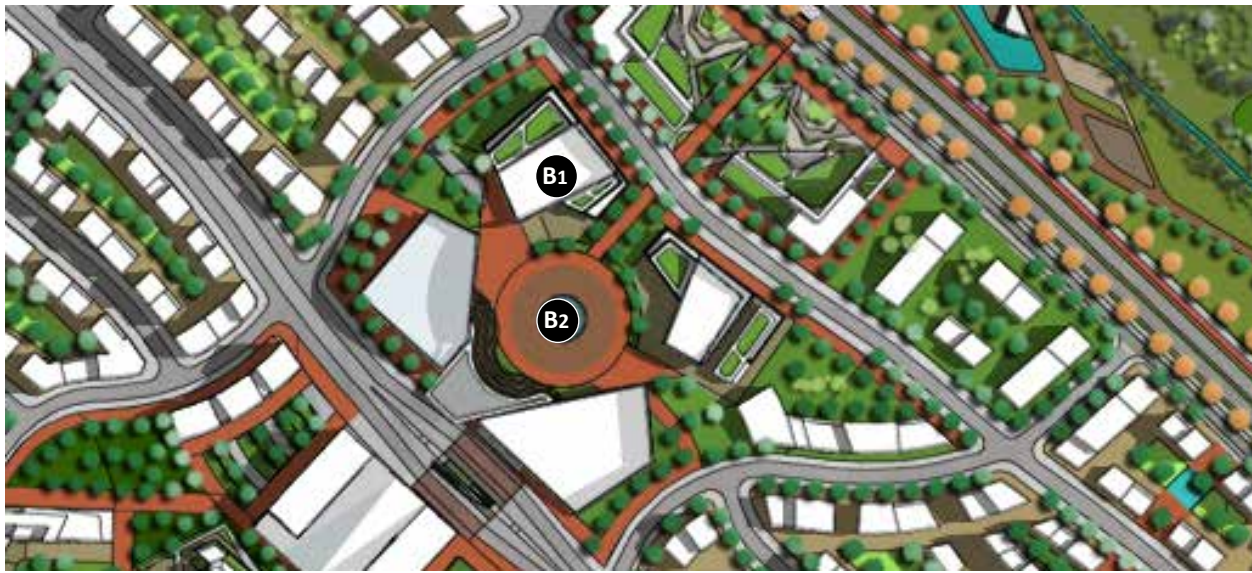
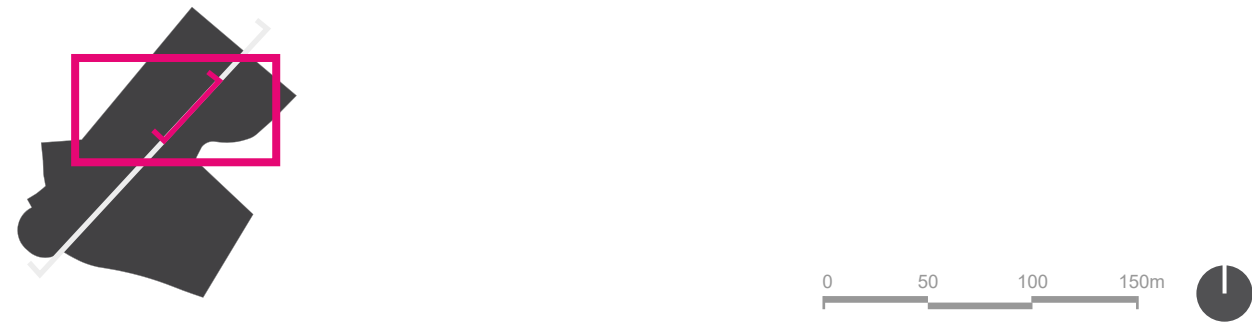
Public Private partnership (PPP) or Public Social Private Partnership (PSPP)¹ process framework, Public Participation processes and Design competitions, are some of the actions that shall be put in place, to facilitate the project implementation.

The complex is organized around the Market Plaza **A2**, a central space along the main pedestrian walkway of the CBD Transect, publicly accessible, hosting a public market. Strategically located between the Muhima Urban Park **P** and the Cultural Cluster **B**, the Market Plaza will serve the Muhima neighborhood and the City center, becoming a new reference point.

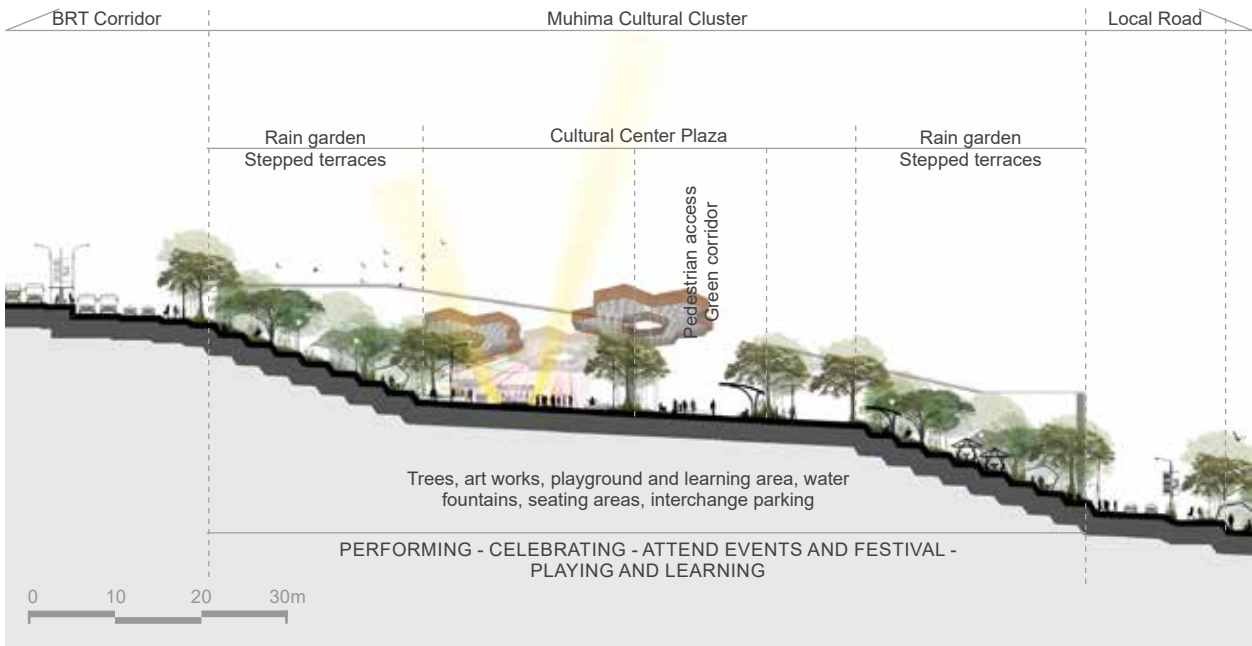


Source: Kigali Conceptual Master Plan.

Chapter 3. Opportunities and Constraints. 3.1 Needs analysis



CBD Transect - Muhima Cultural Cluster - Illustrative Plan



CBD Transect - Muhima Cultural Cluster - Cross Section

Muhima Cultural Cluster

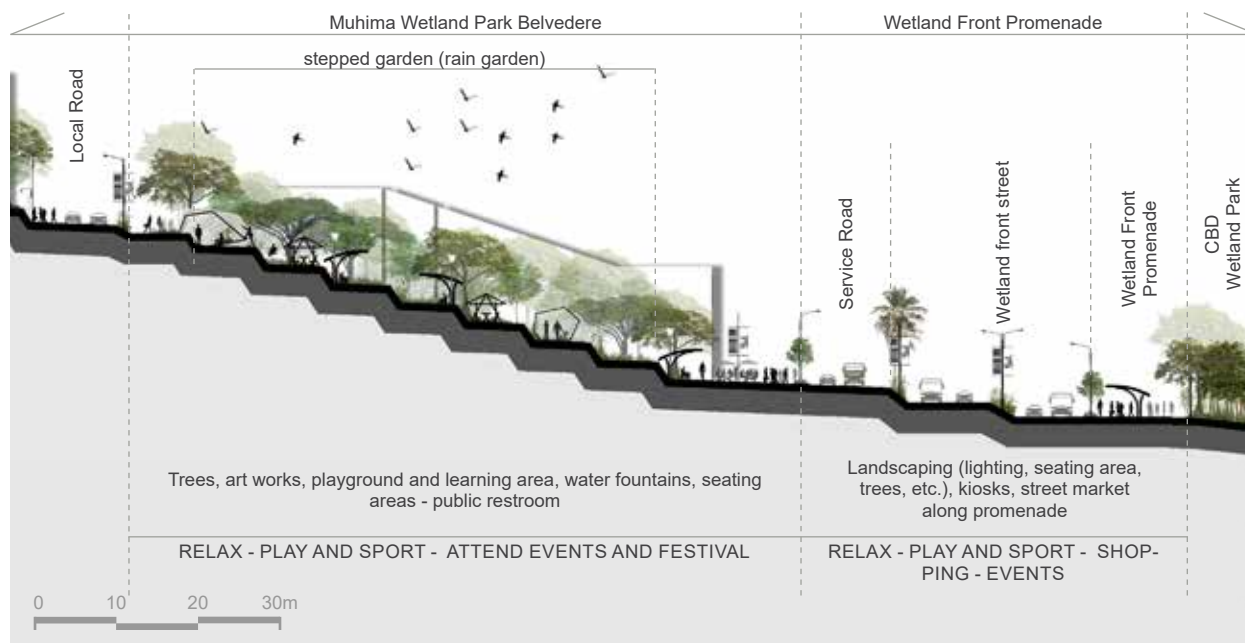
The Muhima Cultural Cluster **B1** is a multifunctional complex, developed around a central plaza **B2**, part of the open space network of the CBD Transect. The Cultural Center has been identified as a catalyst project for the community and the City. The Muhima Cultural Cluster is part of a broader framework of strategies to promote the cultural and creative arts industry, and to enhance awareness and participation of Rwandan civil society. The main CBD Urban Design objectives are to:

- Establish a network of cultural and heritage spaces;
- Re-use and transform underutilized open spaces. The adaptive reuse of vacant industrial and civil buildings into theatres, art galleries, museum, concert halls, artist studios and cultural centers is considered an opportunity to increase the offer of urban cultural spaces within the city;
- Promote multi-functional spaces and buildings, offering flexible spaces adaptable to different cultural activities.

¹ While PPPs are described as being used to execute public tasks in general, in PSPP the scope is narrowed to social needs. PSPP models carry out a phase of developing, planning and organizing the prerequisites for providing the social services. In terms of the meaning of partnership, PPP projects can be formed with only two partners. In the case of PSPP, it ideally involves a minimum of three partners since there are three essential but different roles to be filled; 1). The Financier of the project (Banks, donors, financial institution) 2). the project leadership (social entrepreneur) 3)). the users/customers (people). (ref. International NGO Journal Vol. 4, pp. 362-367)



CBD Transect - Muhima Wetland Park Belvedere - Illustrative Plan



CBD Transect - Muhima Wetland Park Belvedere - Cross Section

Muhima Wetland Park Belvedere and Promenade

The Muhima Wetland Park Belvedere **Q1** and Promenade **Q2** are part of the Wetland Front redevelopment Programme proposed to revitalize and promote the Wetland front redevelopment and to facilitate wetland accessibility.

The Wetland Park Belvedere is an urban Park, open to the public and part of a potential mixed uses development in a large wetland-front lot.

The Muhima Wetland promenade is the central promenade along the wetland front, connecting with the CBD's wetland front walkways, to create a continuous pedestrian and cycling route.

The objective is to mend the physical rupture between the city and the wetland by creating a continuous stretch of sitting-stairs and ramps, all along the wetland front, thus enabling a free and unmediated flow from the street level to the wetland.

Muhima Urban Renewal

The CBD Transect aims to support and facilitate the Muhima residential area **Q** redevelopment and densification.

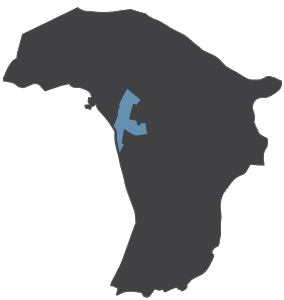
Land assembly, Incremental and Infill development processes should be put in place to create a mixed-use and mixed-income district.

Refer to 'Muhima Urban Renewal' chapter.



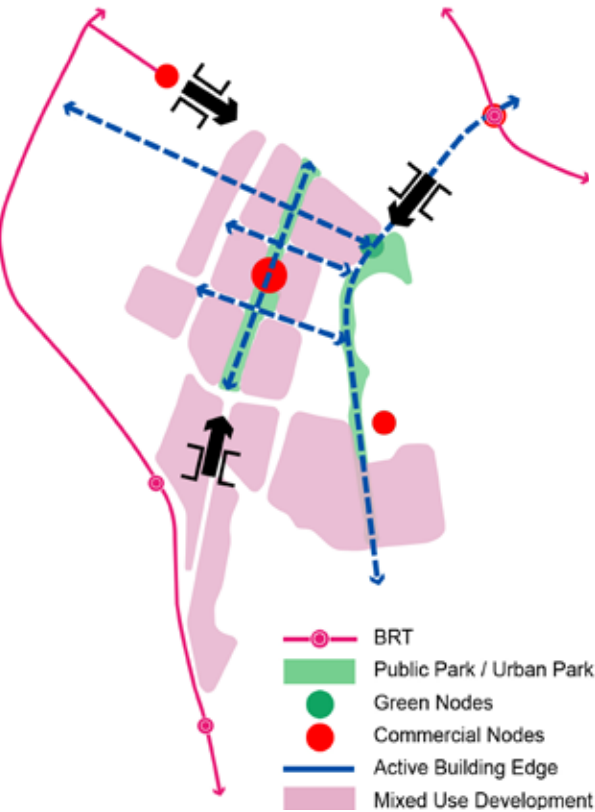
Nyarugenge CBD - CBD Transect - Muhima Belvedere and Wetland Front Promenade





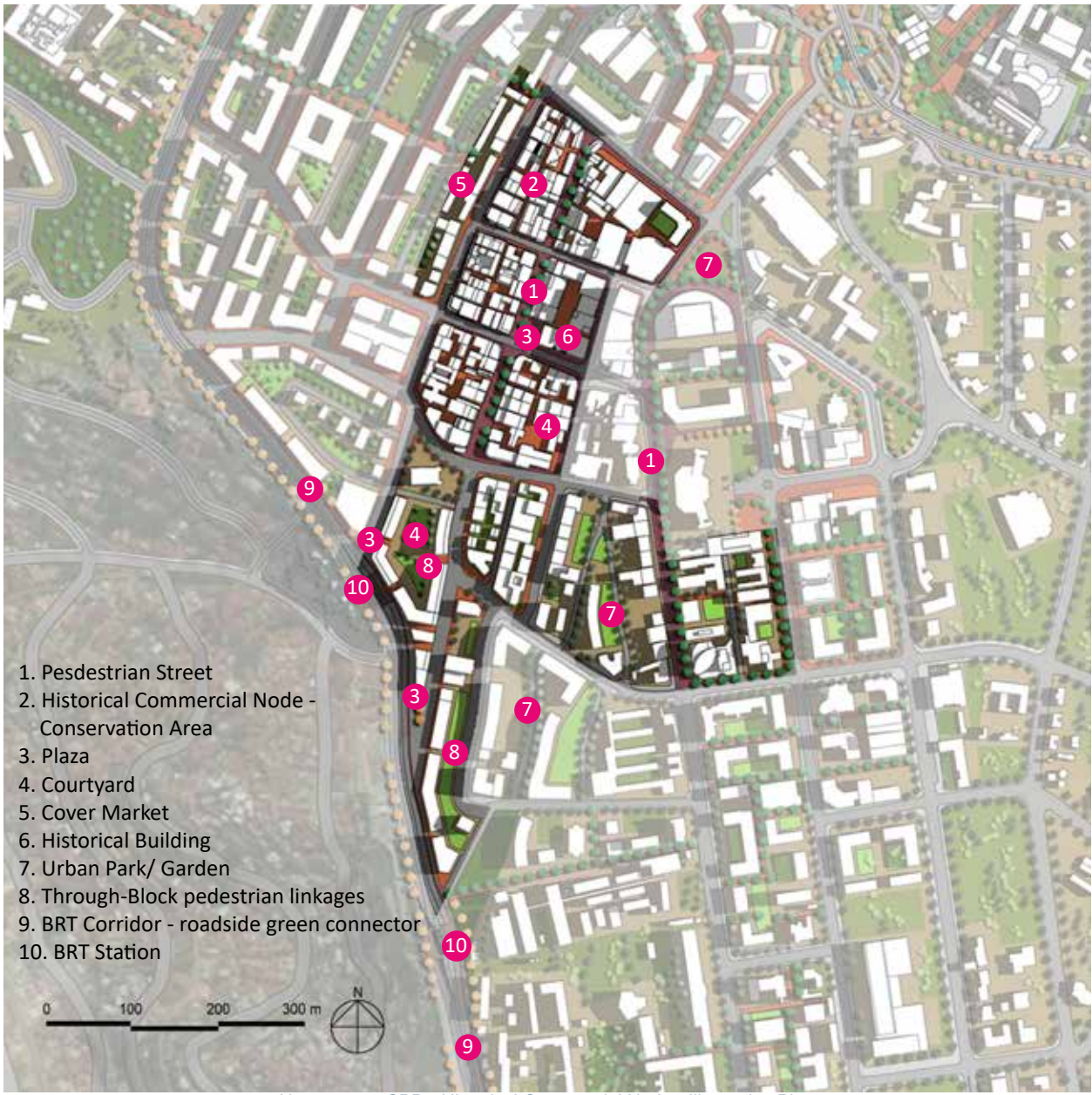
Concept

The Historical Commercial Precinct aims to revitalize the historical commercial neighbourhood of Kigali by reinforcing its open spaces and pedestrian network, restructuring the parking system, and introducing loading restrictions, promoting mixed uses to create a vibrant low-rise commercial, entertainment and cultural precinct, while preserving urban grain, character, vibrancy, and scale of the historical “Quartier Commercial” and “Quartier Matheus”.



HISTORICAL COMMERCIAL NODE

F₁



Nyarugenge CBD - Historical Commercial Node - Illustrative Plan



Historical Commercial Node - Illustrative Plan

The Historical Commercial Precinct regulations attempts to preserve the character of the historical Quartier Commercial and Quartier Matheus, while supporting and enhancing the area as a major arts/entertainment destination.

The aim is to create a new mixed-use development while protecting the scale of the historical commercial corridors (KN 59 St, KN 2 St, KN 83 St, KN 80 St, portion of the KN 4 Ave and KN 3 Ave) by establishing building edge regulations and height limits.

The Historical Commercial Node comprises thirteen blocks **A** (including six blocks of the Conservation Area).¹

The Historical Commercial Node promotes the inclusion of arts and entertainment uses, and application of the inclusionary zoning to promote social inclusion and integration. Transfer of Development Rights (TDR) may also be applied, establishing the Commercial node as a “sending area”.

To ensure active and diverse retail uses, special regulations restrict the amount of ground floor street frontage that may be occupied by banks, office and other non-active uses.

¹ The Historical Commercial Node area is bounded by KN 70 St on the north side, KN 2 St, and KN 85 St on the west side, KN 2 Ave (BRT corridor) on the South part and portion of the pedestrian street **B** (KN 4 Ave), KN 3 Ave, KN 80 St, and KN 61 St on the east side.

² Source: ‘The Balance of Local Culture and Global Economic Development: the Case of the Nyarugenge Heritage Village in Kigali, Rwanda’ by Billy Ndengeyingoma.

³ Refer to developments along KN 59 St, and along KN 2 St, KN 72 St, KN 74 St, and KN 83 St

Design Strategies

Ensure pedestrian friendly connections and full accessibility to the area.

- Increase access through public transport.
- Maintain accessibility by private cars in the vicinity by providing sufficient parking facilities in the perimeter.
- Increase the efficiency of the vehicular circulation in the city by integrating local traffic strategies, into city planning.
- Provide friendly-pedestrian linkages to future public spaces, to create a walkable city.

Ensure comfortable physical qualities of the environment, the safety of the users and accessibility for all; propose diverse uses and activities to ensure a vital and vibrant place.

- Improve vibrancy by introducing new opportunities of recreation, diversifying land use of buildings, increasing presence of leisure premises, café and restaurants.
- Maintain smart security without introducing fencing or check points, increasing lighting and introducing night time attractions and events.
- Increase comfort and safety by improving qualities of paving, reducing barriers, managing accessibility, extend lighting and green links, and providing urban furniture.
- Support sustainability by inserting green pockets to balance the current deficiency of green open space; collecting and recycling rain water from roofs and storm water from streets; integrating planters, swales, rain gardens in the landscaping; exploring opportunities for green wall and green roofs.

- Increase the sense of belonging by introducing public art and events; creating a variety of sizes and types of spaces, to accommodate people from all age, gender and background.
- Promote local economy by efficiently organizing street markets, and strengthening public-private partnerships.
- Help attracting a useful cluster of shops, restaurants, cultural attractions and related activities which will complement, and enhance the area as presently existing.

Create a connection between people and place, a place capable to foster expression and cultural integration.

- Introduce extraordinary experiences, permanent or temporary (daytime or night time) through cultural interventions to stimulate imagination, engagement, and participation of people to the life of the street.
- Strengthen the distinctiveness and uniqueness and of the street by retaining the positive physical characteristics that have developed through time, such as the diversity of the ambience along the street, and any landmark or reference points.
- Improve the originality and authenticity of the street by sensitively and thoughtfully design every element of the street (urban furniture, paving, shelters, curbs, flowerbed, lighting, greenery, etc.), through a design approach grounded in the re-interpretation of material culture.
- Increase the identification of people with the street by integrating in the space, relevant art works capable of capturing the interest, enjoyment and liking of people for the place.
- Demonstrate the value and variety of Rwanda art production, and provide an interesting, and fulfilling visual experience in the city spaces.

Design Framework

Building on the study: “Inclusion of Traditional Rwandan Cultural Characteristics into the Built Environment.” by Peter Rich Architects.

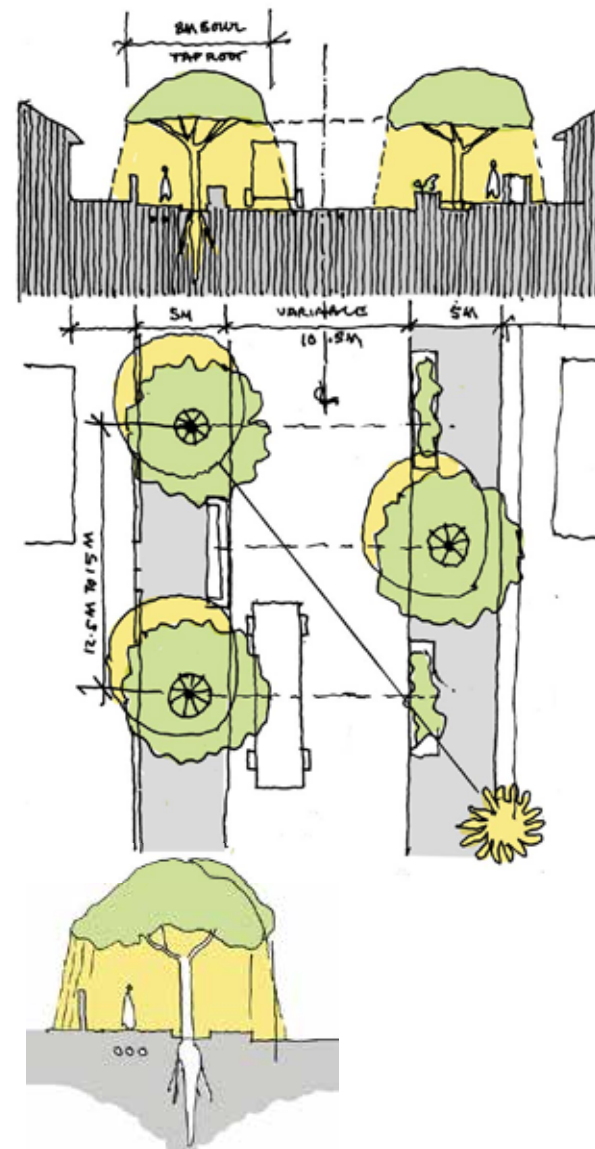
The market-based economy approach and the privatization of land catalysed a construction boom that is transforming the urban fabric of Kigali. Rwandan image and identity have been rapidly affected especially in the CBD City Center.

In this context, the perception that new buildings were enough for urban development has started to change and the topic of cultural preservation and the importance of noticing and defining traditional design features has become one of the top priorities for Rwandan government.²

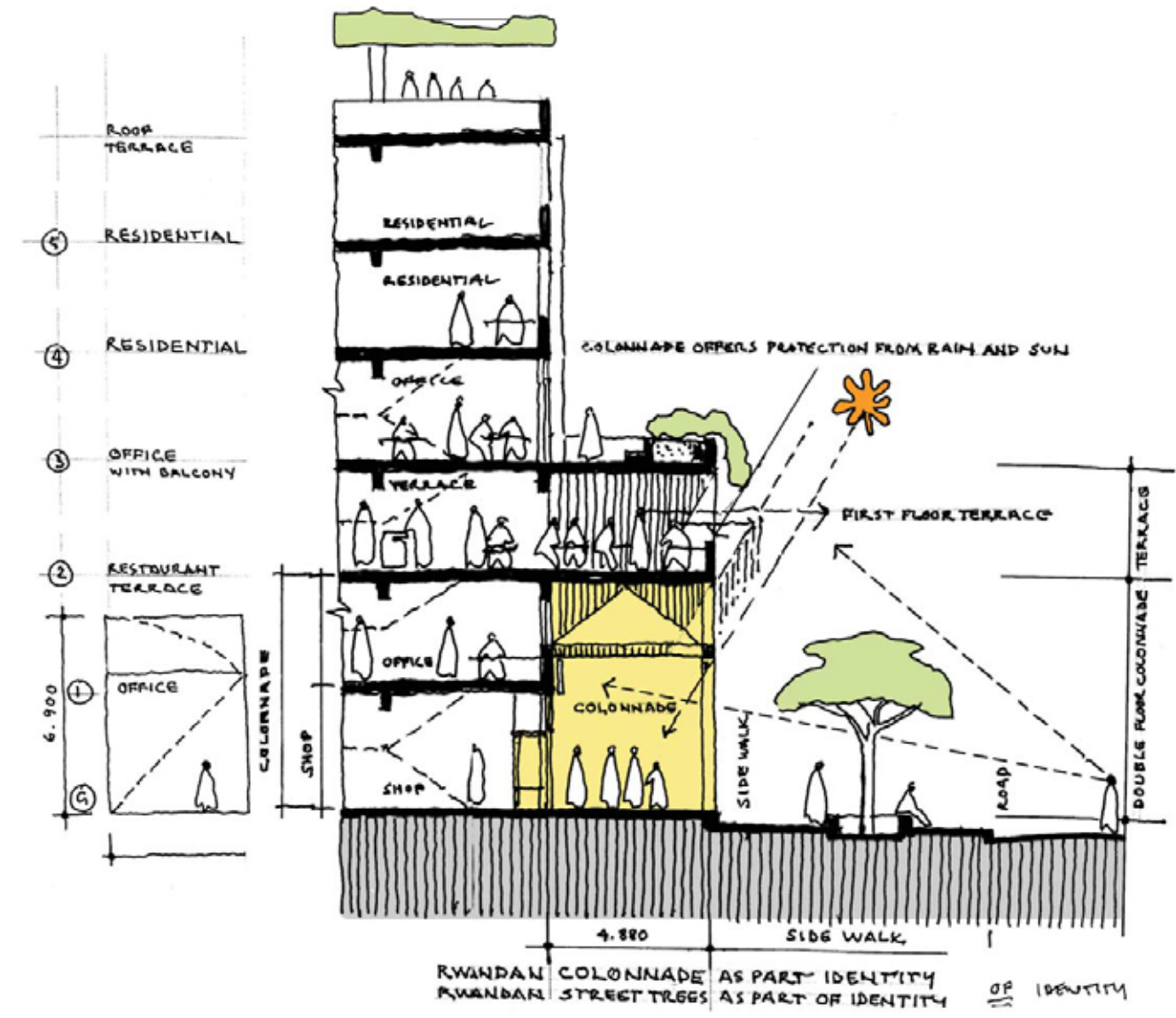
The existing commercial developments³, with their vernacular Rwandan architecture, intimate scale and diverse facades, perpetuate a charm which is not found in new architecture. In this context a study was commissioned by Ministry of Infrastructure (MININFRA) in 2015, titled “Inclusion of Traditional Rwandan Cultural Characteristics into the Built Environment.”, by Peter Rich Architects.

Key design elements and strategies that emerged from the study have been incorporated in the Historical Commercial Node Urban design, adapting the contents to the evolution of the new urban context.

The study, that wasn't completed, should be further developed in order to provide implementable architectural guidelines.



‘Street trees and landscaping as part of sidewalk and public space’



‘The Iconic Rwandan Street Colonnade’

Sketches from ‘Inclusion of Traditional Rwandan Cultural Characteristics into the Built Environment.’ by Peter Rich Architects



Historical Commercial Node - Illustrative Plan

Public Space Network

The historical commercial node aims to provide new pedestrian corridors and improve the existing pedestrian and bicycle network.

- The new pedestrian street KN4, 'Imbuga City Walk' **A** in front of the City Hall, already closed to the traffic, will play an important role in the north-south and east-west pedestrian connectivity. New linkages are proposed between KN 4 Ave, KN 3 Ave and KN 59 St **B** through courtyards. KN4 pedestrian street **A** is the new gateway to the Historical commercial node and the Conservation Area.
- Conservation Area will be seamlessly connected to the existing and proposed pedestrian network, with the pedestrian street along KN 59 St **B**, alleys (existing alleys and new proposed mid-blocks), and courtyards that are publicly accessible.
- KN4 Ave Promenade aims to connect the Historical Commercial node and the pedestrian streets, to the new KN1 Station Plaza **C**, and to the CBD transect pedestrian corridor, crossing Muhima toward the wetland Park.
- New green corridors have been introduced to connect the Historical commercial node to the north west side of the City (connecting the Conservation Area to the BRT Terminal **D**, the Prison Park and Nyabugogo Terminal on one side, and to the Wetland Park, crossing Muhima on the other side).
- Additional new green corridors will mend the lack of connection with the south-west side of the City, and with the BRT corridor **E** through the inclusion of new urban parks **F**.



'Imbuga City Walk' Master Plan



BEFORE



AFTER



BEFORE



AFTER

KN4 Ave Transformation - Views

Source: KN4 Pedestrian Street 'Imbuga City Walk' Master Plan - City of Kigali

- Additional measures:
 - Promote streetscape design for remaining roads, adding green infrastructure along the central median and the sidewalks to support stormwater management, and create a more appealing environment.
 - The sidewalks on wider commercial corridors should have clearly defined frontage zones and street furniture zones, to accommodate restaurant seating, commercial goods, benches, street planting, signs, street lights, and other necessary infrastructure.
 - Reduce physical barriers to the site, such as fences or visual obstructions in visual corridors, and introduction of wayfinding features to draw visitors throughout the site.
 - Ensure permeability and through-block connections within the City Center to discourage car use by making local trips easier and more pleasant, by foot than by car.
 - Improve pedestrian and bicycle links by integrating BRT corridors and main neighbourhood roads in the open spaces and NMT network.
 - Promote Public Art as part of the Building Facade or Open Spaces, through contemporary interpretations of traditional Rwandan Art Forms.

Urban Design Regulations

The Historical Commercial Node Urban Design regulations aim to guide the Development of the area and to preserve the existing urban grain and character. Following the main actions taken:

- Minimum required Plot size within existing consolidated commercial nodes (which includes the Historical commercial node) has been reduced, to ensure preservation of the existing urban grain, and facilitate redevelopment of the area.
- Alignments and building edges shall follow existing building alignments (except for the developments along KN 80 St, KN 61 St and BRT corridor **E**), in order to preserve the existing urban context.
- Pedestrian experience to be reinforced at street level by introducing:
 - Landscaped sidewalk, with appropriate indigenous trees selection, and green infrastructures (streetscape guidelines to be established)
 - Mandatory arcade and/or galleries at the ground floor and recommended arcade/gallery at the first floor (min 3 m depth).
 - Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with rwandan culture.
 - Veranda as extended canopy at the first floor are allowed.
 - First and second floor facade articulation through balconies.

- Possibility to develop linear market/gallery within the block facing kn 2 st as reinterpretation of rwandan covered market ('isoko' place);
- Preservation and reinterpretation of all existing forecourt, courtyard and backyard ('imbuga' and 'mu gikari'),
- Active ground floor building edge.
- Mixed uses to bring life into inner city developments during the night-time.
- 'Through block connection' **G** and permeability has been introduced to reinforce the pedestrian network within the City Center.
- Relocation of the existing wholesale activities, or strict regulations on loading/offloading allowed hours (e.g. between 11 pm to 9 am) to reduce the traffic congestion, parking and loading.
- A series of actions to reduce the impact of existing Nyarugenge Market Building **H** is strongly recommended:
 - Relocation of the existing ground floor market to the new proposed Muhima Market Plaza. Weekly markets can be accommodated within the several publicly accessible open spaces indicated in the CBD Urban Design (KN 4 Ave pedestrian street, Muhima transect corridor).
 - Reconversion of the basement and portion of the Ground floor along KN 82 St, into parking and loading area.
 - Activate ground floor facade along KN 2 St and KN 74 St.

Parking Strategies

The parking demand within the Historical Commercial Node will considerably reduce with the strengthening of Public Transport System. The new BRT Terminal in Down Town, in the north- west side, and the two BRT Stations along KN 2 Ave, in the south-west part, will facilitate accessibility to the City Center.

The existing on-street parking within the City Center requires a strong revision in terms of design, location and management.

'On-street parking' around the Nyarugenge Market are proposed to be reduced to a limited area along KN 82 St, only for loading and unloading operations.

On-street parking shall be located strategically outside the Conservation Area perimeter. Potential on-street parking are proposed along KN 82 St, and KN 76 St in the north-east side, along KN 85 St and KN 59 St, toward the BRT corridor and along portion of KN4 Ave and KN 78 St in the south part.

Curb side parking spaces need not be continuous and can be interspaced with facilities, such as parklets, planting, and cycle share stations, where required.

An Interchange Parking is proposed in correspondence to the BRT Terminal **I**, at the entrance of the pedestrian corridor connecting the Conservation Area. An additional multi-storey parking **L** is proposed in the south-west side to serve the Conservation Area.

Common shared parking areas (areas within each block that is reserved for shared access, service, and parking) are recommended for all the blocks, where new developments are planned.

Vehicular accessibility to buildings has been ensured by identification of access and service roads.



Historical Commercial Node - Illustrative Plan

Loading Area Freight and City Services

Many commercial activities in the City Center require frequent delivery and pick-up services. These areas present conflicts between high pedestrian volumes and large delivery trucks. Historical Commercial Node streets will require movement and hours-of-operation restrictions to be implemented, to manage the best possible street usage.

Following, freight and service strategy shall be adopted:

- Ban large trucks delivery service in the City Center, allowing only smaller vehicles appropriate for the scale of City streets;
- Nyarugenge Market **H**: loading and unloading area to be located within the basement and portion of the ground floor area with access from KN 82 St. Loading bays should be reserved along KN 82 St and KN 76 St.
- Limit access for commercial delivery to off-peak or night-time hours, when streets are less busy
- Provide dedicated loading bays within 'on street parking' areas to prevent delivery vehicles from blocking sidewalks or cycle lanes, avoiding areas with heavy night-time pedestrian activity.
- Develop curb side management strategies that include purpose-based zones, time limits for parking and deliveries, and pricing strategies.
- Remove on-street parking spaces for other uses when competing needs and priorities are

identified.

- Loading zones must be included within common shared parking area and should be time- or permit-restricted.



- Publicly Accessible Open Spaces
- Mid Blocks (4-7m depth)
- Main Courtyards (*Imbuga*)
- Conservation Area
- Link between existing buildings to be renovated and new developments
- Building Alignment
- Main Pedestrian Linkages
- Existing Landmark to be Protec
- Panoramic View

The Conservation Area of the Historical Commercial Node aims to restore and revitalize existing buildings and preserve historical buildings along KN 59 St ❶, transforming the KN 59 St ❶ into an active pedestrian corridor, enhancing and regenerating existing courtyards, creating new mid-blocks, maintaining the vibrancy, scale and character typical of the area.

The Conservation Area regulations have been established to facilitate the redevelopment of the six blocks along KN 59 St ❶, to conform with hygienical, safety and fire protection, MEP (Mechanical, electrical and plumbing) and structural regulations, by ensuring natural ventilation and lighting, and promoting use of local or recycled material.

HISTORICAL COMMERCIAL NODE - CONSERVATION AREA

F₂



Nyarugenge CBD - Historical Commercial Node / Conservation Area - Illustrative Plan



Nyarugenge CBD - Historical Commercial Node / Conservation Area - Illustrative Plan

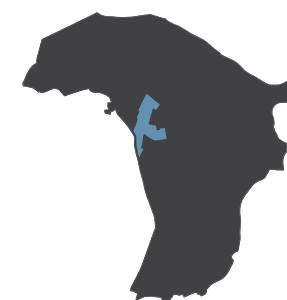
Design Strategies

Connectivity and linkages

- Provide friendly-pedestrian linkages to facilitate Conservation Area access and visibility.
- Improve security and pedestrian circulation in and around the area.
- To facilitate the redevelopment and rehabilitation of the Conservation Area by reinforcing open spaces quality, enhancing existing courtyards and narrow alleys, as intrinsic component of the Conservation Area open space network.
- Create inviting entrances by upgrading building corners and gateway, to alleys and courtyards.

Activities

- Transform the Historical Commercial Node - Conservation Area into a pleasant walking area, where people can step away from traffic to talk with friends, breathe clean air, and enjoy urban green at a comfortable scale.
- Support sustainability by introducing green walls and roofs, expanding possibilities for new buildings as well as for retrofitting existing buildings.
- Create a new attractive and vibrant part of the city for residents, workers and visitors, by encouraging active utilization of open spaces, and by improving landscaping quality, reducing barriers, managing accessibility, and increasing comfort and safety.
- Enhance the retail and service nature and economic vitality of KN 59 St by mandating appropriate retail and service activities;



preserve the small-scale character and variety of existing stores and activities by regulating new commercial uses in conformity with the existing character of the area.

- Introduce activities and uses that enhance the Conservation Area experience and make the alleys and courtyards safe, active and multifunctional in all seasons and at all times.
- Preserve the historic architectural character and the pedestrian orientation of ground floor uses, and thus safeguard the vitality and architectural quality of Historical Commercial Node - Conservation Area.
- Control the impact of buildings on the access of light and air by providing new alleys and enhancing existing courtyards.
- Ensure buildings renovation and redevelopments within the area in character with the existing scale of the community and at rental levels which will not substantially alter the mixture of income groups, currently residing in the area.
- Restrict demolition of buildings that are suitable for renovation or conservation.

Identity and character

- Improve the physical appearance and amenity of the streets by establishing streetscape and signage controls compatible to the Conservation Area character.
- Create and provide appropriate transition between the lower scale of Kigali CBD commercial core and the high-rise

- developments of the CBD financial and institutional area.
- recognize the unique character of the Conservation Area as integral part of the Historical Commercial Node by protecting the existing character of this landmarked area, and promoting development that is harmonious with the existing scale and street configuration.
 - Enhance and integrate built heritage with high quality new developments.
 - Combine the practical features (water recycling, waste collection, etc.) with an artistic approach.
 - Let the alleys and courtyards be playing fields for local artists and places for experiments of design ideas, special urban furniture, materials and colours.
 - Use of typical Rwanda flora as aesthetic approach and key strategy for safeguarding the ecological values of the built environment and climate challenges, like heavy rains and strong sunlight.

Design Framework

Conservation Area Open Spaces

The Historical Commercial Node/ Conservation Area open space network comprises of a main pedestrian street (KN 59 St), alleys, and courtyards.

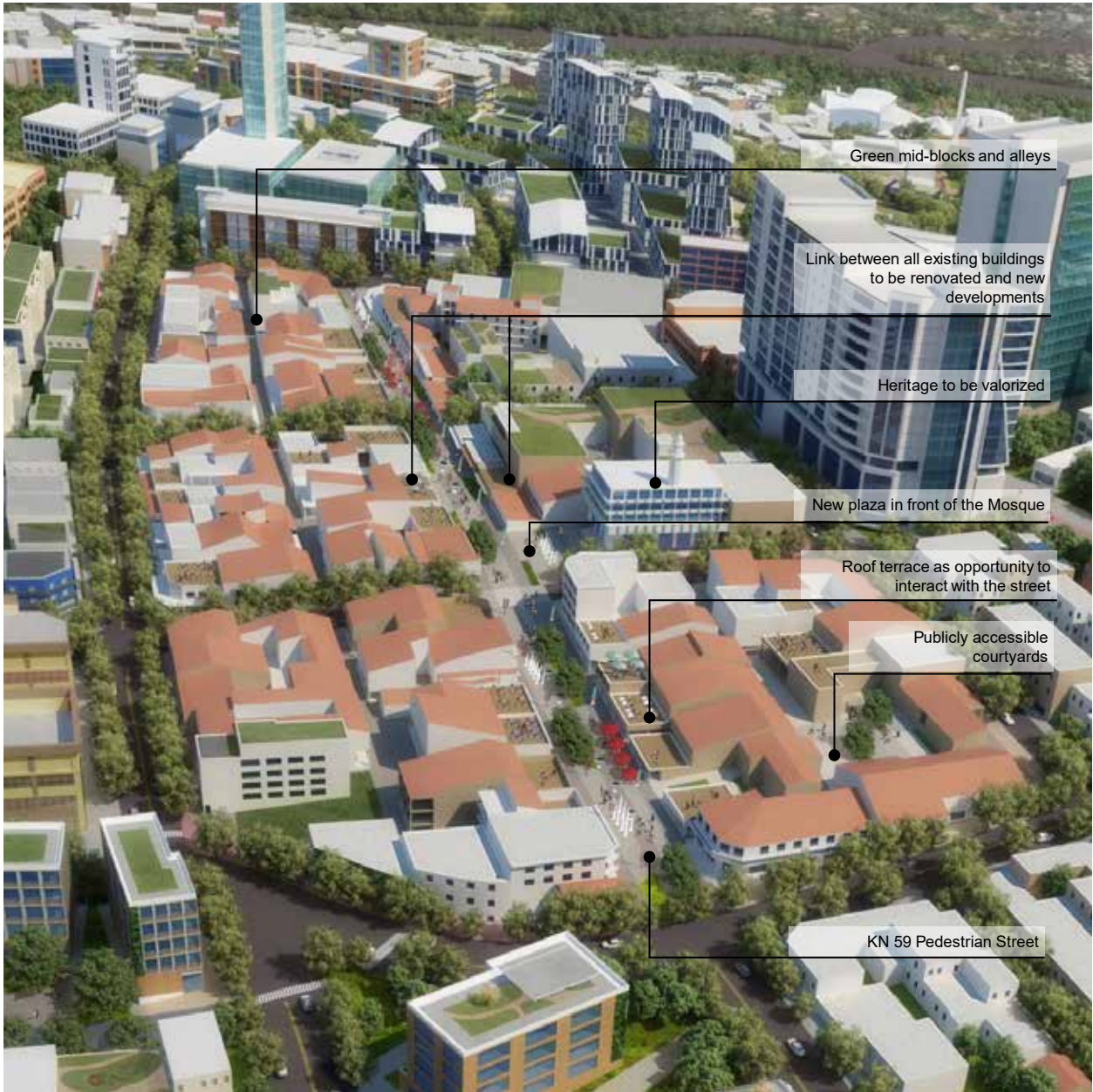
Central Pedestrian Street

KN 59 St **A** will be transformed into a pedestrian public space where all inhabitants, visitors and tourists are welcome and can enjoy a vibrant, diversified, social and inclusive public space of Kigali.

The new pedestrian street should be a continuous, clear, easy walkable space where:

- Permeable and semi permeable surfaces like green walls, roofs and planters, swales, and rain gardens are integrated in the landscape.
- Locally sourced materials, low energy construction techniques, and appropriated maintenance cycles guide the design, and
- Sense of place and authenticity are achieved by greenery, artworks, which re-interpret the Rwandan material culture, and cultural events.

A plaza has been proposed in front of the existing Mosque **B**.



Nyarugenge CBD - Historical Commercial Node / Conservation Area - View



Nyarugenge CBD - Historical Commercial Node / Conservation Area

Courtyards and alleys

Courtyards **C** and alleys **D** have the potential for strengthening the public realm within the Historical Commercial Node, adding value to the diversity of the overall public space network, supporting the fine grain character and increasing pedestrian invitations. The very intimate, human scale space of alleys and courtyards contrast with the more traditional streetscapes in the CBD, and have much potential for more active pedestrian use.

Today, alleys and courtyards of the Conservation Area are treated as backyards, with closed facades, poor paving and inadequate lighting. They are unattractive, uncomfortable, underutilized, with poor natural ventilation, and appears unsafe.

Conservation Area - Public spaces network strategies

Following are the strategic actions to transform the public space network:

- Architectural and landscaping elements including street furniture and signage are an effective tool for activating public spaces and shall be unique, and following high quality design standards.
- Two new mid-block pedestrian alleys **E** have been created to connect the existing courtyards and narrow alleys, that form the characteristic pedestrian network of the Historical Commercial Node - Conservation Area.
- Courtyards **C** and alleys **D** need to be improved to accommodate pedestrian activity, retail and other uses. Dead-end alleys are not permitted.
- Green strategy:
 - Create Blue-green alleys and courtyards with different tones of blue (water) and green (plants).
 - Promote green roof and green walls.
 - Encourage use of recycled water, to reduce water demand, and rainwater harvesting. Combined with drainage systems, to collect and store water.
 - Provide drinking fountains with fresh, potable water.
 - Promote landscaped sidewalk with appropriate East African trees selection.
- Integration of artworks: murals, sculptures, artistic paving and temporary artwork, and lighting.

- Engage local artists, designers, residents, and businesses, to visualize the potential transformation, and to shape the character of the space, according to uses and business types.
- Building edge and uses Active frontage is required along KN 59 St **A**, no boundary walls or fences are allowed.
- Permitted use of outdoor areas for refreshment and merchandise display up to 4m depth along KN 59 St **A**, and within the courtyards.
- Mandatory arcade and/or galleries at the ground and first floor along the mid-block.
- Covered walkways typology (colonnade, 'ibarama') as iconic, and multifunctional element (shelter, display and space for social interaction).
- Maximum 2 floors along the midblock.
- Maintain existing building height along KN 79 St **A**.



Public Art - Treviso



5F1 Active Courtyards



5F 2 Green Alley



5F3 Housing courtyard and café



5F4 Courtyard, public space



5F5 Active alley and courtyard

5F1 © 'Courtyard in Berlin'. Image courtesy of La Citta Vita under Creative Commons License.
<https://www.flickr.com/photos/la-citta-vita/5852581421/>

5F2 Green Alley - Omaha's Old Market (Nebraska, USA) © 'Old Market Passageway 01'. Image courtesy of Chris Murphy under Creative Commons License.
<https://www.flickr.com/photos/chris70/3805943628/>

5F3 © 'Housing courtyard and cafe'. Image courtesy of La Citta Vita under Creative Commons License.
<https://www.flickr.com/photos/la-citta-vita/5852202337/in/album-72157626879890245/>

5F4 © 'Courtyard, public space'. Image courtesy of La Citta Vita under Creative Commons License.
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5F5 © 'Via Di San Calisto in Rome- Italy' -Image courtesy of cgc76 under Creative Commons License A-NC -ND
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Nyarugenge CBD - Historical Commercial Node / Conservation Area

Uses and activities

- Introduce activities and uses that enhance the Historical Commercial Node experience and make all open spaces safe, active and multifunctional, in all seasons and at all times.
- Focus on preservation of small-scale businesses as it relates to built, and unbuilt spaces. Microbusinesses is crucial in maintaining the vibrancy and the urban economy in Kigali.
- Ensure preservation of economic livelihood and history instead of paying more attention to stylistic and decorative elements for cultural preservation.

While mixed uses are recommended within the Conservation Area, following specific uses restrictions have been established:

- **Permitted uses - Ground Floor and first floor:** Accommodation, small restaurants, coffee and pub, retail and service establishments, art galleries, as well as art studio, community facilities.
- **Conditional uses - Small workshops:** subject to evaluation and CoK approval.
- **Prohibited uses - Ground floor:** banks, offices and other non-active uses.
- **Prohibited uses – All floors:** warehouse stores are not allowed. They may only be considered if such a use is ancillary to the main use. Pollutive trades such as engineering, spray-painting, welding, plumbing, motor, metal and joinery workshops, tyre and battery shops,

and plastic products manufacturing are not allowed.

Adapted re-use of existing buildings to ensure mixed use as strategy towards conservation of Cultural buildings, and to fit changed needs is strongly recommended.

Recommended activities for open spaces: public toilet/ rest room, kiosks and open-air cafes, temporary street market (food, drinks, flowers, art and crafts).

Buildings not conforming with the character of the Historical Commercial Node - Conservation Area

Existing buildings or building under construction that are not conforming with the character of the Historical Commercial Node - Conservation Area for scale, use or typology, shall be subject to special prescriptions.

- Transformation of existing and or new big developments, by activating street façade, transforming inaccessible first floor, and covered roof terraces, into publicly accessible spaces, adding green buildings elements to control environmental effects (sun, rain);
- Converting existing not conforming buildings into energy-efficient and green structures;
- Introduction of green walls on building façades, and green roofs for control of rainfall and pollution uptake;
- Improving visual character of parking structures when exposed to prominent public view.

Materials

- Preferable use of natural materials
- Promote use of recycled materials.
- Use local materials.
- Establish buildings, and streetscape palettes materials.

Conservation area and historical buildings

Preservation is a key piece of sustainable development. As the city grows, retaining significant and irreplaceable buildings or fabric may be as much a measure of achievement, as building the new. Not only is it resource conserving, it retains, refreshes, and infuses the future with the city's historical values, culture, and identity.

Historical buildings should be preserved and refurbished, maintaining original building form. Change of use needs to be evaluated by a Conservation Area Committee.

Buildings frontage along KN 59 St **A** will be subject to restoration and renovation to maintain the original charm and scale typical of the 'Quartier Matheus', while improving structural, safety, and hygienic conditions of the buildings.

Conservation area need to be functionally and aesthetically integrated into the redevelopment of the entire area.

Existing building's roof of the conservation area can be transformed into walkable roof and terraces directly connected to the rear development.

Good Architecture and high design standards must be and can be achieved on sensitive sites, considering the followings principles:

- Difficult sites should generate good architecture;
- sensitivity to context and the use of traditional materials are not incompatible with contemporary architecture and
- modern uses can fit within the grain of historic settings.
- High-density buildings do not necessarily involve building high or disrupting the urban grain, and it can be commercially highly successful.
- Good building design should extend into public areas.

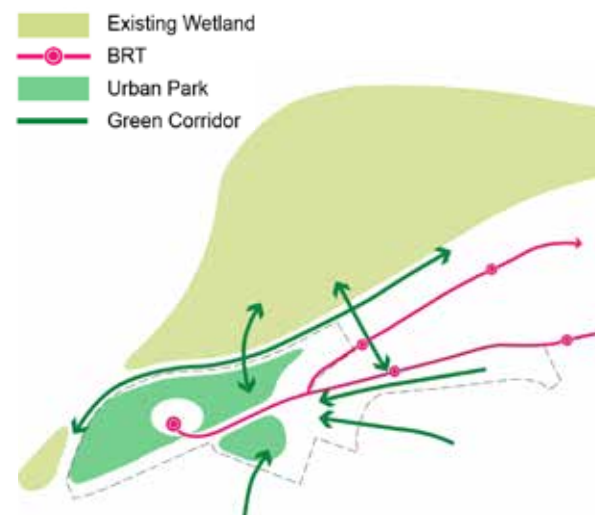




Concept

The Nyabugogo Transport Hub aims to:

- Transform the existing Bus Terminal and taxi park into a welcoming gate to the city for the thousands of travellers coming to Kigali or departing to different parts of the country and the East Africa Region, by integrating the Bus Rapid Transit (BRT) with the main Regional Terminal.
- Establish an integrated development plan to link together the transport function with local economic and urban development/regeneration by ensuring mixed use, residential development in the adjoining area, neighbourhood and regional urban parks, major cultural and social attractions.
- Restore no-longer-utilised parts of the wetland, and allocate them for public recreational uses.

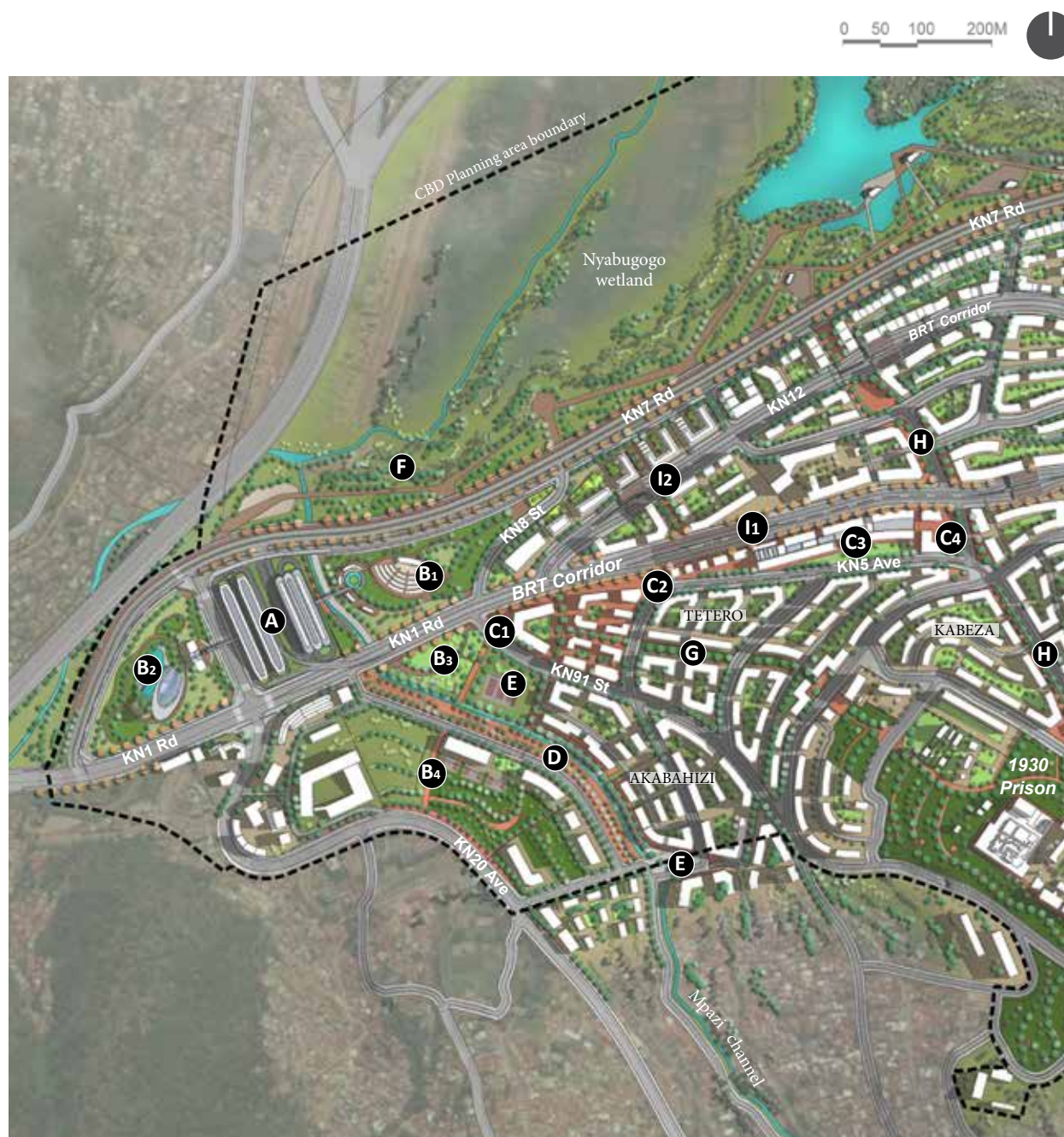


NYABUGOGO TRANSPORT HUB

G



Nyarugenge CBD - Nyabugogo Transport Hub - Illustrative Plan



Nyarugenge CBD - Nyabugogo Transport Hub - Illustrative Plan

Nyabugogo Transport Hub

Nyabugogo Taxi Park is proposed to be developed into an integrated transportation interchange, with complementary commercial and office facilities, serving as an important transportation node at the junctions of Muhima, Kimisagara and Gitega Sectors.

The Nyabugogo Transport Hub aims to:

- Preserve the area within the wetland boundary by adopting appropriate hydraulic and hydrological design solutions and converting a portion of the area into urban park **B**.
- Support Nyabugogo mixed-use developments along the BRT Corridor (KN 1 Rd) and Wetland Front redevelopment (along KN 7 Rd).
- Expand service and economic opportunities along the area's major streets and transportation corridors, maintaining the human scale of the previous Nyabugogo Market area by creating a covered market/gallery **C**.
- Promote the densification of the adjacent residential area of Tetero, Kabeza and Akabahizi cells by encouraging an affordability component.
- Reinforce the open space network and green corridors by creating a more effective system of urban parks seamlessly connected to the Wetland park, converting the area along the Mpazi channel into a vibrant promenade **D** and enabling improved walkability within residential neighbourhoods, and reinforcing pedestrian linkages toward the east, and south side of the city.

Design Strategies

Ensure public transport accessibility and pedestrian friendly connections and full accessibility to the area.

- Provide a well-functioning transit hub.
- Ensure integrated public transit system by ensuring legibility, wayfinding and convenient connections.
- Maintain accessibility by private cars in the vicinity by providing Interchange parking in the perimeter.
- Provide pedestrian-friendly and bicycle environment by relieving sidewalk congestion, providing pedestrian amenities, and ensuring great connections to the rest of the city.

Ensure comfortable physical qualities of the environment, the safety of the users and accessibility for all; propose diverse uses and activities to ensure a vital and vibrant place. A Transit Hub as a place for people.

- Ensure a Transport Hub Design that is able to define neighbourhood character, and provide mobility friendly environment.
- Provide a public transport corridor with high quality waiting facilities to ensure a pleasant experience of using and waiting for public transit.
- Expand the retail, entertainment and commercial character of the area around the transit center and enhance the area's role as a major transportation hub in the City.
- Improve the quality of development in Nyabugogo Transport Hub precinct by requiring the provision of new open spaces.

- Ensure spaces with recreational qualities and variety for residents, commuters and visitors.
- Open up & upgrade existing ground floor frontages along main commercial corridors.
- Provide new, interesting and appealing buildings on corner plots.
- Foster development in Nyabugogo and provide direction and incentives for further growth, where appropriate.
- Ensure environmentally sustainable design solutions to preserve the hydraulic and hydrological features of the areas within the wetland boundary.

A Transit Hub with strong sense of place and a series of welcome spaces with strong identity.

- Provide a welcome space to Kigali, an attractive gateway with a strong sense of place.
- Ensure high quality materials and design to transform Nyabugogo Taxi Park into a place that Kigali can be proud of.
- Ensure adjacent spaces with recreational qualities.
- Create a transport hub urban identity by improving the integration and attractiveness of public transport network, including better and quality focused accessibility.
- Guarantee a place where social relations could be developed, and provides a sense of history and identity.
- Recreate the atmosphere of the previous local market area by introducing a new publicly accessible linear market/gallery.

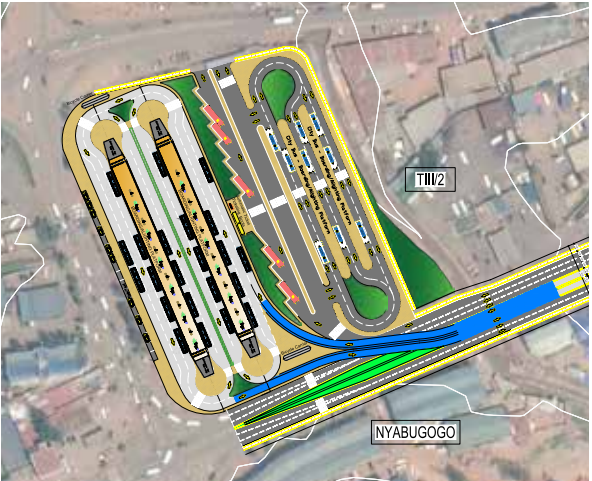
Design Framework

Nyabugogo is the first major stop for hundreds of travellers who travel aboard the interstate buses from Kampala, Nairobi, Dar es Salaam, Bujumbura or Goma. Just like the airport at Kanombe, Nyabugogo deserves to become a welcoming place for people arriving in Kigali or Rwanda.

It's importance as a transport hub for people travelling to other parts of the country and the East African region, is crucial.

The vibrancy of the area is contraposed to the traffic congestion, aggravated by the presence of several fuel stations located next to the taxi park with cars driving in and out onto the main road.

A considerable portion of Nyabugogo falls within the wetland boundary and flooding episodes during the raining season requires urgent hydrological and hydraulics interventions to be put in place.



Nyabugogo BRT Terminal
Source: Preliminary Design for a 'Bus Rapid Transit (BRT) System for the City of Kigali'

Nyabugogo Taxi Park and Bus Terminal area studies

Nyabugogo Taxi park and Bus Terminal area has been objects of two important studies:

1. Nyabugogo Catchment Study (2015), designed for Nyabugogo Area, comprehensive with urban, hydrologic/hydraulic and transportation/ road infrastructure components, and consistent with the recently defined wetland boundaries.
2. Preliminary Design for a 'Bus Rapid Transit (BRT) System for the City of Kigali' (2019),

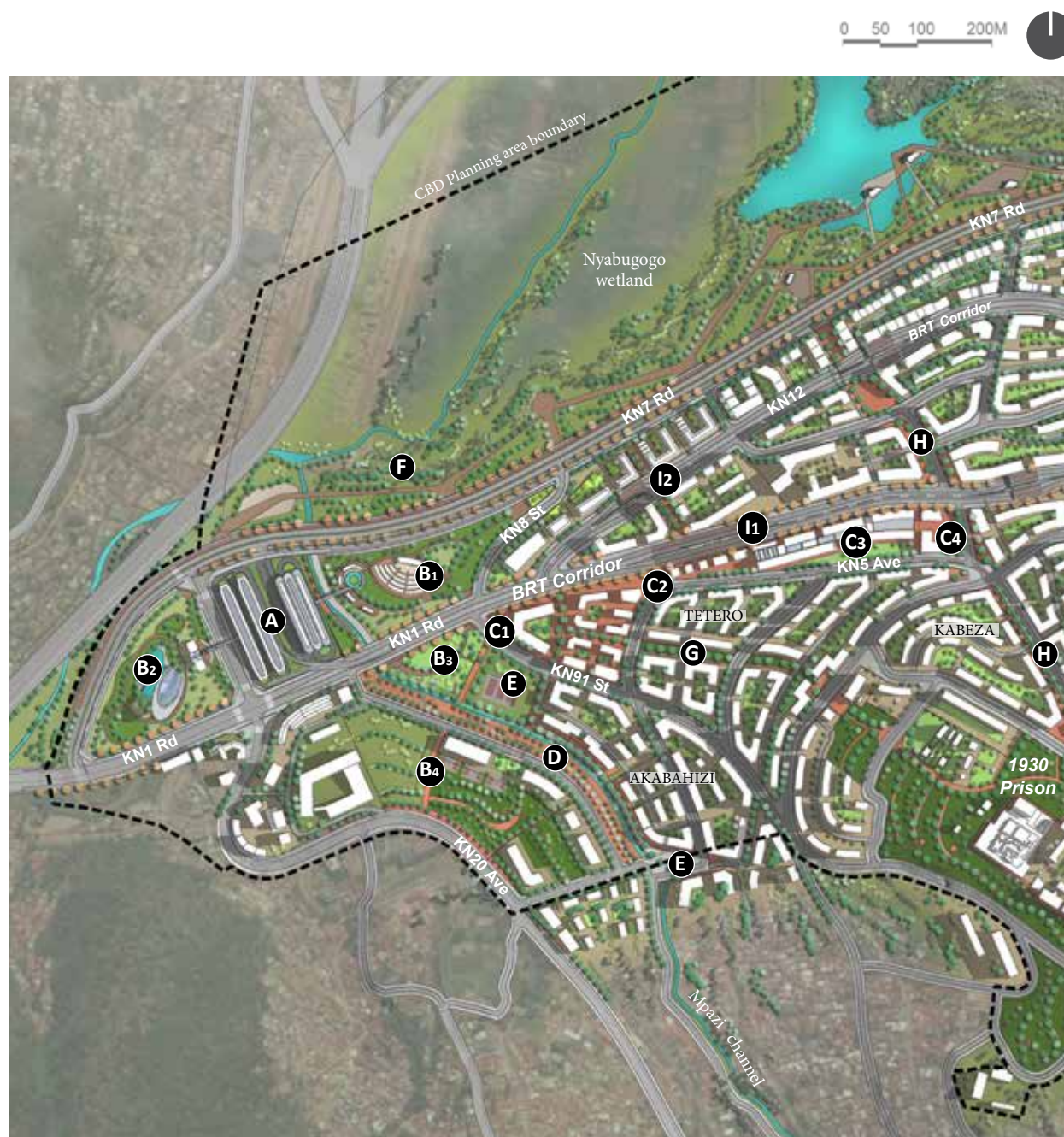
which includes the design of the new Nyabugogo BRT Terminal.

The Nyabugogo Catchment study should be completed and integrated with the new indications coming from the BRT feasibility study.

This urban Design regulations integrates the input coming from both studies, adjusting the design according to the development of the surrounding areas and considering Nyabugogo Transport Hub as integral part of the CBD urban design.



Transit Hub - General Plan
Source: Nyabugogo Catchment Study (2015) - City of Kigali



Nyarugenge CBD - Nyabugogo Transport Hub - Illustrative Plan

Open spaces network

The Nyabugogo wetland includes the future BRT Terminal plot, the adjoining plots along KN1 Rd, and portion of Akabahizi Cell in the north, in front of Mpazi Channel.

As defined in the Nyabugogo catchment study, these plots will be rehabilitated into parks. The BRT Terminal **A** will be surrounded by wetland and urban parks which will give to the area a unique and exceptional character.

The parks are linked to each other through pedestrian and bicycle connections and each Park will have a distinctive feature:

- Mpazi Park **B1** facing the Mpazi channel with an open-air amphitheatre in the BRT Terminal adjoining plot, on the east side.
- The recreational area **A** with sport fields will complete the Mpazi parks in the south side, and
- A botanic garden **B2** on the west side of the Terminal.

The park system is seamlessly connected to the surrounding area by using a more complex network of public spaces and urban parks:

- On the north side, the Mpazi Park and Botanic Garden are directly connected to the wetland park **F**;
- A continuous promenade **D** is proposed alongside Mpazi channel to connect the BRT Terminal to the south part of Akabahizi Cell, revitalizing and increasing land value of the area facing Mpazi channel.

- The promenade alongside the channel will end on a proposed plaza **E** at the junction between Mpazi channel and the road coming down from KN 20 Ave. The promenade can host local market stands and other public services based on the neighbourhood needs.
- A pedestrian connection is linking Mpazi Park and the recreational area to the upper road KN 20 Ave, by upgrading an informal path passing through an existing green steep area which is recommended to become a new linear Park **B4**.
- On the west side, the parks are connected to the Park of the Kigali Former Prison (1930 Prison), through the road KN110 St, proposed to be transformed into a linear park **G** serving Tetero and Kabeza Residential area. This is the new green corridor proposed to connect Nyabugogo to the CBD City Center.
- BRT corridor and wetland front roads will complete the pedestrian connection from the BRT Terminal to the east and west side of the city.
- Along the BRT corridor (KN1 Rd), a sequence of public spaces comprising of plaza **C1** - promenade **C2** - covered walkway (linear market) **C3** - plaza **C4**, will link the BRT Terminal, in correspondence to the intersection between KN1 Rd and KN 91 St, to the green corridor **H** on the east side of Nyabugogo Transport Hub, which connect Downtown to the wetland.
- A green corridor is proposed to connect the BRT Stations along KN 1 Rd **I1**, in front of the linear market, to the BRT Station along KN12 Ave **I2**, and to the wetland.



Nyabugogo Transport Hub - Botanic Garden in proximity to the BRT Terminal



Nyarugenge CBD - Nyabugogo Transport Hub - Illustrative Plan

Building edge and uses

All the proposed buildings along BRT corridors must have active buildings edge.

A covered linear market **C3** is proposed along KN1 Rd, fully publicly accessible and connecting the developments at the block corners.

Distinctive buildings shall be proposed at the corners plot **L**.¹

Evaluate the spatial pattern of distribution of Petrol filling stations in the area and along the waterfront. Establish a regulation for the distributional pattern of the petrol filling station avoiding clusters causing bottlenecks.

BRT Terminal

Transit station area is a place for people/commuters. Hence, it must be well used, safe, comfortable, and attractive; and need to be distinctive and offer variety, choice and fun.

The main goal to achieve is to provide a well-functioning transit hub by:

- reducing penalties of interchange through efficient operation;
- adopting strategies to achieve seamless journey through better physical design;
- providing commercial exploitation opportunities at stations;
- establishing agreed minimum standards of passenger facilities;
- ensuring time competitive & cost-effective transit feeder services;
- ensuring safety & security of both transit users and operators, etc.

¹ Corner plots in correspondence to the intersections between KN 8 St and KN1 Rd on one side, and between KN 91 St and KN1 Rd on the other side.

Residential with affordability component

The residential area proposed in Tetero and Kabeza cell, will benefit from the open space network and the proximity of the Transport hub. The increased value of the land should be capitalized with a mixed income residential offer. Incentives and bonus may be provided to the developers to encourage provision of affordable housing component, and public amenity.

Road network and Parking Strategies

The road network proposed in the 2019 Masterplan will need detailed study to ensure the functionality of Nyabugogo Transport Hub.

The road network proposed for the Nyabugogo Transport Hub planning area is following existing topography and existing roads alignment whenever possible.

Parking management is also an integral part of transit station area development. Proper parking facilities at the station reduce transfer time attracting the personalized vehicle users to the transit services.

The parking strategy adopted for Nyabugogo Transport Hub Precinct includes an Interchange Parking **M** in the closed proximity of the BRT Terminal, 'on-street parking' along secondary roads and service roads and common shared Parking recommended for all new developments.



Nyarugenge CBD - Muhima Densification - Illustrative Plan

Muhima residential area is the largest planning area in the CBD Urban Design review exercise. Major incremental re-development and densification are suggested for this area. The goal is to establish the Muhima precinct by ensuring accessibility, creating a lively and attractive built environment, ensuring sustainable and gradual development, and providing amenities and services for the use and enjoyment of area by residents, workers and visitors at the regional scale.

Design Strategies

The Muhima re-development is designed to promote and protect public health, safety and general welfare. These general goals include, among others, the following specific purposes:

- Provide an open space network comprising of public parks, public open space and public access areas through the establishment of a large-scale plan and other controls and incentives;
 - Create and strengthen the visual corridors along north -south green axes that connect the community to the wetland-front;
 - Facilitate and guide the development of an environmentally beneficial, transit-oriented mixed-use precinct by coordinating development with new mass transit facilities, improved pedestrian access to mass transit facilities, improved pedestrian circulation and avoidance of conflicts with vehicular traffic;
 - Enhance the existing roads by proposing a functional and sustainable road network
 - Encourage development of a mixed-use neighborhood that complements a revitalized community-oriented precinct;
 - Support a variety of community facility, commercial and residential uses;
 - Provide opportunities for the expansion of cultural, educational and mixed-use facilities in a manner that benefits the surrounding community;
 - Provide the retail and service character and economic vitality to the Muhima neighborhood
- by encouraging active ground floor uses along Wetland Front, BRT Corridors and green corridors.
 - Promote design flexibility while fulfilling the goals of the mixed-use district;
 - Expand local employment opportunities;
 - Improve the physical appearance of the streetscape by providing and coordinating harmonious open space, sidewalk amenities and landscaping within a consistent urban design;
 - Invest in working from the ground-up: building communities in incremental, real and effective ways with ethical developments that respect both people, and the natural environment.

Incrementality

Historically, incrementalism was the most common model of city development. It produced a rich and diversified urban fabric that only became stronger through generational change. Incrementalism is inherently imperfect in its results, but the tension created further continuing evolution.

The goal is not to build a new city, but to strengthen the one that is already existing. Within existing neighborhoods, there are plenty of opportunities to create value that are simply too niche or dispersed to attract big developers. The best people for the job are locals who know and love their own communities, and who can cultivate a livelihood from small-scale projects. By focusing on the smallest steps that can be made in the right direction, we lower the barrier to entry and open the door for more citizens to participate in and benefit from revitalization.¹

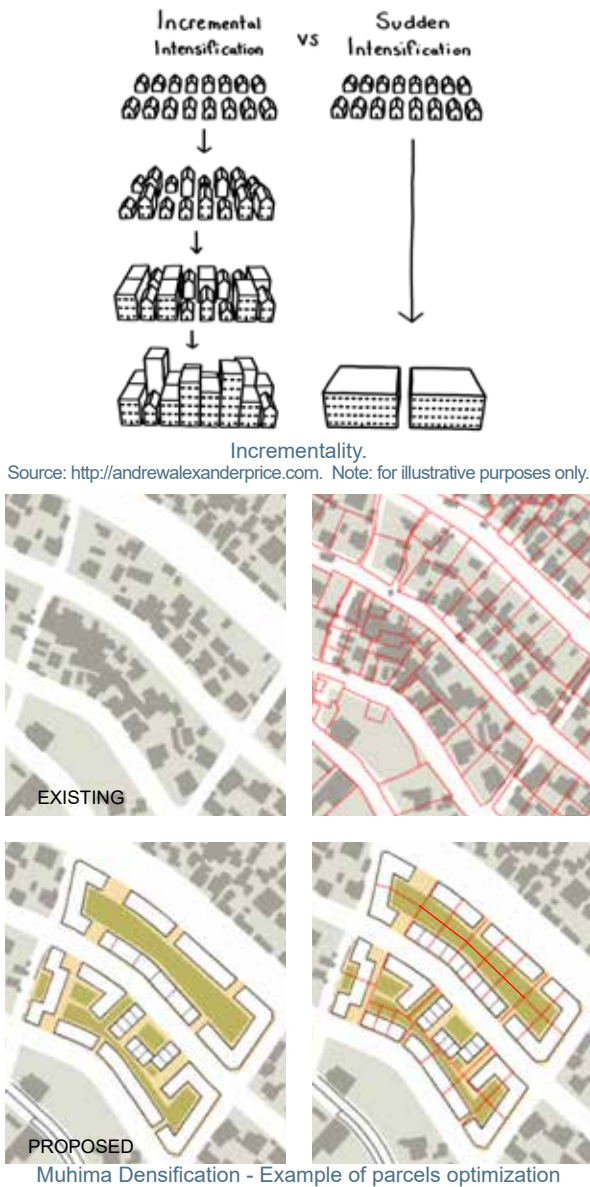
Paraphrasing

“It’s actually not painful to do something, if you do it incrementally.” Yo-Yo-Ma

Incrementalism does not mean doing things slowly: incremental development can be rapid and up to the task of reacting to pressing needs and dramatic societal changes. Incrementalism looks like experimenting, rapid prototyping, iteratively improving, and reducing the risks of bad decisions.

The incrementality development is recommended for the entire Muhima re-development and densification.

¹ Incremental development Alliance – MidTown Columbus

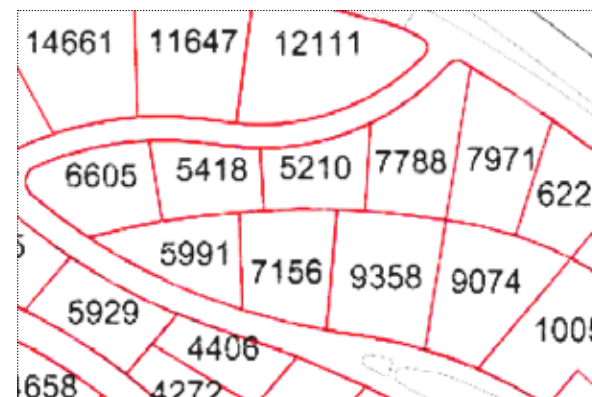


Design Framework

Muhima sector has been prevalently assigned as Mixed-Use Commercial District Zoning - C1. The C1 zone allows for a continuous front development along BRT corridors, green corridors and wetland front by allowing zero side-setback for attached buildings. All buildings shall respect buildings edge alignment, active and animated commercial ground floor, and continuous, well designed, and universally accessible arcade (colonnade and continuous covered walkway) of no less than 3 m along main corridors (BRT and green corridors, Wetland front).

The reduction of the minimum plot size to 500 sqm (against the minimum plot size of 4000sqm as prescribed in previous Plan) aims to facilitate developments and promote incrementality, specifically to support the approach described before.

The Muhima redevelopment has been conceived to encourage city block developments with common shared spaces at the service of the neighborhood. Common shared spaces include garden or parks (private or open space publicly accessible) and parking facilities. Residents surrounding this space share its management, care and oversight, thereby enhancing sense of security and identity.



ZONING MP 2013



ZONING MP 2019

PLOT SIZE
4.000 sqm

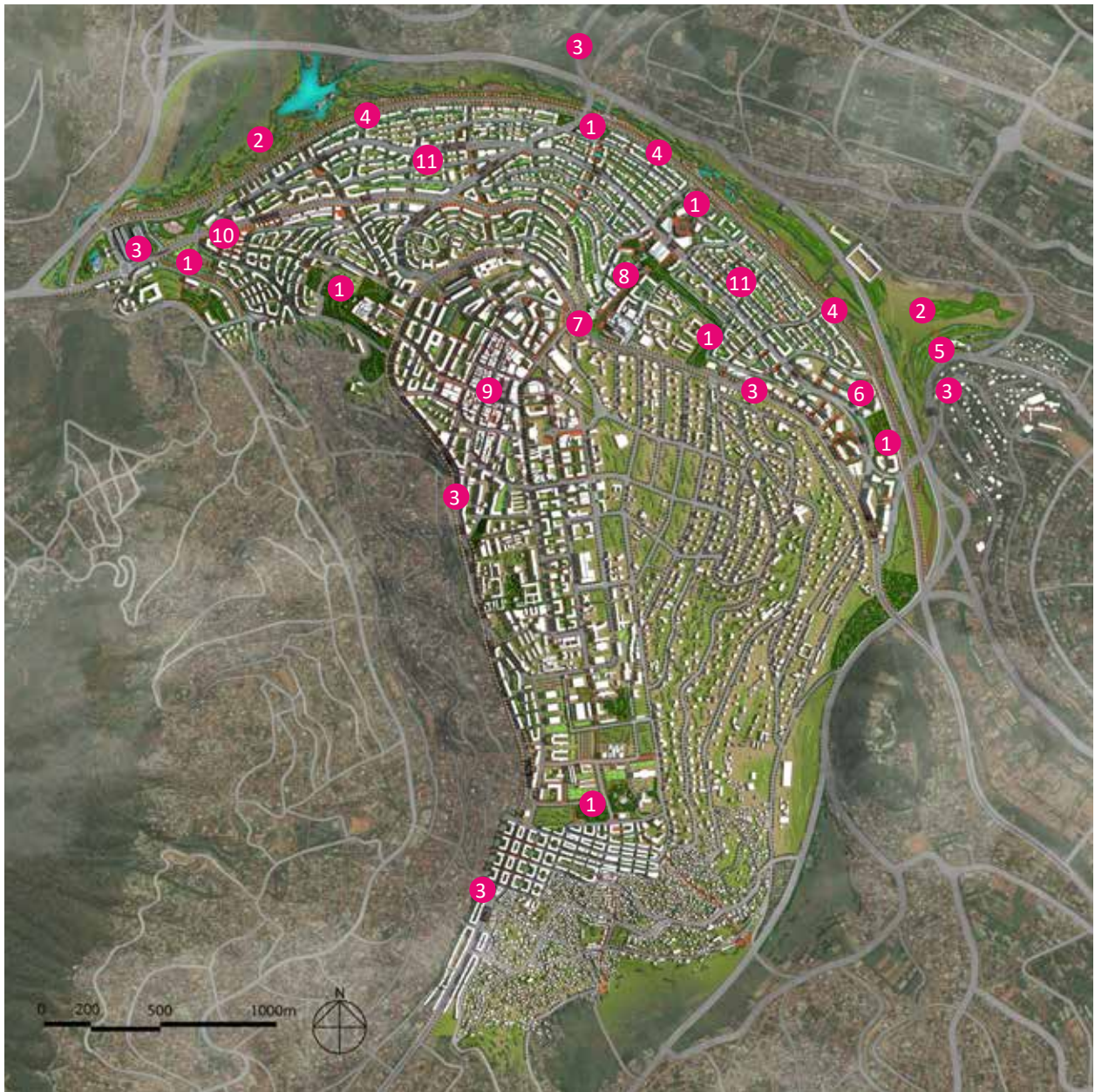
PLOT SIZE
500 sqm

Road Network

Accessibility has been provided and ensured for the entire area.

The design of the road network has carefully considered the existing topography and road alignment. New roads or pedestrian ways (green corridors) have been proposed to connect upland to the wetland, by using existing formal and informal pathways whenever possible. The introduction of a new service road along the wetland, elevated along the portions with greater slope, aims to facilitate this connection.

6 CBD ACTION PLAN



Nyarugenge CBD - Actions Location Plan

A detailed Actions Plan is presented in the following paragraphs. For each Urban Design Area, objectives, required actions and key elements required for its integrated implementation are described together with the proposed phasing.

Whilst the different actions are presented organised by cluster, they should be considered as components of the same programme.

CBD Action Plan is involving the following urban design areas:

- 1 Green Corridors and Urban Parks**
- 2 CBD Wetland Park**
- 3 BRT Infrastructure**
- 4 CBD Wetland Front**
- 5 Kimicanga Garden**
- 6 CBD Office Precinct**
- 7 KN1 Station Plaza**
- 8 CBD Transect**
- 9 Historical Commercial Node**
- 10 Nyabugogo Transport Hub**
- 11 Muhima Urban Renewal**

1

Green Corridors and Urban Parks

Green Corridors to connect the City to the wetlands. New Parks and Open Spaces Network as regional attraction.

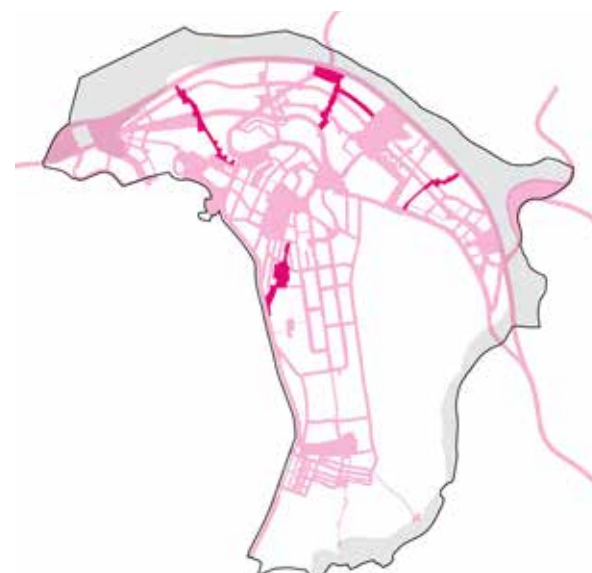
Nyarugenge CBD Green corridors have been identified through the inventory of available nature corridors in the City, complemented by new proposed green-ways.

They include:



Green corridors Phase 1

- BRT (Bus Rapid Transit) corridor road-side
- Open spaces and Urban Parks within the Urban design areas
- Former prison and Kandt House Urban Park
- Green way connecting Downtown to Nyabugogo Transport Hub



Green corridors Phase 2

- Green ways that connect the City to the wetland
- Urban Park and street upgrading connecting Historical Commercial Node - Conservation Area to BRT Station in the south west side

- Green ways that connect the City to the wetland using the topography to enable water to flow towards strategically sited rain gardens, and green street elements
- Water front promenade
- BRT corridor road-side
- Streets with potential for a streetscape and landscaping improvement



Green corridors Phase 3

- Green ways that connect the City to the wetland
- CBD streets with potential for a streetscape and landscaping improvement including new green way passing through the University compound



Green corridors Phase 4

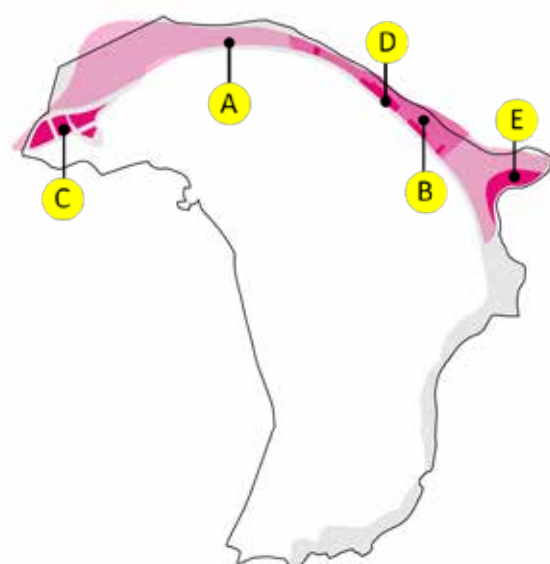
- Green ways that connect the City to the wetland
- Urban Parks and garden
- Streets upgrade

2

CBD Wetland Park

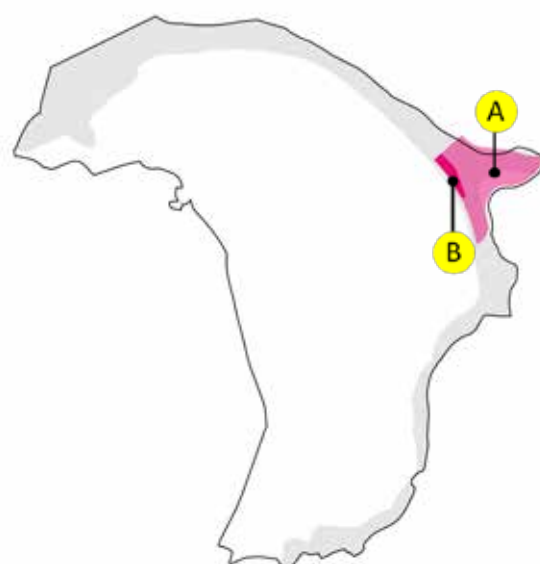
Create an attractive recreational Wetland Park within CBD through:

- Relocation of activities that are not compatible with the wetland use.
- Rehabilitation of the existing affected parcels within the wetland, and wetland park boundary.
- Reconversion into passive and active recreational areas, integrated into the wetland park master plan.



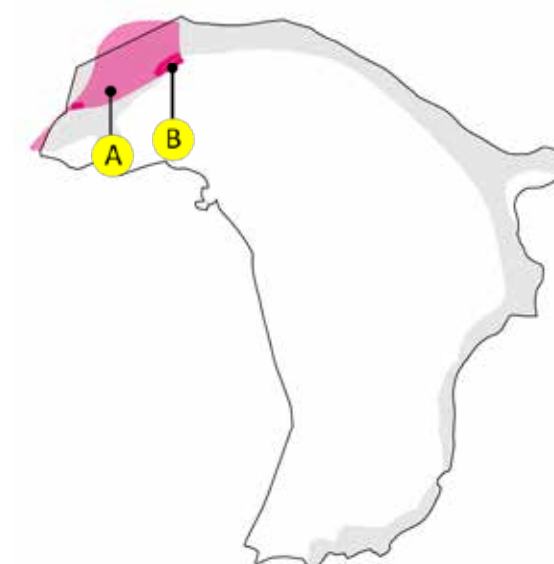
Wetland Park Phase 1

- Feasibility studies, detailed design and phase wise planning of the CBD Wetland Park PHASE 1 (118 Ha)
- Development of CBD wetland Park PHASE 1
- 23.5 Ha (portion of Rwampara Wetland in front of CBD Transect - Muhima)
- Rehabilitation of existing affected parcels in Nyabugogo area (Nyabugogo Transport Hub) and reconversion into recreational area. Nyabugogo BRT Terminal Plot - refer to Nyabugogo Transport Hub action. (7,6 Ha)
- Rehabilitation of the existing affected parcels within Rwampara Wetland and reconversion into recreational areas. (3,5 Ha)
- Development of Kimicanga garden as part of Wetland Park. Refer to Kimicanga Garden UD¹



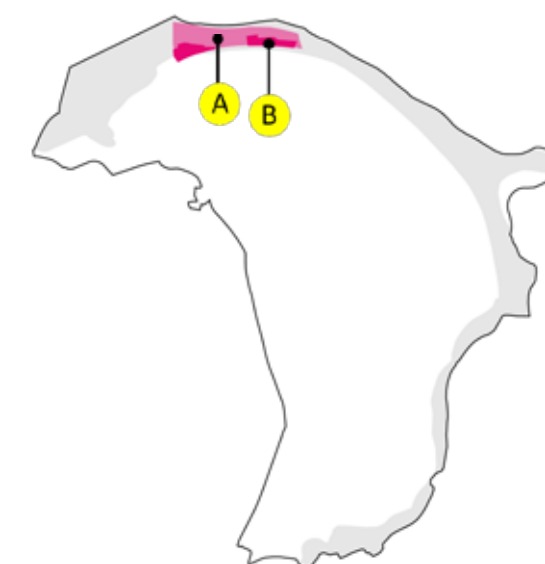
Wetland Park Phase 2

- Development of CBD wetland Park PHASE 2 30 Ha (portion of Rwampara Wetland in front of Kimicanga garden and CBD - Office Precinct)
- Rehabilitation of the existing affected parcels within Rwampara Wetland and reconversion into recreational areas. PHASE 2 (2,9 Ha)



Wetland Park Phase 3

- Development of CBD wetland Park PHASE 3 30 Ha (Nyabugogo Wetland)
- Rehabilitation of the existing affected parcels within Nyabugogo Wetland and Wetland Park Boundary and reconversion into recreational areas. PHASE 4 (4,7 Ha)



Wetland Park Phase 4

- Development of CBD wetland Park PHASE 4
- 18 Ha (Rwezangoro Wetland)
- Rehabilitation of the existing affected parcels within Rwezangoro Wetland and CBD Wetland Park Boundary and reconversion into recreational areas. PHASE 4 (4,7 Ha)

¹ Kimicanga site is not within the wetland boundary, however, considering the closely relation of the site to the wetland it has been included in the set of wetland actions

- Formulation of Detailed Master Plan and development of wetland Park (Portion of Nyabugogo Wetland, Rwezangoro Wetland, portion of Rwampara wetland) in line with prescription of Kigali Wetland Masterplan.

3 BRT

Bus Rapid Transit (BRT) infrastructure, Stations and Terminal



BRT ²

4 CBD Wetland Front

Provide more public open spaces and recreation areas in the city to transform the wetland front into a vibrant and active multimodal corridor.



Wetland Front

Detailed design, phasing plan, implementation and monitoring of road Infrastructure, utilities and landscaping of the Wetland Front Road (KN7 Rd)

5 Kimicanga Garden

Create a new cultural and public space to be integrated into the CBD Public Space network

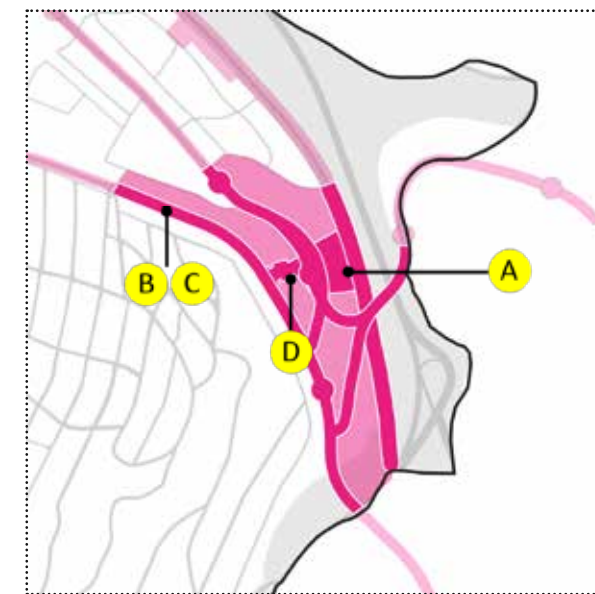


Kimicanga Garden

- Garden and Public Facilities
- Bus Rapid Transit (BRT) infrastructure including BRT Terminal ²

6 CBD Office Precinct

Position Kigali CBD as the Regional Financial Hub and develop prime commercial and office complex through completion of the following projects based on the UD proposal for CBD- Office Precinct:



CBD Office Precinct

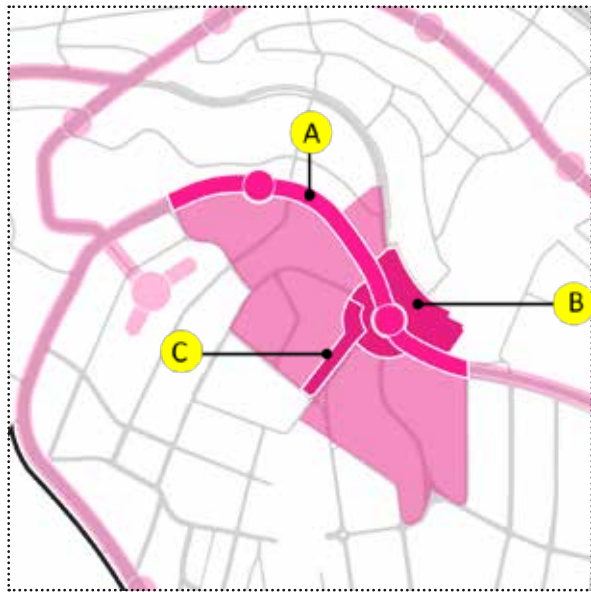
- Rehabilitation of the landslide-affected area and reversion into an Urban Park (detailed study, landscape design of the Park, implementation)
- Bus Rapid Transit (BRT) detailed design and phasing plan, BRT station detailed design, and development ²
- Landscape/streetscape design and implementation of planned landscape elements along the Bus Rapid Transit corridor and Wetland Front ³
- Detailed design and development of the plaza in the central corridor



7

KN1 Station Plaza

CBD “welcome gate-way” for residents and visitors. Create vibrant commercial centre for employment opportunities through completion of the project, based on the UD proposal for KN1 Station.



KN1 Station Plaza

- A. Bus Rapid Transit (BRT) detailed design and phasing plan, BRT station detailed design, and development ²
- B. KN1 Intersection (Centre Ville Roundabout) and landscaping (including central plaza, utilities and street furniture)
- C. Detailed design and development of KN4 Promenade

8

CBD Transect

Sustain the growth of CBD as the Regional Financial Hub and create a physical, social and economic linkage between Muhima and Nyarugenge CBD.

Support and complement the Muhima redevelopment/ densification, and improve and reinforce Rwanda cultural heritage, through the implementation of new open spaces, and community and civic facilities.

Facilitate and improve wetland accessibility.



CBD Transect

CBD Transect Phase 1

- A. Consolidation/acquisition of land or property
- B. Bus Rapid Transit (BRT) as per phasing plan and BRT Station
- C. Parking facilities adjoining Centre Ville Roundabout
- D. Open spaces (parks, plaza and promenade) between Centre Ville Roundabout and BRT station along current KN1 Ave, completed phase 1
- E. Art Installation in St. Famille Art Plaza
- F. Memorial in St. Famille Memorial Plaza
- G. Realignment of the existing utilities
- H. Detailed design completed of:

- Market Plaza and mixed-use development
- Cultural Center and mixed-use development
- Wetland front: road Infrastructure, utilities and landscaping ³

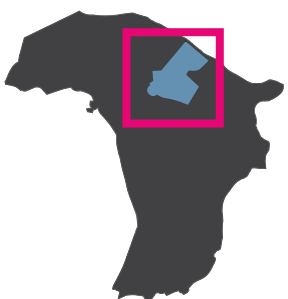
- Muhima Belvedere, park and mixed-use development

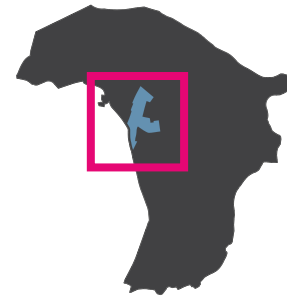
CBD Transect Phase 2

- A. Open spaces (parks, plaza and promenade) between Centre Ville Roundabout and BRT station along current KN1 Ave, completed phase 2
- B. Market Plaza and mixed-use development (PPP) including - Interchange parking
- C. Cultural Center and mixed-use development including Interchange parking
- D. Wetland front: road Infrastructure, utilities and landscaping ³
- E. Muhima Belvedere, Park and mixed-use development

² refer to Feasibility Study and Preliminary Design for Bus Rapid Transit (BRT) System for the City of Kigali

³ refer to Wetland Front Action





9

Historical Commercial Node

Revitalize the Old City Center and improve its connectivity and accessibility through completion of the project based on the CBD UD proposal for Historical Commercial Node and Conservation Area which include:

- Construction of pedestrian street along KN 4
 - Detailed design, construction, and monitoring of: Bus Rapid Transit (BRT) infrastructure including BRT Terminal in Downtown area and BRT Stations along KN2 Ave ²
 - Parking Infrastructure
 - Green corridors and pedestrian network
 - Public spaces and pedestrianisation of KN59 St within the Conservation Area
- Establishment of COK Planning Team and Conservation Area Advisory Committee
- Develop a Conservation Area Program for Nyarugenge Historical Commercial Node - Conservation Area
- Develop a detailed design for Nyarugenge Historical Commercial Node - Conservation Area



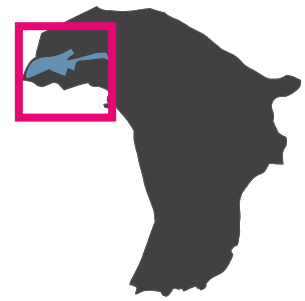
CBD Transect

Historical Commercial Node and Conservation Area - Phase 1

- A. Bus Rapid Transit (BRT) infrastructure as per phasing plan and BRT Terminal and Stations
- B. Parking Infrastructure
- C. KN4 Ave Pedestrian Corridor
- D. Conservation Area Program
- E. Historical Commercial Node/ Conservation Area Detailed design
- F. COK Planning Team and Stakeholders Group established
- G. Detailed design of public spaces and pedestrianisation of KN59 St within the Conservation Area completed

Historical Commercial Node and Conservation Area - Phase 2

- A. Public spaces and pedestrianisation of KN59 St within the Conservation Area
- B. Green corridors and gallery within Historical Commercial Node completed



10

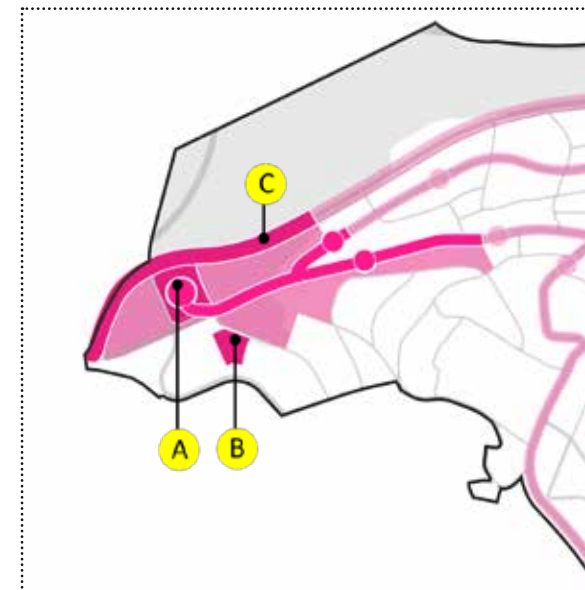
Nyabugogo Transport Hub

To support interchange to enable the integration of transport systems and routes

To connect the new Transport Hub to the City through new green corridors

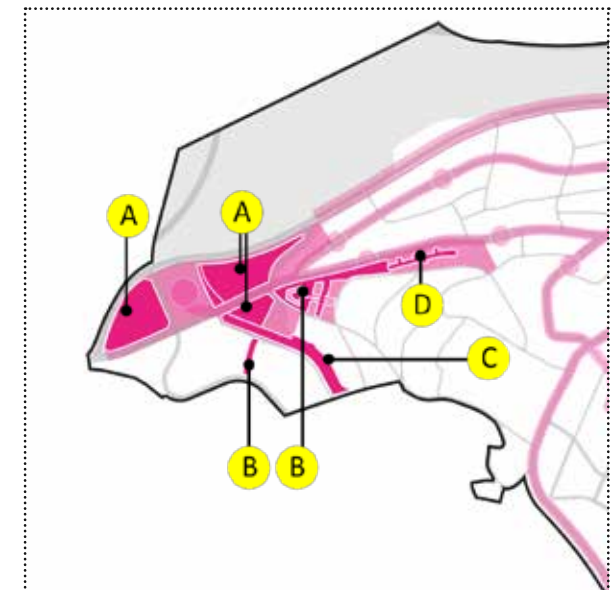
The project is based on the UD proposal for Nyabugogo transport Hub and includes the detailed design construction and monitoring of:

- Bus Rapid Transit (BRT) infrastructure including BRT Terminal (refer to Feasibility Study and Preliminary Design for BRT System for the City of Kigali)
- Parking Facilities
- Urban Parks, Mpazi promenade and green corridors



Nyabugogo Transport Hub Phase 1

- A. Bus Rapid Transit (BRT) infrastructure as per phasing plan and BRT Terminal and Stations ²
- B. Parking Infrastructure
- C. Wetland front: road Infrastructure, utilities and landscaping ³



Nyabugogo Transport Hub Phase 2

- A. Urban Parks within the wetland ⁴
- B. Urban Parks, recreational area and green corridors
- C. Mpazi Promenade
- D. Publicly accessible Gallery

11

Muhima Urban Renewal

Create a sustainable and vibrant mixed-use development in Muhima CBD and facilitate implementation of incremental developments in Muhima CBD through implementation of Bus Rapid Transit (BRT) infrastructure including BRT stations ², road and utilities realignments and landscaping.



- Muhima redevelopment**
- Detailed design and implementation of:
- Bus Rapid Transit (BRT) infrastructure including BRT stations
 - Road infrastructure:
 - road and utilities realignments
 - landscaping

² Refer to Feasibility Study and Preliminary Design for Bus Rapid Transit (BRT) System for the City of Kigali

³ Refer to Wetland Front Action

⁴ Refer to CBD Wetland Park Actions

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A URBAN DESIGN REGULATIONS



Nyarugenge CBD - View

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| A3 | Urban design Regulations | 153 |

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A₁ INTRODUCTION

Purpose

The main purpose of these Urban Design Regulations is to achieve the desired urban characters of the Kigali CBD, the different characters of the key areas and the desired ambience at the ground level.

The Key Urban Design tools are identified for:

- Achieving the CBD's urban design characters through the definition and placement of Skyline, Landmarks, Gateways, Vistas and Building Edges.
- Enhancing the CBD's public spaces and connectivity through definition of pedestrian and cycle connections, publicly accessible areas, outdoor refreshment areas and activity generating uses at ground level.

Urban Design Area Boundary

Each Urban Design area has been identified with a boundary.

Each Urban Design area as local spatial property interact with a larger context; for this reason, broader areas have been taken into account. In some cases, Urban Design Regulation may affect areas that are not physically within the Urban Design area boundary but are closely related to it.

The boundary should not be considered a physical limit and developments outside the boundary need to consider the relation and the transition to such areas.

Types of Urban Design Regulations Plans

These urban design requirements are to be observed in addition to the requirements specified in the Zoning Regulations. In case of any conflict between the two, this Urban Design Regulation Plans will prevail.

The following are the different types of control plans introduced for key areas in the Urban Design:

Structure Plans

Structure plan sets out a vision for the future development of each planning area. It establishes a planning and management framework to guide developments.

Structure plan includes also special projects that are considered catalyst or are identified as priority to the development of the area and neighbourhoods. Special projects are recommended to be implemented focusing on engagement local communities'.

Parcellation Plan

The parcellation plan aims to preserve as much as possible existing parcel subdivision and promote land assembly while allowing flexibility, by suggesting alternative parcel subdivision whenever possible. The parcellation plan is composed by the following layers:

- Proposed parcellation (level 1) proposes a different parcel configuration and subdivision where land assembly is recommended
- Alternative Parcel Subdivision (level 2) propose a different parcel configuration and subdivision with minimum plot size to facilitate development whenever land assembly is not implementable. Revision of Alternative Parcel

Subdivision is allowed and requires City of Kigali – One Stop Center approval.

- Revised Existing Parcellation is based on existing parcel configuration and subdivision while proposing land assembly whenever recommended. Existing parcels have been revised considering the Right of Way and adjusted in case of irregular shaped plots.
- Revised Existing Parcellation - Alternative Parcel Subdivision. Existing parcels have been revised considering the Right of Way and adjusted in case of irregular shaped plots. It is an alternative solution whenever land assembly is not implementable

Building Ground Floor Use Plan

While most of the parcels within the key areas have to follow the Zoning Regulations to determine their land use, special parcels in key areas are required to follow special Urban Design Control. As per this Plan, the ground floor in mixed use buildings adjacent to green corridors and public plazas are designated to be used for activity-generating uses like food and beverage outlets, retail uses, etc.

These uses provide activity and vibrancy on the streets and public spaces.

They enhance public security and passive surveillance and improve the amenity of the public domain by encouraging pedestrian activity. They also assist in supporting the economic viability of the street.

Special uses like art or entertainment are also allowed and recommended within specific areas.

The Building Ground Floor use plan defines also areas for outdoor refreshment or outdoor dining.

Extra outdoor refreshment areas or different locations can be evaluated and approved by City of Kigali OSC. Outdoor dining areas shall be arranged so as not to obstruct pedestrian movement. If not specified otherwise, the minimum width of the unobstructed pedestrian corridor has been determined to be two (2) meters and should be applied to all outdoor dining establishments in the City that impact the public right of way. When arcades are provided, unobstructed pedestrian corridor can be reserved along the covered walkway.

Special Urban Design Regulations Plan

Special Urban Design Regulations plan is established as a special regulatory tool to promote the incentive zoning within the CBD. It defines the areas where extra GFA or extra floors on top of current Zoning Regulations are permitted.

Building Setback Plan

The Building setback plan supersedes the setbacks parameters prescribed in the Zoning Regulations. In specific areas, existing building alignments have been identified to maintain and protect existing built-up frontage or urban fabric that need to be preserved.

Building Edge and Covered Pedestrian Walkway Plan

Mandatory buildings edges alignments are stipulated along the open spaces and public plazas to define the open space character. Building Edge Plan also defines the alignment of the covered pedestrian walkways (arcade or gallery) which creates a continuous covered pedestrian walkway.

Public Access Plan

Public access plan defines all the open spaces publicly accessible and main pedestrian connections and linkages. Publicly accessible Open Spaces should be dedicated to landscaping, pedestrian activities and outdoor refreshment areas whenever allowed (refer to Ground Floor Building Use Plan and Cross-Sections). Pedestrian movement is maximised throughout the area by allowing uninterrupted movement along and within all parcels as well as through features including arcades to enhance pedestrians' experiences.

Parking Strategy and Local Accessibility Plan

In terms of vehicular accessibility and movement within the CBD, emphasis is laid on facilitating pedestrian comfort by clearly segregating vehicular access.

Vehicular entry is provided along the main access roads.

The proposed Parking system is recommended to optimize the urban form, preserve land form and avoid conflicts with pedestrian movement

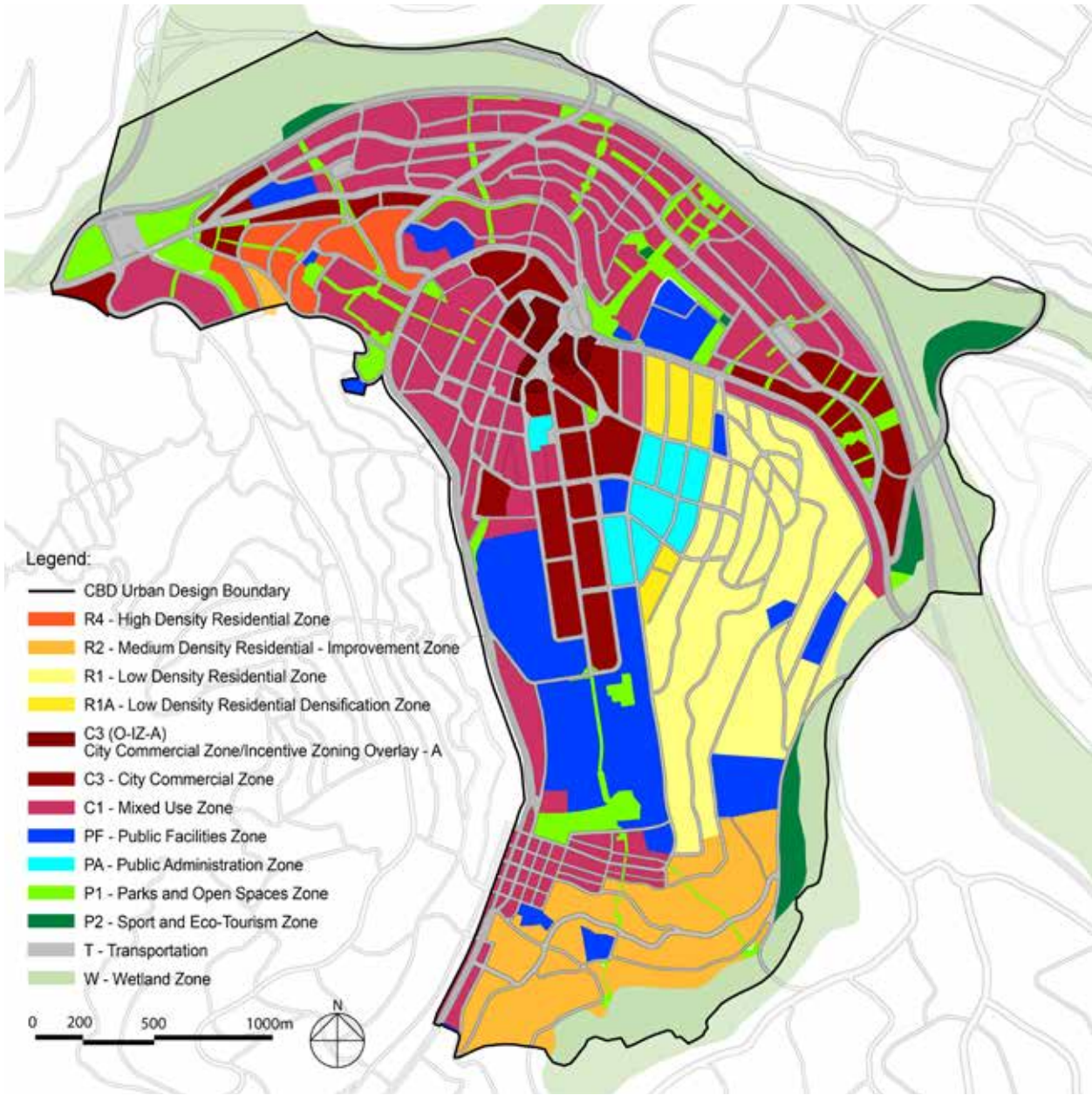
Cycle Network Plan

The Cycle Network Plan identifies the main cycle routes and location of bicycle facilities.

Urban Planning Area Regulations maps are showing the existing and proposed built-up area. Refer to the Existing and Proposed Buildings Map.

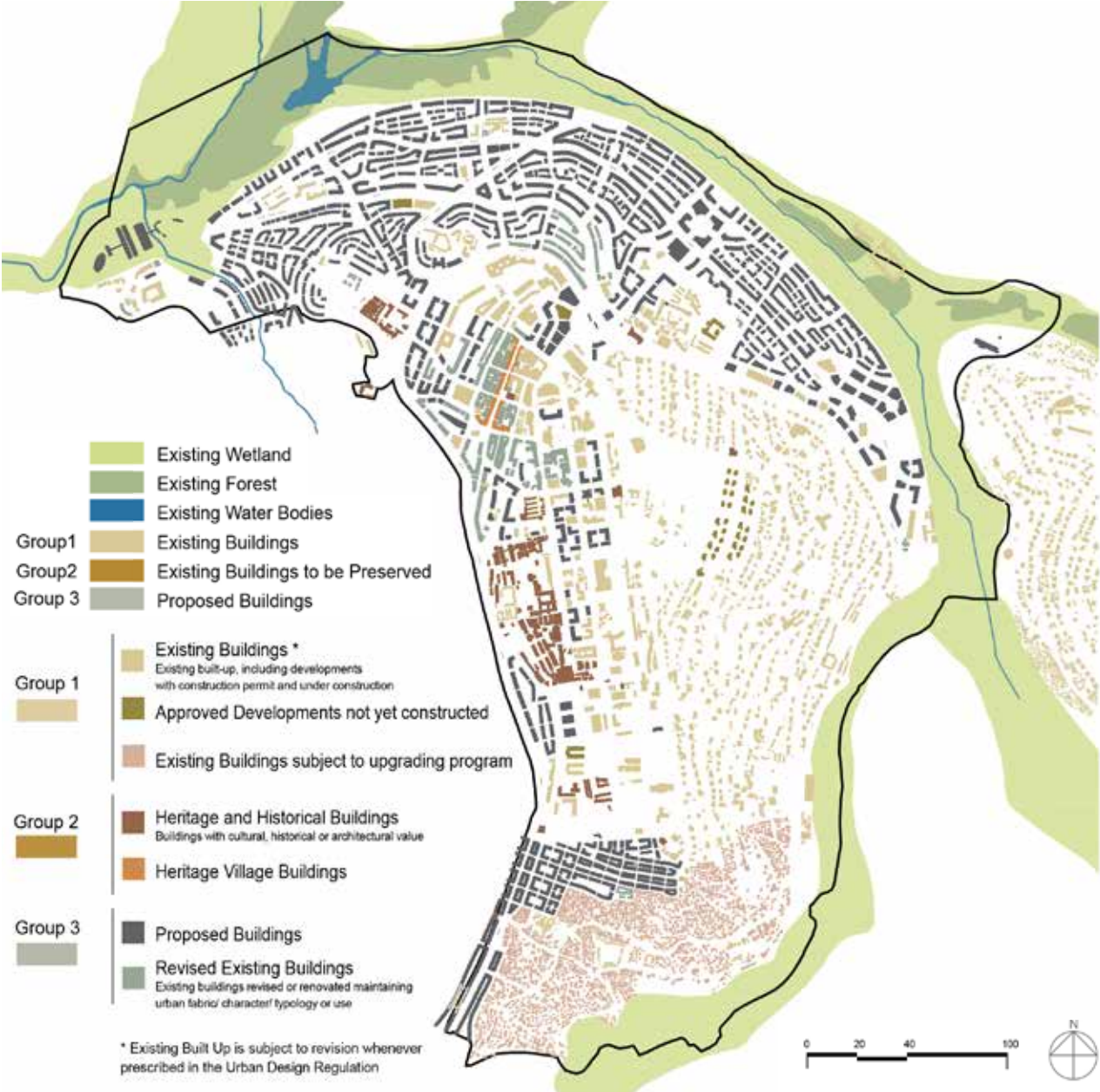


ZONING PLAN



Nyarugenge CBD - Zoning Plan

BUILDING MAP



Nyarugenge CBD - Existing / Proposed Building Map

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A₂ GENERAL PROVISIONS

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Suggested Parcellation

The proposed parcellation plans for each Urban Design Area may be subject to modifications or adjustments based on detailed design and upon submission of alternative Subdivision Plan.

A1 Store in Barcelona, Spain. Credits Miralles Tagliabue EMBT). Note: for illustrative purposes only.

A2 Refurbishment of Riera la Salut, Barcelona Spain Architects: Pol Feminias (credits O.M. Estudi). Note: for illustrative purposes only.

A3 Street in London, UK (credits Tim Crocker). Note: for illustrative purposes only.

Building Uses

Urban Design Regulations provide additional prescriptions to the Zoning Regulations regarding:

- Building Uses;
- Site-Specific Recommended Uses;
- Additional Prohibited Uses;
- Additional Conditional Uses;
- Building Ground Floor Uses.

Cultural and Entertainment Uses

Among the site-specific uses and activities proposed within each Urban Design Area, Cultural and Entertainment uses have been selected to complement the primary uses of the Building Ground Floor, in order to promote art, culture and vibrancy within the CBD.

Cultural and entertainment uses include: Art galleries, Library, Museums, Performance spaces, Theatres, Visual/Media arts spaces, Auditoriums, Bookstores, Clubs, Music stores, Arts studio. The list of Cultural and entertainment uses is subject to update or modification by City of Kigali – One Stop Center.

Night activities such as restaurants, pubs, music clubs, etc. should be encouraged to develop and promote a night-time economy in the CBD.

The following actions are recommended:

- Extend operating hours of businesses, where suitable;
- Create night time atmosphere through lighting and event programming;
- Promote evening cultural events like outdoor cinema, music or food festival, night time food market, concert in public spaces, etc.;
- Encourage use of underutilized spaces by street and food market where possible;

- Ensure night- time bus and shuttle services to facilitate CBD’s night-life access to users.

Cultural and entertainment uses, including night-time activities, are subject to approval by City of Kigali – One Stop Center, based on the site-specific context.

Active Façade / Frontage

Mandatory or recommended active façade/ frontage is required along Bus Rapid Transit (BRT) Corridors, Wetland Front and Green Corridors. An active frontage is constituted by continuous business or retail uses that open directly to the footpath. These uses provide activity and vibrancy to the streets and public spaces.

They enhance public security and passive surveillance and improve the amenity of the public domain by encouraging pedestrian activity. They also assist in supporting the economic viability of the street.

Encouraging active and visually permeable frontages instead of blank compound walls will help to improve safety, visual interest and cohesion to the streetscape.

The design of facades at ground floor should generate active frontages along the street enclosure. Three different typologies of active frontage can be identified:

- a) Visually Permeable Frontage, allowing bi-directional visibility from the street inside the building and vice versa.
- b) Welcoming Frontage, inviting the passing-by in through clearly legible entrances that are physically easy to access.
- c) Jutting Frontage, when it extends out on the street, as is the case of cafes and outdoor dining areas.



A1 Active Building Frontage (type b)



A2 Social Fence



A3 Active Building Frontage (type c)

The ground-floor façade characteristics play an important role in promoting activities on the sidewalk:

- diversity of building ground-floor uses including food outlets and cafés;
- physical and visual permeability of ground-floor frontages;
- the spill over of indoor activities like outdoor dining and refreshment areas;
- high levels of rhythm and complexity in ground-floor façades;
- good walking experience with appropriate sidewalk width, and
- seating opportunities.

Outdoor Uses

Sidewalks are often seen as potential sites for buildings to extend their ground floor uses for stores to display their goods, or for restaurants to increase their seating areas. These uses can be permitted or temporary. Outdoor uses can add to the variety of pedestrian speeds, allowing for people to pause and look, stop, relax, and people watch. On a commercial street, outdoor uses like cafés, flowers, and fruit stalls can add enormously to the sidewalk's vitality.

Active Façade - Strategies

Strategies to activate building frontages exposed to prominent public view

An overall strategy is to ensure active and inviting facades on all streets in the CBD by identifying the ground floor facades that could have negative effects on public realm.

Boundary wall/fence and blank walls

Long stretches of blank façades with no entrances or windows should be avoided. When this is not possible, artwork or architectural articulation techniques can add interest to the pedestrian experience.

Fences, blank walls and gates impede access and create unfavourable conditions for social interaction, vivacity, sense of belonging and are detrimental to the aesthetic values of a place.

A social fence is proposed for cases where Boundary wall or fence is exposed to open spaces in order to achieve a continuity to the street. A Social Fence contributes in adding an extra layer to the fence, mitigating its barrier-like nature.

Camouflage is the preferred strategy of mitigation, implemented through public art installations, repainting, and covering them with vegetation. With the same objective, existing fences may be integrated with urban furniture such as seating, lighting, signage and trash bins to enhance their interaction with the street.

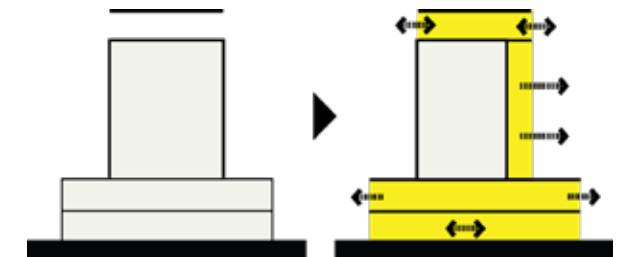
Parking Structures

Converting existing Parking Structures into energy-efficient and green structures; introduction of green walls on building façades and green roofs for control of rainfall and pollution uptake. New Parking Structures:

- Should be designed to have an external façade designed to improve visual character when exposed to prominent public view.
- should integrate sustainable design features such as photovoltaic panels, renewable materials, landscaping and storm water treatment wherever possible.
- Integrate public art and lighting as part of the Building Façade.
- Ground floor treatments should provide screening to block views of parked vehicles from pedestrians using adjacent sidewalk.

Commercial complex versus active frontage

Transformation of existing and or new big developments, by activating street façade, transforming inaccessible first floor and covered roof terraces into publicly accessible spaces, adding green buildings elements to control environmental effects (sun, rain).

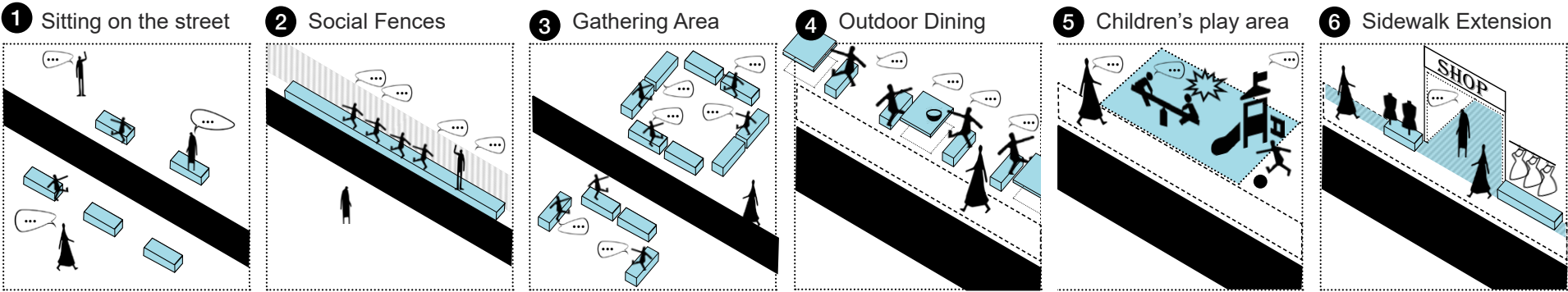


Open Spaces activities and Streetscape Provisions

While Streetscape Guidelines are recommended to be implemented by City of Kigali, the Urban Design Regulations propose a list of recommended activities and streetscape provision for Wetland Front Promenade and Green Corridors:

- streetscape amenities include: street furniture, seating, tables, benches, trees, landscaping, cycle racks, and water fountains;
- art forms as part of the building facade and / or open spaces: art installations, monuments, sculptural artwork, murals, etc.;
- streetscape-enhancing amenities, including lighting or sculptures;
- entertainment amenities, including water features, children's play areas, etc.;
- unenclosed outdoor refreshment area;
- drinking fountains with fresh, potable water to offer sustainable alternatives to bottled water and ensure an essential water source in communities;
- services and dedicated spaces for vendors, kiosks and open-air cafes, temporary street markets (food, drinks, flowers, art and crafts stalls) and other establishments along the wetland's edge;
- public toilets/rest rooms along wetland front and green corridor to improve quality of life by maintaining access to clean sanitation facilities for all.

A4 - A5 Illustrations and pictures' source: ' Imbuga pedestrian corridor on KN4 Ave' - City of Kigali



A4 Example of Streetscape Provisions



A5 Art Forms

Non-Conforming Buildings and Uses

Non-conforming Buildings and Uses have been identified in some areas of the CBD. The list of non-conforming buildings and uses shall not be considered exhaustive and shall be updated and/or revised by City of Kigali periodically.

Refer also to Chapter 4.3 - Non-Conforming Existing Uses in Zoning Regulations, General Provisions.

Refer to 'Strategies to activate building frontages exposed to prominent public view'.

Special Urban Design Regulations

The Special Urban Design Regulations identifies where Incentive Zoning Overlay Regulations is applicable and gives site-specific prescriptions. However other form of incentives can be applied within the Nyarugenge CBD planning area.

Refer to section 7.2 Incentive Zoning Overlay (O-IZ) and section 8.4 Incentive of the Zoning Regulations.

Zoning regulations should be referred to when no specific indications are provided by the Urban Design Regulations. In all other cases Urban Design regulations supersede general Zoning regulations.

Building Edge

Building edge prescriptions include:

- Building Edge - Alignment
- Building Edge - Ground Floor Covered Pedestrian Walkways
- Building Edge - Above Ground Floor Use

Building Edge prescriptions are illustrated in ‘Building Edge and Covered Pedestrian Walkways’ Plans and cross sections, when available, for each Urban Design Areas. For areas outside the Urban Design boundaries, the City of Kigali will be responsible to control building alignments to ensure relevant site-specific views and green corridors.

Building Façade Elements

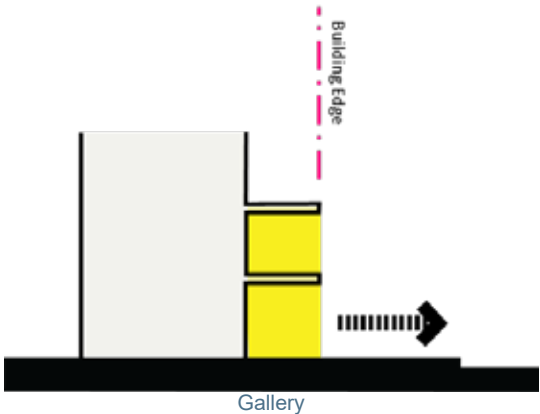
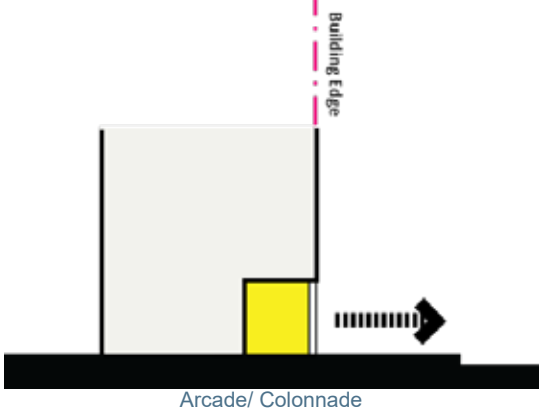
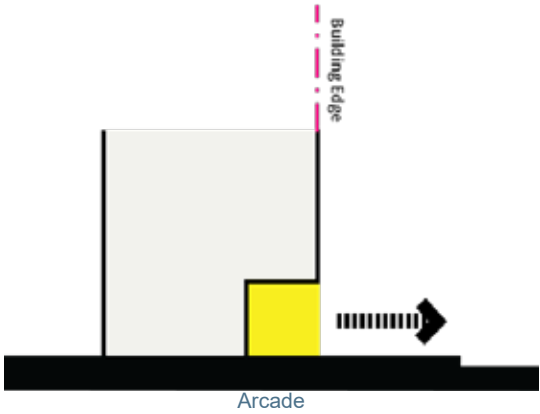
Covered pedestrian Walkways

A covered pedestrian walkway along the building edge besides offering protection from the rain and the sun, serves a much broader economic constituency of small, medium related activities. As highlighted in the study “Inclusion of Traditional Rwandan Cultural Characteristics into the Built Environment”, establishing Rwandan street Colonnade (‘ibarama’) as iconic and multifunctional element (shelter, display and space for social interaction) will improve the public interaction with the buildings, creating a more natural environment for social communication.

Refer to types of Building Covered Pedestrian Walkways in the pictures.

Attention shall be put to the height and width of the arcade/ gallery in order to ensure architectural proportion and adequate space for pedestrian circulation.

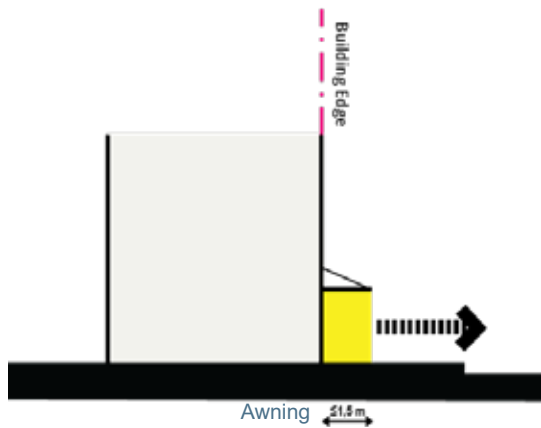
Refer to Zoning Regulations Setback Principles



Canopies and awnings

Awnings define the storefront and contribute to the appearance of the street, and also provide shade, protecting people and displayed merchandise, from the sun. They are attached to the building.

Canopies/ awnings shall be positioned next to the building and leaving adequate space on the sidewalk for pedestrians to circulate.

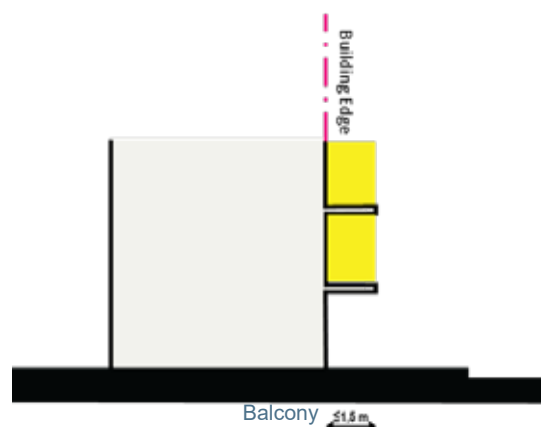


Balconies

Balconies design should be controlled and integrated into the overall composition of the façade.

Refer to Zoning Regulations Setback Principles

Canopies, awnings and balconies elements add depth, interest, and variation to the building façade and roof plane of the sidewalk room. They also often provide opportunities for individual establishments to use color and add to the character of the street while breaking down the scale of larger buildings. Awnings often incorporate part of a commercial establishment's signage and help shape a specific building's identity. Awnings/canopies, and shading devices can provide shade during hot seasons and shelter from rain.



Terraces

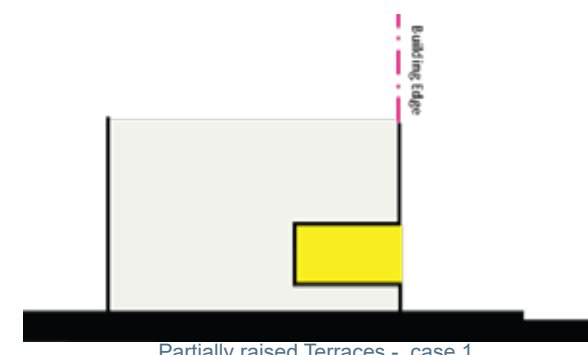
Terraces are recommended to as Active Frontage component, subject to City of Kigali – One Stop Center approval.

Partially raised terrace

A change in the level provides a privacy gradient maintaining a visual contact with street. A partially raised terrace clearly defines a seating area elevated from the sidewalk.

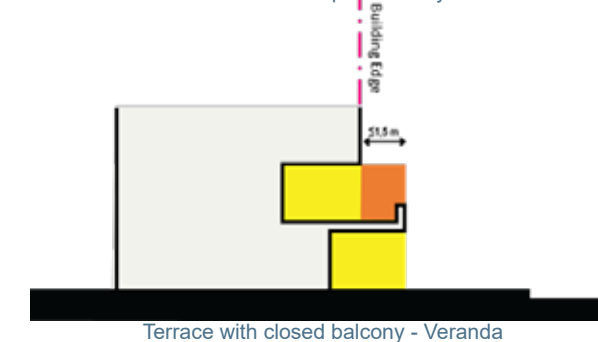
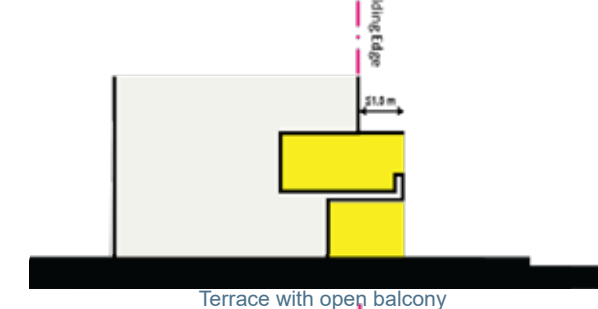
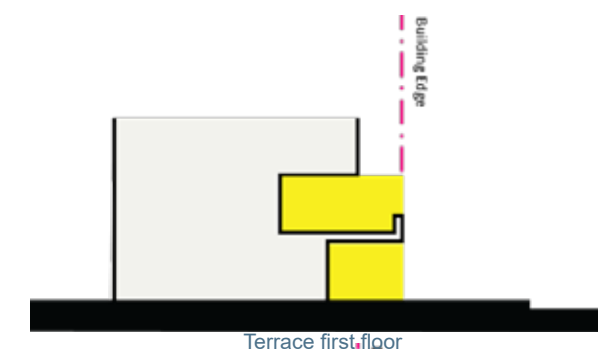
Partially raised terraces must be located immediately next to the building, along the front building edge. Attention must be paid to partially raised terraces to assure pedestrians movement and accessibility.

Partially raised terraces as outdoor refreshment area (case 2) is applicable in cases where outdoor refreshment area is allowed and is subject to City of Kigali – One Stop Center approval.



Terrace First Floor

Partially raised floor terraces and/or first floor terraces ensure an interactive experience with the street. The first gives a more direct contact with the street although it is physically limited (clearly defines a seating area elevated from the sidewalk), the second gives an overlook on the street below.



Shop Front and other Ground floor façade elements

Building façade elements, especially at the ground floor level, play an important role as street interface. Following are some of the buildings facade elements that need to be regulated:

- **Ground Floor Transparency**
Commercial storefronts should be transparent, allowing for a direct visual connection between pedestrians on the sidewalk and activities occurring inside the buildings. Setting minimum transparency levels at the ground level activates the street environment, providing visual interest during the day and an intimate, secondary source of lighting at night. A high level of transparency between 50 and 95% fenestration is recommended, to provide visibility between inside and outside and to expand the street space.
- **Signage and merchandise display**
Signs can add interest to the sidewalk environment if they are appropriate to the area's desired scale and character. The rhythm and spacing of signs along the building façade can help achieve a human scale and create a more inviting and active sidewalk environment. Restrictions or flexibility of signage design should be provided according to the character of the area.
- **Building equipment**
Building equipment such as air-conditioning devices, electricity cables, photovoltaic modules, water tanks, satellite dishes, should not be visible at the street level. They should be located internally whenever possible or and, in any case, should be discreetly hidden inside

suitable parts of the building, as per approval from the City of Kigali- One Stop Centre.

- **Lighting Display Windows**
Lighting for signs and display windows should be compatible with both sign and building.
- **Gates – emergency exit and accessibility**
Provide frequent and clearly demarcated entrances. Commercial entrances are key elements in activating the sidewalk, and should be visible and approachable. They should be clearly marked and look inviting to pedestrians, and provide an adequate transition between public and private space.



A5 - A6 Good design of a storefront signage, Milano, Italy

Circulation and Accessibility

Circulation and Accessibility include:

Public Access – Pedestrian

Refer to the specific Urban Design Area 'Public Access Plan' and 'Public Building Use/Edge and Public Access' Sections, when available. Refer also to Nyarugenge CBD -Urban Design Report chapters: 'Pedestrian Network' and 'Green Corridors'.

Supplemental publicly accessible open spaces are or may be required within private developments along Wetland Front and Green Corridors boundary in specific areas to ensure green corridor implementation. Areas that are required to include publicly accessible open spaces are defined in the Wetland Front and Green Corridors 'Public Access' Plan and 'Special Urban Design Regulations' Plan

Public Access – Cyclists

Refer to the specific Urban Design Area 'Cycle Network Plan' and Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter.

A5 Storefront, Milano, Italy. Architects Mar office (credits: Filippo Poli). Note: for illustrative purposes only.

A6 Storefront, Milano, Italy. Architects John Pawson (credits: Max Gleeson). Note: for illustrative purposes only.

Visual Corridors and Upland Pedestrian Connections

Visual Corridors

Visual corridors have been established for the Wetland Front Urban Design Area and along the green corridors.

Visual Corridors are open areas that provide an unobstructed view from upland streets through a wetland front plots to the wetland. Intended to extend existing and proposed views to the wetland from the upland communities, visual corridors are required at regular intervals corresponding to the existing street network or green corridors. Visual corridors, should be generally accessible to the public but a component of private space may be authorised provided that it does not obstruct the views. Visual Corridors may contain certain obstructions such as parking areas and trees.

Upland Pedestrian Connections

Upland connections are pedestrian ways within a public place (a park, for example) or a through-block connection. Upland connections may be provided along a private road. In some cases, upland connections are existing informal footpaths that have been preserved and formalized. Upland Pedestrian Connections have been established along the Wetland Front. City of Kigali - One Stop Center is responsible for identifying and preserving additional Upland Pedestrian Connections based on site-specific context and local detailed design.

Parking Strategy and Local Accessibility

Parking Strategy and local Access Plan of each Urban Design Area are part of the overall CBD parking and loading strategy.

Refer to:

- Specific Urban Design Area 'Parking Strategy and Local Access Plan'.
- Nyarugenge CBD Urban Design Report 'Parking strategies, Loading and City Services' Chapter.
- Zoning Regulations – 6.7 Parking Requirements.

Loading and City Services

Loading Areas and City Services of each Urban Design Area is part of the overall CBD Loading and City Services strategy.

Refer to Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter and to Zoning Regulations -4.7 Service areas and equipment

Public Transit

Integrated public transit systems, legibility and wayfinding need to be controlled at key nodes, in correspondences of BRT terminal and Stations.

Night- time bus and shuttle services are recommended to facilitate CBD's night-life access to users.

Refer to Nyarugenge CBD Urban Design Report 'Public Transport Network' Chapter.

Implementation recommendations

General implementation recommendation for the overall CBD are listed below:

- Inclusivity and Community Involvement in the Planning are strongly recommended by establishing a participatory planning process to involve amenity societies, independent experts, residents and businesses.
- Support and promote Microbusinesses especially within the Muhima Densification and Redevelopment Area and Historical Commercial Node - Conservation Area.
- Promote Micro, Small and Medium Enterprises financial inclusion.
- Inclusionary Zoning is recommended to promote social inclusion and integration, where applicable.
- Land assembly, Incremental and Infill development processes are recommended to create a mixed-use and mixed-income district.
- Parcel amalgamation and/or regularisation is recommended as a mechanism for achieving urban consolidation through densification.
- Incrementality is encouraged to maximise current investment capacity without hindering future development potential.

Site-specific implementation recommendations are provided for each Urban Design Area.

Environmental Sustainability

The Intent of this section is to ensure environmental sustainability of CBD developments.

- Refer to Zoning Special Regulations 8.2 Minimum green building requirements
- Refer to Zoning Regulations - 7.8 Slope (30-55%) Overlay

General Environmental Sustainability recommendations are listed below:

- Natural landform must be preserved. No large-scale land benching movement shall be permitted;
- Protect biologic, botanic, geologic and topographic features;
- Ensure Green Building and Energy Efficiency high level standard;
- Ensure storm water runoff treatment;
- Preferable use of local and natural materials. Use of recycled materials is allowed and recommended.

Site-specific environmental sustainability recommendations are provided for each Urban Design Area.

Recommended Actions for City of Kigali to Undertake

In order to facilitate implementation of the CBD Urban Design, a series of recommended actions are listed below

- Nyarugenge CBD is subdivided into different Character Areas, based on context, scale, form, and intensity: CBD City centre, Historical Commercial Node, Muhima Mixed use area, Bus Rapid Transit (BRT) Corridor front and Wetland front. For each area, urban design and architectural guidelines should be established to guide the developments.
- Establish Architectural Design standards and City Center Design Manual to define and regulate building façade, walls, windows, roofs, materials, colours and other building features, according to the character of the area.
- Establish 'Tall Buildings' design guidelines to create a set of performance measures for the evaluation of all tall building development applications across the city.
- The establishment of an Architects' Board to evaluate architectural conformity of the proposed development is strongly recommended.
- Prepare Streetscape guidelines and street-level building façade guidelines. Minimum landscaping provision requirements shall be established by a landscape and streetscape regulation of the green corridors.
- Promote citizen and professionals' sensitization.
- Promote dialogue between professionals, developers, local planning authority and other stakeholders to achieve best buildings' results.

Heritage and cultural sites conservation

- Establish a conservation area advisory committee and COK planning Team to ensure good architecture and quality control.
- Develop Design guidance for conservation areas and Historical buildings.
- Develop Heritage Management Plan.
- Transfer Development Rights (TDR) is recommended to be implemented as a tool in historical conservation areas.

Refer also to Kigali Master Plan Report, '12.5 Kigali Culture and Heritage Assets' and Zoning Regulations, '7.10 Heritage Conservation and Promotion Overlay'.

INTERIM

In absence of the above heritage conservation tools, the following procedure is recommended for Construction Permitting process of selected heritage buildings/ sites (as per 'existing building to be preserved' in the 'Nyarugenge CBD - Existing / Proposed Building Map'):

- Any request of Construction Permit is subject to a design competition with at least three design proposals. City of Kigali will be in charge to prepare Terms of Reference.
- City of Kigali will be responsible to establish a Jury to select and orient the best design.

Refer to Nyarugenge CBD - Urban Design and Regulations, Urban Design Regulations, Introduction chapter: 'existing building to be preserved' in the 'Nyarugenge CBD - Existing / Proposed Building Map'.

Site-specific recommended actions for City of Kigali to undertake are listed within each Urban Design Area regulations.

Recommended Design Principles

Site Design

- Recognize and enhance Urban Patterns. Sites should be designed to reinforce and continue existing urban patterns by modulating scale of buildings and promoting walkability, enhancing existing courtyards and small alleys
- Ensure relationships between Buildings, Streets, and Open Spaces by controlling building massing vertically and horizontally to a scale compatible to its context

Design the street elevations of large buildings as multiple façades, especially along the sidewalk. This maintains a sense of pedestrian scale. Variety within each building will help to break down the horizontal scale, helping the pedestrian experience.

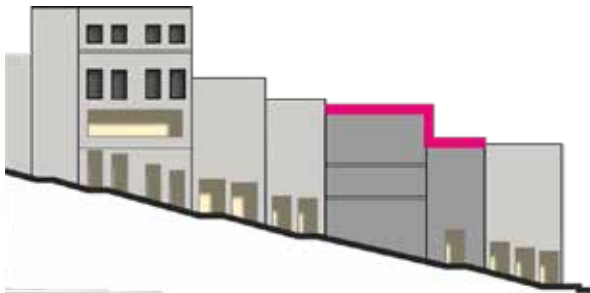
- Recognize and Enhance Unique Conditions
- Create, Protect, and Support View Corridors
- Create a Defined and Active Building Edge
- Organize Uses to Complement the Public Environment
- Integrate Common Open Space and Landscape with Architecture
- When integrated into the built environment, common open space— such as rear yards, front setbacks, courtyards, and roof decks— enhance the quality of urban life.
- Respect and Exhibit Natural Systems and Features. Buildings that reflect the existing site topography and retain natural features help express city identities



Block assembly - multiple façades



Defined and Active Building Edge



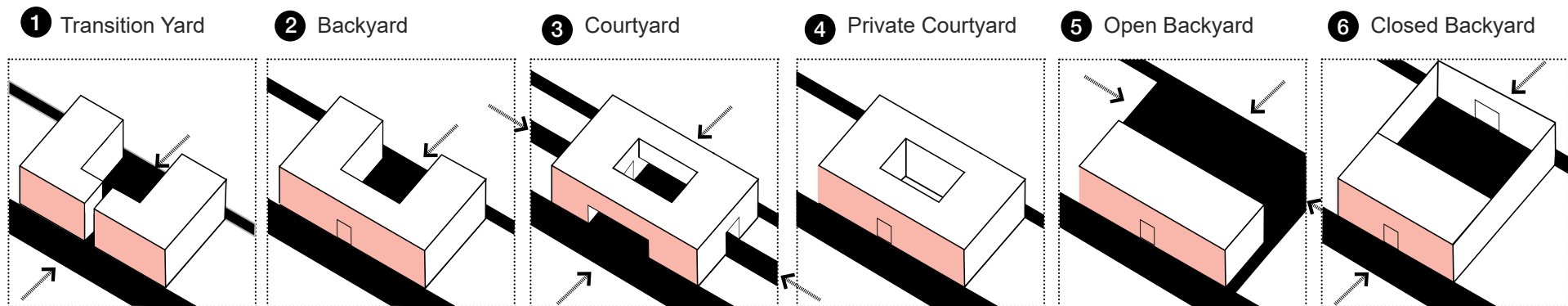
Buildings that reflect existing site topography

Building Design

- Buildings in urban setting should respond to context.
- Buildings should relate to the city fabric and human activity.
- Harmonize building designs with neighboring scale.
- Design all aspect of buildings including roofscape.
- Coordinate building façade elements.
- Design active building fronts.
- Adopt sustainable principles and practices in building design.

Public Space Design

- Design Public Open Spaces to connect with and complement the streetscape by conceiving publicly-accessible open spaces as extensions of sidewalks and incorporated with neighbourhood uses.
- Locate and design Open Spaces to maximize physical comfort and visual access.
- Express neighborhood unique character and culture in Open Space designs.
- Support Public Transport and NMT.
- Design sidewalks to enhance pedestrian experience.
- Program Public Open Spaces to encourage social activity, play and rest.
- Integrate sustainable practices into the landscape.



Kigali (RWA)



Kigali (RWA)



Kigali (RWA)



Kigali (RWA)



Kigali (RWA)



Kigali (RW)



Copenhagen (DK)



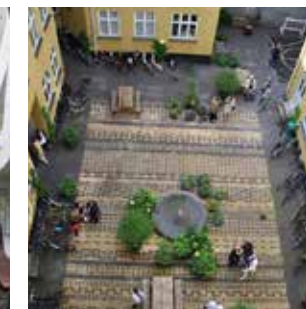
New Orleans (US)



Florence (IT)



LA (US)



Copenhagen (DK)



Cerdanyola del Vallès (E)

A7 Common open space— such as Backyards, front setbacks, courtyards, and roof decks—enhance the quality of urban life

Short Term Strategies

Short Term Strategies and Actions to create a vibrant CBD are listed below:

Building adapted re-use

While for new developments maximum design flexibility is strongly recommended, there are opportunities to strengthen the existing building stock. Evaluate adapted re-use of existing buildings or portions of them, for cultural and art event and activities.

Reusing existing structures is cheaper, more environmentally sound (less waste from demolishing the old building and fewer new resources required for the new building), and faster than rebuilding anew, and is important to help prevent old buildings from being abandoned or sitting vacant.

Temporary transformation of open spaces

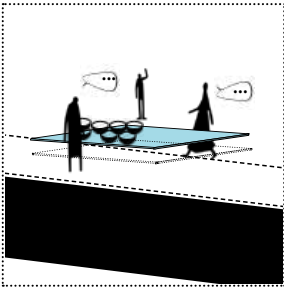
The Nyarugenge CBD City Center is active during day hours, but less attractive outside of business hours. This affects the use patterns during the night time and on weekends. This includes also the Historical Commercial Node. While mixed use is suggested in most part of the City, allowing the creation of employment opportunities integrated with the neighbourhoods, short term actions can be put in place to create a vibrant and attractive CBD.

An overall strategy is to create more attractions in Nyarugenge CBD for people to visit.

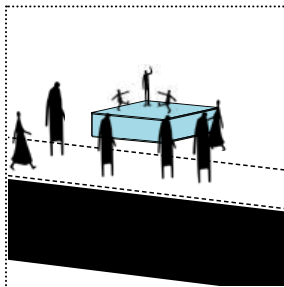
- Identify empty spaces or spaces that are not used during night hours or weekend time (e.g. parking spaces).
- Work with property owners/agencies to develop a new purpose.
- Invite the local artists, students, non-profits, architects and designers to engage and implement permanent but flexible-, sustainable, low cost interventions .
- Focus on small interventions and urban acupuncture, and create different happenings, events and attractions in these spaces.

New people space

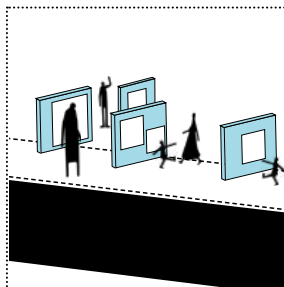
There are street corners, empty or abandoned areas within the City that appear desolate and gloomy spaces. They offer a great opportunity to introduce new functions, uses or activities compatible with public space life and open-air recreational events. New places for people.



A8a Temporary street market



A8b Temporary events



A8c Temporary exhibitions



Temporary uses of selected open spaces

Introduce extraordinary experiences, permanent or temporary (daytime or night time) through cultural interventions to stimulate imagination, engagement, and participation of people with the life of the street.

Temporary art work to be commissioned seasonally to demonstrate the value and variety of Rwanda art production.

Provide an interesting and fulfilling visual experience in the city spaces or temporary creative cultural and entertainment events.

A7 - A8a-b-c Illustrations and pictures' source: ' Imbuga pedestrian corridor on KN4 Ave' - City of Kigali

Green elements

An overall strategy is to convert all streets in CBD to “Green connectors.”

The approach is to focus on the sidewalks to:

- Ensure a clear, walkable zone along the sidewalk.
- Introduce street elements that invite people to sit, stand, wait, pause, meet and enjoy the view.
- Create street elements that are locally designed and produced with materials that relate to Kigali as a green city.
- Introduce green street elements, trees and typical Kigali species for planters.

Upgraded Bus Stop

An overall strategy is to invite more people to use public transport in the CBD.

The approach is to focus on the actual bus stops in the CBD. To upgrade the experience of using busses when waiting; provide shelter and different opportunities for waiting.

- Provide shelter and different opportunities for waiting.
- Introduce clear zoning of the sidewalk: an edge zone relating to the facade, a pedestrian movement zone and a waiting zone.
- Provide shelter, signage, and seating, preferably incorporated into the facade of the adjacent building.
- Ensure accessibility for all.
- Introduce information stands that provides bus arrival time tables and network.
- Introduce well designed lighting.

Wayfinding – Kigali signage

Provide a new well-designed signage in key nodes, in Kinyarwanda, English and French languages

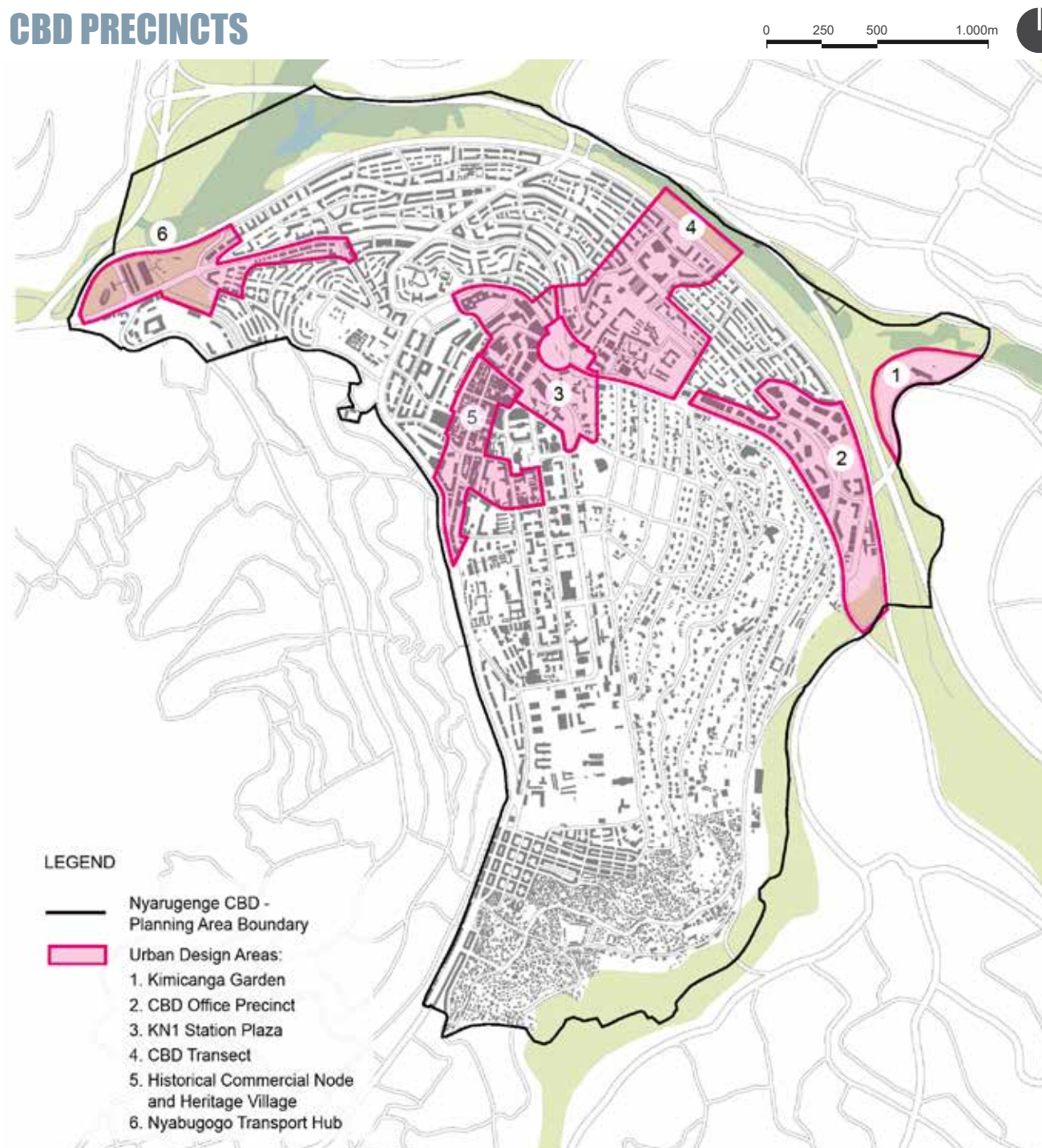
- Information signs: where information about a location (area, buildings, monuments, etc.) are displayed. This includes city and street maps and trail marker maps, which orient people in the built environment.
- Directional signs: where information is displayed to find destinations, located on several strategic points in the built environment.
- Identification signs: where information about individual locations is displayed such as buildings, public facilities.
- Warning signs: that indicate safety procedures such as a fire escape routes and other regulations that is allowed in a specific area.

A₃ URBAN DESIGN REGULATIONS

| | |
|---|-----|
| Kimicanga Garden | 157 |
| CBD - Office Precinct | 161 |
| KN1 Station Plaza | 173 |
| CBD Transect | 183 |
| Historical Commercial Node | 197 |
| Historical Commercial Node - Conservation Area | 207 |
| Nyabugogo Transport Hub | 215 |
| Wetland Front | 225 |
| Green Corridors | 241 |

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CBD PRECINCTS



CBD Precincts - Urban Design Areas - Boundaries



Urban Design Regulations apply to the new CBD Nyarugenge Urban Design Areas.

The Urban design areas proposed in the 2013 Master Plan have been updated and, in some cases, redefined with a new boundary. The new urban Design Areas are listed below:

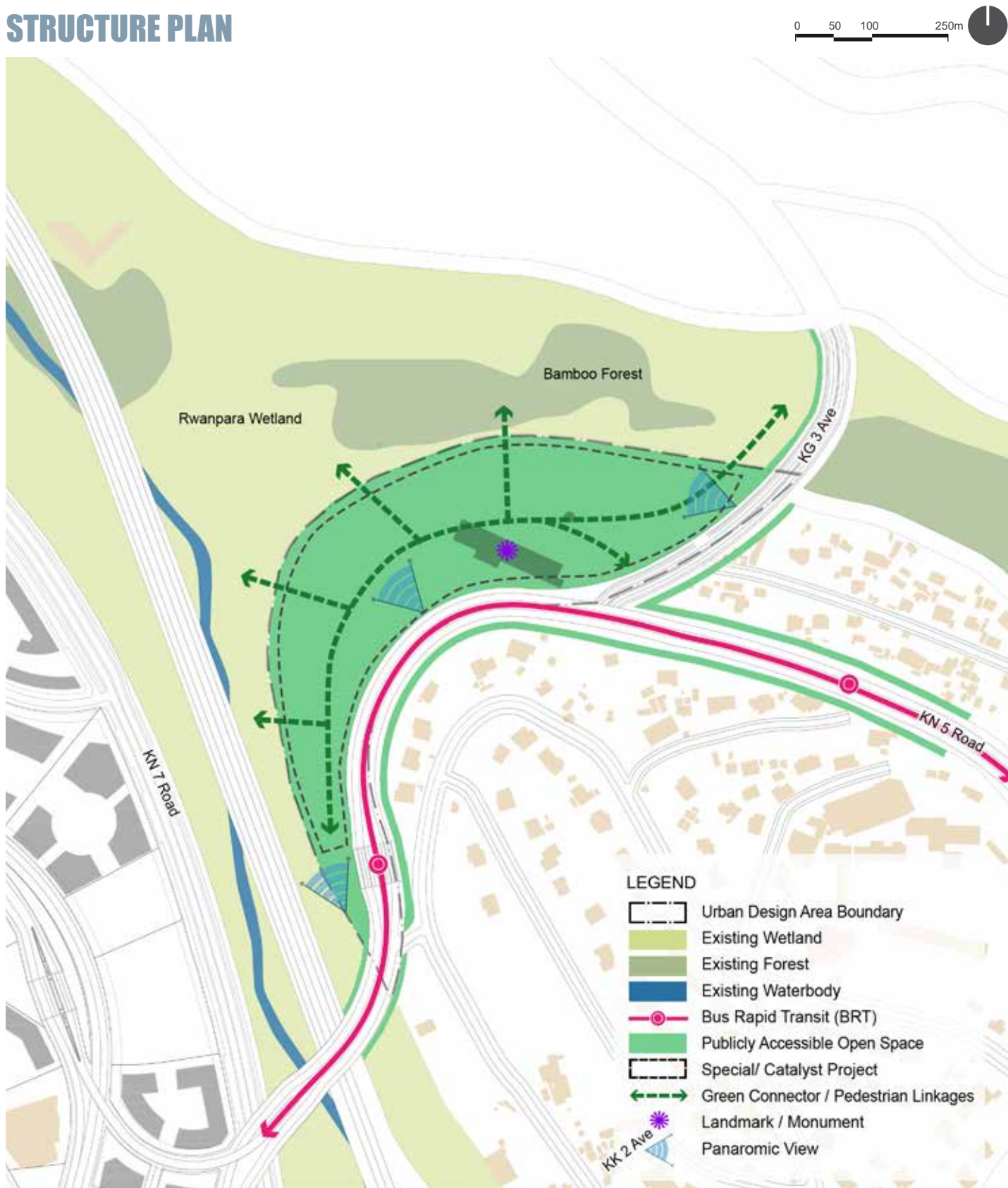
1. Kimicanga Garden (Previous 'Kimicanga' – MP 2013). Kimicanga boundary have been limited to the cleared area facing the Wetland.
2. CBD Office Precinct (Previous 'CBD Phase 1' – MP 2013). The boundary of the CBD phase 1, now renamed CBD Office Precinct, has not been changed.
3. KN1 Station Plaza (Previous 'Centre Ville Roundabout' Redevelopment – MP 2013). The Centre Ville Roundabout has been replaced with the KN1 Station Plaza. The Boundary has been changed as illustrated in the map of Urban Design Areas.
4. CBD Transect (Previous 'CBD Core' – MP 2013) is including the area previously named 'CBD Core' and portion of the Centre Ville Roundabout area.
5. Historical Commercial Node and Conservation Area. The Historical Commercial Node is a new Urban Design Area within the City Center. It is including the Conservation Area, already proposed in the 2013 Master Plan (previously named 'Heritage Village').
6. Nyabugogo Transport Hub. Nyabugogo Transport Hub boundary has been slightly changed as illustrated in the map of Urban Design Areas.
7. Wetland Front. The wetland front is a new Urban Design area, covering an area of 5 km along the existing KN7 Rd in front of the Wetland.
8. Green Corridors. The 'Green Corridors' identify a new Urban Design area. The boundary is illustrated in the Green Corridors – Urban design Area map.

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KIMICANGA GARDEN

STRUCTURE PLAN



Kimicanga Garden - Structure Plan

The objectives of Kimicanga Garden Urban Design are to:

- Provide an open and recreational space to be included into and connected to the CBD Wetland Park and be designated as tourist and educational destination, for both visitors and residents;
- Establish social and cultural facilities to the benefit of residents and visitors.

Skyline:

Preserve hillsides having unique aesthetic value to the public.

Landmarks and Gateways:

Provide Landmark, art installations and monuments, water features to make this area visible and attractive.

Building Edge and Use:

Promote art, culture, sport and special entertainment uses for residents and visitors.

Pedestrian Connections:

Ensure a comprehensive pedestrian and bicycle network, by preserving existing footpaths and enhancing wetland accessibility. Provide integrated public transit systems with clear information and convenient connections.

Views and Vistas:

Preserve view and ecological corridors to the wetland.



| KIMICANGA GARDEN URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of Kimicanga Garden, the following Zoning regulations should be referred to when no specific indications are provided by this UD regulations. In all other cases Urban Design regulations supersede general Zoning regulations. | Nyarugenge CBD Zoning Plan |
| | P2 - Sport and Eco-tourism Zone | |
| PARCELLATION | | |
| Suggested Parcellation | N.A. Kimicanga Garden site is currently owned by Government. | |
| USES | | |
| Permitted uses Prohibited uses Conditional uses | As per zoning regulations. | |
| Site-specific Recommended Uses | Cultural and entertainment uses are encouraged. | |
| | Landmark, art installations and monuments, water features are strongly recommended | |
| Additional Conditional Uses | Micro-enterprises, commercial and retail uses | |
| Building Ground Floor Use | Permitted use of outdoor areas for refreshment and merchandise display to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open spaces activities and streetscape provisions | Recommended activities and streetscape provision along wetland front and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

| KIMICANGA GARDEN URBAN DESIGN REGULATIONS | | |
|--|--|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | N.A. | |
| Maximum Number of Floors and Building Height | For landmarks such as buildings with high architecture quality, sculptures, monuments or art installations, there is no height regulation applicable. Maximum number of floors or maximum height will be subject to City of Kigali, One Stop Centre approval | |
| Building Setback | As per Zoning Regulations. | Zoning Regulations - 6.8 Setback Regulations |
| BUILDING EDGE | | |
| Alignment | N.A. | |
| | No plot boundary wall or fence shall be allowed. | |
| Ground Floor Covered Pedestrian Walkways | N.A. | |
| Above Ground Floor | N.A. | |

| KIMICANGA GARDEN URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Preserve existing footpaths and enhance wetland accessibility and pedestrian connections to future CBD Wetland Park. | Nyarugenge CBD Urban Design Report chapters: <ul style="list-style-type: none">- Pedestrian Network- Green Corridors Kimicanga Garden |
| Visual Corridors and Upland Pedestrian Connections | Preserve views and ecological corridors to the wetland. Visual Corridor along green corridors shall be maintained free from obstructions. In no event shall fencing be permitted in any open area of the visual corridor. Exceptions will be evaluated by the City of Kigali by introducing social fences or applying screening requirements. | |
| Public Access Cyclist | Kimicanga Garden - Cycle Network Plan is part of the overall CBD Cycle Network Plan. Refer to CBD Cycle network plan. | Nyarugenge CBD - Urban Design Report: 'Cycle Network' Chapter |
| Parking Strategy and Local Accessibility | Kimicanga Garden - Parking Strategy is part of the overall CBD Parking and Loading Strategy. | Nyarugenge CBD - Urban Design Report: 'Parking strategies, Loading and City Services' chapter Zoning Regulations – 6.7 Parking Requirements |
| Loading and City Services | Kimicanga Garden – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy. | Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter Zoning Regulations - 4.7 Service areas and equipment |

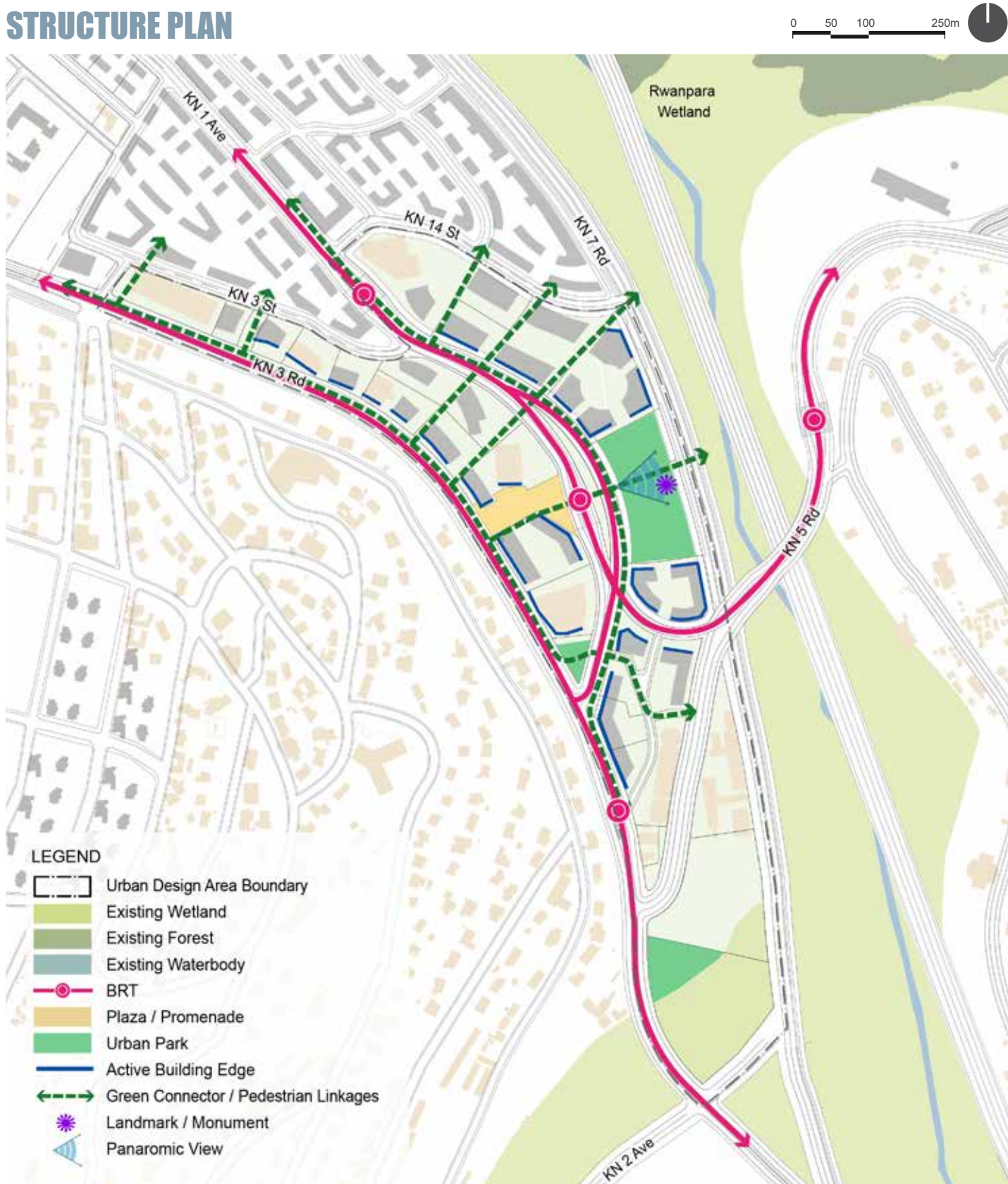
| KIMICANGA GARDEN URBAN DESIGN REGULATIONS | | |
|--|---|-----|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Transit | Ensure integrated public transit systems and improve legibility and wayfinding. Ensure high-quality open spaces in correspondence of pedestrian entrances from KN 5 Rd and pedestrian friendly connections to the Bus Rapid Transit (BRT) Stations | |
| SITE-SPECIFIC IMPLEMENTATION RECOMMENDATIONS | | |
| No Site-Specific Recommendation. Refer to 'general implementation recommendations' in the 'General Provisions' chapter. | | |
| ENVIRONMENT AND SUSTAINABILITY | | |
| Refer to 'Green Corridors' and 'General Provisions' chapter. | | |
| RECOMMENDED ACTIONS FOR COK TO UNDERTAKE | | |
| Refer to 'General Provisions' chapter | | |

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CBD OFFICE PRECINCT

STRUCTURE PLAN



CBD Office Precinct - Structure Plan

- The objectives of CBD Office Precinct Urban Design area are to create a:
- New Urban Node and an integrated, well planned, commercial/office complex;
 - Pleasant, green and vibrant environment at the ground level.

Skyline:
Create a dynamic skyline that reinforces the entrance to the Muhima CBD

Landmarks and Gateways:
Ensure key buildings are located at highly visible sites on both sides of the green corridor to create gateway effect. Sculpture or monument should be located within the Urban Park

Building Edge and Use:
Ensure that all buildings abutting on urban plazas, along BRT corridor and on Wetland Front, have a mandatory building edge with activity-generating uses at the ground level to ensure vibrancy.

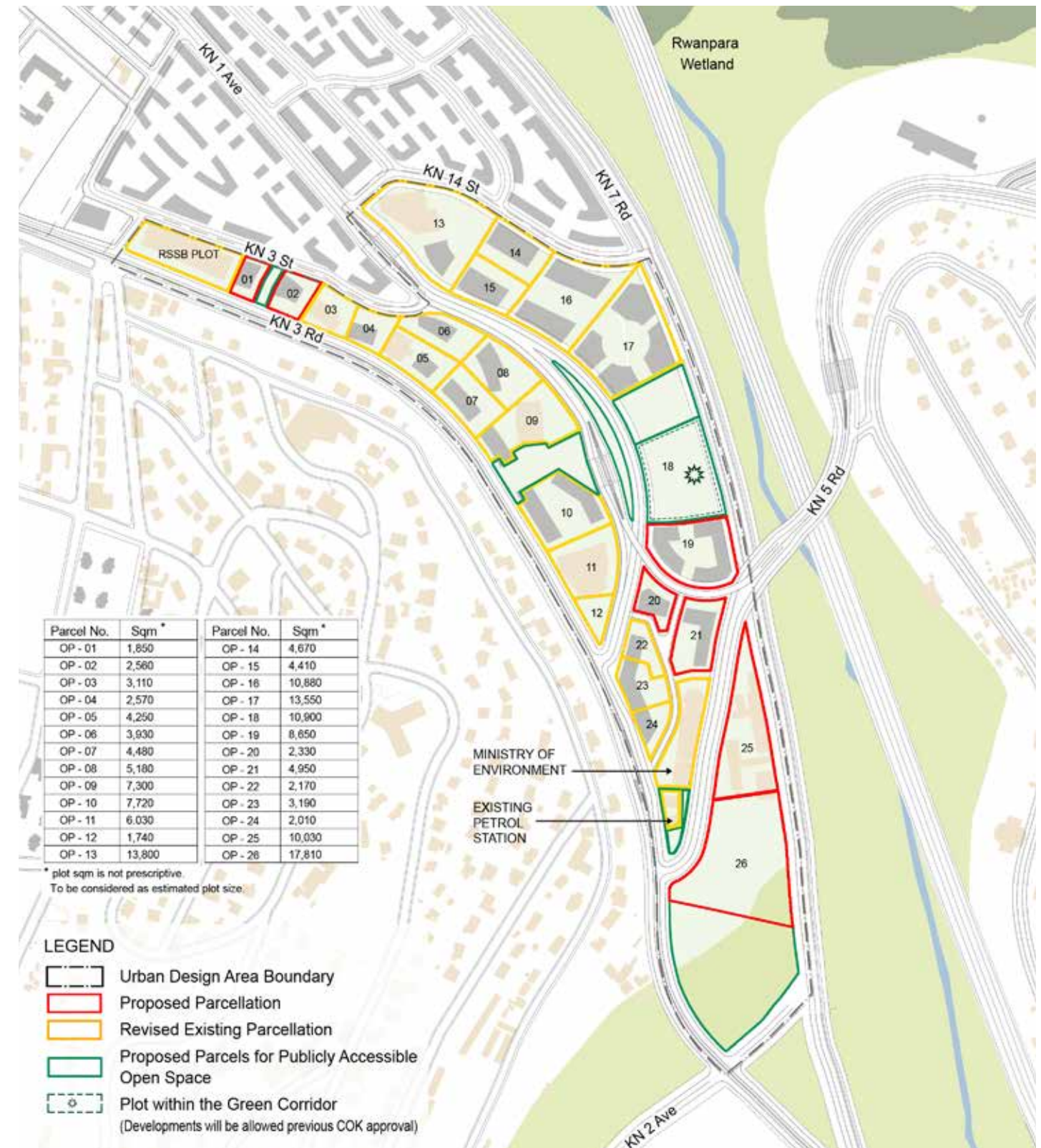
Pedestrian Connections:
Ensure seamless pedestrian connectivity between the key buildings and across the public spaces

Views and Vistas:
Ensure significant vistas along the green corridors



| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|---|---------------------------------------|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of CBD Office Precinct, the following Zoning Regulations should be referred to when no specific indications are provided by this Urban Design Regulations. In all other cases Urban Design Regulations supersede general Zoning Regulations. | Nyarugenge CBD Zoning Plan |
| | C3 - City Commercial Zone | |
| | P1 - Park and Open Space Zone | |
| | Considering the recent case of landslide, Plot N. 18 has been proposed to be converted into an urban park. However, the City of Kigali – One Stop Center will evaluate possible developments upon fulfilment of the following requirements: <ul style="list-style-type: none"> - Follow C3 Zone Regulations as per Zoning Plan. - Provide at least two main pedestrian linkages through the site toward the Wetland, connected and integrated to the adjacent urban park. - Fulfilment of Slope Overlay and Flood Hazard/High Risk Zone Overlay requirements. Refer to 'Environment and Sustainability' section of this chapter. | CBD Office Precinct-Parcellation Plan |
| PARCELLATION | | |
| Suggested Parcellation | The parcellation plan of CBD Office Precinct is essentially following the existing parcel subdivision, with few adjustments in case of irregular shaped plots. Parcels' shape and configuration changes have been proposed in few cases to facilitate implementation of green corridors and BRT infrastructure: refer to plot n. 01, 02, 19, 20 and 21. | CBD Office Precinct-Parcellation Plan |

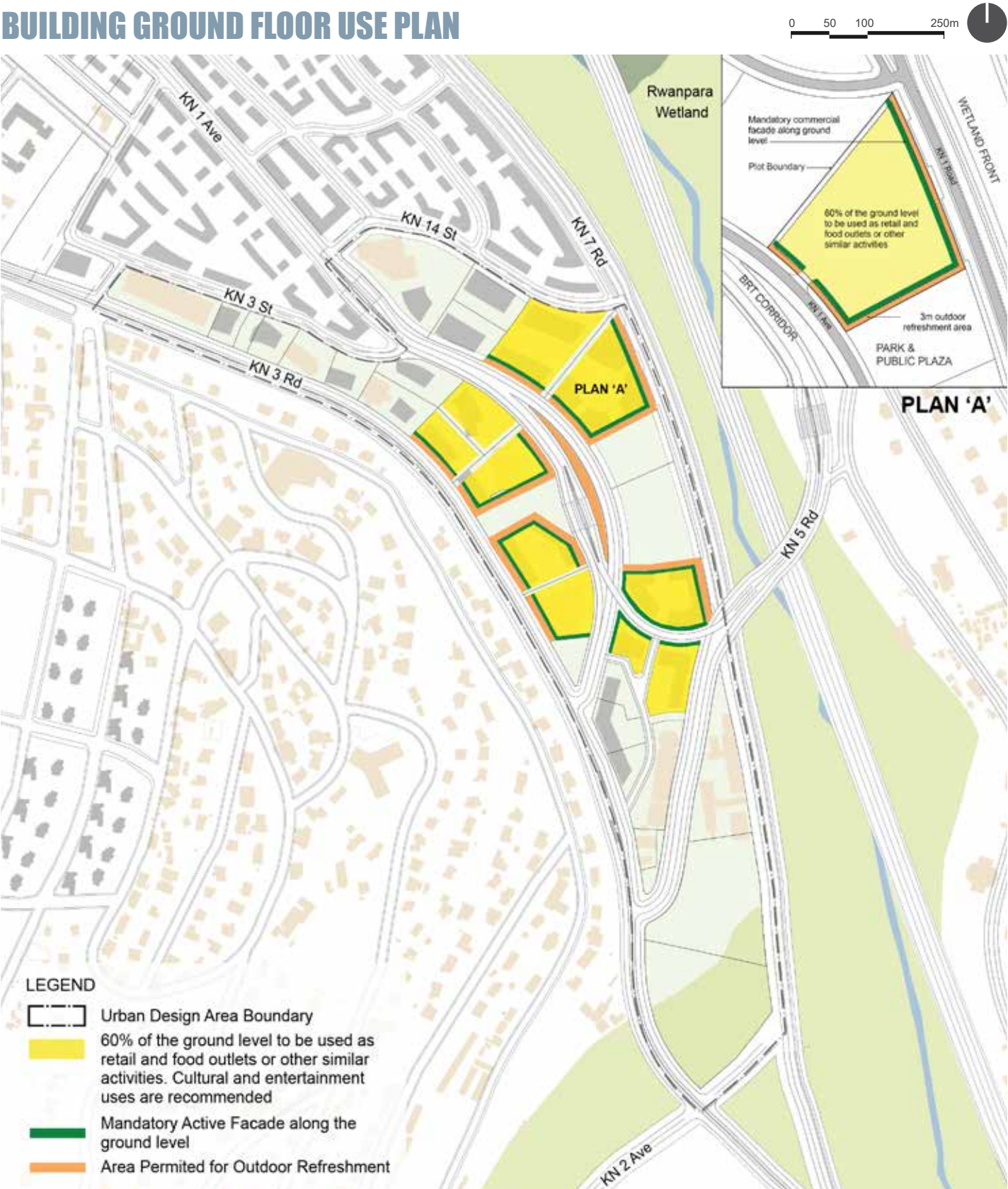
PARCELLATION PLAN



CBD Office Precinct - Parcellation Plan

| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|--|---|---|
| Regulations | | Ref |
| USES | | |
| Permitted Uses Prohibited Uses Conditional Uses | As per Zoning Regulations. | |
| Site-specific Recommended Uses | <p>Cultural and entertainment uses are encouraged especially for developments along the Wetland, the central green corridor and Bus Rapid Transit (BRT) Corridor.</p> <p>Min. 15% of residential uses and/or accommodation facilities shall be allowed/recommended to ensure a mixed-use development. Exceptions to be evaluated by City of Kigali – One Stop Center.</p> | |
| Building Ground Floor Use | Mandatory active façade is required along the central green corridor, the Bus Rapid Transit (BRT) corridor and the Wetland front. | CBD Office Precinct – Building Ground Floor Use Plan CBD Office Precinct - Building Use/Edge and Public Access Sections |
| | Minimum 60 % of the ground floor of specific areas highlighted in the ‘Building Ground Floor Use Plan’ shall be used as retail and food outlets or other similar activities. | |
| | Cultural and entertainment uses are recommended. | |
| | Permitted outdoor refreshment areas and merchandise display as per Building Ground Floor Use Plan. Additional area for outdoor refreshment area to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open Spaces Activities and Streetscape Provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

BUILDING GROUND FLOOR USE PLAN



CBD Office Precinct - Building Ground Floor Use Plan



| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Incentive Zoning as per point 'b' and 'c' of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the 'CBD Office Precinct - Special Urban Design Regulations' Plan. | CBD Office Precinct - Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| Maximum Number of Floors and Building Height | Refer to Zoning Regulations | |
| | For landmarks such as sculptures, monuments or art installations, no height regulation is applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval. | |

SPECIAL URBAN DESIGN REGULATIONS PLAN



CBD Office Precinct - Special Urban Design Regulations Plan

| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| SETBACK | | |
| Building Setback | CBD Office Precinct setback are illustrated in the Building Setback Plan. | CBD Office Precinct - Setback Plan Existing/Proposed Building Map |
| | Step back (Above Ground Floor setbacks) are regulated by C3 Zoning regulation - Setback | Zoning Regulations - 6.8 Setback Regulations |

SETBACK PLAN

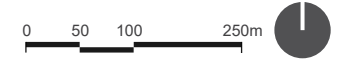


CBD Office Precinct - Setback Plan



| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | Mandatory buildings edge alignments are stipulated along KN 3 Rd, KN7 Rd, KN1 Ave and along the plaza and Urban park in the central green corridor. No plot boundary wall or fence shall be allowed. | CBD Office Precinct - Building Edge and Covered Pedestrian Walkways Plan CBD Office Precinct - Building Use/Edge and Public Access Sections Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided at the ground floor to create a continuous covered pedestrian walkway. | |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Accessible Roof Terrace is recommended. | |

BUILDING EDGE & COVERED PEDESTRIAN WALKWAYS PLAN



CBD Office Precinct - Building Edge and Covered Pedestrian Walkways Plan

| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the CBD Office Precinct - Public Access Plan. | <div>CBD Office Precinct - Public Access Plan</div> <div>CBD Office Precinct - Building Use/Edge and Public Access Sections</div> <div>Nyarugenge CBD - Urban Design Report chapters:</div> <div><div>- 'Pedestrian Network'</div><div>- 'Green Corridors'</div><div>- 'CBD Office Precinct'</div></div> |

PUBLIC ACCESS PLAN

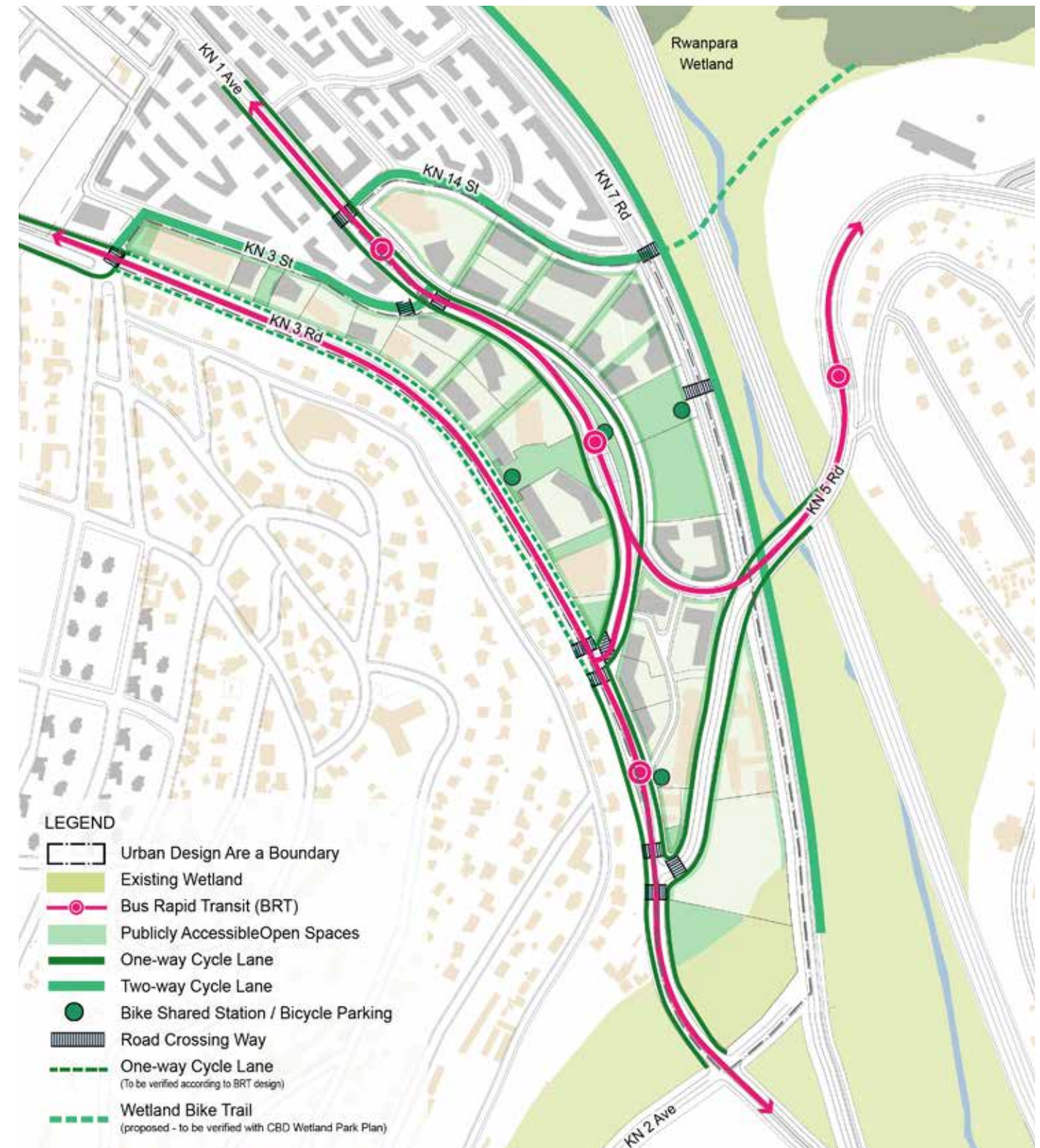


CBD Office Precinct - Public Access Plan



| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | <p>The CBD Office Precinct Cycle Network Plan, part of the overall 'Nyarugenge CBD - Cycle Network Plan', shall be followed.</p> <p>Bicycle lanes along KN3 Rd should be evaluated during the detailed phase of the Bus Rapid Transit Infrastructure. Possible bike trails within the wetland shall be evaluated and verified with the CBD Wetland Park Master Plan.</p> <p>Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali.</p> | CBD Office Precinct - Cycle Network Plan Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter |
| Visual Corridors | <p>Ensure that vistas along Central Corridor and other green corridors are valorised and preserved without visual and physical obstructions.</p> <p>Preserve views and ecological corridors to the wetland.</p> | |

CYCLE NETWORK PLAN



CBD Office Precinct - Cycle Network Plan

| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | | |
|---|---|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Parking Strategy and Local Accessibility | <p>CBD Office Precinct Parking Strategy and Local Access Plan is part of the overall CBD parking and loading strategy.</p> <p>For new developments, off-street shared parking is strongly recommended.</p> <p>On-street parking is suggested within the service road along the wetland front as per Parking Strategy Plan. Whenever possible vehicular entry is provided along main access roads like KN 3 St and KN 14 St.</p> <p>Whenever possible, vehicular entry shall be provided along access roads.</p> | <p>CBD Office Precinct - Parking Strategy and Local Access Plan</p> <p>Nyarugenge CBD - Urban Design Report chapters:</p> <ul style="list-style-type: none">- 'Parking Strategies and Loading'- 'CBD Office Precinct' <p>Zoning Regulations – 6.7 Parking Requirements</p> |
| Loading and City Services | <p>CBD Office Precinct – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy.</p> | <p>Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter</p> <p>Zoning Regulations - 4.7 Service areas and equipment</p> |
| Public Transit | <p>Ensure integrated public transit systems and improve legibility and wayfinding.</p> | |

PARKING STRATEGY & LOCAL ACCESS PLAN

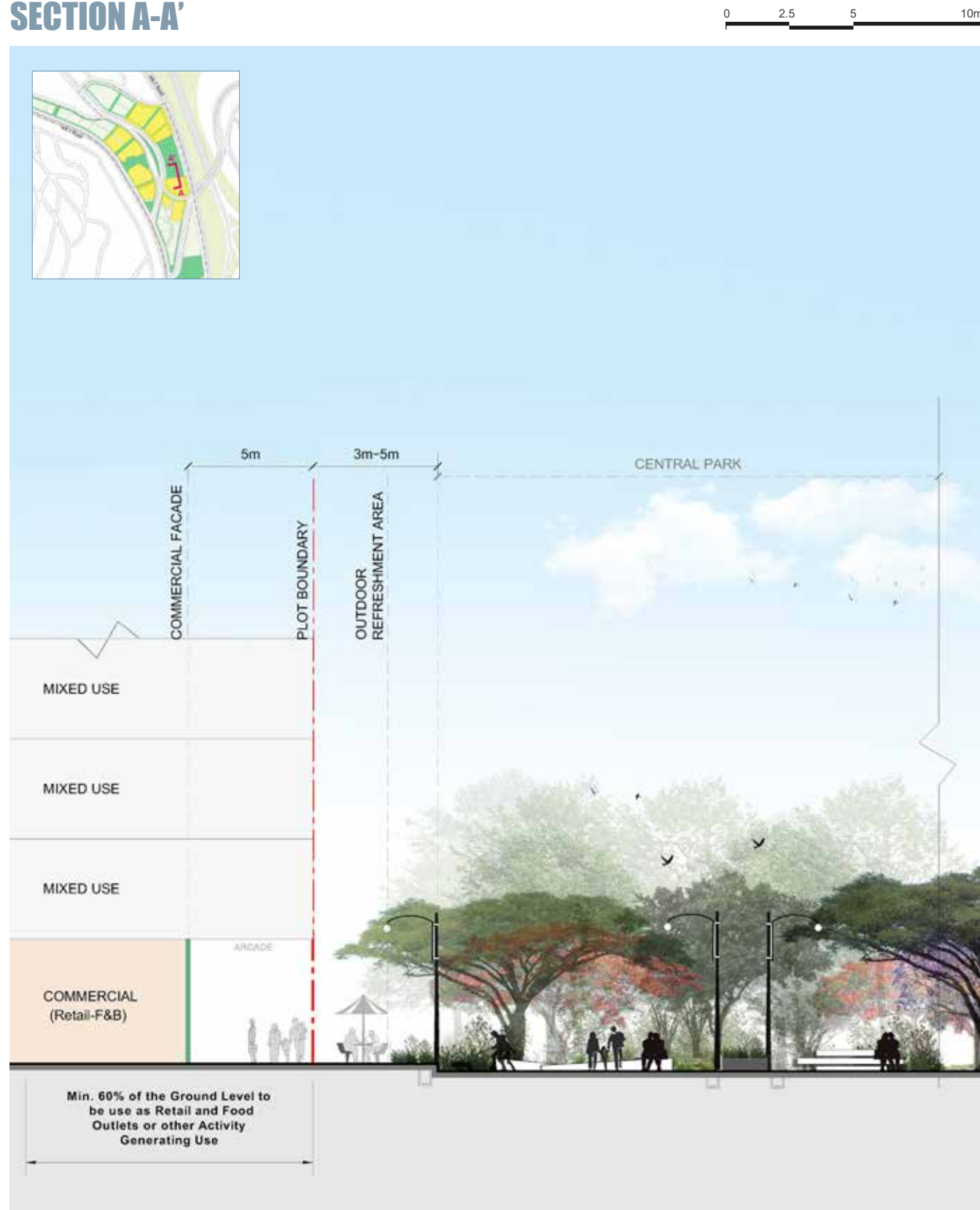


CBD Office Precinct - Parking Strategy and Local Access Plan



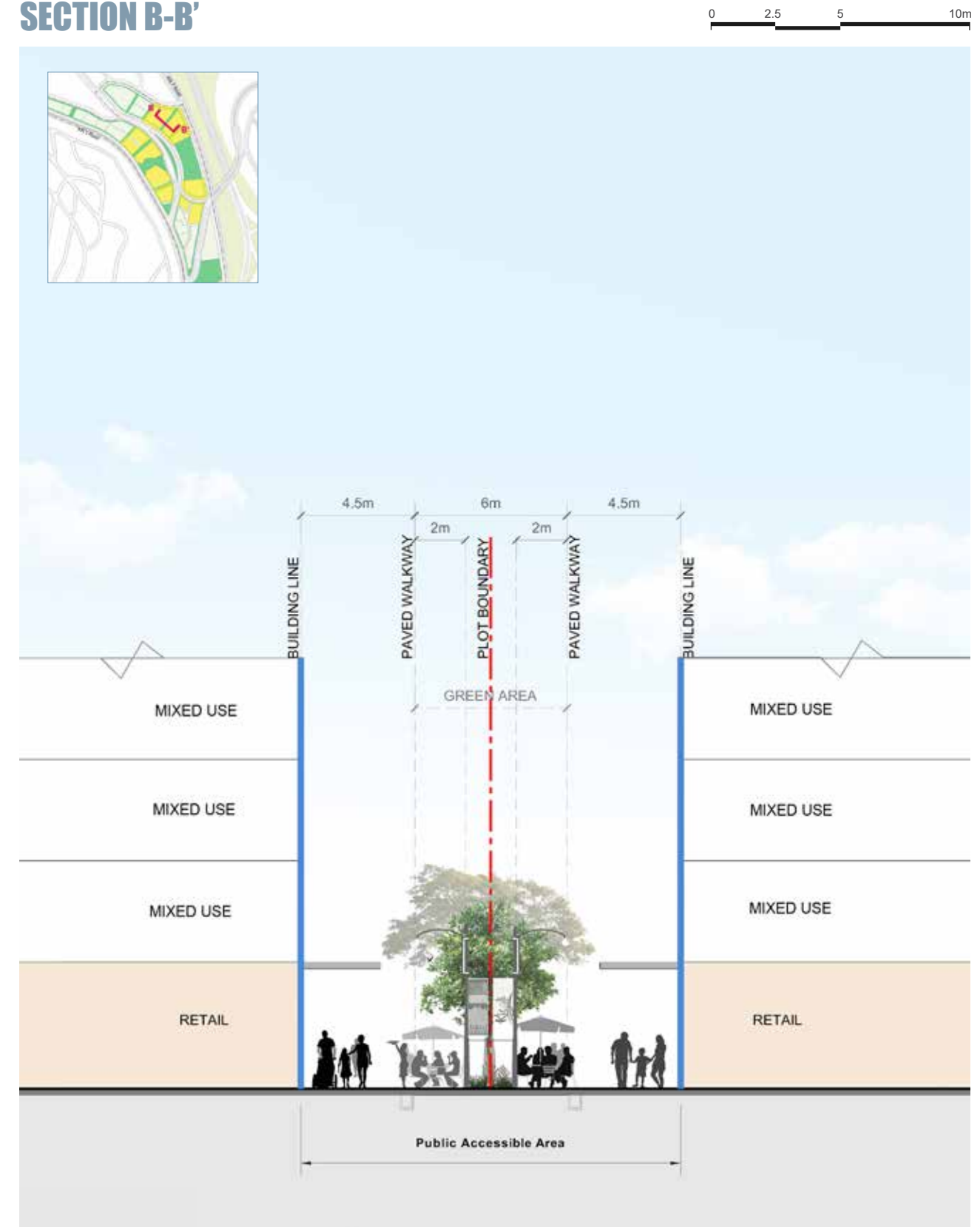
| CBD OFFICE PRECINCT URBAN DESIGN REGULATIONS | |
|---|--|
| Regulations | Ref |
| SITE SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| No Site-Specific Recommendation. Refer to general implementation recommendations in the ‘General Provisions’ chapter. | |
| ENVIRONMENT AND SUSTAINABILITY | |
| Applicability of Slope overlay regulations is recommended within the entire CBD Office Precinct Boundary. Applicability of Flood Hazard/High Risk Zone Overlay Regulations is recommended within the entire CBD Office Precinct Boundary and is especially required for plot n.18. Prescriptions include, but are not limited to the below requirements: <ul style="list-style-type: none">• Natural landform must be preserved. No large-scale land cutting shall be permitted.• Preliminary geotechnical investigations must be conducted prior to any construction permit application• Landslide hazard mitigation measures shall be adopted and authorized by COK, (including but not limited to drainage improvements, specially designed foundations, retaining walls, removal of overburden and other improvements designed to minimize the risk of earth movement, prevent avoidable damage to structures, safeguard adjacent properties, limit risk to inhabitants, and to stabilize the structure in the event of movement) | Zoning Regulations - 7.8 Slope Overlay Nyarugenge CBD Urban Design Report ‘CBD Office Precinct’ chapter |
| Refer to the ‘General Provisions’ chapter. | |
| RECOMMENDED ACTIONS FOR CITY OF KIGALI TO UNDERTAKE | |
| Refer to the recommended actions in the ‘General Provisions’ chapter. | |

SECTION A-A'



CBD Office Precinct - Building Use/Edge and Public Access Section - Section A-A'

SECTION B-B'



CBD Office Precinct - Building Use/Edge and Public Access Section - Section B-B'

SECTION C-C'

0 5 10 25m

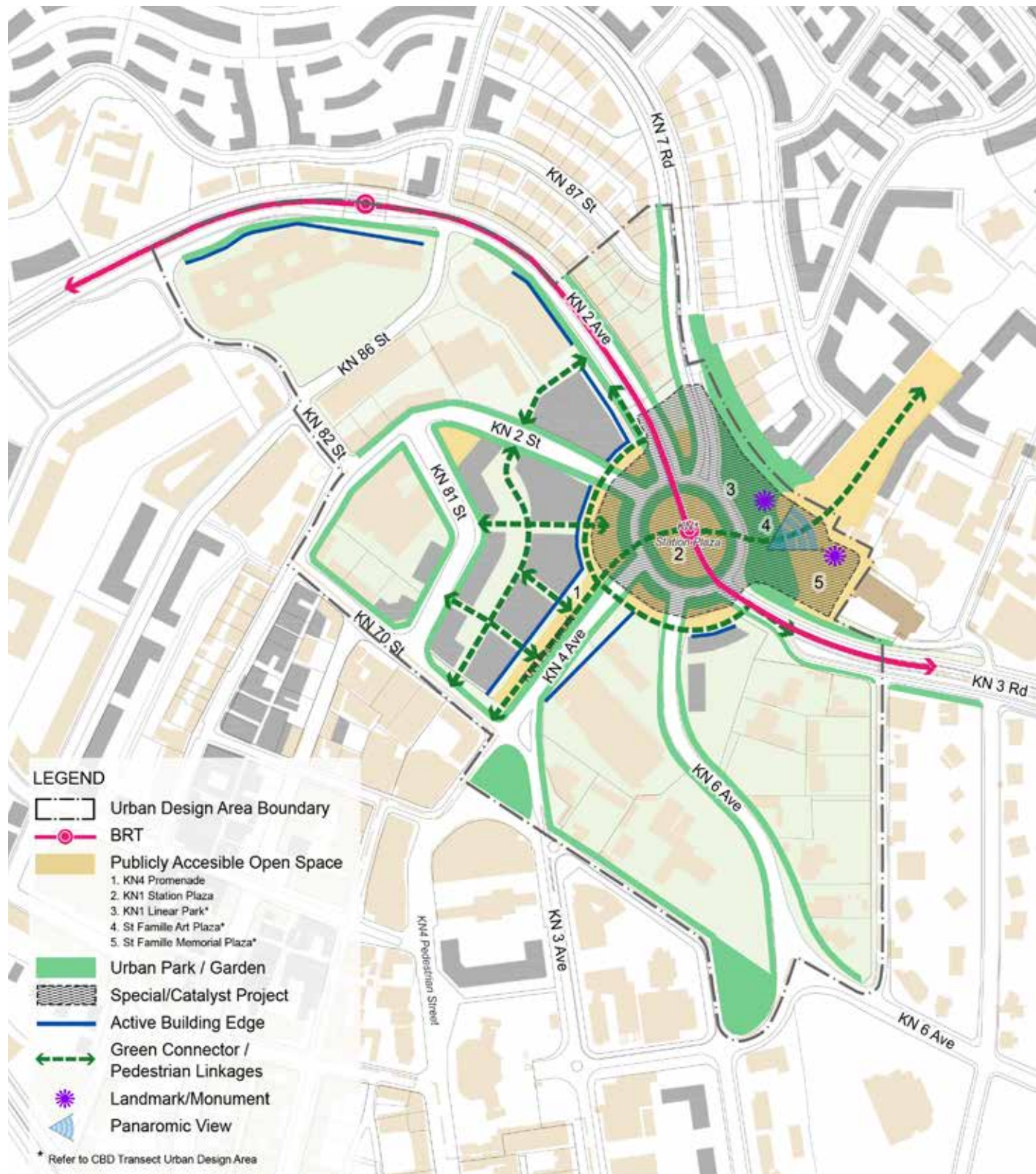


CBD Office Precinct - Building Use/Edge and Public Access Section - Section C-C'



KN1 STATION PLAZA

STRUCTURE PLAN



KN1 Station Plaza - Structure Plan

The objectives of the KN1 Station Plaza are to create a:

- Key-node characterized by a center-running Bus Rapid Transit lane and dedicated Station to facilitate access to the City Center and represent a “welcome gate-way” for residents and visitors.
- Pleasant, green and vibrant environment at the ground level

Skyline:

Create a unique identity that enhances the space quality at and around KN1 Station Plaza.

Landmarks and Gateways:

Ensure buildings around KN1 Station Plaza to have a unique and distinctive architectural character.

Building Edge and Use:

Create mandatory building edges and wider setbacks along KN4 Ave to create vibrant streetscapes with activity generating retail uses at the ground levels.

Pedestrian Connections:

Ensure seamless pedestrian connectivity by providing through- block connections and pedestrian circulation spaces at the ground level.

Views and Vistas:

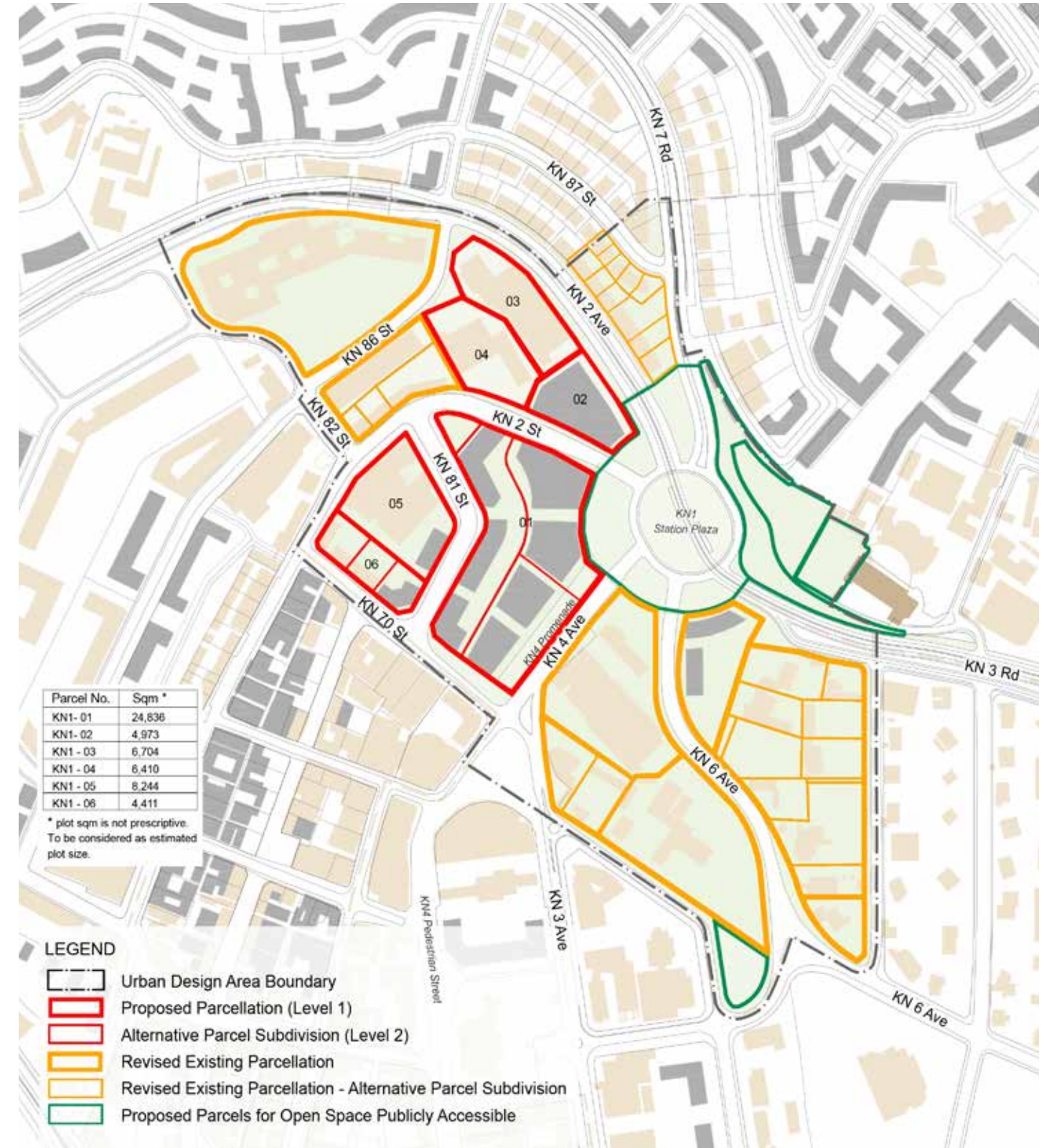
Ensure existing significant vistas and view corridors to/from KN1 Station Plaza are maintained without encroachment.



| KN1 STATION PLAZA URBAN DESIGN REGULATIONS | | |
|---|---|-------------------------------------|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of KN1 Station Plaza the following Zoning Regulations should be referred to when no specific indications are provided by this Urban Design Regulations. In all other cases Urban Design Regulations supersede general Zoning Regulations. | Nyarugenge CBD Zoning Plan |
| | IZ-O – Incentive Zoning Overlay (Overlay of C3 - City Commercial Zone) | |
| | C3 City Commercial Zone | |
| | C1 Mixed use zone | |
| | P1 Park and Open Space Zone | |
| PARCELLATION | | |
| Suggested Parcellation | The parcellation plan is following the existing parcel subdivision, with few adjustments in case of irregular shaped plots. Parcels assembly has been proposed in few cases to facilitate implementation of high-rise developments around KN1 Station Plaza. | KN1 Station Plaza-Parcellation Plan |

PARCELLATION PLAN

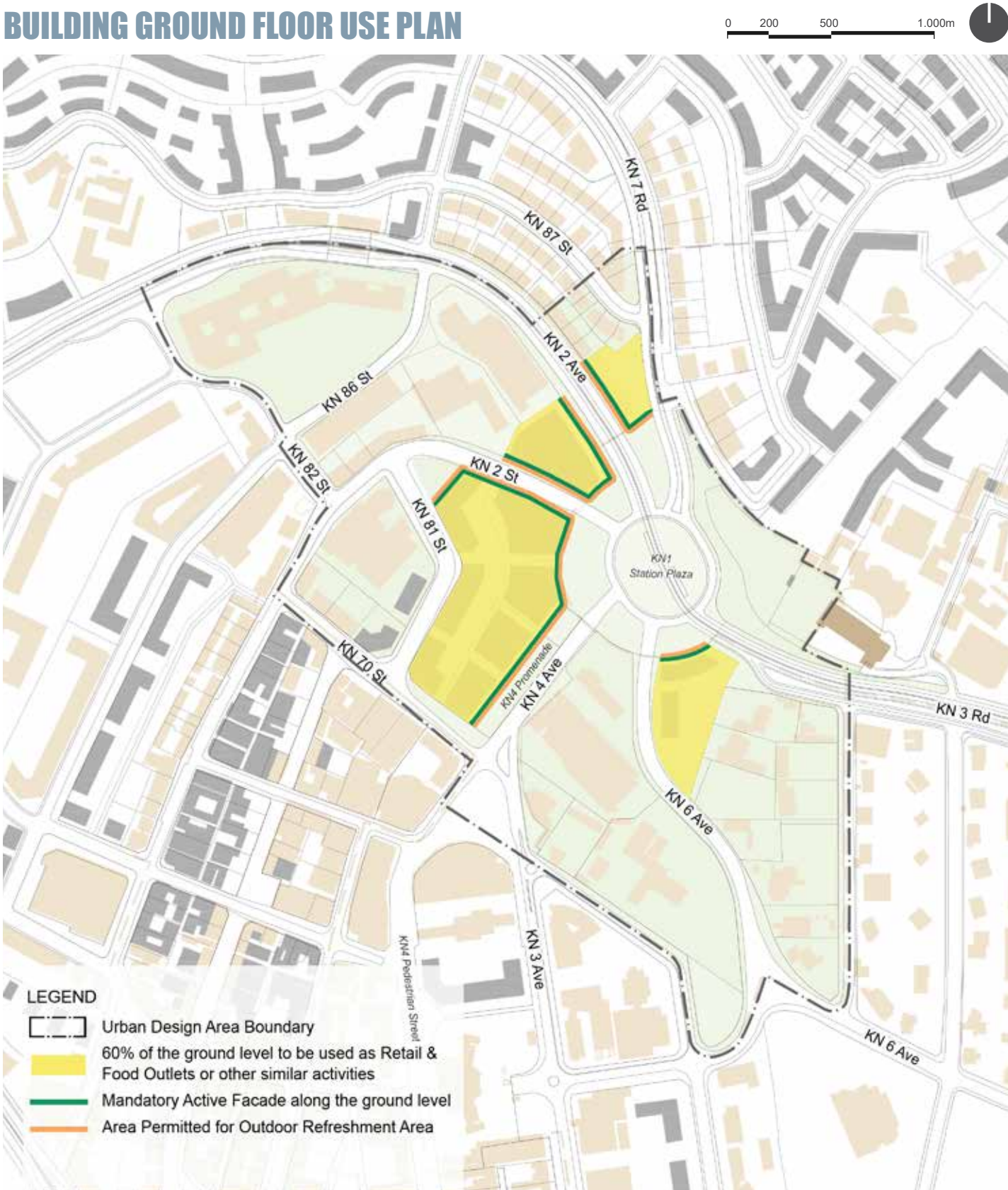
0 200 500 1,000m



KN1 Station Plaza - Parcellation Plan

| KN1 STATION PLAZA | | |
|---|---|---|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| USES | | |
| Permitted Uses Prohibited Uses Conditional Uses | As per Zoning Regulations. | |
| Site-specific Recommended Uses | Cultural and entertainment uses are encouraged especially for developments along KN 70 St. Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. Exceptions to be evaluated by City of Kigali – One Stop Center. | |
| Building Ground Floor Use | Mandatory active façade is required along corner plots facing KN1 Station Plaza and along KN4 Promenade. Minimum 60 % of the ground floor of specific areas highlighted in the ‘Building Ground Floor Use Plan’ shall be used as retail and food outlets or other similar activities. Cultural and entertainment uses are recommended. Permitted outdoor refreshment areas and merchandise display as per Building Ground Floor Use Plan. Additional area for outdoor refreshment area to be evaluated and approved by City of Kigali – One Stop Center. | KN1 Station Plaza – Building Ground Floor Use Plan KN1 Station Plaza - Public Building Use/Edge and Public Access Sections |
| Open Spaces Activities and Streetscape Provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

BUILDING GROUND FLOOR USE PLAN

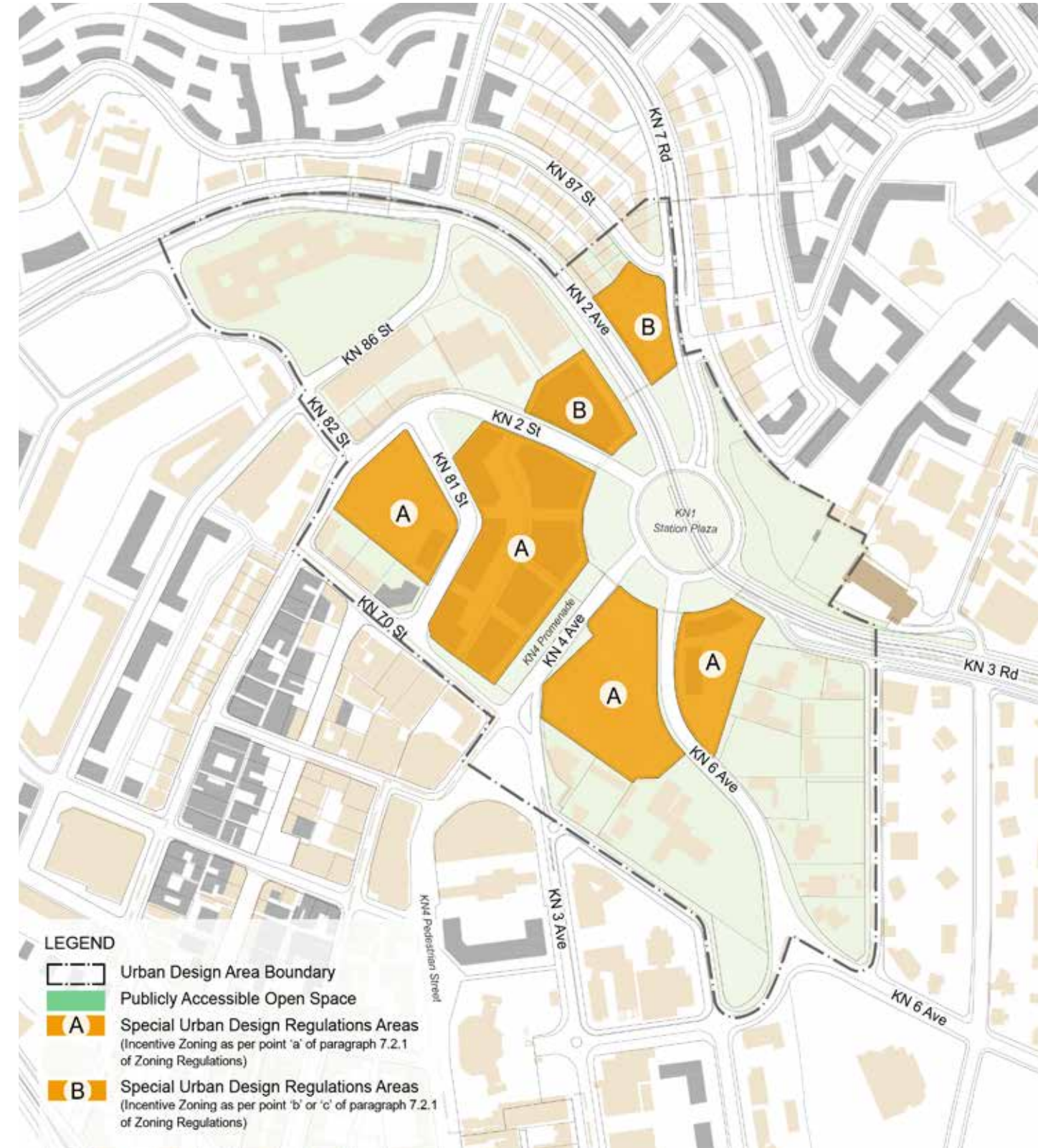


KN1 Station Plaza - Building Ground Floor Use Plan



| KN1 STATION PLAZA URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Incentive Zoning as per point 'a', 'b' or 'c' of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the 'KN1 Station Plaza - Special Urban Design Regulations' Plan. | KN1 Station Plaza - Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| Maximum Number of Floors and Building Height | Maximum number of floors are indicated in KN1 Station Plaza - Special Urban Design Regulations Plan. For plots within the Special Urban Design Regulations Areas Type B, maximum five (5) extra floors on top of current Zoning Regulations are permitted, provided that at least 15% of the dwelling units dedicated for affordable housing or adequate public amenities are developed, as per point 'b' or 'c' of Incentive Zoning Conditions. | KN1 Station Plaza - Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| | For landmarks such as sculptures, monuments or art installations, no height regulation is applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval. | |

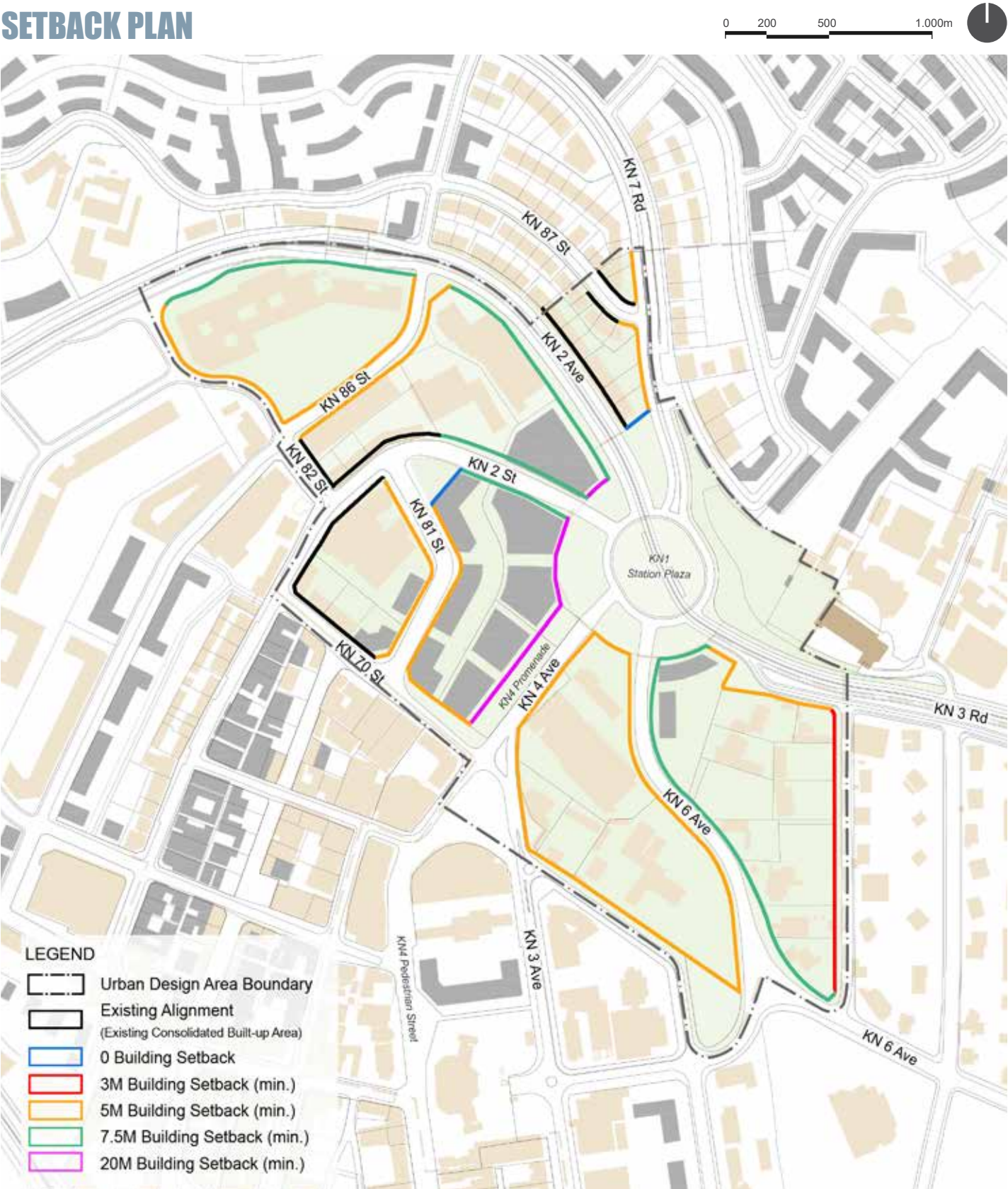
SPECIAL URBAN DESIGN REGULATIONS PLAN



KN1 Station Plaza - Special Urban Design Regulations Plan

| KN1 STATION PLAZA | | |
|--------------------------|--|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| SETBACK | | |
| Building Setback | Existing alignment are referring to building alignment of existing consolidated built up area along KN2 St, KN 70 St, KN 87 St and north-west side of KN2 Ave. | KN1 Station Plaza - Setback Plan Existing/Proposed Building Map |
| | Step back (Above Ground Floor setbacks) are regulated by C3 Zoning regulation - Setback | Zoning Regulations - 6.8 Setback Regulations |

SETBACK PLAN

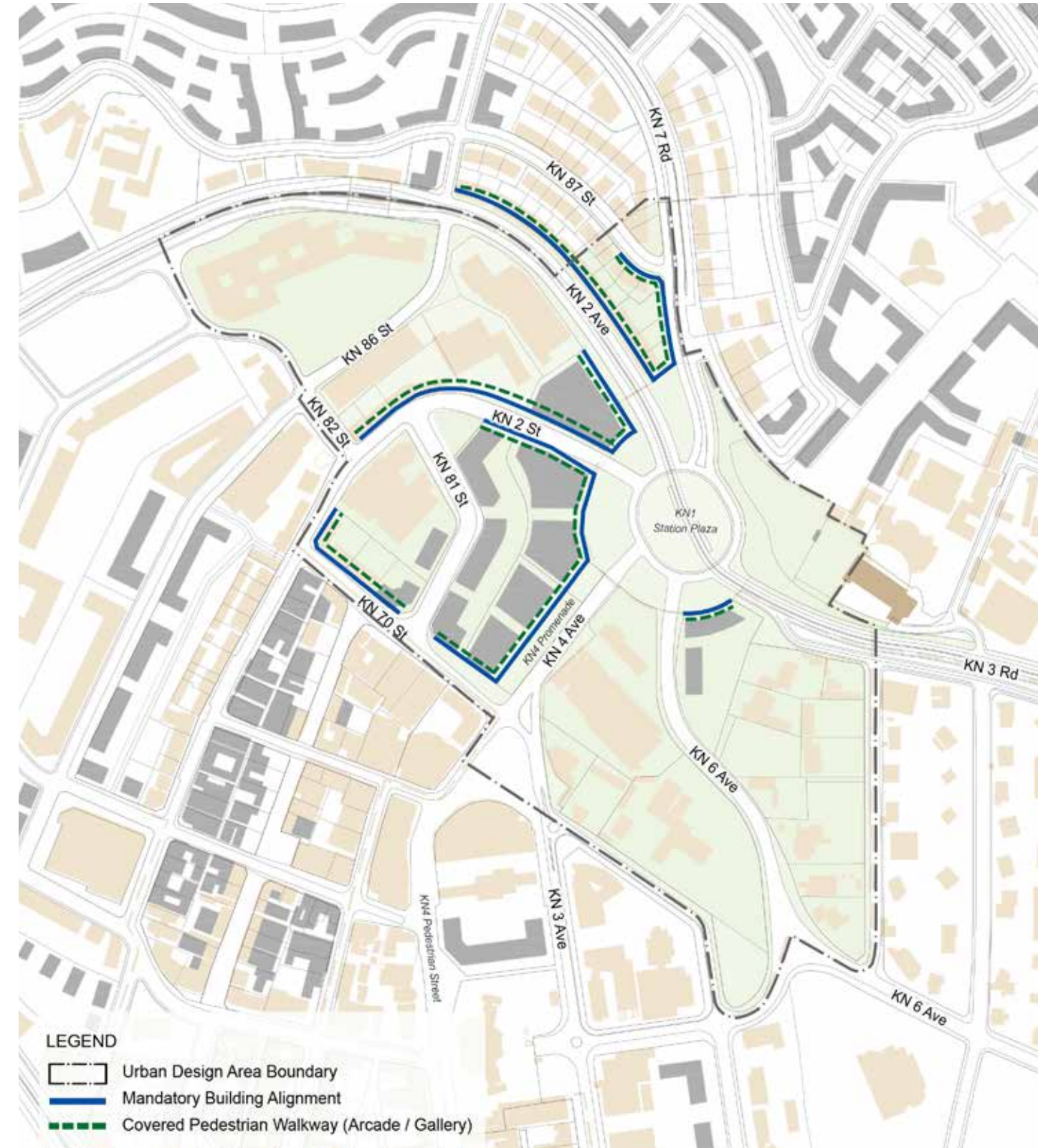


KN1 Station Plaza - Setback Plan



| KN1 STATION PLAZA URBAN DESIGN REGULATIONS | | |
|---|--|---|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | Mandatory buildings edge alignments are stipulated along corner plots facing KN1 Station Plaza, KN4 Promenade, KN 2St and KN 70 St. No plot boundary wall or fence shall be allowed within the KN1 Station Plaza Urban Design Area. | KN1 Station Plaza - Building Edge and Covered Pedestrian Walkways Plan KN1 Station Plaza - Public Building Use/Edge and Public Access Sections |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided at the ground floor to create a continuous covered pedestrian walkway. | Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Accessible Roof Terrace is recommended. | |

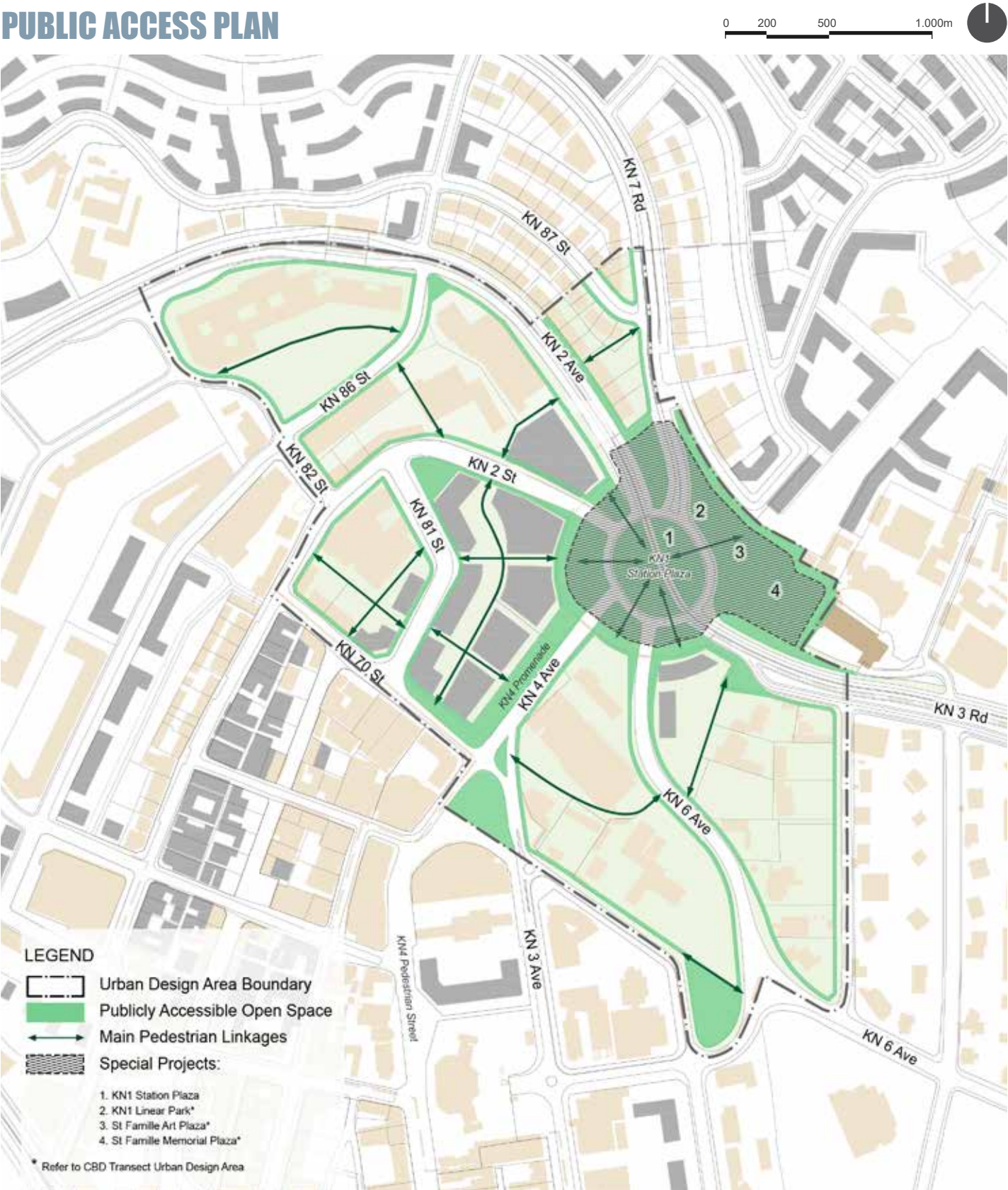
BUILDING EDGE & COVERED PEDESTRIAN WALKWAYS PLAN



KN1 Station Plaza - Building Edge and Covered Pedestrian Walkways Plan

| KN1 STATION PLAZA | | |
|-------------------------------|--|---|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the KN1 Station Plaza - Public Access Plan. | KN1 Station Plaza - Public Access Plan KN1 Station Plaza - Public Building Use/Edge and Public Access Sections Nyarugenge CBD - Urban Design Report chapters: - 'Pedestrian Network' - 'Green Corridors' - 'KN1 Station Plaza' |

PUBLIC ACCESS PLAN

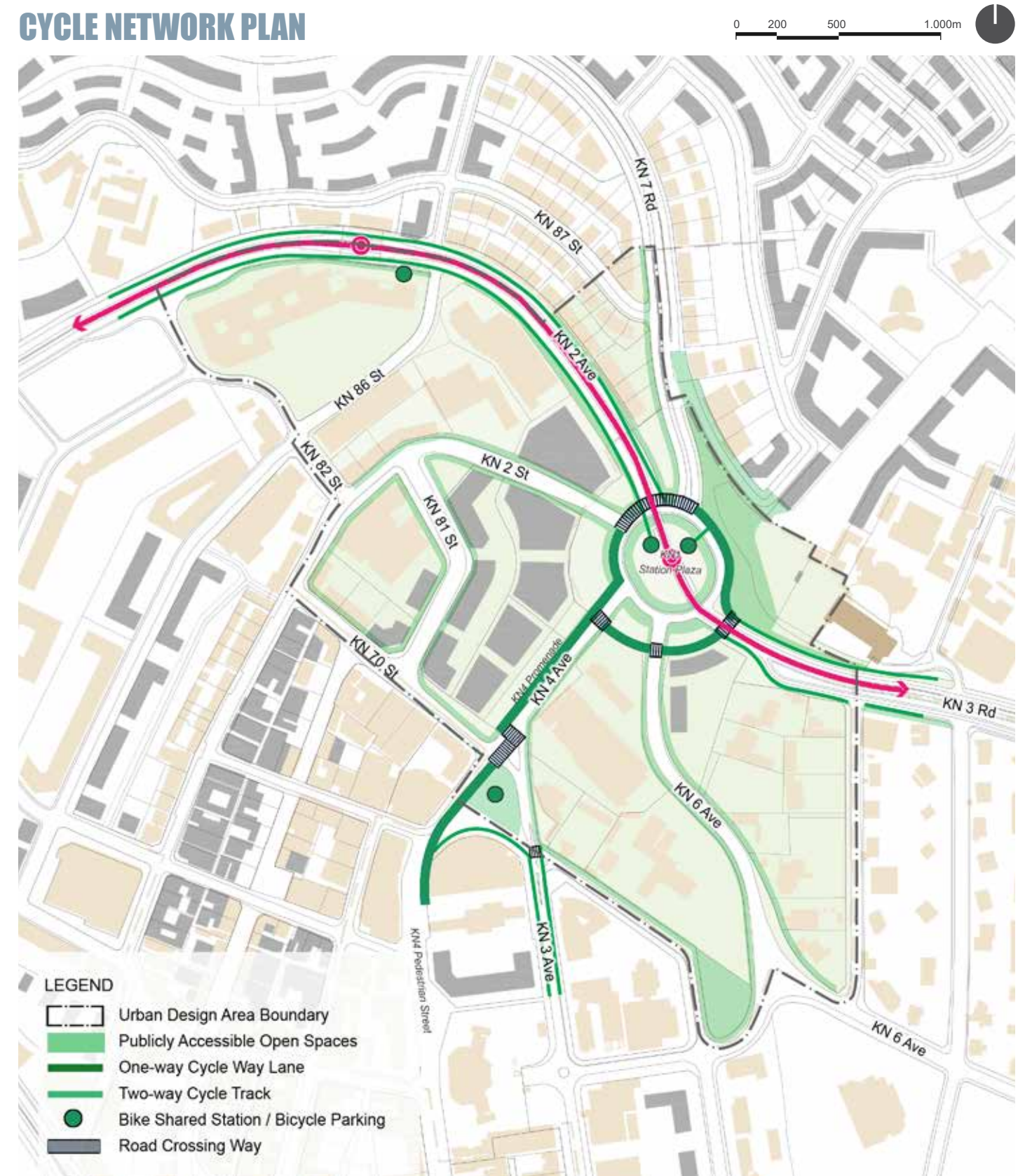


KN1 Station Plaza - Public Access Plan



| KN1 STATION PLAZA URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | Bicycle lanes along the north-west side of KN4 Ave shall be included within the 20 m building setback prescribed for the adjacent plot (KN4 Promenade). Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | KN1 Station Plaza - Cycle Network Plan Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter |
| Visual Corridors | Ensure that vistas along green corridors are valorised and preserved without visual and physical obstructions. | |

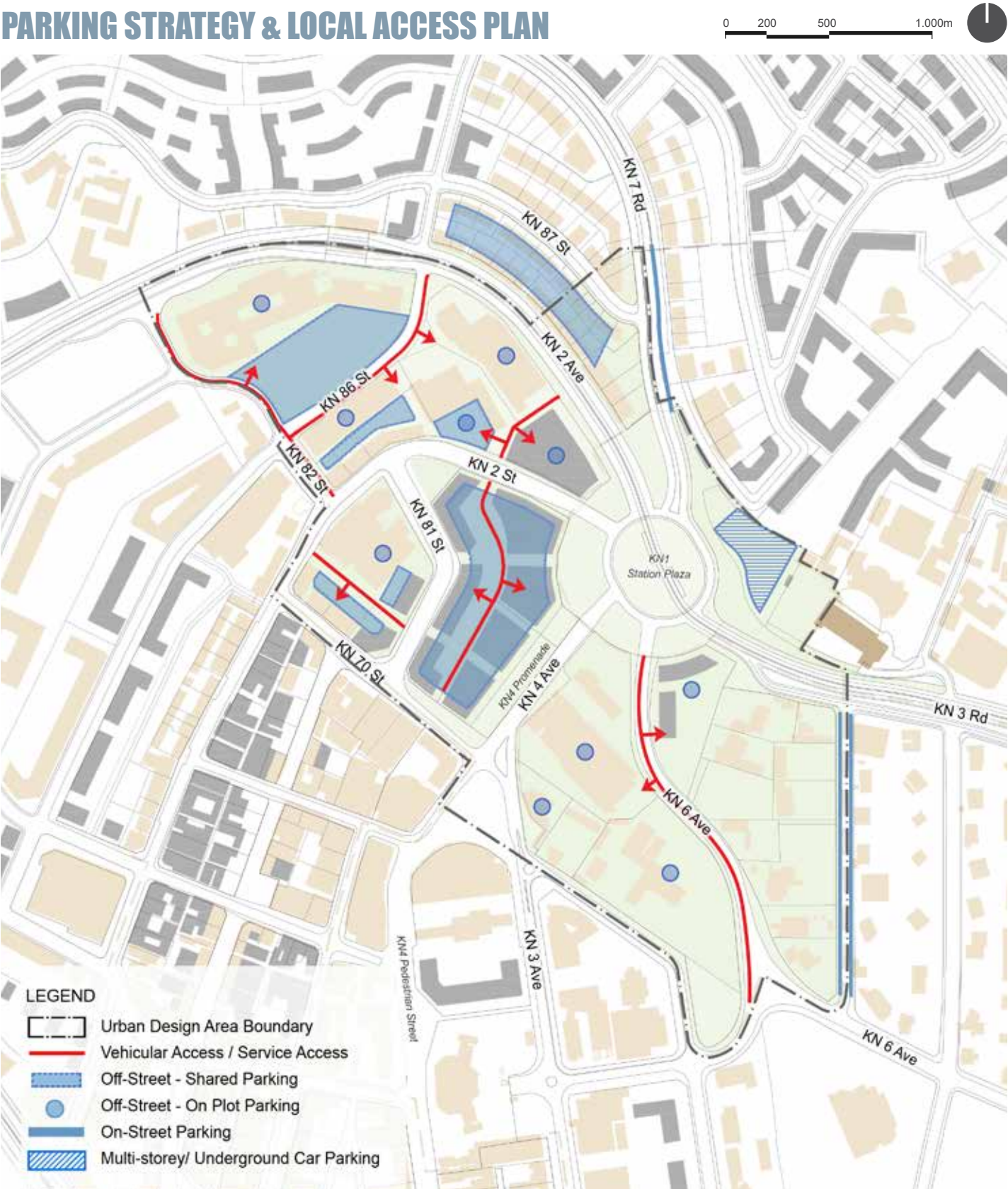
CYCLE NETWORK PLAN



KN1 Station Plaza - Cycle Network Plan

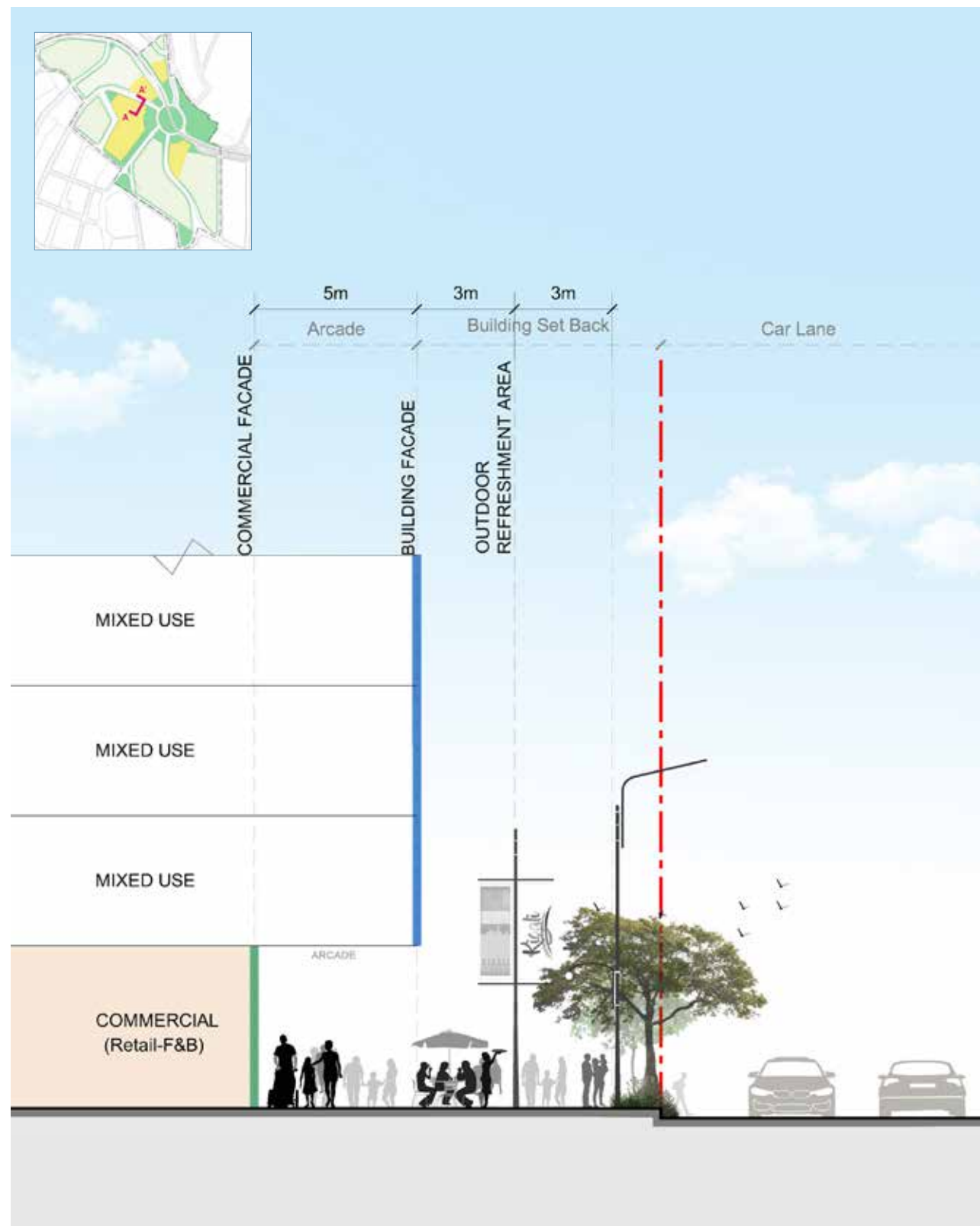
| KN1 STATION PLAZA | | |
|--|--|---|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Parking Strategy and Local Accessibility | KN1 Station Plaza Parking Strategy and Local Access Plan is part of the overall CBD parking and loading strategy. For new developments, off-street shared parking is strongly recommended. On-street parking is suggested within the service road along KN 7 Rd as per Parking Strategy and Local Access Plan. Whenever possible, vehicular entry shall be provided along access roads. | KN1 Station Plaza - Parking Strategy and Local Access Plan Nyarugenge CBD - Urban Design Report chapters: <ul style="list-style-type: none">- 'Parking Strategies and Loading'- 'KN1 Station Plaza' Zoning Regulations – 6.7 Parking Requirements |
| Loading and City Services | KN1 Station Plaza – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy. | Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter Zoning Regulations - 4.7 Service areas and equipment |
| Public Transit | Ensure integrated public transit systems and improve legibility and wayfinding. Provide a well-functioning transit station at the KN1 roundabout intersection by providing commercial exploitation opportunities at station; ensuring safety & security of both transit users and operators, etc. | |
| SITE SPECIFIC IMPLEMENTATION RECOMMENDATIONS | | |
| No Site-Specific Recommendation. Refer to general implementation recommendations in the 'General Provisions' chapter. | | |
| ENVIRONMENT AND SUSTAINABILITY | | |
| Refer to the 'General Provisions' chapter. | | |
| RECOMMENDED ACTIONS FOR CITY OF KIGALI TO UNDERTAKE | | |
| Refer to the recommended actions in the 'General Provisions' chapter. | | |

PARKING STRATEGY & LOCAL ACCESS PLAN



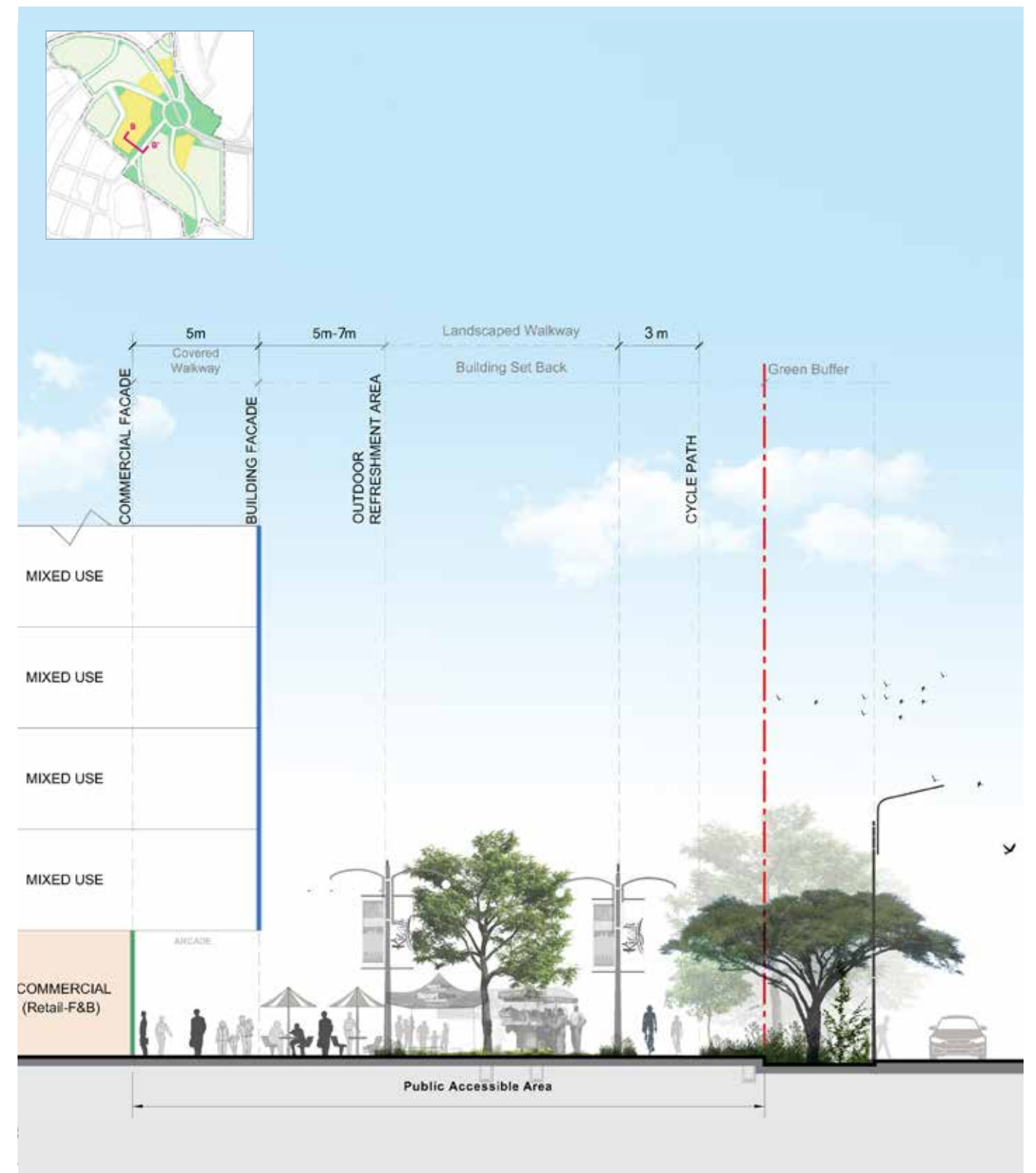
KN1 Station Plaza- Parking Strategy and Local Access Plan

SECTION A-A'

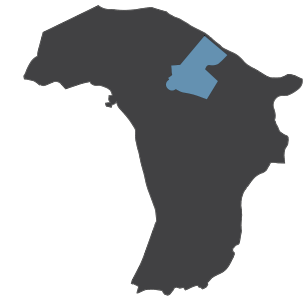


KN1 Station Plaza - Building Use/Edge and Public Access Section - Section A-A'

SECTION B-B'

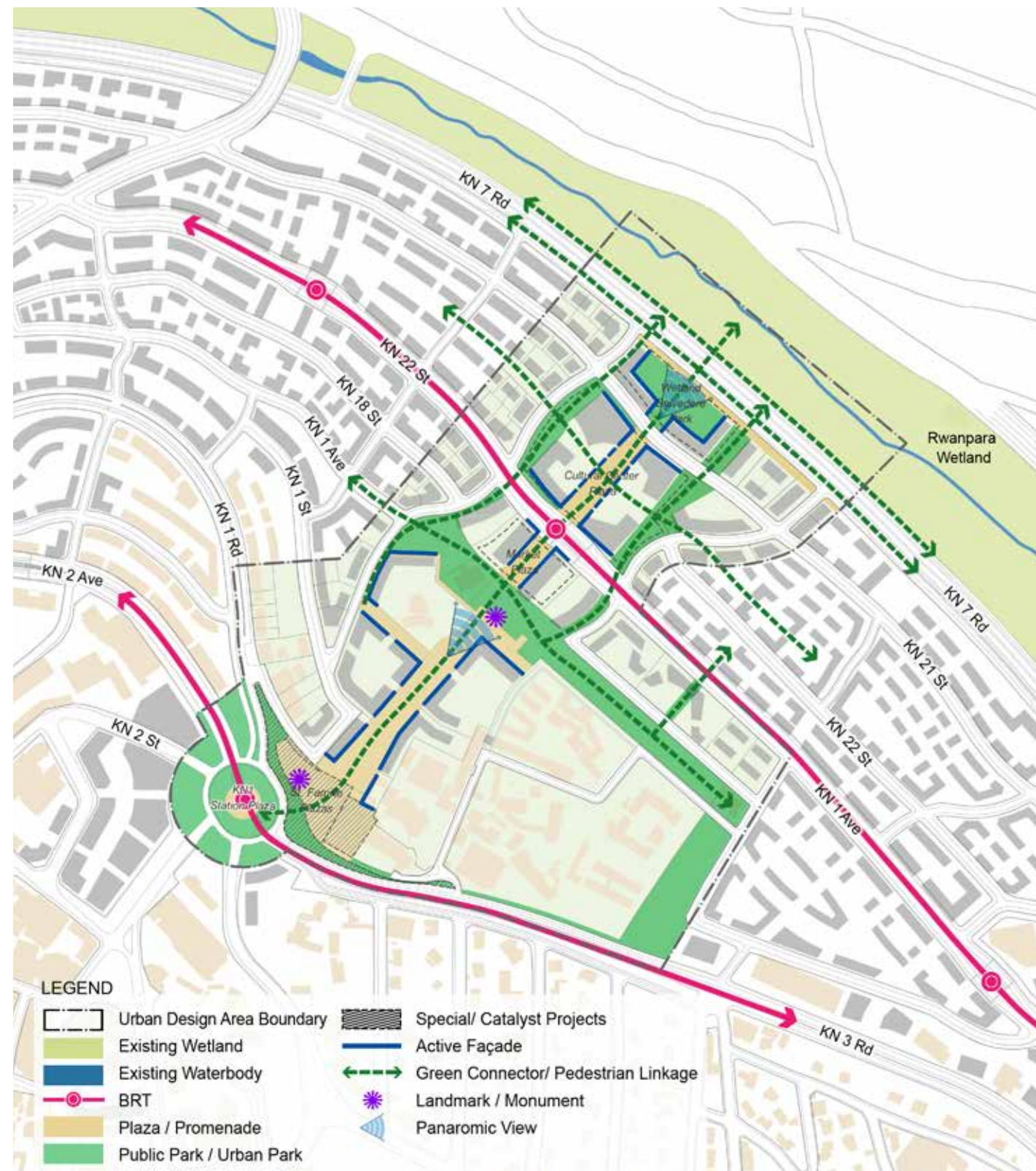


KN1 Station Plaza - Building Use/Edge and Public Access Section - Section B-B'



CBD TRANSECT

STRUCTURE PLAN



CBD Transect - Structure Plan

The objectives of CBD Transect Urban Design area are to:

- Connect visually, physically and socially, two portions of the city that are currently completely disconnected, providing a walking experience through a sequence of active open spaces that reflect the existing characteristics and proposed diversity.
- Create a pleasant, green and vibrant environment at the ground level.

Skyline:

A unique skyline that emphasize the sequence of active open spaces and the natural land form.

Landmarks and Gateways:

Buildings placed along the CBD transect will act naturally as landmarks. Additional Design elements as sculpture and art installations are proposed within the public space as reference points to strengthen the distinctiveness and uniqueness of the walking experience along the CBD transect.

Building Edge and Use:

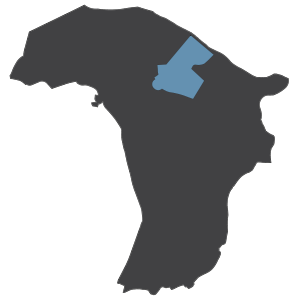
Ensure all the buildings abutting plazas and promenade to have a mandatory active frontage with activity generating uses at the ground level and outdoor refreshment area along the open spaces to ensure vibrancy.

Pedestrian Connections:

Ensure seamless pedestrian connectivity between the key buildings and across the public spaces.

Views and Vistas:

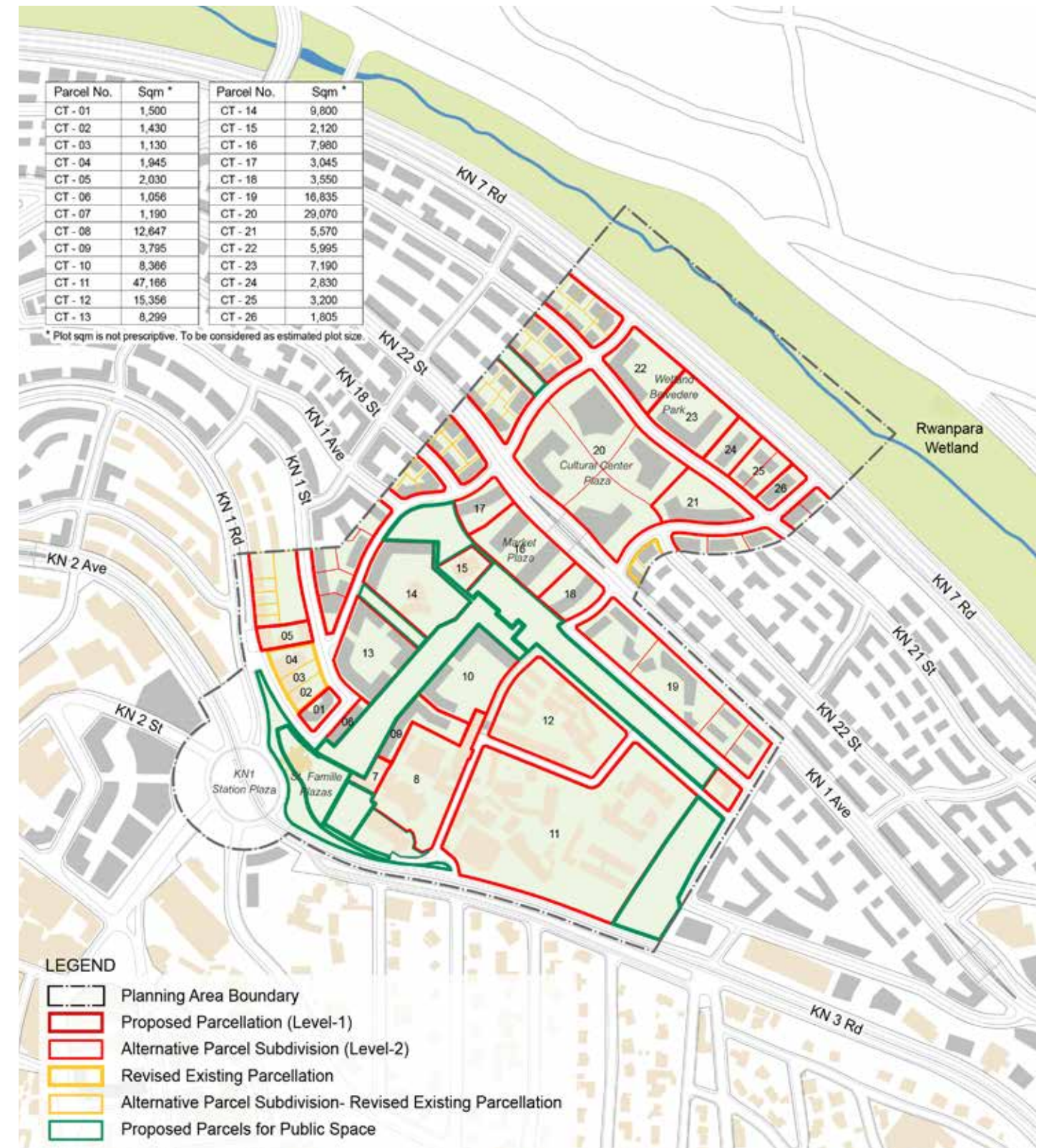
Ensure vistas along Central Corridor and other green corridors are valorised and preserved without visual and physical obstructions.



| CBD TRANSECT URBAN DESIGN REGULATIONS | | |
|--|---|--------------------------------|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of CBD Transect the following Zoning Regulations should be referred to when no specific indications are provided by this Urban Design Regulations. In all other cases Urban Design Regulations supersede general Zoning Regulations. | Nyarugenge CBD Zoning Plan |
| | C1 - Mixed Use zone | |
| | PF - Public Facilities Zone | |
| | P1 - Park and Open Space Zone | |
| | P2 - Sport and Eco-tourism Zone | |
| PARCELLATION | | |
| Suggested Parcellation | <p>A new parcellation plan has been proposed along the central corridor of the CBD Transect to facilitate implementation of special and catalyst projects, public and civic facilities for the service of the neighbourhoods and the City at large.</p> <p>The Parcellation Plan of the extensive mixed-use oriented area (C1 zone) aims to facilitate the development of compact city blocks with shared space at the service of the residents</p> | CBD Transect-Parcellation Plan |

PARCELLATION PLAN

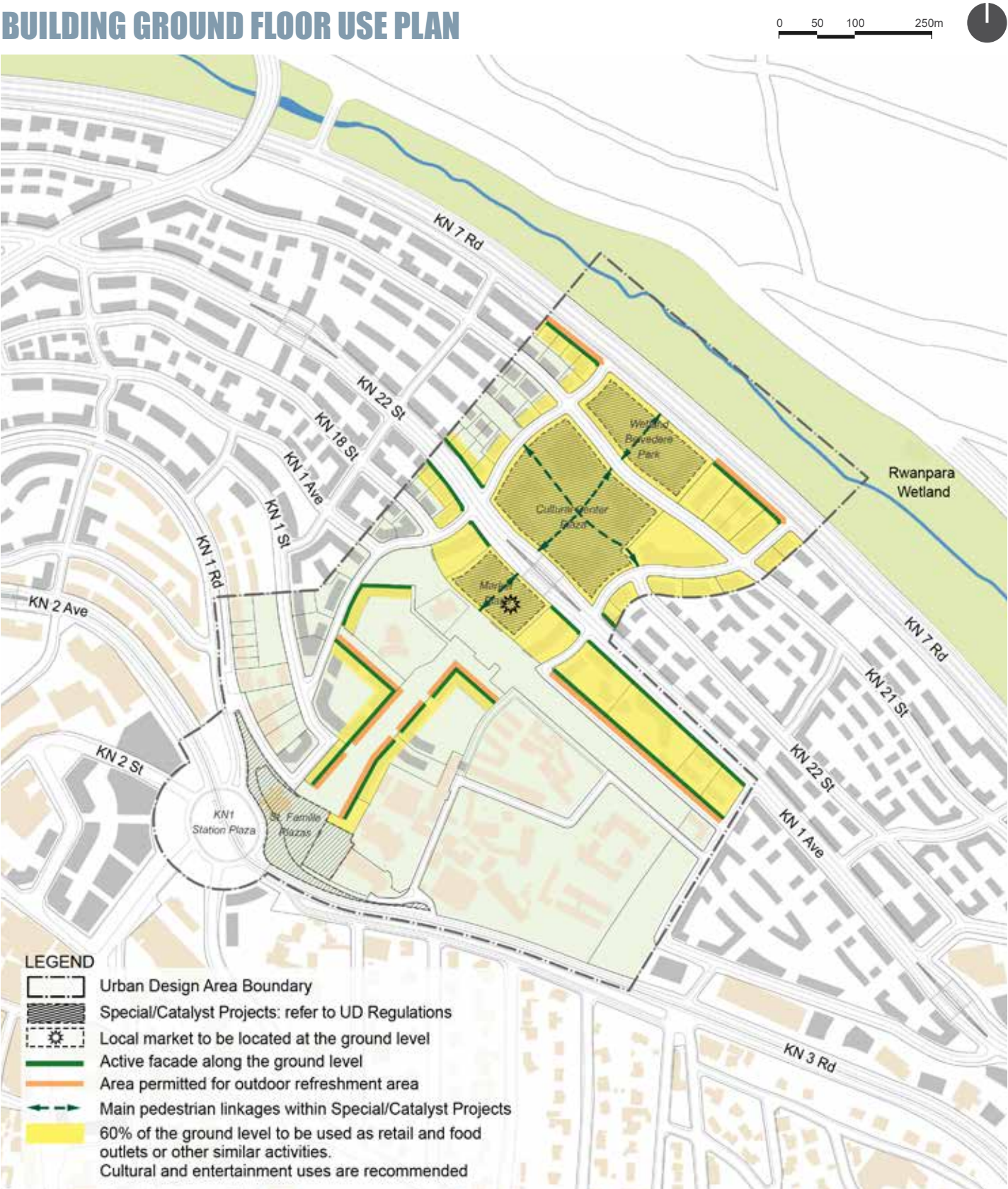
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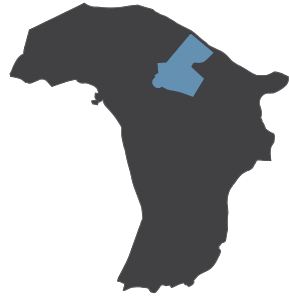
CBD Transect - Parcellation Plan

| CBD TRANSECT | | |
|---|--|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| USES | | |
| Permitted Uses Prohibited Uses Conditional Uses | As per Zoning Regulations. | |
| Site-specific Recommended Uses | <p>Cultural and entertainment uses are encouraged especially for developments along the Wetland, the central green corridor and Bus Rapid Transit (BRT) Corridor.</p> <p>Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. Exceptions to be evaluated by City of Kigali – One Stop Center.</p> | |
| Building Ground Floor Use | <p>Mandatory active façade is required along the central green corridor crossing the hill toward the Wetland, the Bus Rapid Transit (BRT) corridor and the Wetland front.</p> <p>Minimum 60 % of the ground floor of specific areas highlighted in the ‘Building Ground Floor Use Plan’ shall be used as retail and food outlets or other similar activities.</p> <p>Special/ Catalyst Projects: Minimum 30 % of the ground floor along main pedestrian linkages shall be used as retail and food outlets or other similar activities.</p> <p>Cultural and entertainment uses are recommended.</p> <p>Permitted outdoor refreshment areas and merchandise display as per Building Ground Floor Use Plan. Additional area for outdoor refreshment area to be evaluated and approved by City of Kigali – One Stop Center.</p> <p>Special/ Catalyst Projects: outdoor refreshment areas should be located along main pedestrian linkages, to be approved by City of Kigali – One Stop Center.</p> <p>Parcel n. 16 (refer to Parcellation Plan) Ground Floor shall be dedicated for Local Market Activities.</p> | <p>CBD Transect – Building Ground Floor Use Plan</p> <p>CBD Transect - Public Building Use/Edge and Public Access Sections</p> |
| Open Spaces Activities and Streetscape Provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

BUILDING GROUND FLOOR USE PLAN

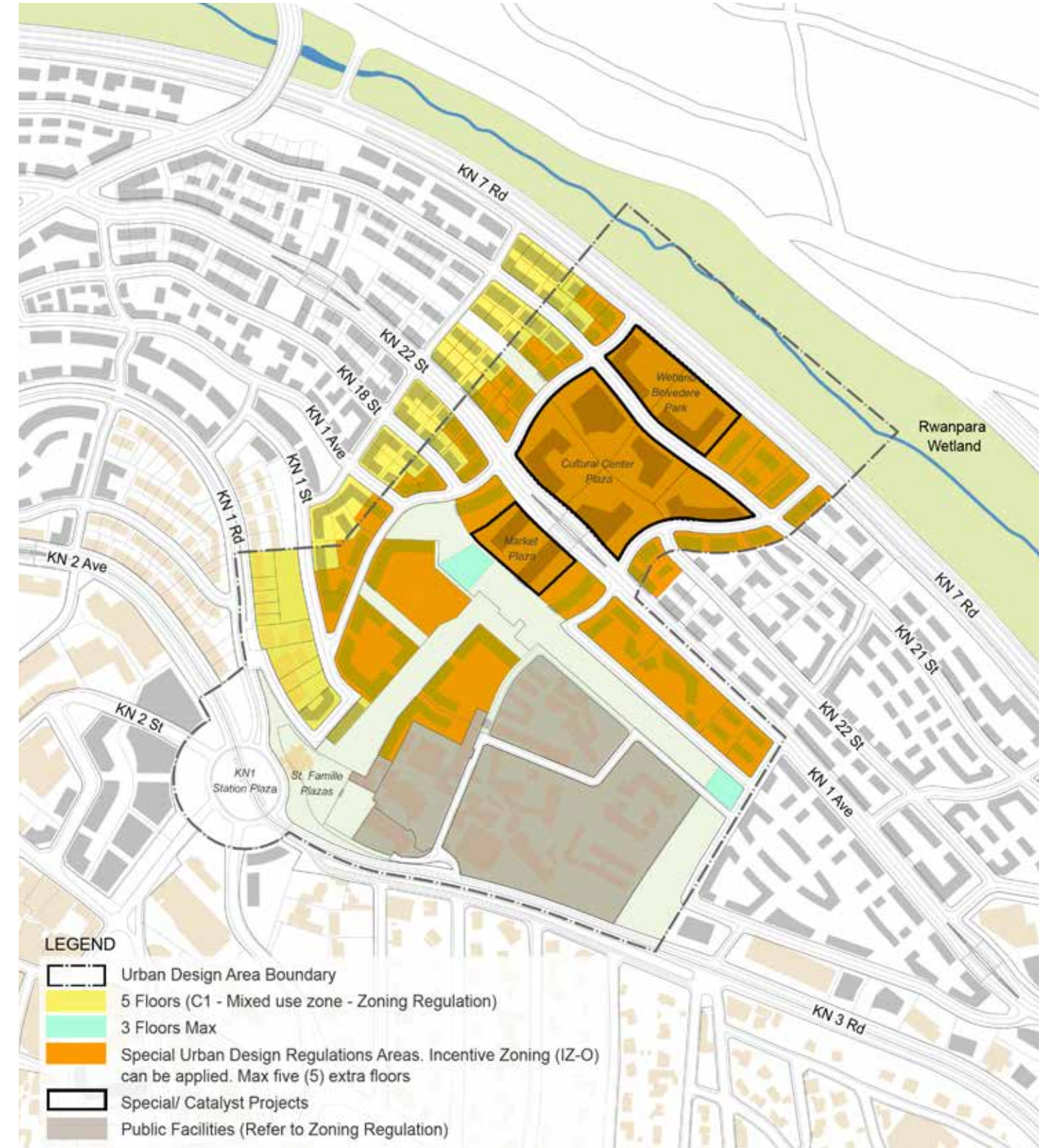


CBD Transect - Building Ground Floor Use Plan



| CBD TRANSECT URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | <p>Incentive Zoning as per point 'b' or 'c' of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the 'CBD Transect - Special Urban Design Regulations' Plan.</p> <p>Special Urban Design Regulations Areas are located along:</p> <ul style="list-style-type: none"> - the central green corridor crossing the hill toward the Wetland; - the green corridor that passes through the Cultural Cluster along KN 22 St axis; - the Bus Rapid Transit (BRT) corridor and the Wetland front. <p>as detailed in CBD Transect - Special Urban Design Regulations Plan.</p> <p>Special Urban Design Regulations Areas include the following Special/ Catalyst Projects:</p> <ol style="list-style-type: none"> 1. Muhima Central Market 2. Muhima Cultural Complex 3. Muhima Wetland Park Belvedere Development | <p>CBD Transect - Special Urban Design Regulations Plan</p> <p>Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ)</p> |
| Maximum Number of Floors and Building Height | <p>Maximum number of floors are indicated in CBD Transect - Special Urban Design Regulations Plan</p> <p>For plots within the Special Urban Design Regulations Areas, maximum five (5) extra floors on top of current Zoning Regulations are permitted, provided that at least 15% of the dwelling units dedicated for affordable housing or adequate public amenities are developed, as per point 'b' or 'c' of Incentive Zoning Conditions.</p> | <p>CBD Transect - Special Urban Design Regulations Plan</p> <p>Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ)</p> |
| | <p>For landmarks such as sculptures, monuments or art installations, no height regulation is applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval.</p> | |

SPECIAL URBAN DESIGN REGULATIONS PLAN



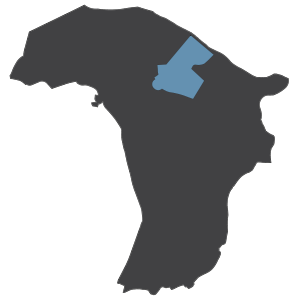
CBD Transect - Special Urban Design Regulations Plan

| CBD TRANSECT | | |
|--------------------------|--|---|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| SETBACK | | |
| Building Setback | CBD Transect setback are illustrated in the Building Setback Plan. Existing alignment are referring to building alignment of existing consolidated built-up area. | CBD Transect - Setback Plan Existing/Proposed Building Map |

SETBACK PLAN

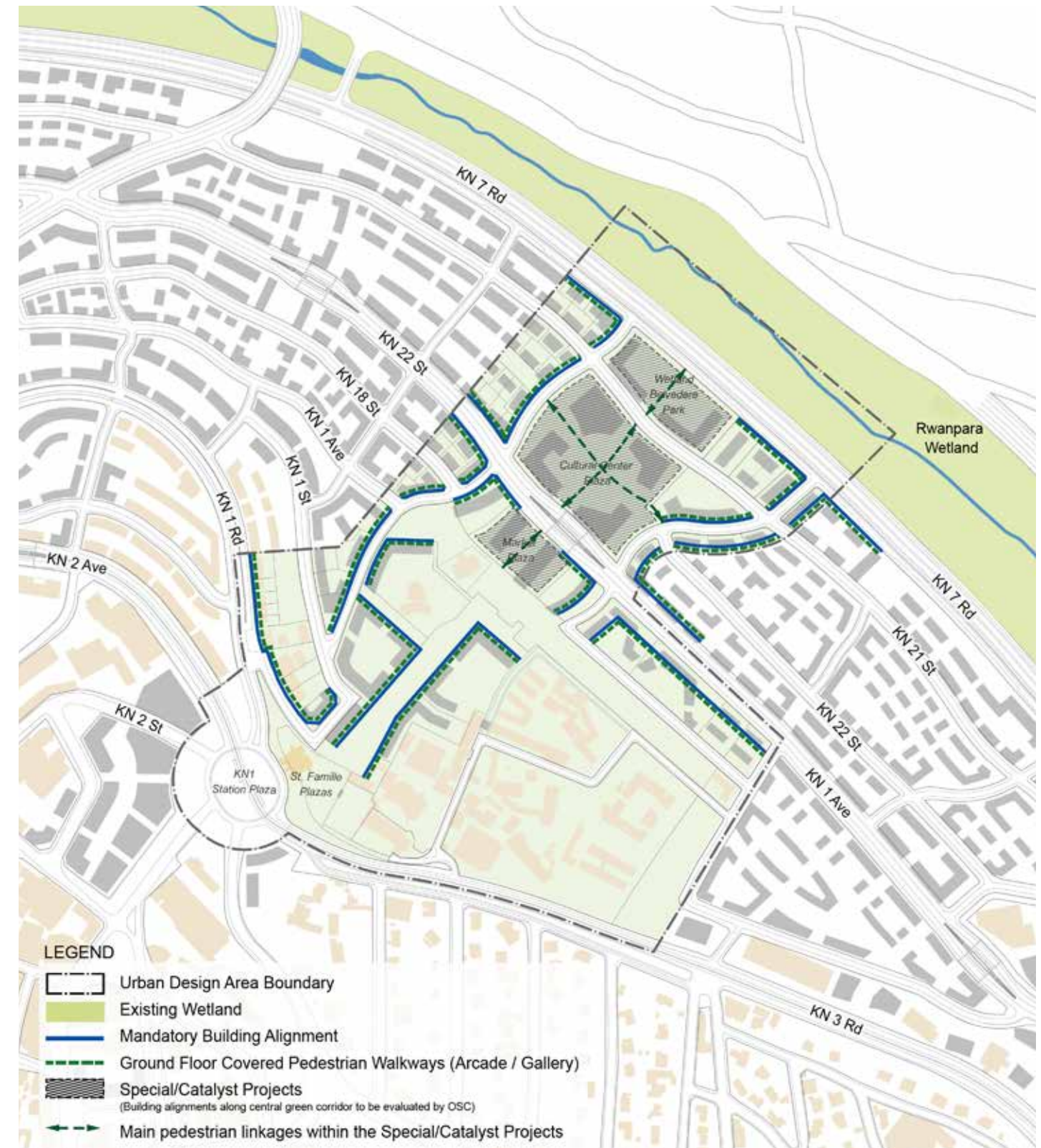


CBD Transect - Setback Plan



| CBD TRANSECT URBAN DESIGN REGULATIONS | | |
|--|--|--|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | <p>Mandatory buildings edge alignments are stipulated along the central green corridor crossing the hill toward the Wetland, the Bus Rapid Transit (BRT) corridor and the Wetland front.</p> <p>Within Special/Catalyst Projects areas, building alignments shall consider main pedestrian linkages.</p> <p>No plot boundary wall or fence shall be allowed within the CBD Transect Urban Design Area.</p> | <p>CBD Transect - Building Edge and Covered Pedestrian Walkways Plan</p> <p>CBD Transect - Public Building Use/Edge and Public Access Sections</p> <p>Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback)</p> |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided at the ground floor to create a continuous covered pedestrian walkway. | |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Roof Terrace is recommended. | |

BUILDING EDGE & COVERED PEDESTRIAN WALKWAYS PLAN



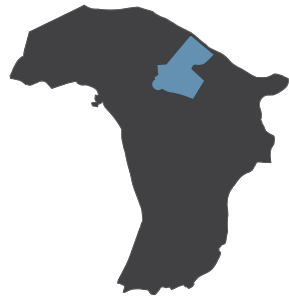
CBD Transect - Building Edge and Covered Pedestrian Walkways Plan

| CBD TRANSECT | | |
|-------------------------------|---|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the CBD Transect - Public Access Plan. | <div>CBD Transect - Public Access Plan</div> <div>CBD Transect - Public Building Use/Edge and Public Access Sections</div> <div>Nyarugenge CBD - Urban Design Report chapters:</div> <div><div>- 'Pedestrian Network'</div><div>- 'Green Corridors'</div><div>- 'CBD Transect'</div></div> |

PUBLIC ACCESS PLAN

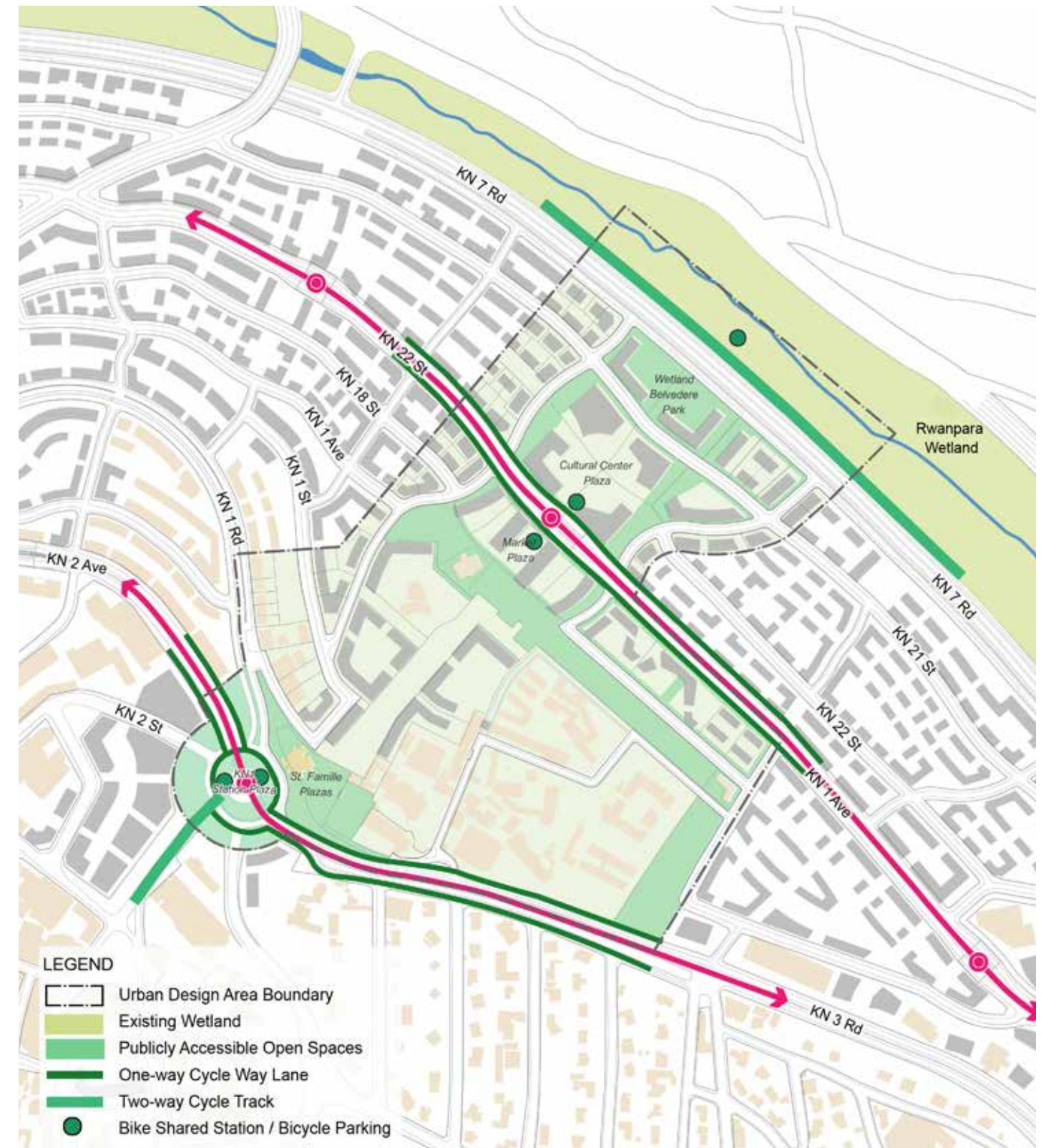


CBD Transect - Public Access Plan



| CBD TRANSECT URBAN DESIGN REGULATIONS | | |
|--|---|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | The CBD Transect Cycle Network Plan, part of the overall 'Nyarugenge CBD - Cycle Network Plan', shall be followed. Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | CBD Transect - Cycle Network Plan Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter |
| Visual Corridors | Ensure that vistas along Central Corridor and other green corridors are valorised and preserved without visual and physical obstructions. | |

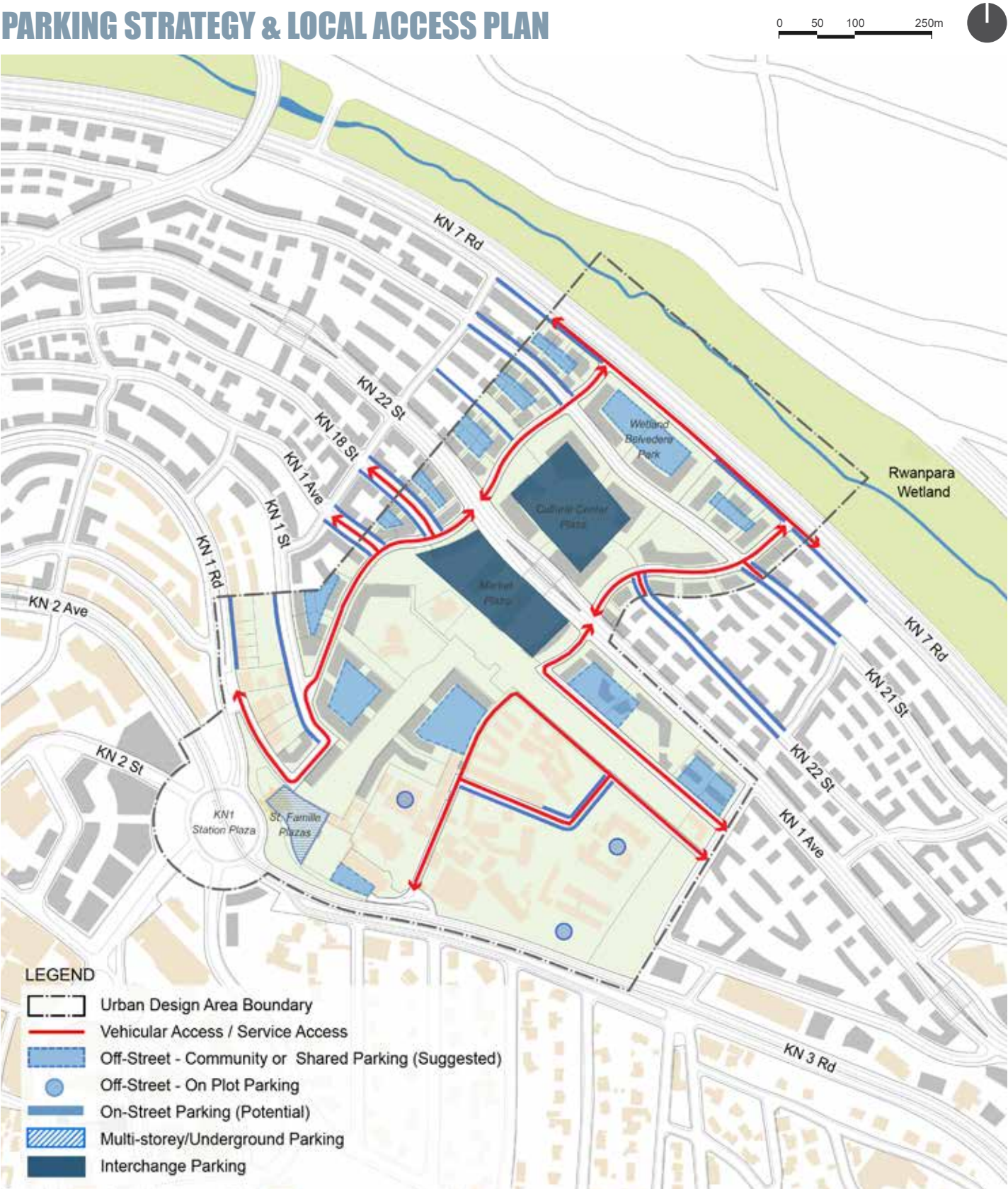
CYCLE NETWORK PLAN



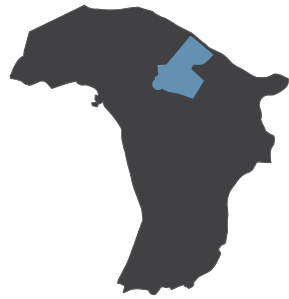
CBD Transect - Cycle Network Plan

| CBD TRANSECT URBAN DESIGN REGULATIONS | | |
|--|---|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Parking Strategy and Local Accessibility | <p>CBD Transect Parking Strategy and Local Access Plan is part of the overall CBD parking and loading strategy.</p> <p>For new developments, off-street shared parking is strongly recommended.</p> <p>On-street parking is suggested within the service road along KN 7 Rd as per Parking Strategy and Local Access Plan. Additional potential On-Street Parking are suggested along several Muhima neighbourhood roads, that have to be evaluated by City of Kigali – One Stop Center on case by case basis.</p> <p>An Interchange Parking is proposed to serve the BRT Station in front of the new Muhima Market and Cultural Cluster (St IV/9).</p> <p>Whenever possible, vehicular entry shall be provided along access roads.</p> | <p>CBD Transect - Parking Strategy and Local Access Plan</p> <p>Nyarugenge CBD - Urban Design Report chapters:</p> <ul style="list-style-type: none">- ‘Parking Strategies and Loading’- ‘CBD Transect’ <p>Zoning Regulations – 6.7 Parking Requirements</p> |
| Loading and City Services | <p>CBD Transect – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy.</p> | <p>Nyarugenge CBD Urban Design Report - ‘Parking strategies, Loading and City Services’ Chapter</p> <p>Zoning Regulations - 4.7 Service areas and equipment</p> |
| Public Transit | <p>Ensure integrated public transit systems and improve legibility and wayfinding.</p> | |

PARKING STRATEGY & LOCAL ACCESS PLAN



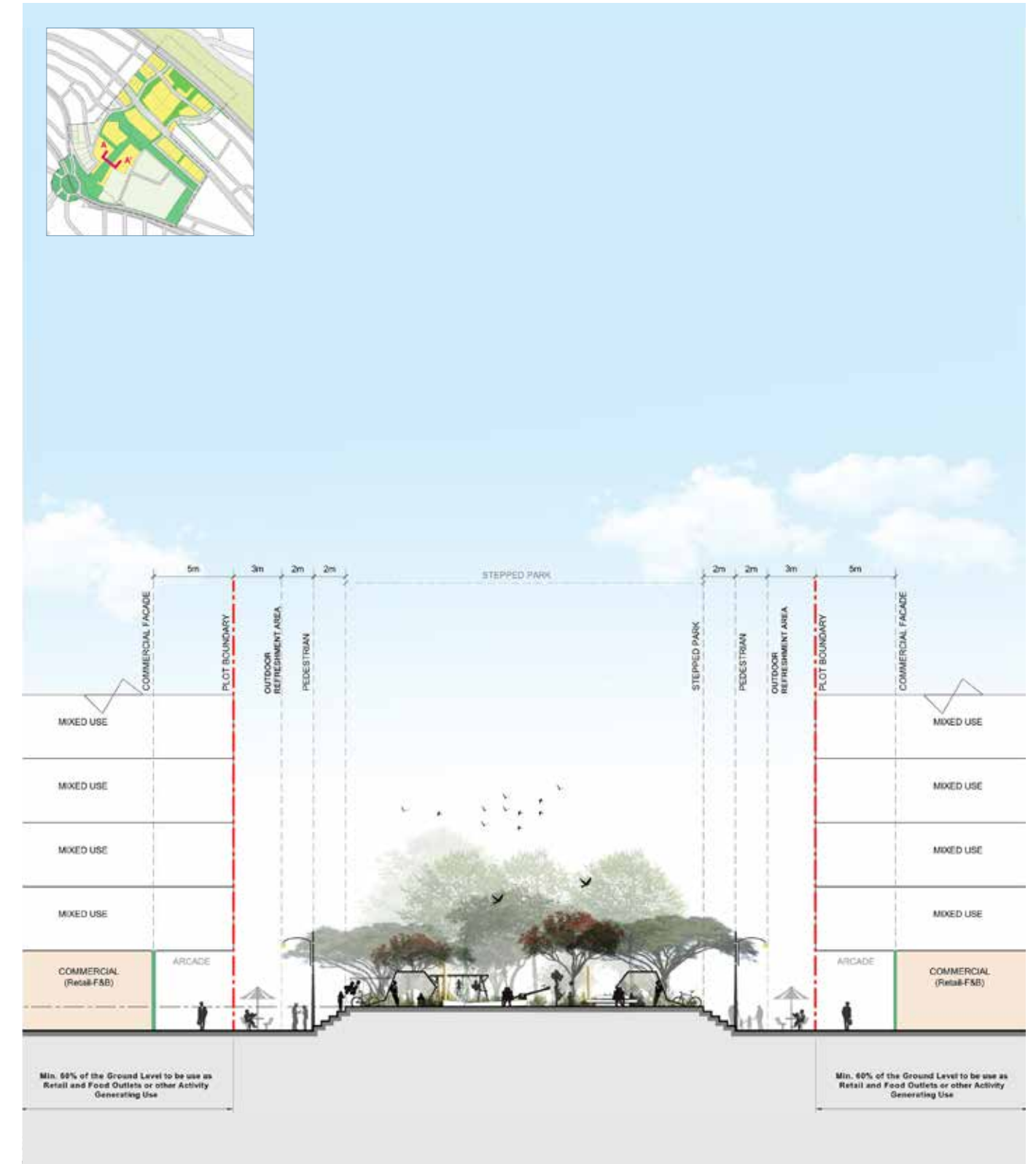
CBD Transect- Parking Strategy and Local Access Plan



| CBD TRANSECT URBAN DESIGN REGULATIONS | |
|--|--|
| Regulations | Ref |
| SITE SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| Incrementality is encouraged to maximise current investment capacity without hindering future development potential. | |
| Inclusivity and Community Involvement in the Planning are strongly recommended by establishing a participatory planning process to involve amenity societies, independent experts, local residents and businesses. | |
| Parcel amalgamation as a mechanism for achieving urban consolidation through densification and create common shared spaces. | |
| Refer to general implementation recommendations in the 'General Provisions' chapter for other provisions. | |
| ENVIRONMENT AND SUSTAINABILITY | |
| Considering the slopes above 30% affecting some areas of Muhima, applicability of Slope Overlay Regulations is recommended within the entire CBD Transect Boundary. | Zoning Regulations - 7.8 Slope Overlay Nyarugenge CBD Urban Design Report 'CBD Office Precinct' chapter |
| RECOMMENDED ACTIONS FOR CITY OF KIGALI TO UNDERTAKE | |
| Refer to the recommended actions in the 'General Provisions' chapter. | |

SECTION A-A'

0 5 10 20m



CBD Transect - Building Use/Edge and Public Access Section - Section A-A'

SECTION B-B' - STRETCH A



CBD Transect - Building Use/Edge and Public Access Section - Section B-B' - Stretch A

SECTION B-B' - STRETCH B

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CBD Transect - Building Use/Edge and Public Access Section - Section B-B' - Stretch B

SECTION B-B' - STRETCH C



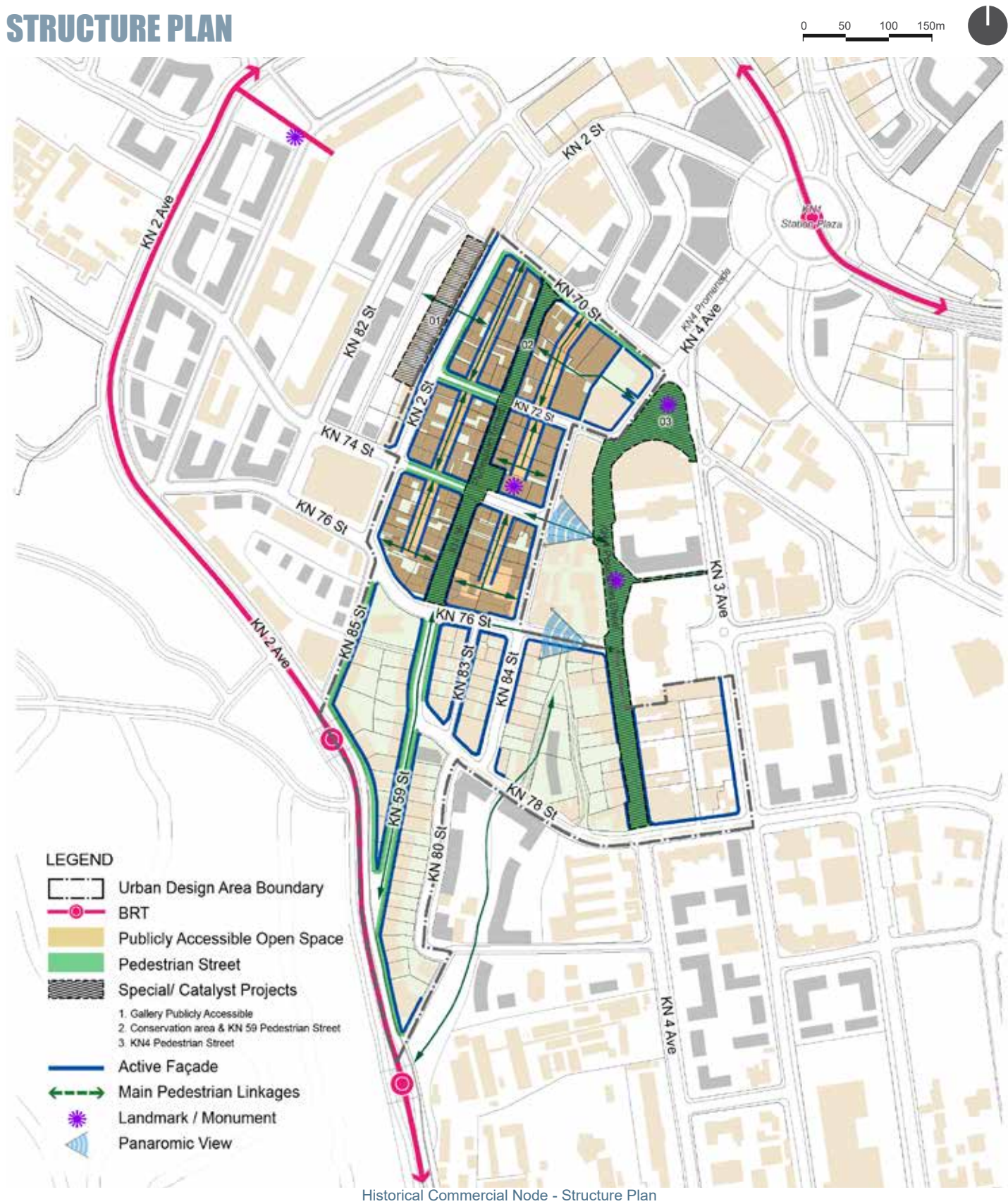
CBD Transect - Building Use/Edge and Public Access Section - Section B-B' - Stretch C

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HISTORICAL COMMERCIAL NODE

STRUCTURE PLAN



Historical Commercial Node - Structure Plan

The Urban Design objective for the Historical Commercial Node is to:

- revitalize the historical commercial neighbourhood of Kigali by reinforcing its open spaces and pedestrian network, restructuring the parking system and introducing freight movements and loading restrictions;
- create a vibrant low-rise commercial, entertainment and cultural precinct, while preserving urban grain, character, vibrancy and scale of the historical “Quartier Commercial” and “Quartier Matheus”.

Skyline:

Reinforce the identity and character of the existing commercial developments, with their vernacular Rwandan architecture, intimate scale and diverse facades.

Landmarks and Gateways:

KN 4 pedestrian street is the most important gateway to the Historical Commercial node and the city, as many people enter Kigali from the ‘KN1 Station Plaza’.

Existing Landmark Buildings like the City Hall, the Mosque, etc. need to be enhanced while new monuments, sculptures and water fountains strategically located will act as navigation landmarks along the area.

Building Edge and Use:

Retain & enhance the street character with mandatory conservation of existing building alignment and covered pedestrian walkways to create a charming streetscape with active façade at the ground levels.

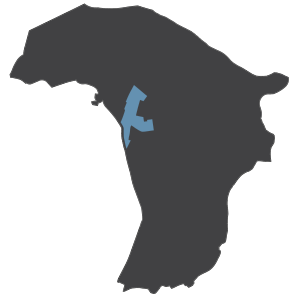
Pedestrian Connections:

Ensure seamless pedestrian connectivity between the key buildings and across the public spaces.

Creation of a friendly-pedestrian city centre by providing new pedestrian linkages through courtyards and ensuring through block connections.

Views and Vistas:

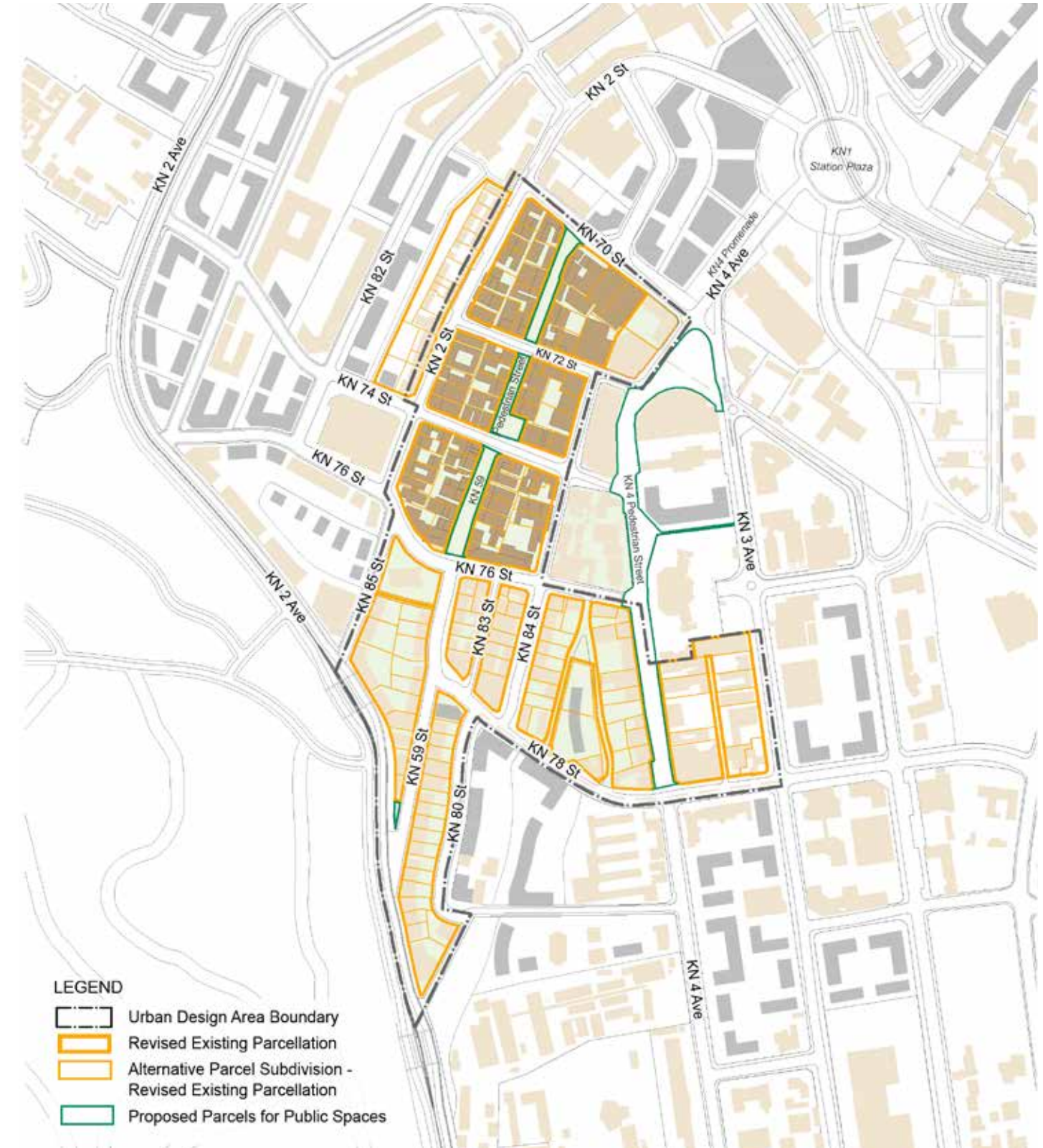
Ensure existing significant vistas and view corridors along existing and proposed green corridors are valorised and maintained without visual and physical obstructions.



| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of Historical Commercial Node, the following Zoning regulations should be referred to when no specific indications are provided by this UD regulations. In all other cases Urban Design regulations supersede general Zoning regulations. | Nyarugenge CBD Zoning Plan |
| | C1 - Mixed Use Zone | |
| | P1 - Park and Open Space Zone along KN4 Ave and KN 59 St (Pedestrian Streets) | |
| PARCELLATION | | |
| Suggested Parcellation | The Historical Commercial Node parcellation is based on the existing parcel subdivision. | Historical Commercial Node - Parcellation Plan |

PARCELLATION PLAN

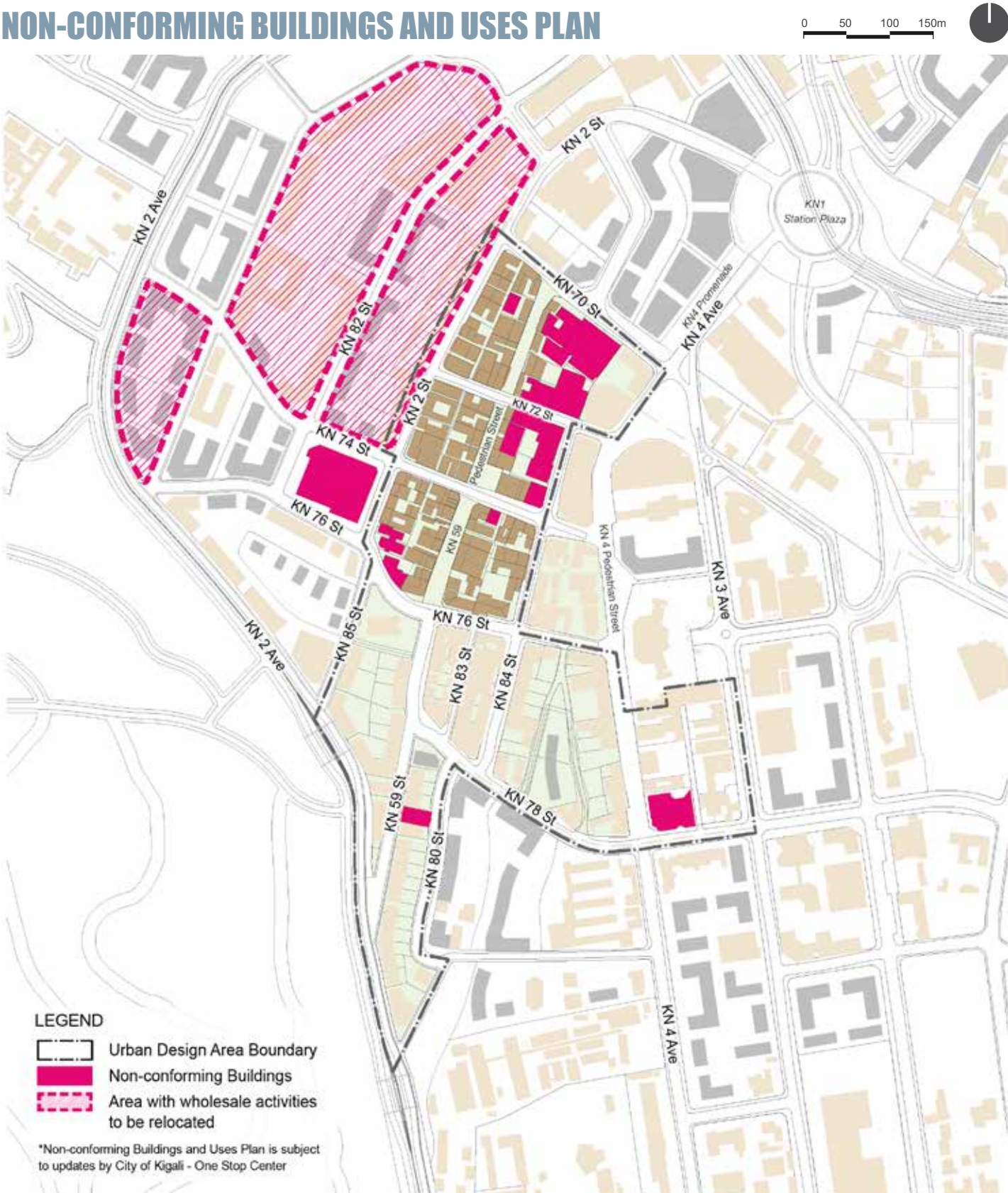
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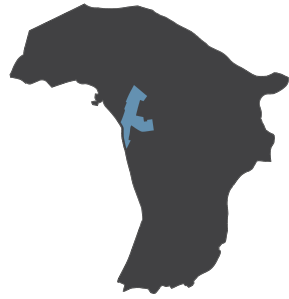
Historical Commercial Node - Parcellation Plan

| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| USES | | |
| Permitted uses Prohibited uses Conditional uses | As per Zoning Regulations. No wholesale activities are allowed. Relocation of the existing wholesale activities is required. | Historical Commercial Node - Non-Conforming Buildings and Uses Plan |
| Site-specific Recommended Uses | Cultural and entertainment uses are encouraged especially along KN 85 St, KN 59 St, within the Conservation area, along green corridors connecting the Conservation area to Downtown and Muhima. Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. Exceptions to be evaluated by City of Kigali – One Stop Center. | Nyarugenge CBD - Urban Design Report chapters: <ul style="list-style-type: none">- ‘Green Strategy’- ‘Green Corridors’ |
| Building Ground Floor Use | Mandatory active façade is required along the green corridors and within the Conservation area Permitted use of outdoor areas for refreshment and merchandise display to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open Spaces Activities and Streetscape Provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

NON-CONFORMING BUILDINGS AND USES PLAN



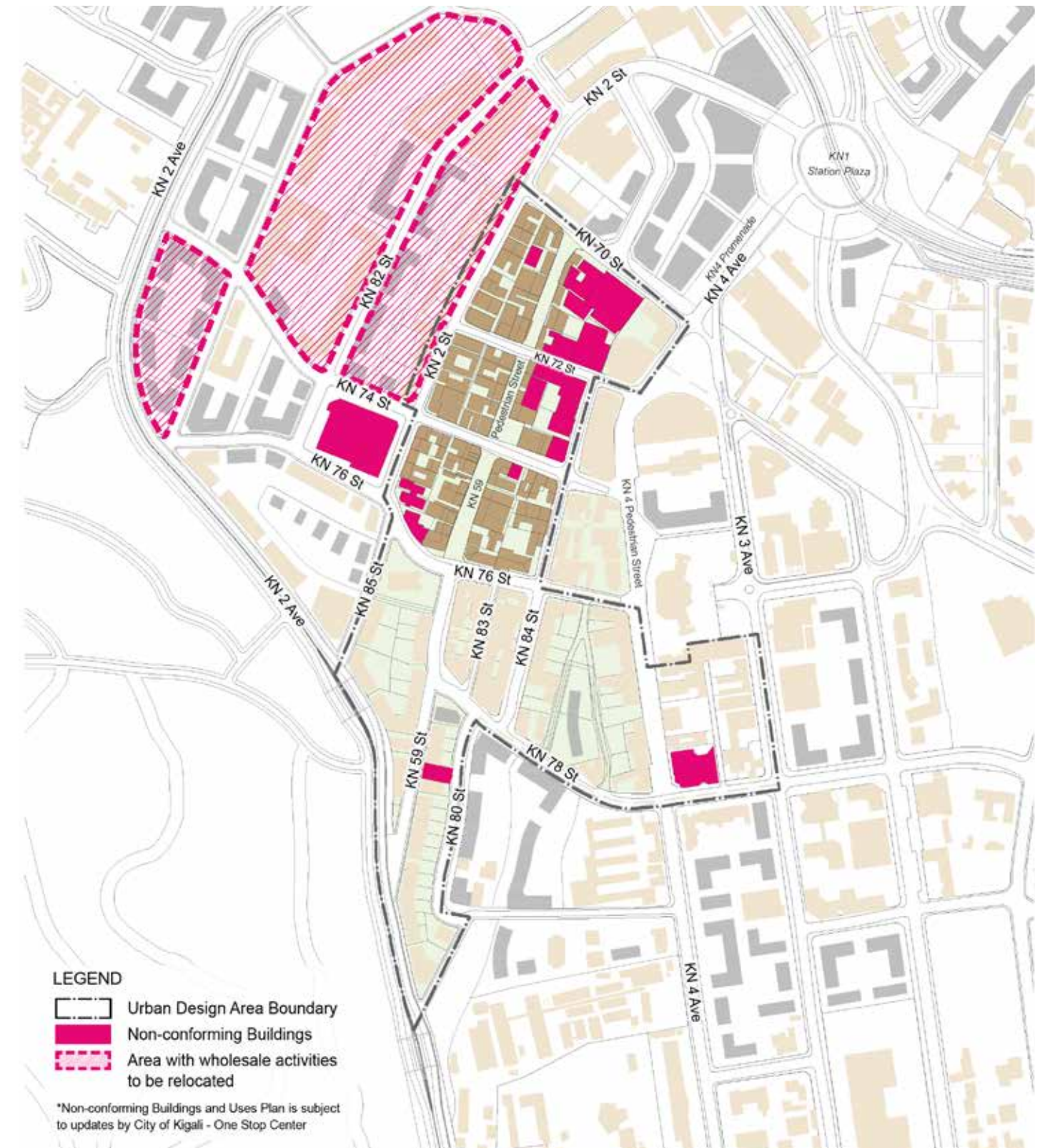
Historical Commercial Node - Non-Conforming Buildings and Uses Plan



| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| NON-CONFORMING BUILDINGS AND USES | | |
| Incompatible Uses | <p>Relocation of the existing wholesale activities. Additional incompatible uses maybe defined by City of Kigali.</p> <p>The following actions to reduce the impact of existing Nyarugenge Market Building are strongly recommended:</p> <ul style="list-style-type: none">• Relocation of the existing ground floor market to the new proposed Muhima Market Plaza. Weekly markets can be accommodated within the several open spaces that are publicly accessible as indicated in the CBD Urban Design (KN 4 Ave pedestrian street, Muhima transect corridor)• Reconversion of the basement and portion of the Ground floor along KN 82 St into parking and loading area.• Activate ground floor facade along KN 2 St and KN 74 St. | Historical Commercial Node – Non-Conforming Buildings and Uses Plan |
| Non-Conforming Buildings for scale, use or typology | <p>Existing or under-construction developments that are considered non-conforming to the character of the area for scale, use or typology are recommended to improve visual character and/or add green building design elements, as indicated below:</p> <ul style="list-style-type: none">• Activate street façade whenever possible;• Transform inaccessible first floor and covered roof terraces into publicly accessible spaces;• Introduce green walls on building façades and green roofs. | Historical Commercial Node Non-Conforming Buildings and uses Plan Nyarugenge CBD Urban Design Regulations - General Provisions - 'Strategies to activate building frontages exposed to prominent public view' chapter |

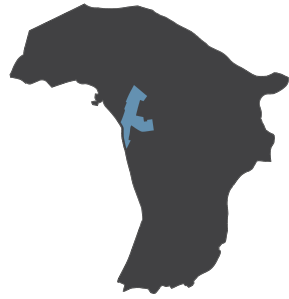
NON-CONFORMING BUILDINGS AND USES PLAN

0 50 100 150m



Historical Commercial Node - Non-Conforming Buildings and Uses Plan

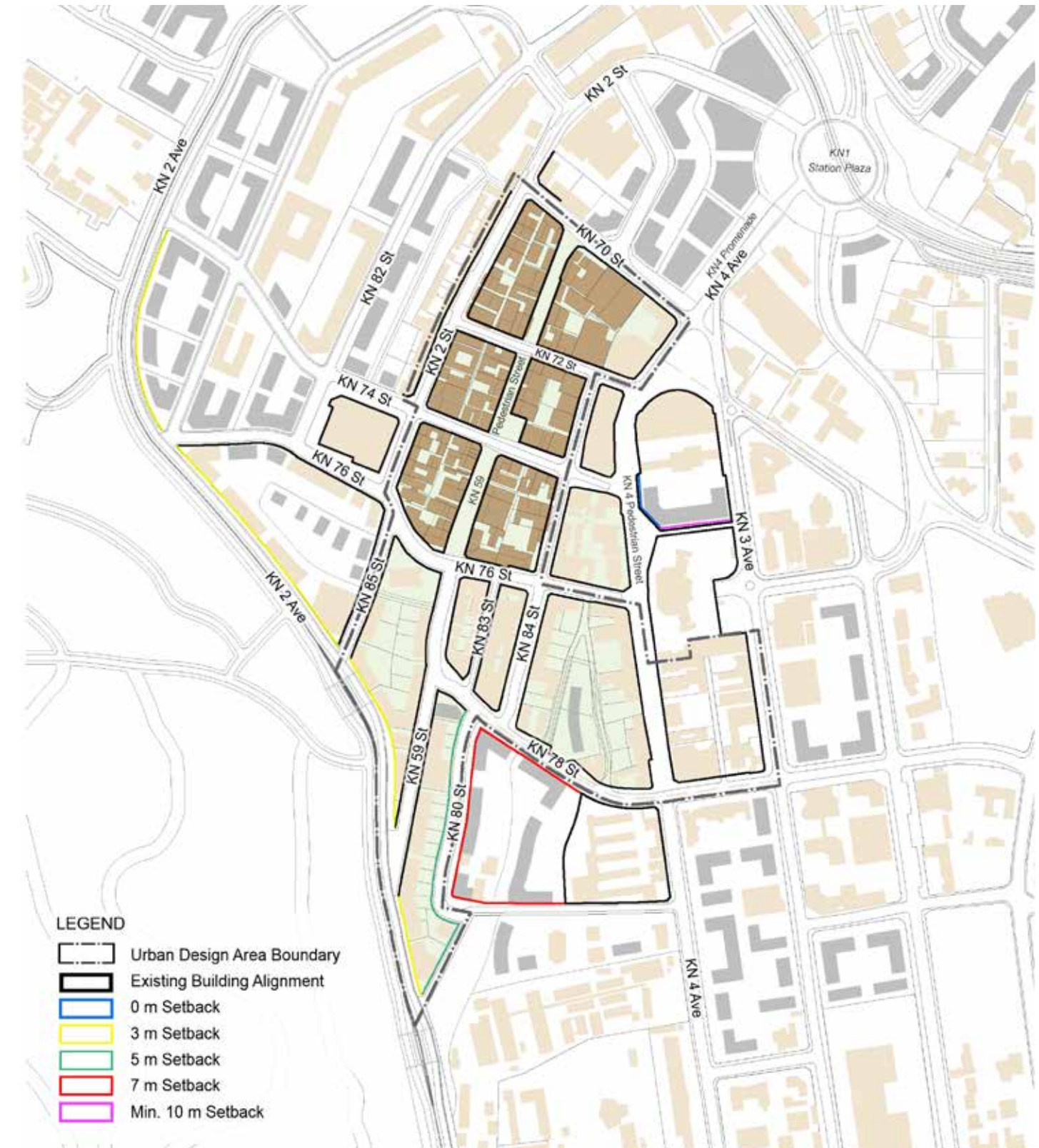
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| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| SETBACK | | |
| Building Setback | Historical Commercial Node setback are presented in the Building Setback Plan. | Historical Commercial Node - Setback Plan Existing/Proposed Building Map |
| BUILDING EDGE | | |
| Alignments | The Historical Commercial Node is entirely within the existing consolidated built-up area and most of existing building alignments are proposed to be maintained. No plot boundary wall or fence shall be allowed. | Historical Commercial Node Building Setback Plan |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery are required along building edge in the overall area, especially along KN 85 St, KN 59 St, KN2 St and within the Historical Commercial Node/ Conservation Area Boundary (refer to Historical Commercial Node/ Conservation Area -Building Edge and Covered Pedestrian Walkways Plan). | Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) Historical Commercial Node/ Conservation Area - Building Edge and Covered Pedestrian Walkways Plan |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Veranda as extended canopy at the first floor is allowed. | |
| | First and Second floor facade articulation through balconies is allowed. | |
| | Roof Terrace is recommended. | |

SETBACK PLAN

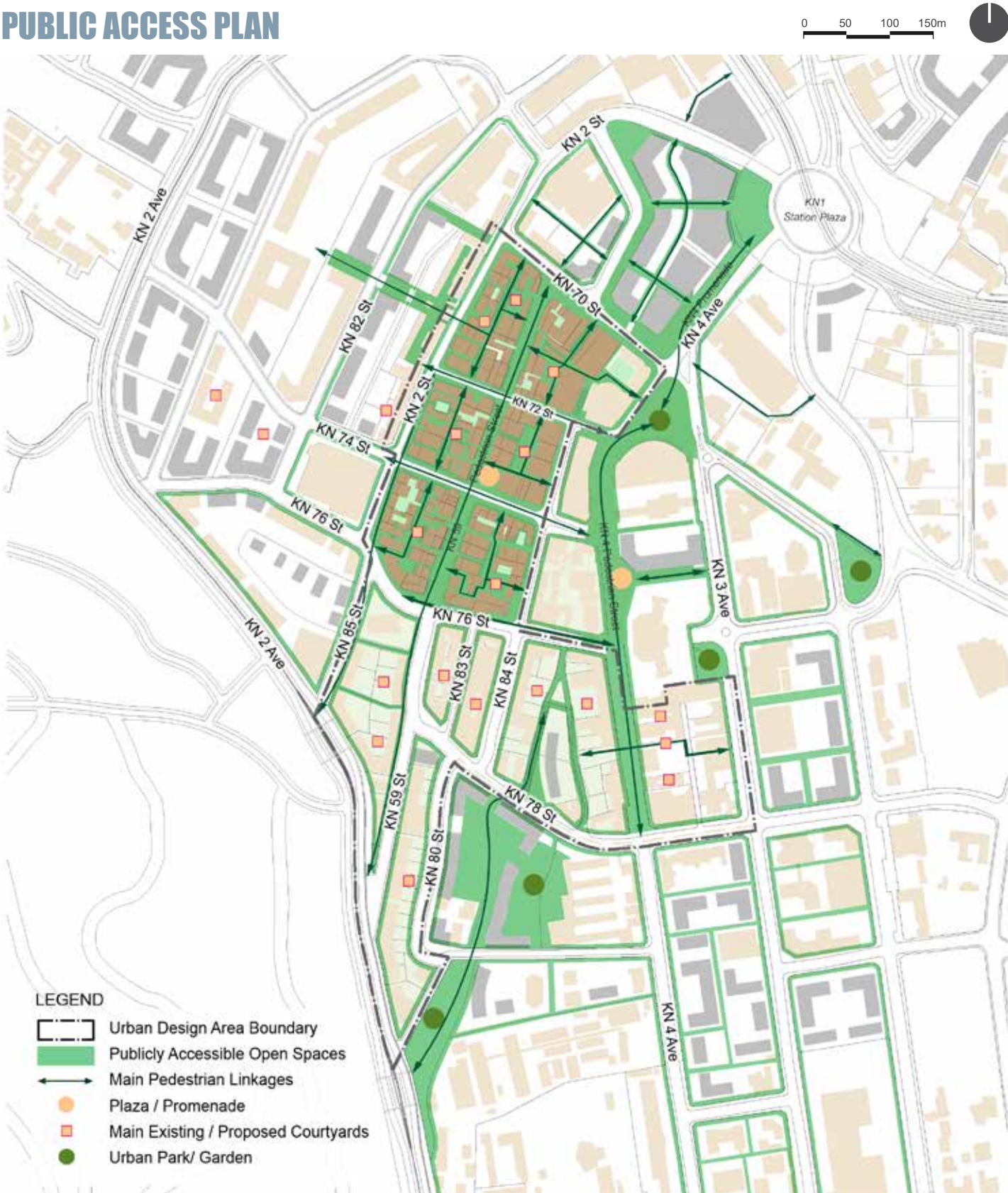
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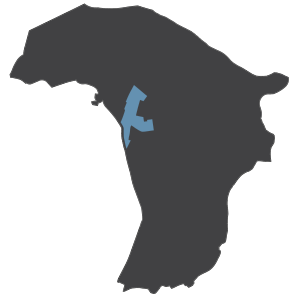
Historical Commercial Node - Setback Plan

| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the Historical Commercial Node - Public Access Plan. | Historical Commercial Node Public Access Plan Nyarugenge CBD - Urban Design Report chapters: <ul style="list-style-type: none">- 'Pedestrian Network'- 'Green Corridors'- 'Historical Commercial Node' |
| | Existing courtyards and small alleys shall be preserved, improved and enhanced as part of culture and character of the area. | |

PUBLIC ACCESS PLAN

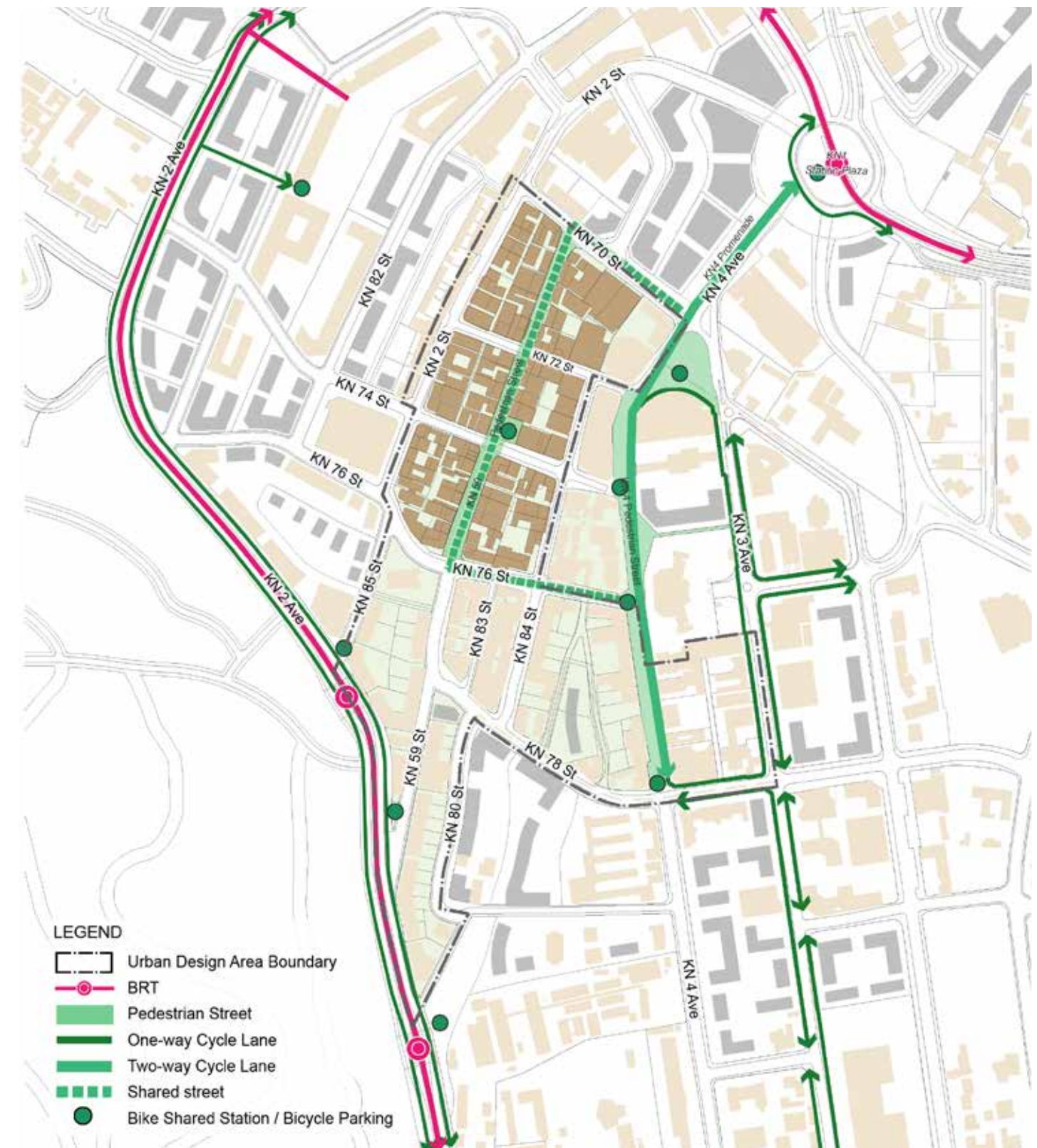


Historical Commercial Node - Public Access Plan



| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | The 'Historical Commercial Node - Cycle Network' Plan, part of the overall 'Nyarugenge CBD - Cycle Network Plan', shall be followed. Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | Historical Commercial Node - Cycle Network Plan Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter |

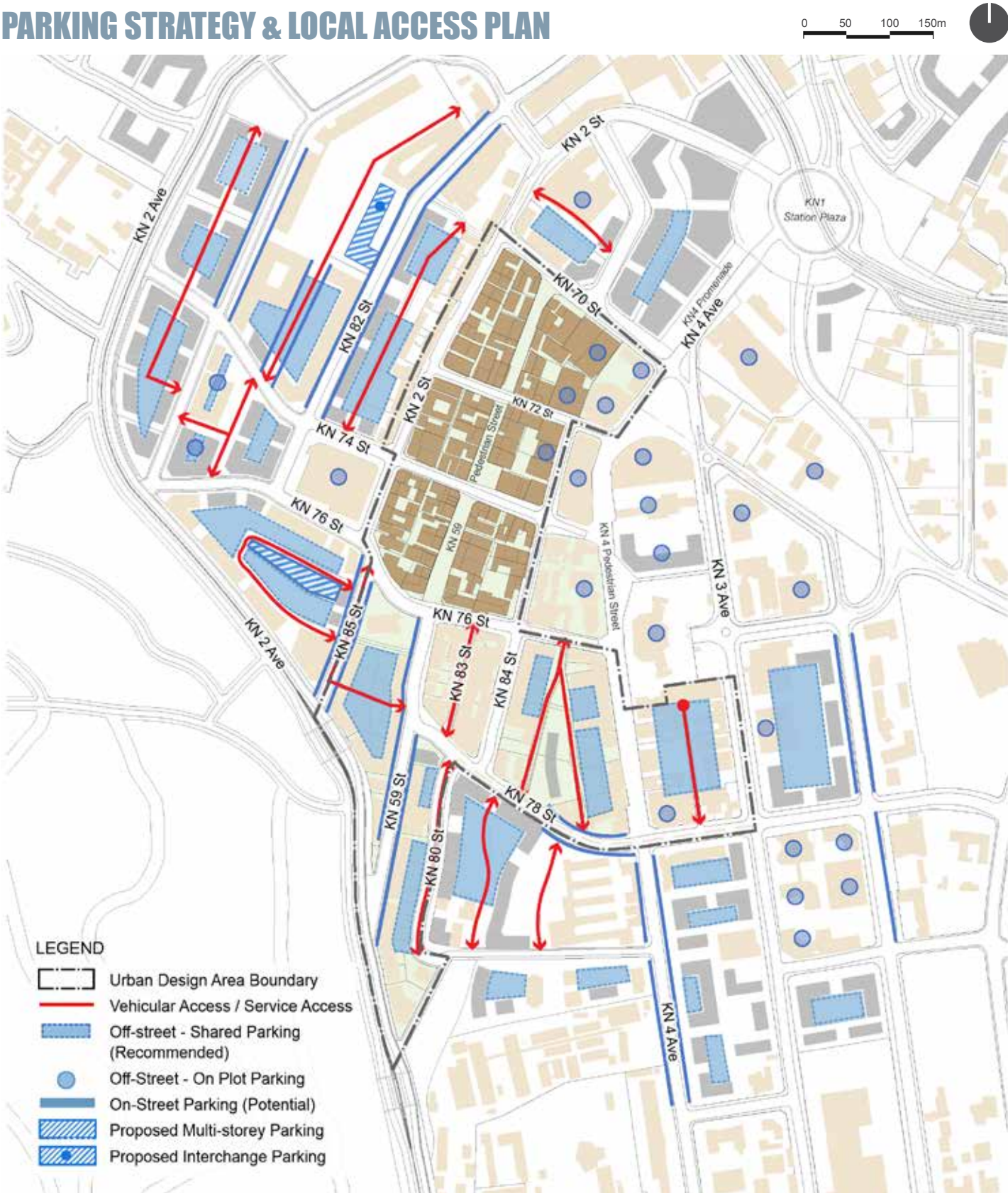
CYCLE NETWORK PLAN



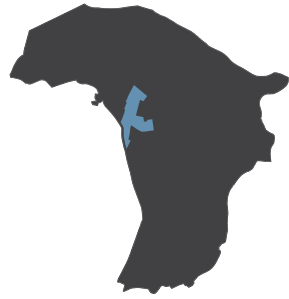
Historical Commercial Node - Cycle Network Plan

| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Parking Strategy and Local Accessibility | <p>Historical Commercial Node Parking Strategy and local Access Plan is part of the overall CBD parking and loading strategy.</p> <p>'On-street parking' around the Nyarugenge Market are proposed to be limited to the area along KN 82 St, only for loading and unloading operations.</p> <p>On-street parking shall be located strategically outside the Historical Commercial Node/ Conservation Area perimeter. Potential on-street parking are proposed along KN 82 St, and KN 76 St in the north-east side, along KN 85 St and KN 59 St toward the BRT corridor and along portion of KN4 Ave and KN 78 St in the south part.</p> <p>An Interchange Parking is proposed in correspondence to the BRT Terminal, at the entrance of the pedestrian corridor connecting to the Historical Commercial Node/ Conservation Area. An additional Multi-storey parking is proposed in the south-west side to serve the Historical Commercial Node/ Conservation Area.</p> <p>Common shared parking areas (areas within each block that is reserved for shared access, service, and parking) are recommended for all the blocks where new developments are planned.</p> <p>Whenever possible vehicular entry shall be provided along access roads.</p> | <p>Historical Commercial Node - Parking Strategy and Local Access Plan</p> <p>Nyarugenge CBD Urban Design Report chapters:</p> <ul style="list-style-type: none">- 'Parking strategies, Loading and City Services'- 'Historical Commercial Node' <p>Zoning Regulations – 6.7 Parking Requirements</p> |

PARKING STRATEGY & LOCAL ACCESS PLAN



Historical Commercial Node - Parking Strategy and Local Access Plan

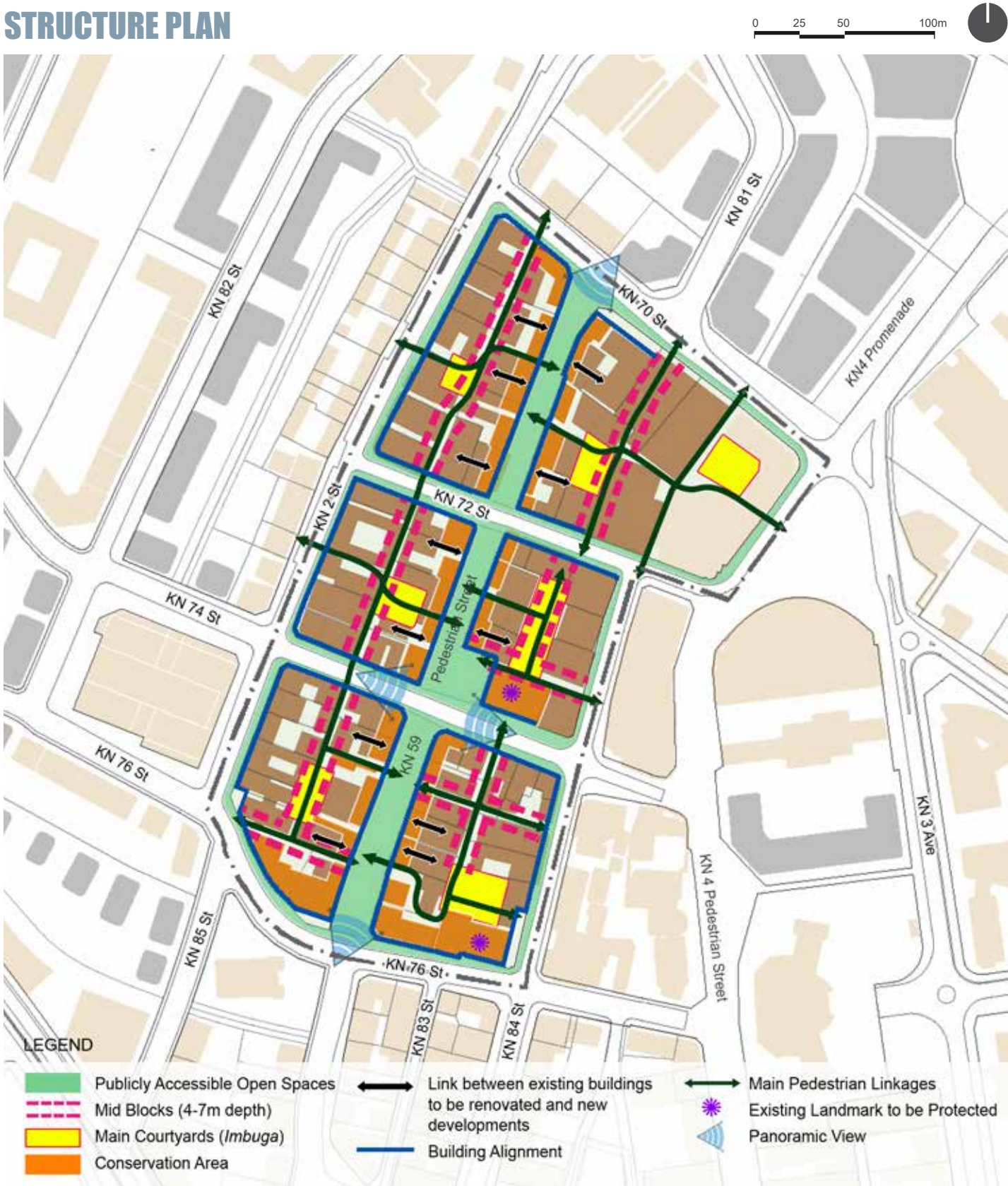


| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | | |
|--|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Loading and City Services | <ul style="list-style-type: none">- Ban large trucks delivery service within the city centre allowing only smaller vehicles appropriate for the scale of city streets- Nyarugenge Market: loading and unloading area to be located within the basement and portion of the ground floor area with access from KN 82 St. Loading bays should be reserved along KN 82 St and KN 76 St.- Limit access for commercial delivery to off-peak or night-time hours, when streets are less busy- Provide dedicated loading bays within 'on-street parking' areas to prevent delivery vehicles from blocking sidewalks or cycle lanes, avoiding areas with heavy night-time pedestrian activity.- Develop curb side management strategies that include purpose-based zones, time limits for parking and deliveries, and pricing strategies.- Remove on-street parking spaces for other uses when competing needs and priorities are identified.- Loading zones must be included within common shared parking area and should be time- or permit-restricted. | Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter Zoning Regulations - 4.7 Service areas and equipment |
| Public Transit | Ensure integrated public transit systems and Improve legibility and wayfinding. Ensure high-quality open spaces corresponding to pedestrian entrances from KN 85 St and KN 59 St, in proximity of Bus Rapid Transit (BRT) Stations | |

| HISTORICAL COMMERCIAL NODE URBAN DESIGN REGULATIONS | |
|---|--|
| Regulations | Ref |
| SITE-SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| Adapted re-use of existing buildings to ensure mixed use as strategy towards conservation of Cultural buildings and to fit changed needs is strongly recommended. | Nyarugenge CBD Urban Design Regulations - General Provisions – 'Short Term Strategies and Actions to create a vibrant CBD' chapter |
| Infill development process is recommended to preserve the character of the Historical Commercial Node. | |
| Parcel amalgamation as a mechanism for achieving urban consolidation through densification and create common shared spaces is recommended. | |
| ENVIRONMENTAL SUSTAINABILITY | |
| Refer to the 'General Provisions' chapter. | |
| RECOMMENDED ACTIONS FOR COK TO UNDERTAKE | |
| <ul style="list-style-type: none">• Develop Design guidance for conservation areas and Historical buildings. Establish Architectural Design standards and Conservation Area Design Manual.• Develop Heritage Management Plan. | Zoning Regulations: 7.10 Heritage Conservation and Promotion Overlay |
| <ul style="list-style-type: none">• Establish a conservation area advisory committee and COK planning Team to ensure good architecture and quality control.• Promote Citizen and professional's sensitization.• Promote dialogue between professionals, developers, local planning authority and other stakeholders to achieve best buildings' results. | |

HISTORICAL COMMERCIAL NODE - CONSERVATION AREA

STRUCTURE PLAN



Historical Commercial Node – Conservation Area - Structure Plan

The Urban Design objectives for the Conservation Area of the Historical Commercial Node are to:

- maintain the vibrancy, scale and character typical of the area, retaining the existing “old city” charm and creating a contrast to the surrounding high-density modern environment; and
- provide human scale, pedestrianised and lively relaxing environment at the ground level.

Skyline:

Reinforce the identity of the Nyarugenge ‘Conservation Area’ by retaining the existing low rise shops along the pedestrianised street and promoting developments that are harmonious with the existing scale and street configuration.

Landmarks and Gateways:

Retain and redevelop the existing landmarks like the Church and the Mosque to be the urban node. Preserve existing view corridors and vistas.

Building Edge and Use:

Retain & enhance the street character with mandatory conservation of existing building and covered pedestrian walkways to create a charming streetscape with retail and F&B, art, culture and entertainment activities at the ground levels.

Pedestrian Connections:

Provide pedestrian-friendly linkages to facilitate the Historical Commercial Node – Conservation Area access and visibility.

Enhance and regenerate existing courtyards, creating new mid-blocks, maintaining the vibrancy, scale and character typical of the area.

Views and Vistas:

Ensure existing significant vistas and view corridors to Muhima CBD and the historical buildings, like the Church and Mosque are maintained, without encroachment.

Proposed Conservation Area:

Ensure the existing façade treatment and details along KN 59St are preserved.

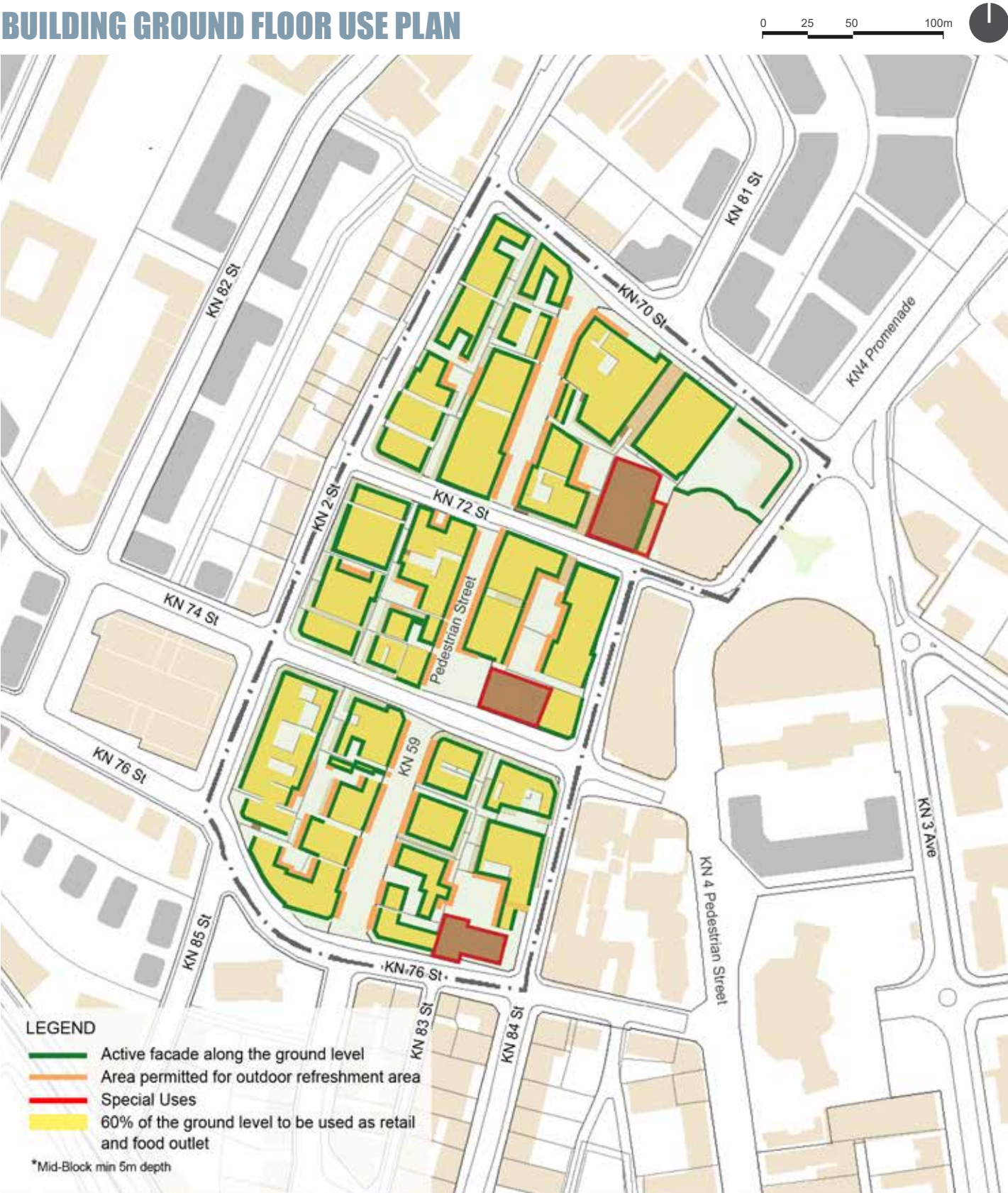


| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of Historical Commercial Node - Conservation Area, the following Zoning regulations should be referred to when no specific indications are provided by this UD regulations. In all other cases Urban Design regulations supersede general Zoning regulations. C1 - Mixed use zone P1 - Park and Open Space Zone along KN4 Ave and KN 59 St Pedestrian Streets | Nyarugenge CBD Zoning Plan |
| PARCELLATION | | |
| Suggested Parcellation | Historical Commercial Node - Conservation Area parcellation is based on the existing parcel subdivision. | Historical Commercial Node - Parcellation Plan |

| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | | |
|--|--|---|
| Regulations | | Ref |
| USES | | |
| Permitted uses Prohibited uses Conditional uses | As per zoning regulations. No Wholesale activities are allowed. | Historical Commercial Node - Non-Conforming Buildings and Uses Plan |
| Site-specific Recommended Uses | Accommodation facilities, small restaurants, coffee and pub, retail and service establishments, small community facilities. Cultural and entertainment uses are encouraged within the entire Historical Commercial Node - Conservation Area Boundary and are subject to approval by City of Kigali – One Stop Center. Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. Exception to be evaluated by City of Kigali – One Stop Center. | |
| Additional Conditional Uses | Small workshops such as art craft workshop, jewellery laboratory and similar activities. | |
| Additional Prohibited Uses | Warehouse stores are not allowed. They may only be considered if such a use is ancillary to the main use. Pollutive trades such as engineering, spray-painting, welding, plumbing, motor, metal and joinery workshops, tyre and battery shops, and plastic products manufacturing are not allowed. Prohibited uses at the Ground Floor level: banks, offices and other non-active uses. Betting shops. | |

| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA | | |
|---|---|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| USES | | |
| Building Ground Floor Use | Mandatory active façade especially along KN 59 St pedestrian Street, along Mid-block and Courtyards | Historical Commercial Node/ Conservation Area - Building Ground Floor Use Plan |
| | 60% of the ground level to be used as retail and food outlet | |
| | Cultural and entertainment uses | |
| | Permitted outdoor refreshment areas and merchandise display as per Building Ground Floor Use Plan. Additional area for outdoor refreshment area to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open Spaces Activities and Streetscape Provisions | Public toilet/rest room, kiosks and open-air cafes, temporary street market (food, drinks, flowers, art and crafts). | Urban Design Regulations – ‘General Provision’ Chapter |
| | Landmark, art installations and monuments, water features. | |
| | Promote Public Art as part of the Building Facade or Open Spaces, through contemporary interpretations of traditional Rwandan Art Forms. | |
| | Integration of artworks: murals, sculptures, artistic paving and temporary artwork, and lighting. | |
| | Recommended activities and streetscape provision along green corridors are indicated in the Urban Design Regulations – General Provisions. | |

BUILDING GROUND FLOOR USE PLAN

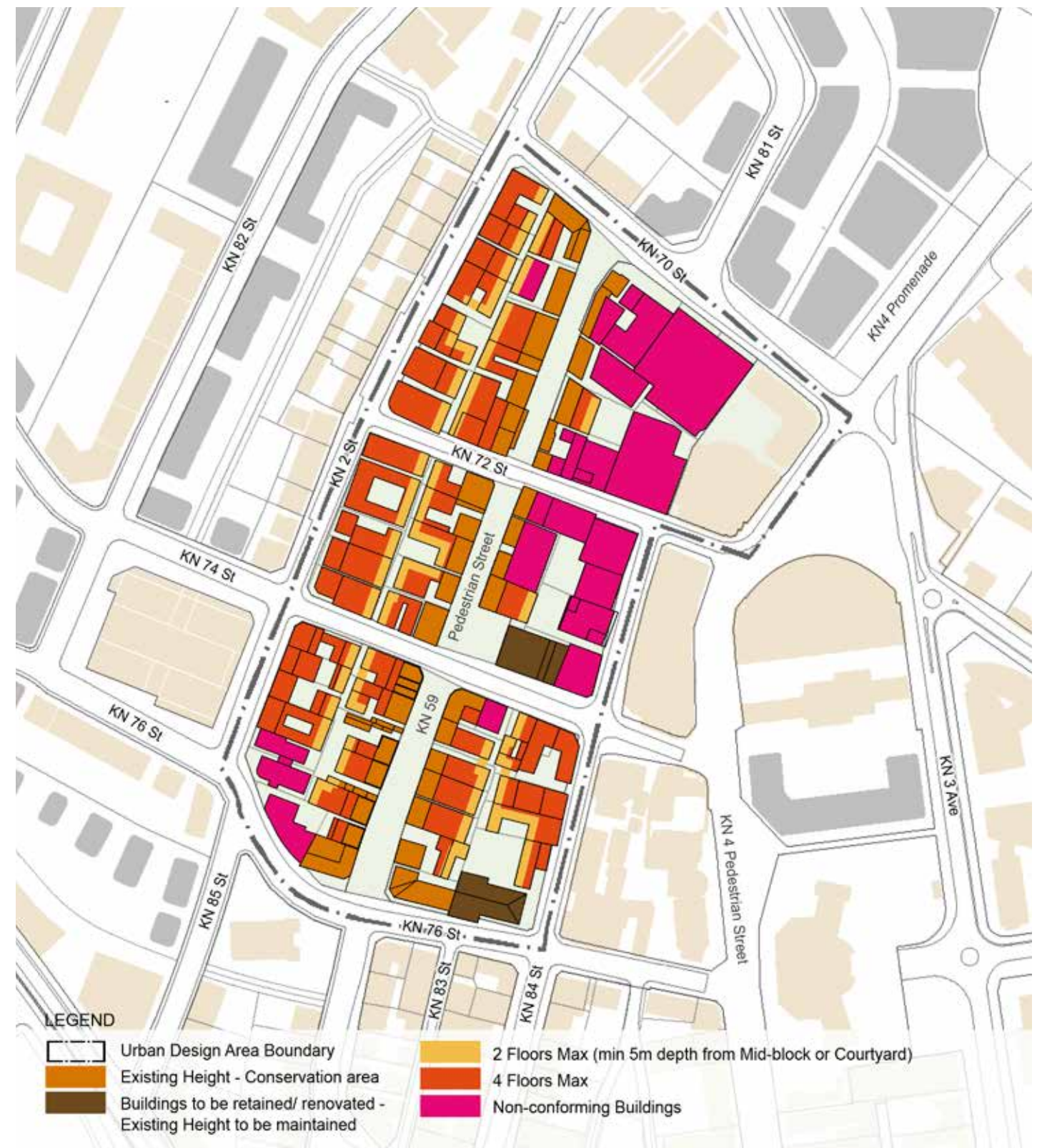


Historical Commercial Node – Conservation Area - Building Ground Floor Use Plan



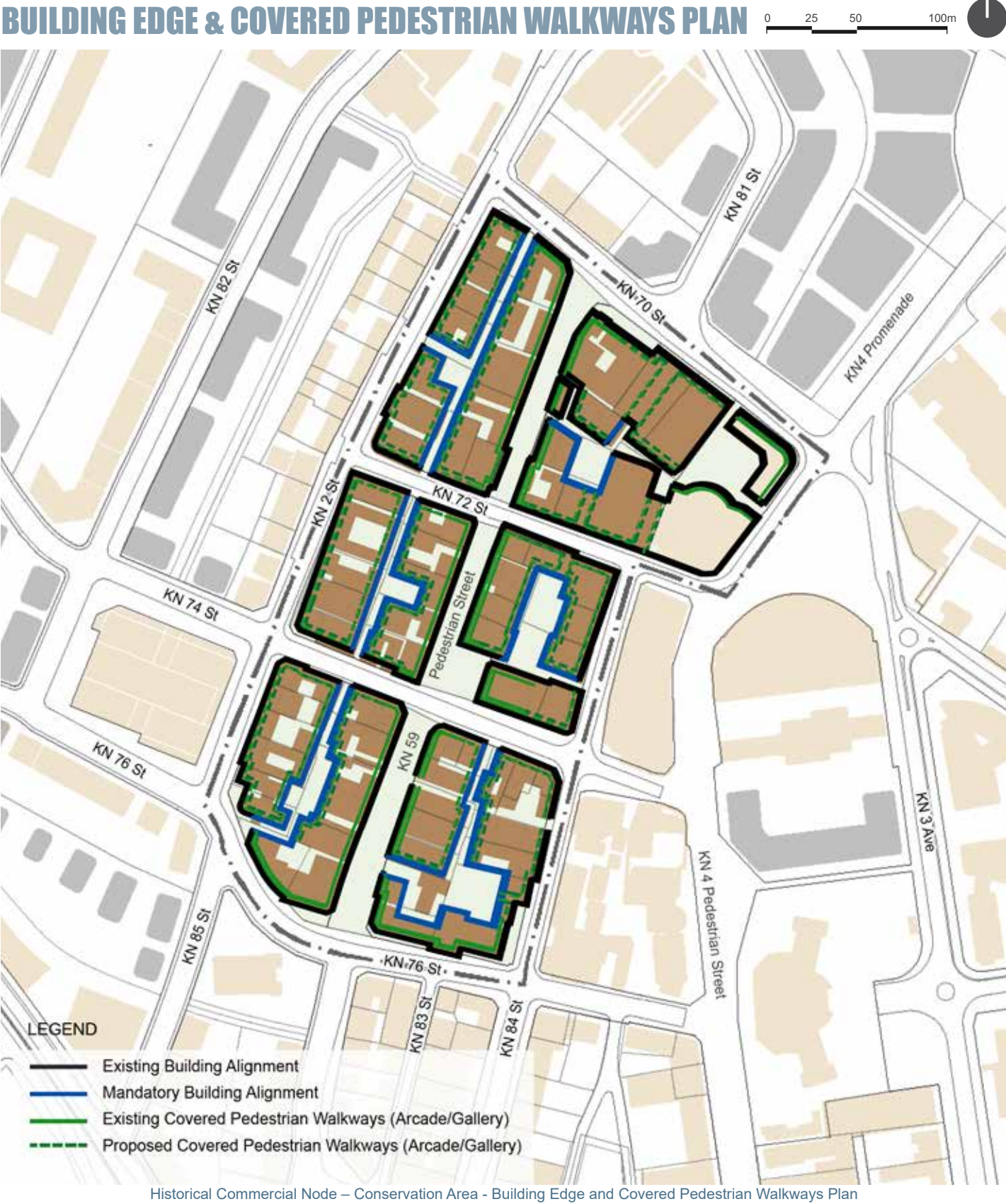
| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | | |
|--|--|---|
| Regulations | | Ref |
| NON-CONFORMING BUILDINGS AND USES | | |
| Incompatible Uses | Relocation of the existing wholesale activities and other prohibited uses. | Historical Commercial Node/ Conservation Area - Building Height Plan: ‘Non-Conforming Buildings’ Nyarugenge CBD Urban Design Regulations - General considerations - ‘Strategies to activate building frontages exposed to prominent public view’ chapter |
| Non-Conforming Buildings for scale, use or typology | Existing or under-construction developments that are considered non-conforming to the character of the area for scale, use or typology are recommended to improve visual character and/or add green building design elements as mentioned below: <ul style="list-style-type: none">• Activate street façade whenever possible;• Transform inaccessible first floor and covered roof terraces into publicly accessible spaces;• Introduce green walls on building façades and green roofs. | |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Additional FAR or additional Number of floors should not be allowed, while other forms of incentives are applicable (e.g. tax abatement for refurbishment) at discretion of City of Kigali. Transfer Development Rights (TDR) is applicable for plots within the Historical Commercial Node/ Conservation Area Boundary, except for Non-conforming buildings and buildings that have already reached maximum height allowed. TDR is also recommended to be implemented as a tool in historical conservation areas. | Historical Commercial Node/ Conservation Area - Building Height Plan: ‘Non-Conforming Buildings’ Nyarugenge CBD Urban Design Regulations - General provisions - ‘Recommended Actions for City of Kigali to Undertake’ chapter |
| Maximum Number of Floors and Building Height | <ul style="list-style-type: none">• Existing height along KN59 ST for building to be maintained• Max G+ 1 along mid-block and courtyards.• Max G+ 3 floors for the remaining Buildings (subject to approval by City of Kigali – One Stop Center). | Historical Commercial Node/ Conservation Area - Building Height Plan |
| | For landmarks such as sculptures, monuments or art installations, no height regulation is applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval. | |
| Floor to Floor Height | Within the conservation area, different parameters for floor to floor height maybe established by City of Kigali – One Stop Center. | |

BUILDING HEIGHT PLAN



Historical Commercial Node – Conservation Area - Building Height Plan

| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA | | |
|---|---|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| BUILDING SETBACK | | |
| Building Setback | Historical Commercial Node/ Conservation Area setback are presented in the Historical Commercial Node Building Setback Plan. | Historical Commercial Node - Setback Plan |
| BUILDING EDGE | | |
| Alignments | The Conservation Area of the Historical Commercial Node is entirely within the existing consolidated built up area and majority of existing building alignments are proposed to be maintained. | Historical Commercial Node/ Conservation Area - Building Edge and Covered Pedestrian Walkways Plan Historical Commercial Node/ Conservation Area - Public Access Plan |
| Ground Floor Covered Pedestrian Walkways | Mandatory covered pedestrian walkway (arcade or Gallery) is represented in the Historical Commercial Node/ Conservation Area - Building Edge Plan. | Historical Commercial Node/ Conservation Area - Building Edge and Covered Pedestrian Walkways Plan Historical Commercial Node/ Conservation Area - Public Access Plan Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Above GF | Recommended arcade/ gallery at the first floor (min 3 m depth). Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. Veranda as extended canopy at the first floor are allowed. First and Second floor facade articulation through balconies. Roof Terrace is recommended. | |
| Within Historical Commercial Node/ Conservation Area façade articulation and building form are subject to approval by City of Kigali – One Stop Center and Conservation Area Committee (to be established). | | |

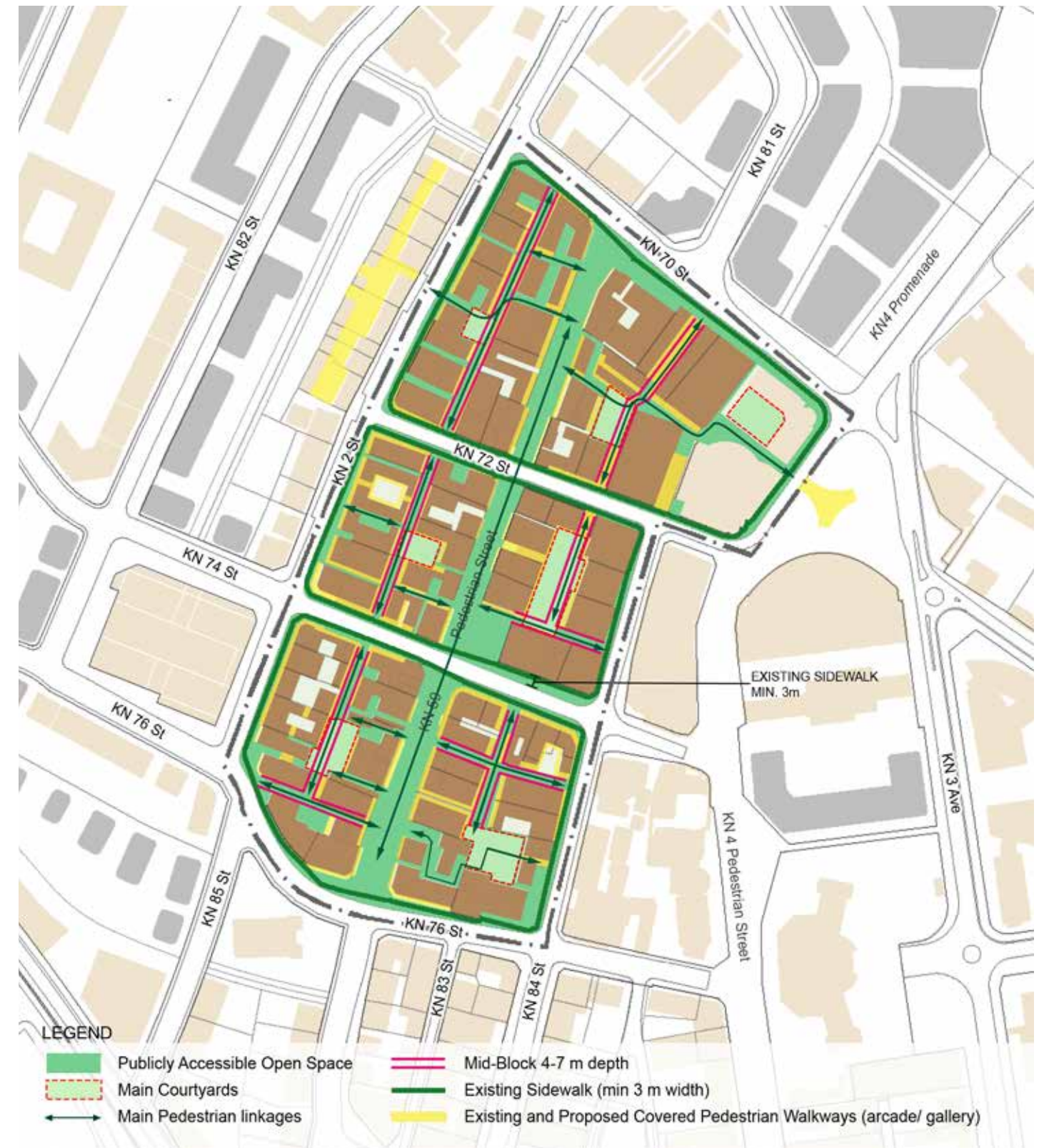


Historical Commercial Node – Conservation Area - Building Edge and Covered Pedestrian Walkways Plan



| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | | |
|--|--|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | <p>Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the Historical Commercial Node/ Conservation Area - Public Access Plan.</p> <p>Existing courtyards and small alleys shall be preserved, improved and enhanced as part of culture and character of the area.</p> | <p>Historical Commercial Node/ Conservation Area - Public Access Plan</p> <p>Nyarugenge CBD - Urban Design Report chapters:</p> <ul style="list-style-type: none"> - 'Pedestrian Network' - 'Green Corridors' - 'Historical Commercial Node and Conservation area' |
| Public Access Cyclist | <p>The 'Historical Commercial Node - Cycle Network' Plan, part of the overall 'Nyarugenge CBD - Cycle Network Plan', shall be followed.</p> <p>Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali.</p> | <p>Historical Commercial Node - Cycle Network Plan</p> <p>Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter</p> |
| Parking Strategy and Local Accessibility | <p>No parking and vehicles entry are allowed within the Historical Commercial Node/ Conservation Area except for cleaning or emergency vehicles.</p> <p>Parking Facilities have been identified outside the Historical Commercial Node/ Conservation Area Boundary.</p> <p>Historical Commercial Node/ Conservation Area Parking Strategy and local access Plan is part of the overall CBD parking and loading strategy.</p> | <p>Historical Commercial Node - Parking Strategy and Local Access Plan</p> <p>Nyarugenge CBD Urban Design Report chapters:</p> <ul style="list-style-type: none"> - 'Parking strategies, Loading and City Services' - Historical Commercial Node' |
| Loading and City Services | <p>Refer to Historical Commercial Node - 'Parking strategies, Loading and City Services'.</p> <p>Promote alternative delivery and transport types (e.g. electric micro vans or cargo bikes).</p> | <p>Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter</p> |
| Public Transit | <p>Ensure integrated public transit systems and Improve legibility and wayfinding.</p> <p>Signage controls shall be compatible to the Historical Commercial Node/ Conservation Area character.</p> | |

PUBLIC ACCESS PLAN



Historical Commercial Node – Conservation Area - Public Access Plan

| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | |
|--|--|
| Regulations | Ref |
| SITE-SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| Adapted re-use of existing buildings to ensure mixed use as strategy towards conservation of Cultural buildings and to fit changed needs is strongly recommended. | Nyarugenge CBD Urban Design Regulations - General provisions – ‘Short Term Strategies’ chapter |
| Infill development process is recommended to preserve the character of the Historical Commercial Node/ Conservation Area. | |
| Support and promote Microbusinesses. Promote Micro, Small and Medium Enterprises financial inclusion. | |
| Inclusivity and Community Involvement in the detailed design and implementation phases are strongly recommended by establishing a participatory process to involve amenity societies, independent experts, residents and businesses. | |
| ENVIRONMENT AND SUSTAINABILITY | |
| <ul style="list-style-type: none"> Ensure Green Building and Energy Efficiency high level standard. Ensure stormwater runoff treatment. Use of local and natural materials is recommended. Use of recycled materials is allowed and recommended. Green Conservation Area: <ul style="list-style-type: none"> create Blue-green alleys and courtyards with different tones of blue (water) and green (plants); provide Green roof and green walls; use of recycled water, to reduce water demand, and rainwater harvesting combined with drainage systems to collect and store water; Provide drinking fountains with fresh, potable water. Provide landscaped sidewalk with appropriate East African trees selection. | |
| Refer to the ‘General Provisions’ chapter. | |

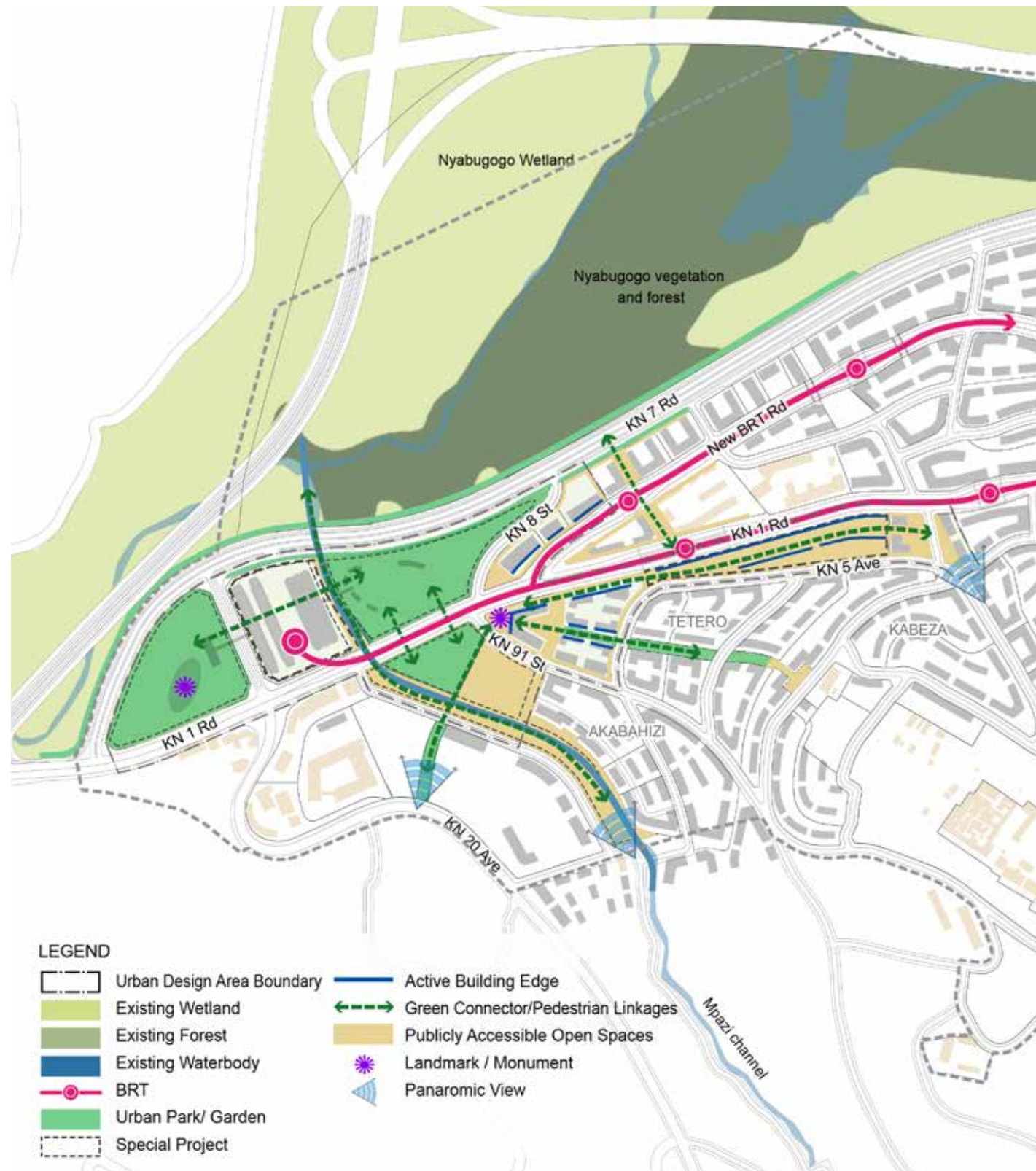
| HISTORICAL COMMERCIAL NODE – CONSERVATION AREA URBAN DESIGN REGULATIONS | |
|---|---|
| Regulations | Ref |
| RECOMMENDED ACTIONS FOR COK TO UNDERTAKE | |
| <ul style="list-style-type: none"> Develop Design guidance for conservation areas and historical buildings. Develop Heritage Management Plan. Architectural Design standards to define and regulate building form, building façade, walls, windows, roofs, materials, colours and other building features according to the character of the area. Establish a conservation area advisory committee and COK planning Team to ensure good architecture and quality control. Promote Citizen and professional’s sensitization. Promote dialogue between professionals, developers, local planning authority and other stakeholders to achieve best buildings’ results. | Zoning Regulations: 7.10 Heritage Conservation and Promotion Overlay |
| INTERIM In absence of the above heritage conservation tools, the following procedure is recommended for Construction Permitting process of the conservation area within the Historical Commercial Node/ Conservation Area boundary: <ul style="list-style-type: none"> Any request of Construction Permit is subject to a design competition with at least three design proposals. City of Kigali will be in charge to prepare Terms of Reference. City of Kigali will be responsible to establish a Jury to select and orient the best design. | Historical Commercial Node/ Conservation Area – Structure Plan: ‘Conservation Area’ |

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NYABUGOGO TRANSPORT HUB

STRUCTURE PLAN



LEGEND

| | | | |
|--|----------------------------|--|-------------------------------------|
| | Urban Design Area Boundary | | Active Building Edge |
| | Existing Wetland | | Green Connector/Pedestrian Linkages |
| | Existing Forest | | Publicly Accessible Open Spaces |
| | Existing Waterbody | | Landmark / Monument |
| | BRT | | Panaromic View |
| | Urban Park/ Garden | | |
| | Special Project | | |

Nyabugogo Transport Hub - Structure Plan

The objectives of the KN1 Station Plaza are to create a:

- Key-node characterized by a center-running Bus Rapid Transit lane and dedicated Station to facilitate access to the City Center and represent a “welcome gate-way” for residents and visitors.
- Pleasant, green and vibrant environment at the ground level

Skyline:

Create a unique identity that enhances the space quality at and around KN1 Station Plaza.

Landmarks and Gateways:

Ensure buildings around KN1 Station Plaza to have a unique and distinctive architectural character.

Building Edge and Use:

Create mandatory building edges and wider setbacks along KN4 Ave to create vibrant streetscapes with activity generating retail uses at the ground levels.

Pedestrian Connections:

Ensure seamless pedestrian connectivity by providing through- block connections and pedestrian circulation spaces at the ground level.

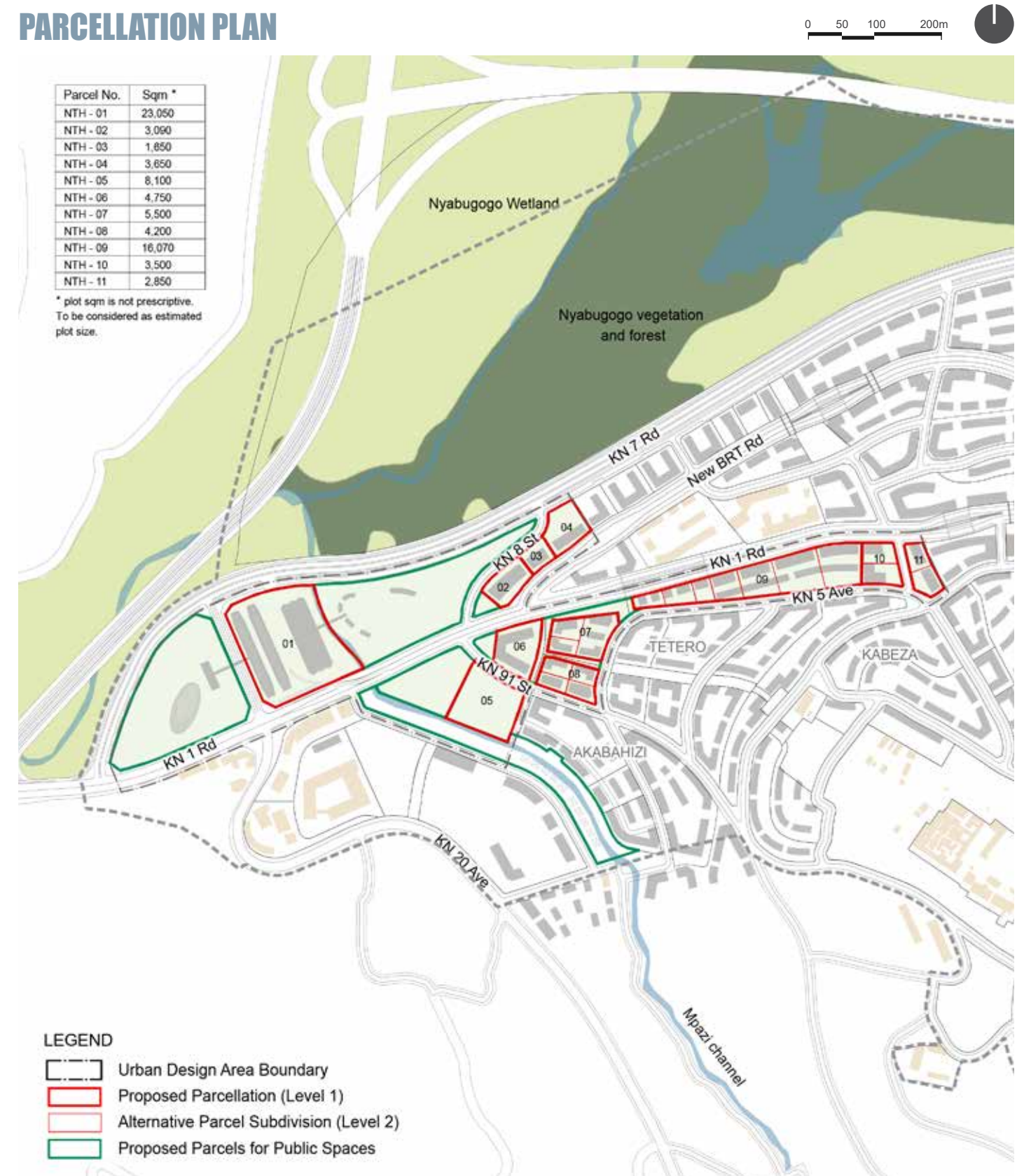
Views and Vistas:

Ensure existing significant vistas and view corridors to/from KN1 Station Plaza are maintained without encroachment.



| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|---|---|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of Nyabugogo Transport Hub the following Zoning Regulations should be referred to when no specific indications are provided by this Urban Design Regulations. In all other cases Urban Design Regulations supersede general Zoning Regulations. | Nyarugenge CBD Zoning Plan |
| | C3 - City commercial zone | |
| | C1 - Mixed Use zone | |
| | P1 - Park and Open Space Zone | |
| | P2 - Sport and Eco-tourism Zone | |
| PARCELLATION | | |
| Suggested Parcellation | The Nyabugogo Transport Hub parcellation proposes a different parcel configuration and subdivision. Land assembly is required. | Nyabugogo Transport Hub-Parcellation Plan |

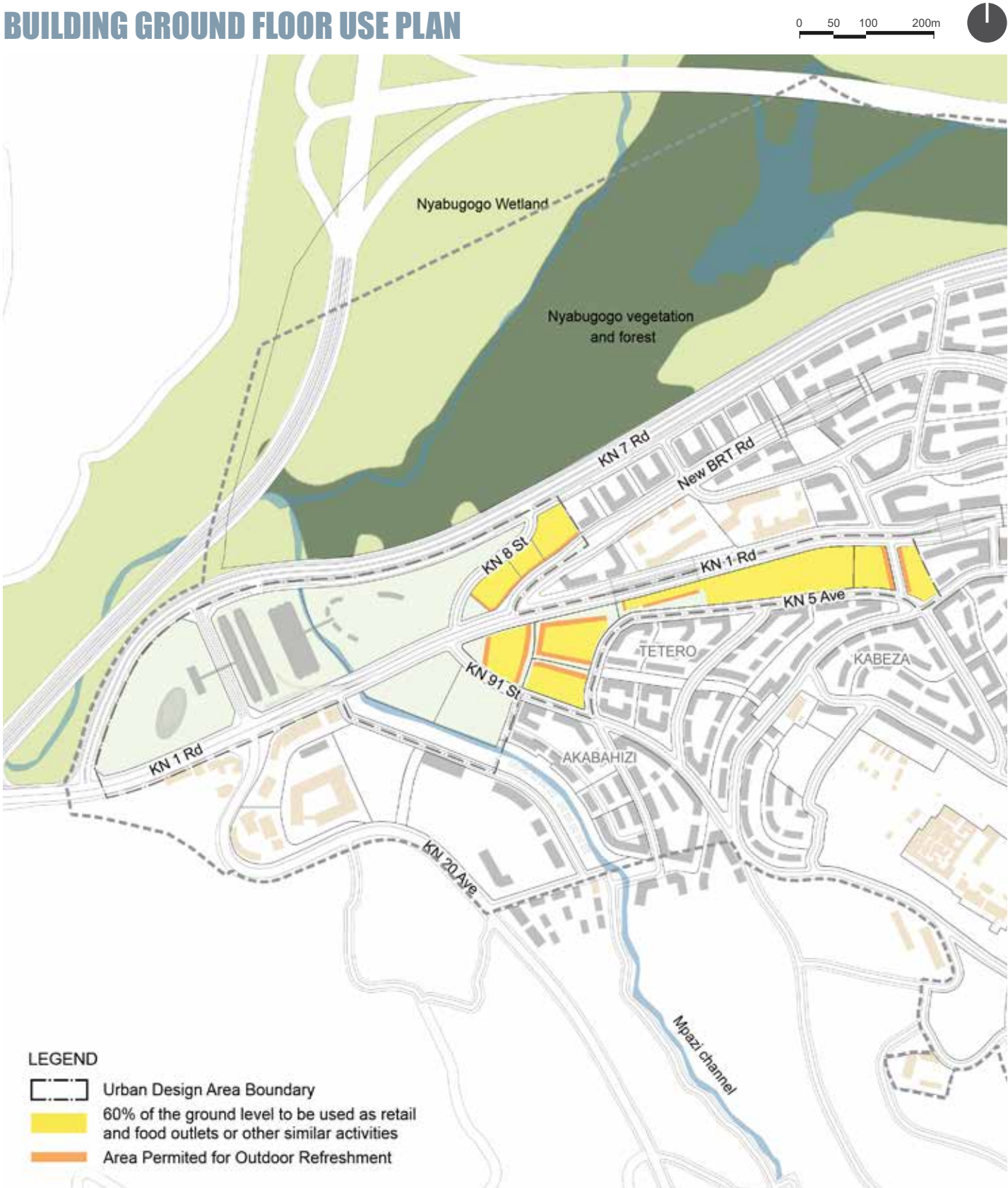
PARCELLATION PLAN



Nyabugogo Transport Hub - Parcellation Plan

| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| USES | | |
| Permitted Uses Prohibited Uses Conditional Uses | As per Zoning Regulations. | |
| Site-specific Recommended Uses | Cultural and entertainment uses are encouraged especially for developments along the Wetland, the green corridors and Bus Rapid Transit (BRT) Corridor. | |
| | Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. Exceptions to be evaluated by City of Kigali – One Stop Center. | |
| Building Ground Floor Use | Mandatory active façade is required along the Bus Rapid Transit (BRT) corridor, the Wetland front and green corridors. | Nyabugogo Transport Hub – Building Ground Floor Use Plan |
| | Minimum 60 % of the ground floor of specific areas highlighted in the ‘Building Ground Floor Use Plan’ shall be used as retail and food outlets or other similar activities. | |
| | Cultural and entertainment uses are recommended. | |
| | Permitted outdoor refreshment areas and merchandise display as per Building Ground Floor Use Plan. Additional area for outdoor refreshment area to be evaluated and approved by City of Kigali – One Stop Center. | |
| | Special/ Catalyst Projects: outdoor refreshment areas should be located along main pedestrian linkages, to be approved by City of Kigali – One Stop Center. | |
| Open Spaces Activities and Streetscape Provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – ‘General Provision’ Chapter |

BUILDING GROUND FLOOR USE PLAN



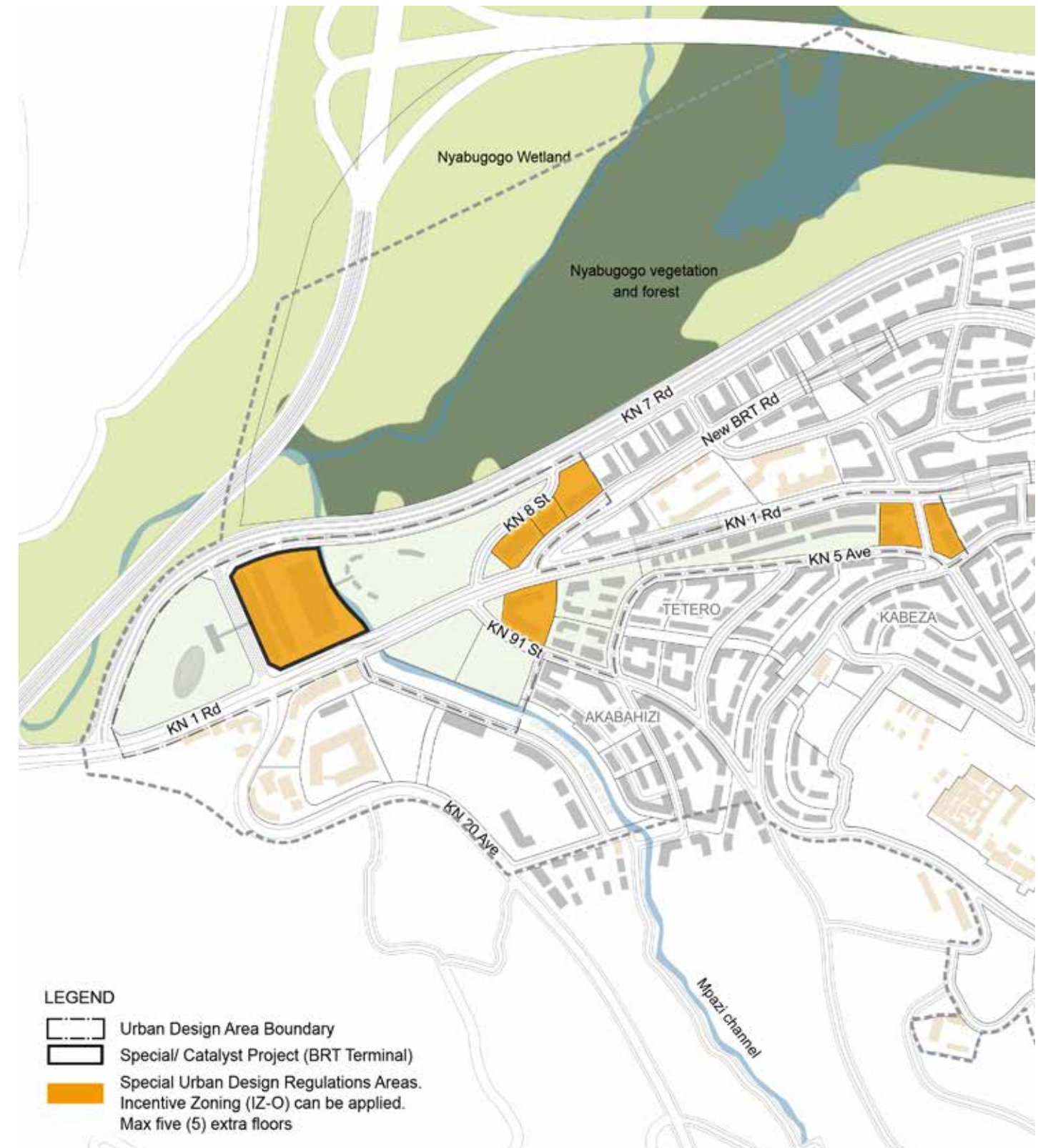
Nyabugogo Transport Hub - Building Ground Floor Use Plan



| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Incentive Zoning as per point 'b' or 'c' of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the 'Nyabugogo Transport Hub - Special Urban Design Regulations' Plan. Special Urban Design Regulations Areas include the Special/ Catalyst project of Nyabugogo BRT Terminal | Nyabugogo Transport Hub - Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| Maximum Number of Floors and Building Height | For plots within the Special Urban Design Regulations Areas, maximum five (5) extra floors on top of current Zoning Regulations are permitted, provided that at least 15% of the dwelling units dedicated for affordable housing or adequate public amenities are developed, as per point 'b' or 'c' of Incentive Zoning Conditions. | Nyabugogo Transport Hub - Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| | For landmarks such as sculptures, monuments or art installations, no height regulation is applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval. | |

SPECIAL URBAN DESIGN REGULATIONS PLAN

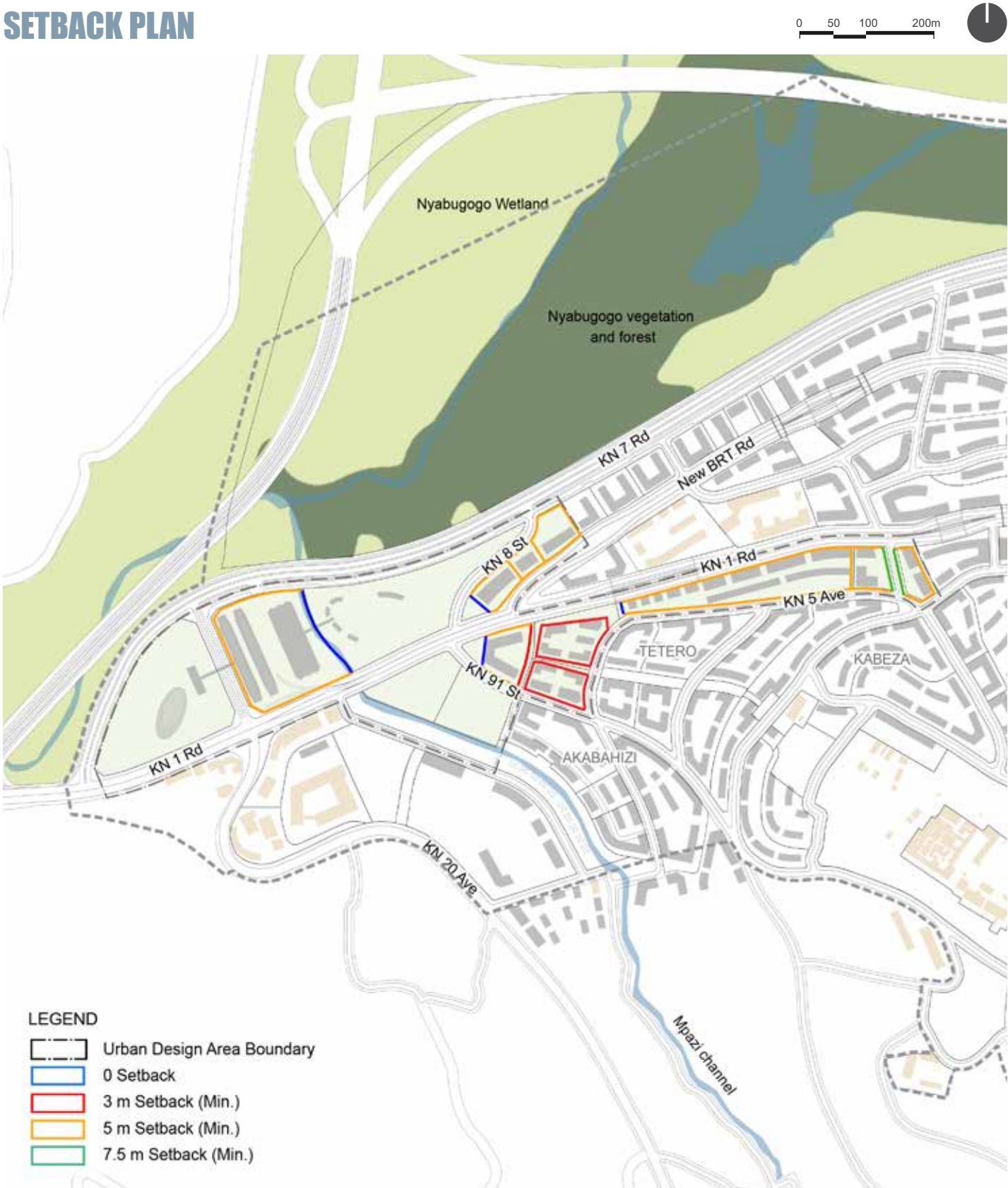
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Nyabugogo Transport Hub - Special Urban Design Regulations Plan

| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| Building Setback | Nyabugogo Transport Hub setback are illustrated in the Building Setback Plan. | Nyabugogo Transport Hub - Setback Plan |

SETBACK PLAN

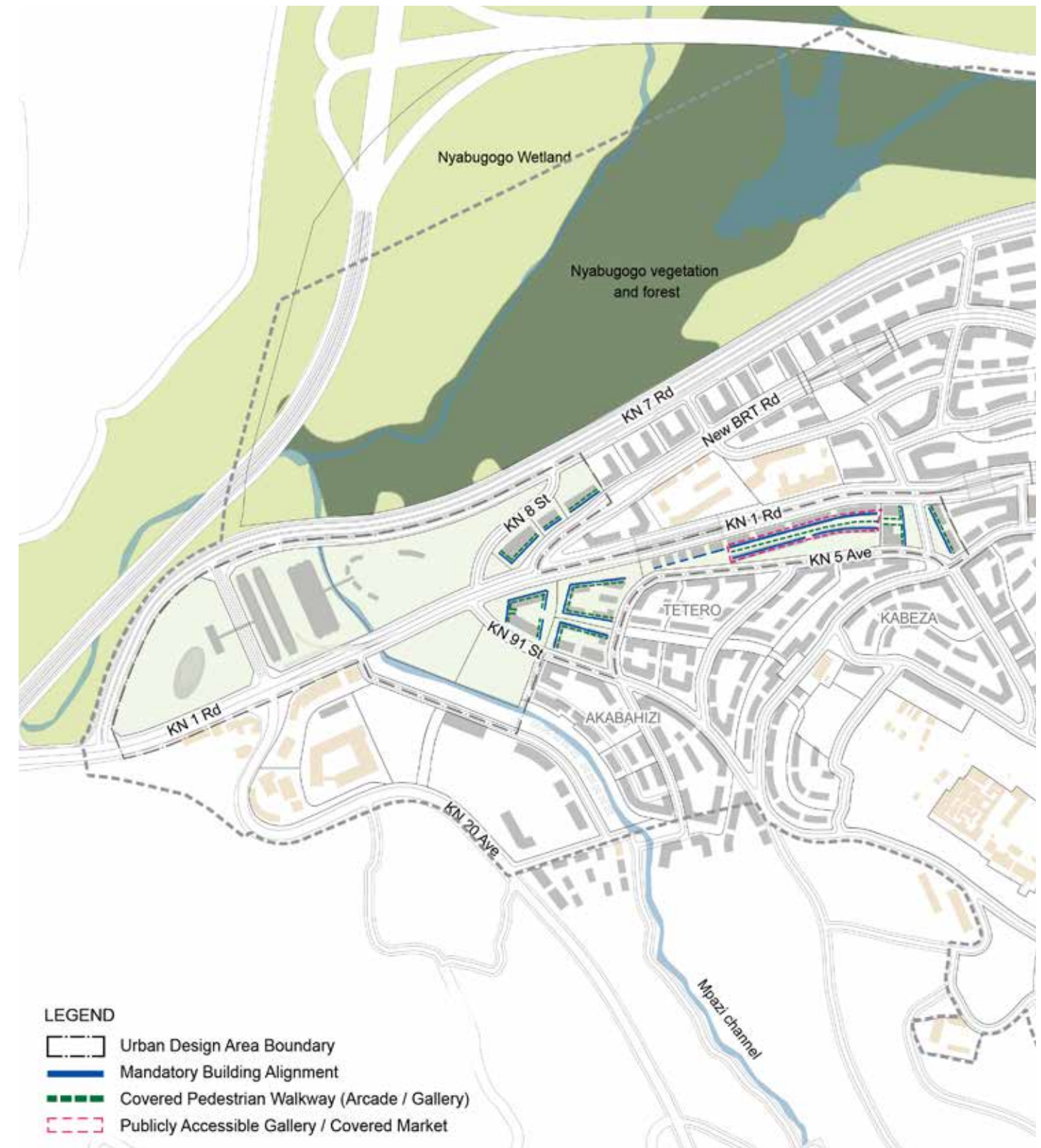


Nyabugogo Transport Hub - Setback Plan



| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | Mandatory buildings edge alignments are illustrated in the 'Building Edge and Covered Pedestrian Walkways' plan. Within Special/Catalyst Projects areas, building alignments shall consider main pedestrian linkages. No plot boundary wall or fence shall be allowed within the Nyabugogo Transport Hub Urban Design Area. | Nyabugogo Transport Hub - Building Edge and Covered Pedestrian Walkways Plan |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided at the ground floor to create a continuous covered pedestrian walkway. Arcade or gallery are required along BRT corridor and publicly accessible open spaces (within the green corridors). The Special/Catalyst project of the covered market/gallery is part of the 'Covered Pedestrian Walkways' Plan. | Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. Roof Terrace is recommended. | |

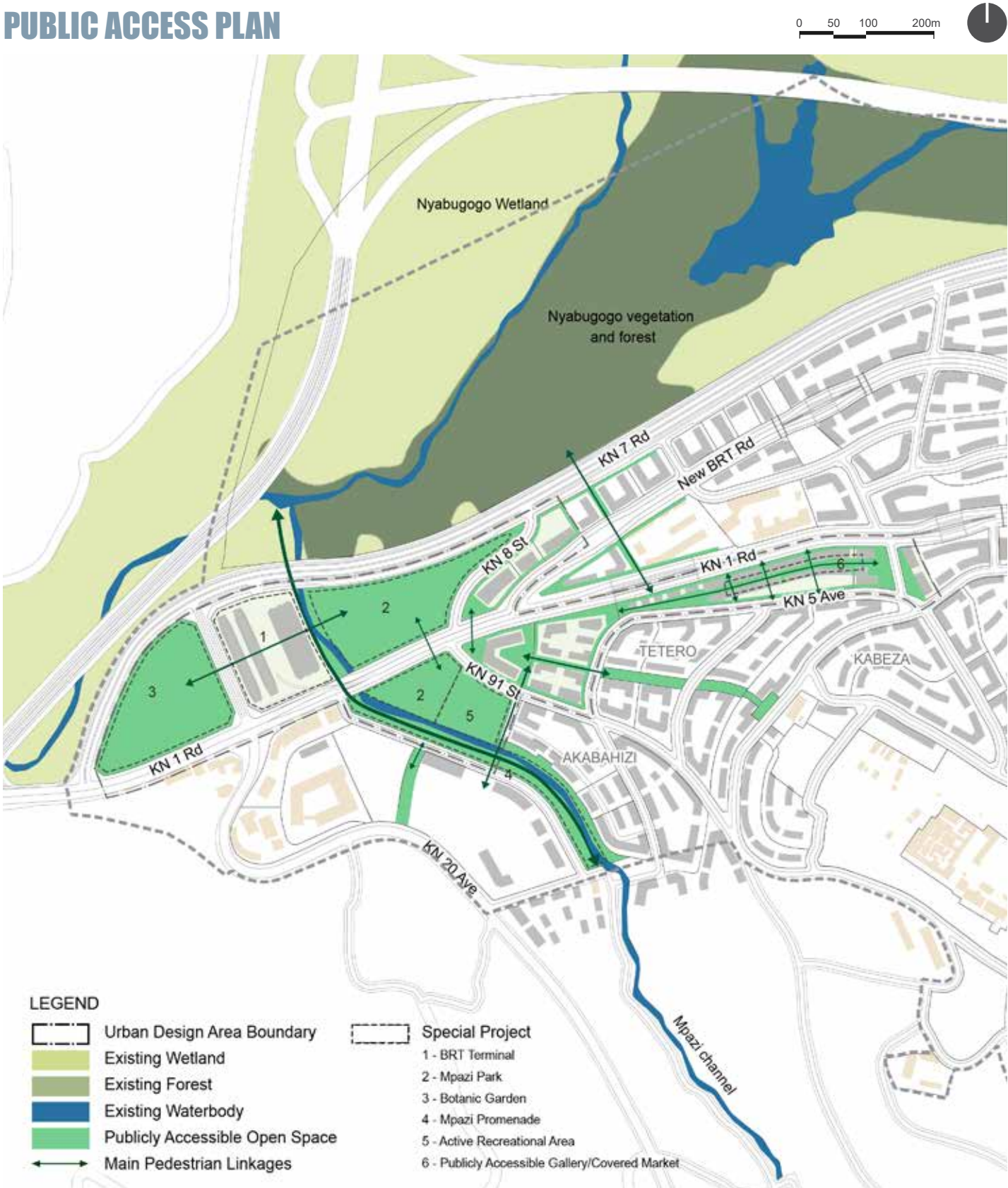
BUILDING EDGE & COVERED PEDESTRIAN WALKWAYS PLAN



Nyabugogo Transport Hub - Building Edge and Covered Pedestrian Walkways Plan

| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|--|---|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | Seamless pedestrian connectivity between key buildings and across the public spaces shall be ensured, as a part of the Nyabugogo Transport Hub - Public Access Plan. | Nyabugogo Transport Hub - Public Access Plan Nyarugenge CBD - Urban Design Report chapters: <ul style="list-style-type: none">- 'Pedestrian Network'- 'Green Corridors'- 'Nyabugogo Transport Hub' |

PUBLIC ACCESS PLAN



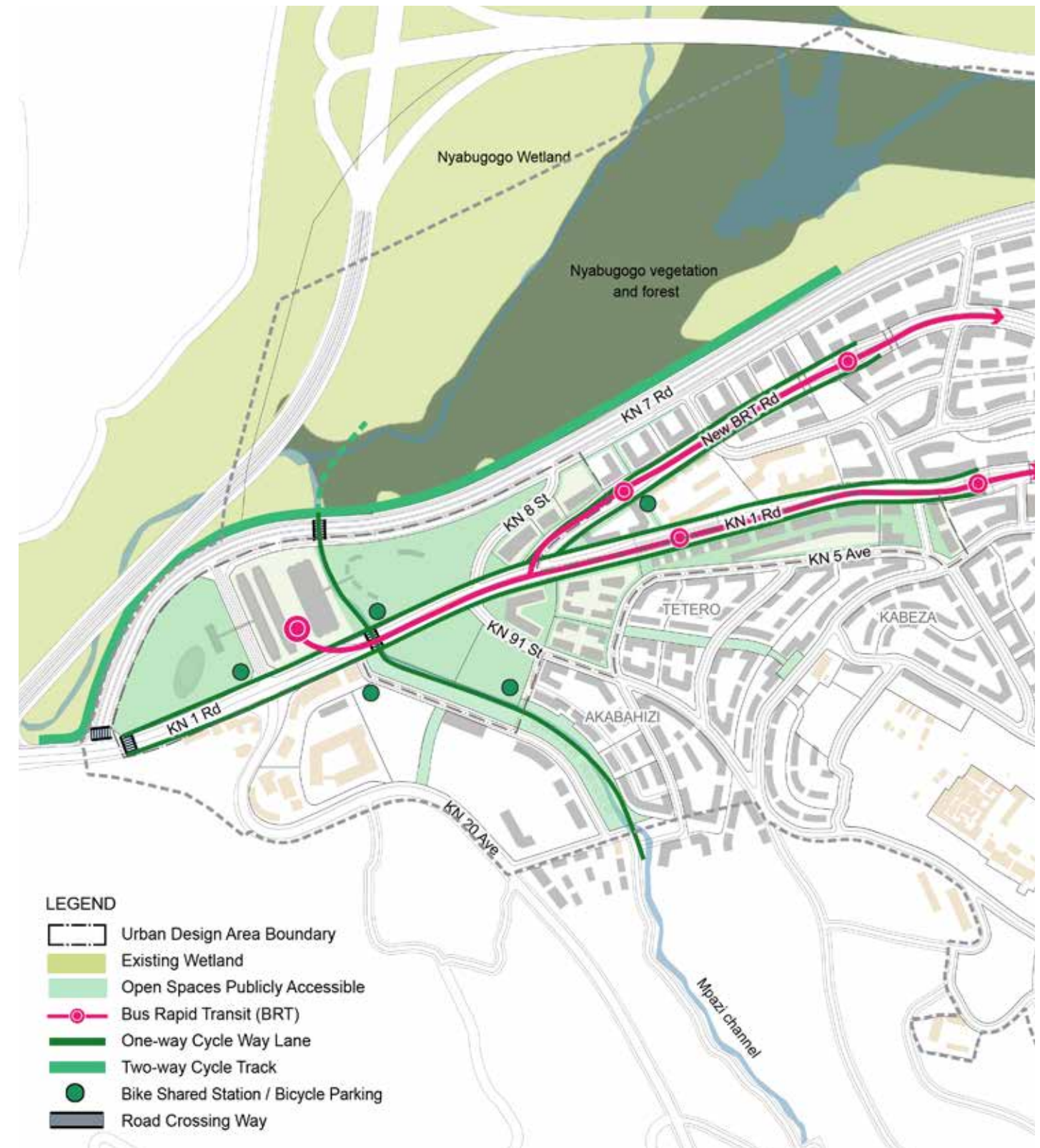
Nyabugogo Transport Hub - Public Access Plan



| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | The Nyabugogo Transport Hub Cycle Network Plan, part of the overall 'Nyarugenge CBD - Cycle Network Plan', shall be followed. Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | Nyabugogo Transport Hub - Cycle Network Plan Nyarugenge CBD Urban Design Report - 'Cycle Network' chapter |
| Visual Corridors | Ensure that vistas along green corridors are valorised and preserved without visual and physical obstructions. | |

CYCLE NETWORK PLAN

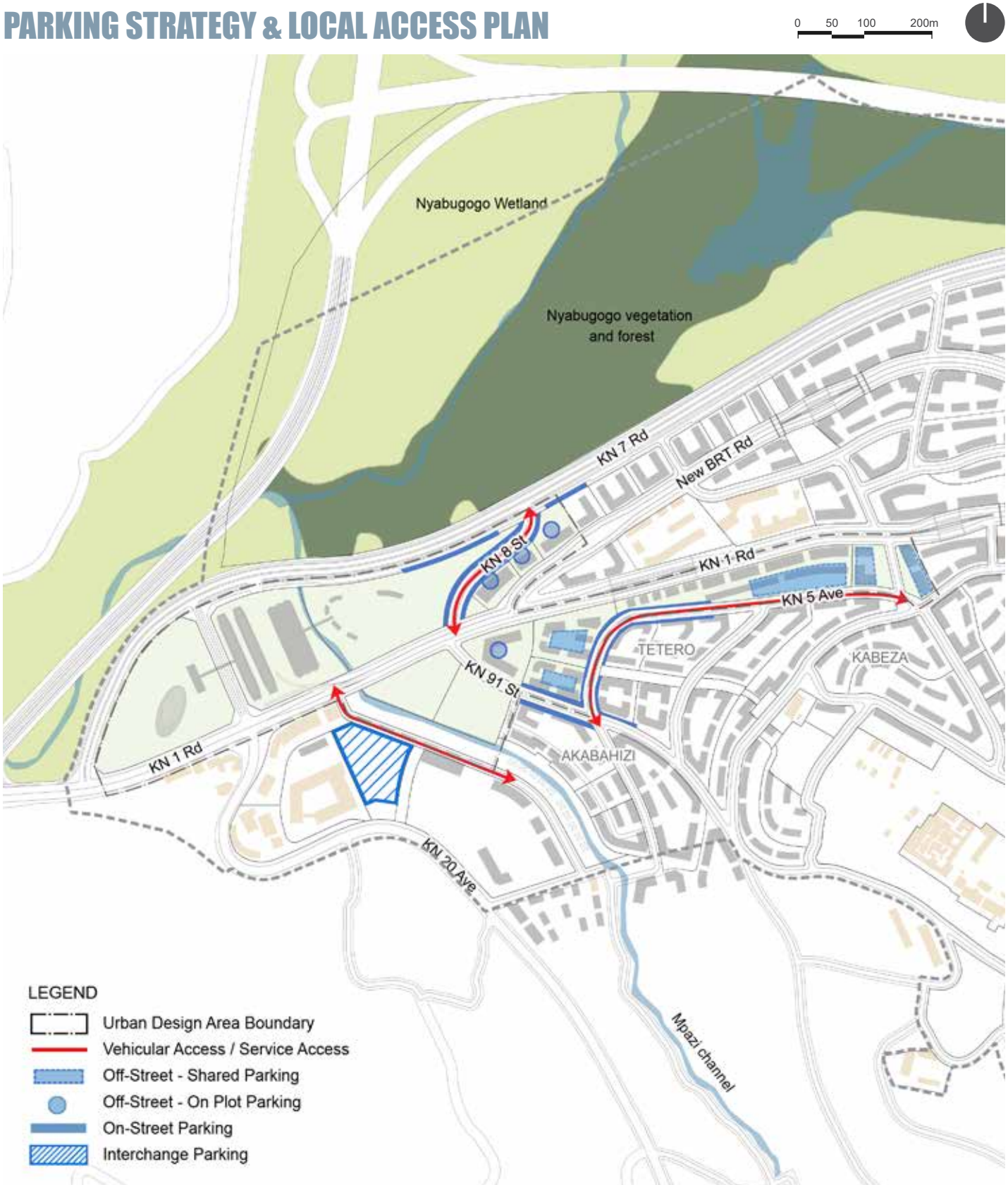
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Nyabugogo Transport Hub - Cycle Network Plan

| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Parking Strategy and Local Accessibility | Nyabugogo Transport Hub Parking Strategy and Local Access Plan is part of the overall CBD parking and loading strategy. The parking strategy adopted for Nyabugogo Transport Hub includes an Interchange Parking in the close proximity of the BRT Terminal, 'on street parking' along secondary roads and service roads and common shared Parking recommended for all new developments. | Nyabugogo Transport Hub - Parking Strategy and Local Access Plan Nyarugenge CBD - Urban Design Report chapters: - 'Parking Strategies and Loading' - 'Nyabugogo Transport Hub' Zoning Regulations – 6.7 Parking Requirements |
| Loading and City Services | Nyabugogo Transport Hub – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy. | Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter Zoning Regulations - 4.7 Service areas and equipment |
| Public Transit | Ensure integrated public transit systems and Improve legibility and wayfinding. Provide a well-functioning transit hub by: <ul style="list-style-type: none">• reducing penalties of interchange through efficient operation;• adopting strategies to achieve seamless journey through better physical design;• providing commercial exploitation opportunities at stations;• establishing agreed minimum standards of passenger facilities;• ensuring time competitive & cost-effective transit feeder services; ensuring safety & security of both transit users and operators, etc. | |

PARKING STRATEGY & LOCAL ACCESS PLAN

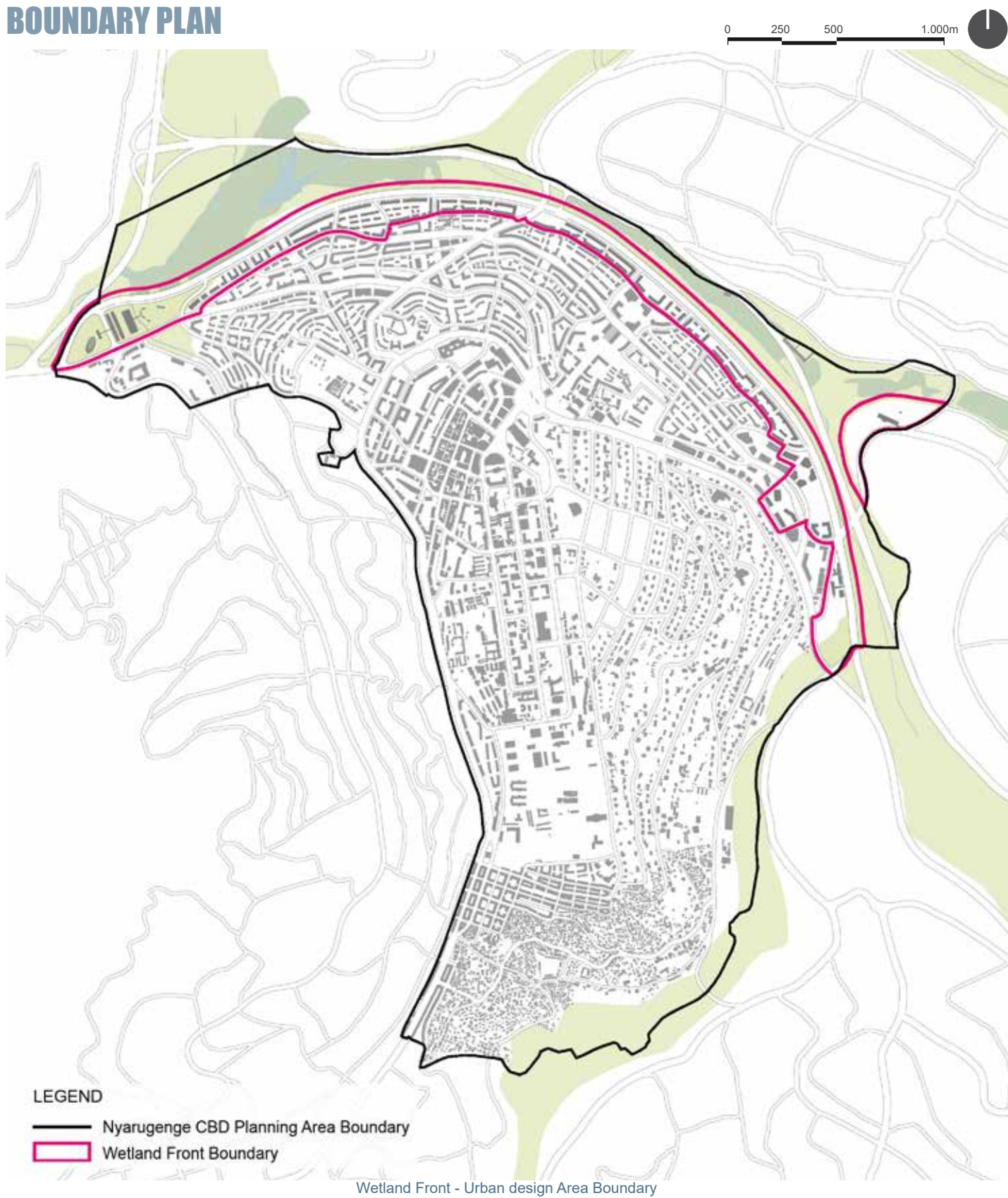


Nyabugogo Transport Hub - Parking Strategy and Local Access Plan

| NYABUGOGO TRANSPORT HUB URBAN DESIGN REGULATIONS | |
|--|-----|
| Regulations | Ref |
| SITE SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| Land assembly through participatory land readjustment or assisted land pooling approach, where feasible, is recommended. | |
| Inclusivity and Community Involvement in the implementation are strongly recommended by establishing a participatory process to involve amenity societies, independent experts, residents and businesses. | |
| Residential area proposed in Tetero and Kabeza: - Inclusionary Zoning is recommended in the residential area proposed in Tetero and Kabeza cell to promote social inclusion and integration. - Incrementality is allowed to maximise current investment capacity without hindering future development potential. | |
| Refer also to general implementation recommendations in the 'General Provisions' chapter. | |
| ENVIRONMENT AND SUSTAINABILITY | |
| A considerable portion of Nyabugogo falls within the wetland boundary and flooding episodes during the rainy season requires urgent hydrological and hydraulics interventions to be put in place. Applicability of Flood Hazard/High Risk Zone Overlay Regulations is required for the BRT Terminal Parcel. Refer also to the 'General Provisions' chapter. | |
| RECOMMENDED ACTIONS FOR CITY OF KIGALI TO UNDERTAKE | |
| <ul style="list-style-type: none"> Evaluate the spatial pattern of distribution of Petrol filling stations in the area and along the Wetland Front. Establish a regulation for the distributional pattern of the petrol filling station avoiding clusters causing bottlenecks. The road network proposed in the 2019 Masterplan will need detailed studies to ensure the functionality of Nyabugogo Transport Hub. | |
| Refer also the recommended actions in the 'General Provisions' chapter. | |

WETLAND FRONT

BOUNDARY PLAN



A wetland front area is the area adjacent to the wetland at least 100 m wide, (75 m from the Road Right of Way) comprising all blocks facing the wetland, refer to the CBD Wetland Front Boundary. Blocks within the wetland front area are subject to Wetland Front Urban Design Regulations.

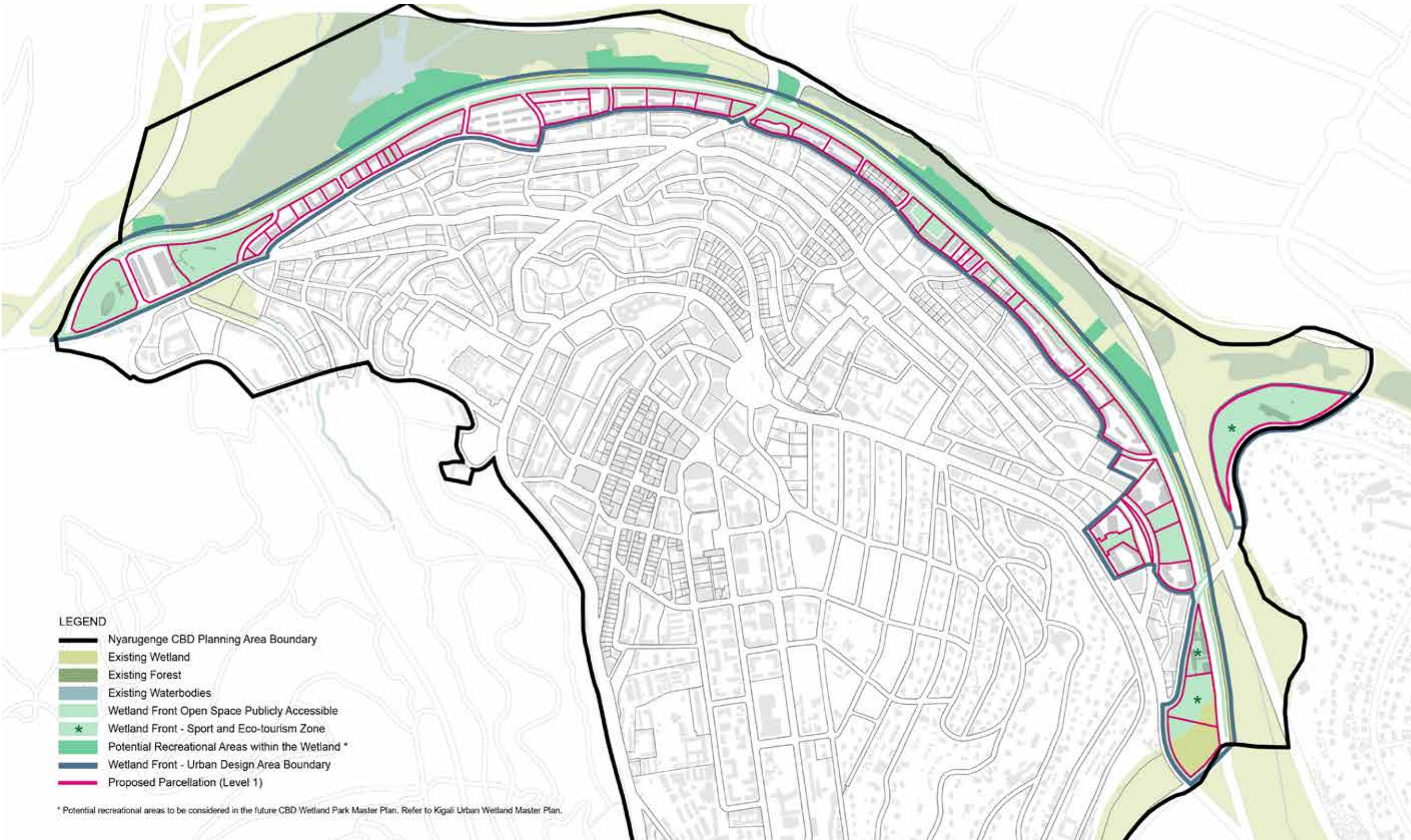
| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|---|----------------------------|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | In the implementation of Wetland Front the following Zoning Regulations should be referred to when no specific indications are provided by this Urban Design Regulations. In all other cases Urban Design Regulations supersede general Zoning Regulations. | Nyarugenge CBD Zoning Plan |
| | C1 - Mixed use zone | |
| | C3 - City Commercial Zone | |
| | L1 - Light industrial zone | |
| | P1 - Park and Open Space | |
| | P2 - Sport and Eco-tourism Zone | |



| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|---|-----------------------------------|
| Regulations | | Ref |
| PARCELLATION | | |
| Suggested Parcellation | The proposed parcellation plan shows parcel configuration and subdivision where land assembly is recommended. Alternative Parcel Subdivision can be provided based on the existing situation to facilitate developments, subject to approval by City of Kigali One Stop Center. | Wetland Front - Parcellation plan |
| USES | | |
| Permitted uses Prohibited uses Conditional uses | As per zoning regulations. | |
| Site-specific Recommended Uses | Accommodations, small restaurants, coffee and pub, retail and service establishments, small community facilities. | |
| | Cultural and entertainment uses are encouraged especially for developments along the wetland in correspondence of green corridors. | |
| | Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. | |
| Additional Prohibited uses | Light industrial uses, including garages and wholesale activities are not allowed. Warehouse stores are not allowed. They may only be considered if such a use is ancillary to the main use. | |
| | Pollutive trades such as engineering, spray-painting, welding, plumbing, motor, metal and joinery workshops, tyre and battery shops, and plastic products manufacturing are not allowed. | |
| | Prohibited uses at the Ground Floor level: banks, offices and other non-active uses. | |
| Additional Conditional Uses | Workshops are conditional uses. | |
| | Petrol Filling Stations locations should be restricted to specific selected areas. Refer to 'Recommended Actions for City of Kigali to undertake'. | |

| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| USES | | |
| Building Ground Floor Uses | Mandatory active façade at the ground level is required along the entire Wetland front. | |
| | Permitted use of outdoor areas for refreshment and merchandise display to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open spaces activities and streetscape provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – 'General Provisions' Chapter |
| NON-CONFORMING BUILDINGS AND USES | | |
| Incompatible uses | <p>Following actions to reduce the impact of incompatible uses, within the wetland and the wetland front area, are strongly recommended:</p> <ul style="list-style-type: none"> relocation of settlements and incompatible activities within the wetland boundary; relocation of existing activities within the Wetland Front boundary that are included in the list of prohibited uses; evaluation and rationalization of the spatial pattern distribution of Petrol filling stations along the wetland front. | Nyarugenge CBD - Urban Design Report – 'Wetland Front' chapter |

PARCELLATION PLAN



- LEGEND
- Nyarugenge CBD Planning Area Boundary
 - Existing Wetland
 - Existing Forest
 - Existing Waterbodies
 - Wetland Front Open Space Publicly Accessible
 - Wetland Front - Sport and Eco-tourism Zone *
 - Potential Recreational Areas within the Wetland *
 - Wetland Front - Urban Design Area Boundary
 - Proposed Parcellation (Level 1)

* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

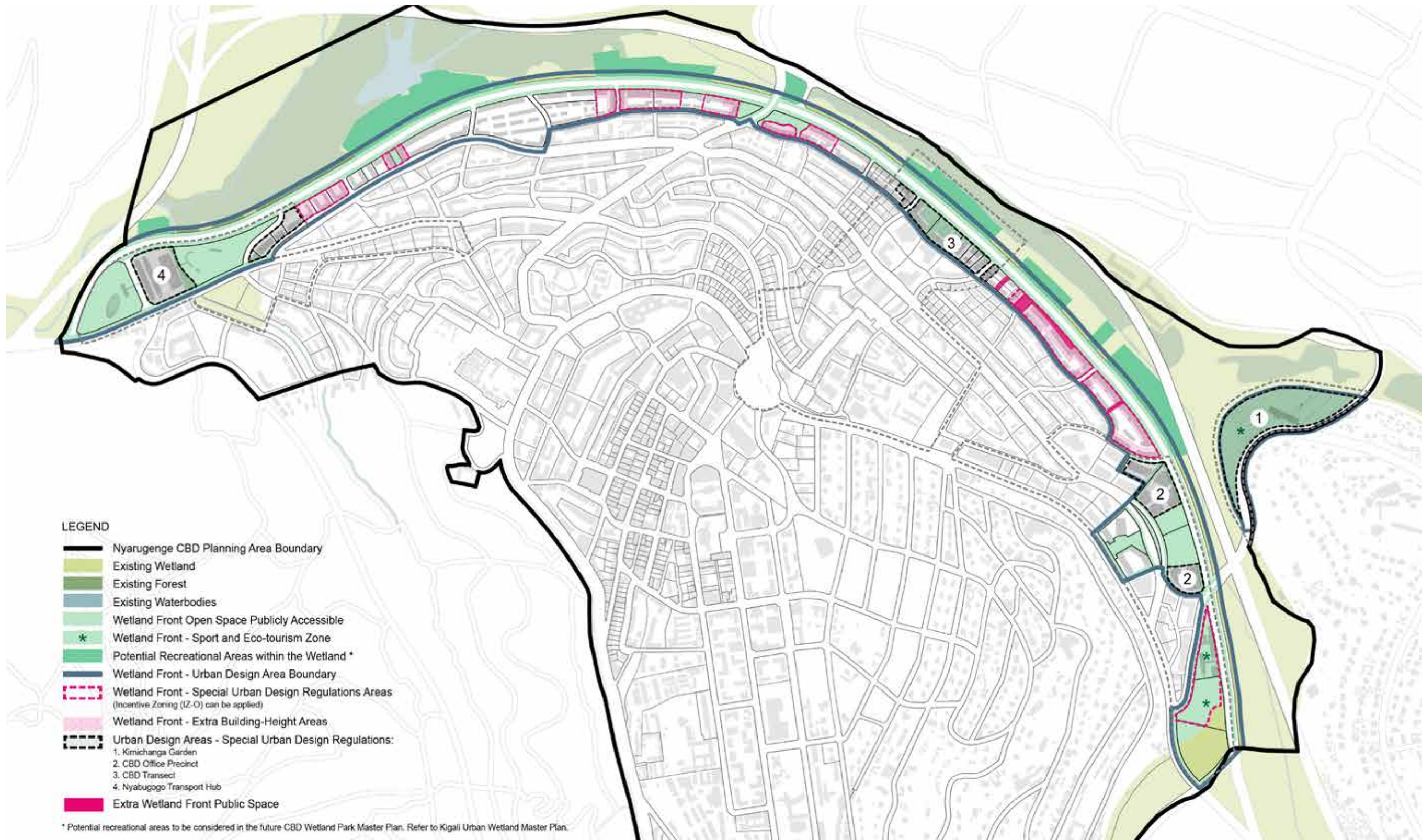
Wetland Front - Parcellation Plan



| WETLAND FRONT | | |
|--|---|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Incentive Zoning as per point ‘b’ or ‘c’ of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the ‘Wetland Front - Special Urban Design Regulations’ Plan. | |
| Maximum Number of Floors and Building Height | Additional Number of Floors is subject to evaluation of the City of Kigali, One Stop Centre and shall be allowed only in specific areas identified as ‘Extra Building Height Areas’ in the ‘Wetland Front – Special Urban Design Regulations’ Plan. For plots within the ‘Extra Building Height Areas’, provided that at least 15% of the dwelling units dedicated for affordable housing or adequate public amenities are developed, as per point ‘b’ or ‘c’ of Incentive Zoning Conditions. | Wetland Front – Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| | For landmark such as sculpture, monument or art installation, there is no height regulation applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval | |
| Building Setback | As per Zoning Regulations. For plots within Urban Design Areas, refer to the respective Setback Plan. | Zoning Regulations - 6.8 Setback Regulations Nyabugogo Transport Hub, CBD-Transect, CBD Office Precinct Setback Plans |

SPECIAL URBAN DESIGN REGULATIONS PLAN

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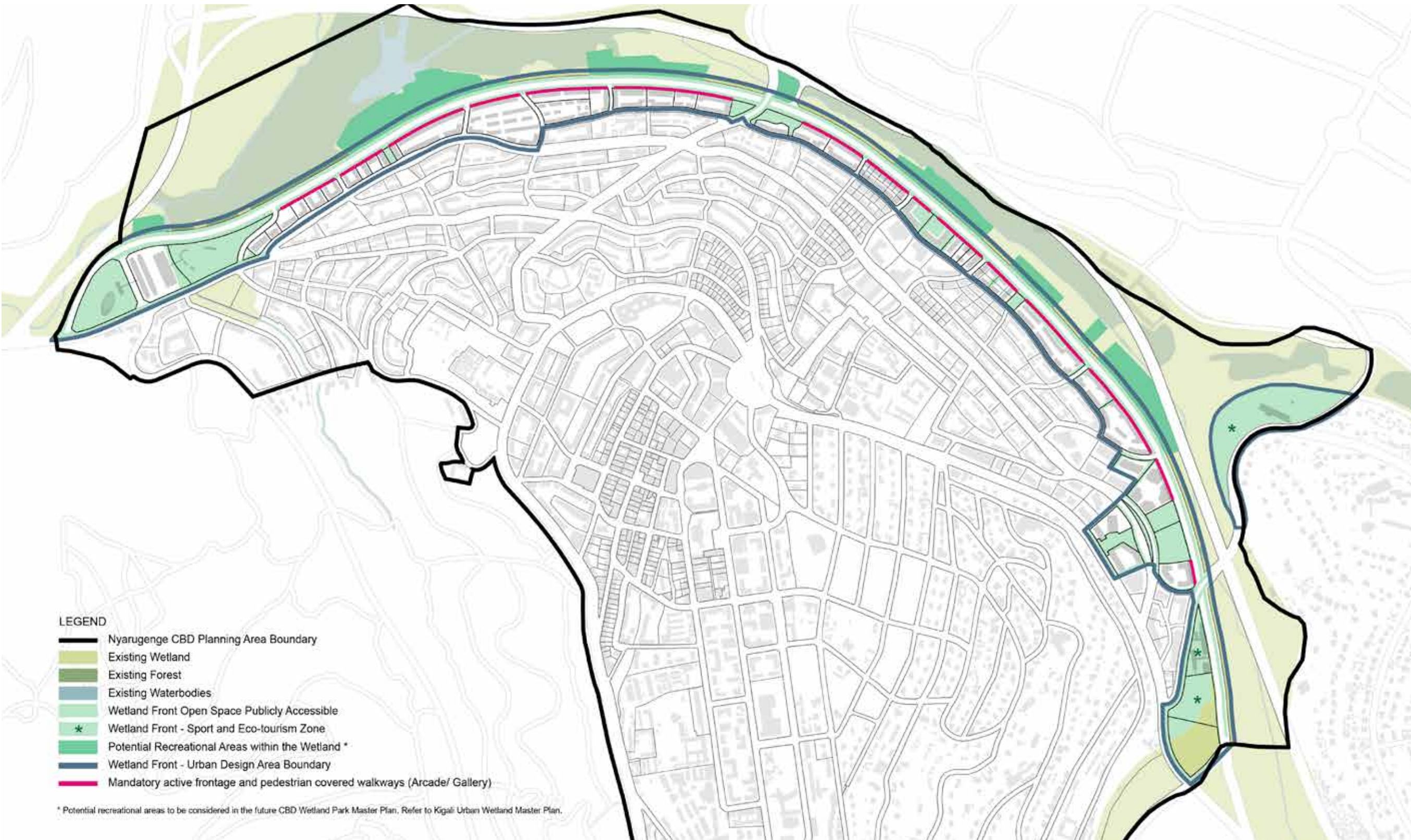
* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Wetland Front - Special Urban Design Regulations Plan



| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | A continuous Building edge alignment along the Wetland Front is required. Building front setback shall be dedicated to a continuous publicly accessible open space. | |
| | No plot boundary wall or fence shall be allowed. Exceptions will be evaluated case by case by City of Kigali – One Stop Center | |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided along the wetland front buildings edge to create a continuous covered pedestrian walkway. | Wetland Front - Building Edge and Covered Pedestrian Walkways Plan Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are allowed and recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Partially raised terraces extended from building- alignment within the outdoor refreshment area (whenever allowed) shall be evaluated and approved by City of Kigali – One Stop Center. | |
| | Veranda as extended canopy at the first floor is allowed. | |
| | First and Second floor facade articulation through balconies is allowed | |
| | Roof Terrace is recommended. | |

BUILDING EDGE & COVERED PEDESTRIAN WALKWAYS PLAN



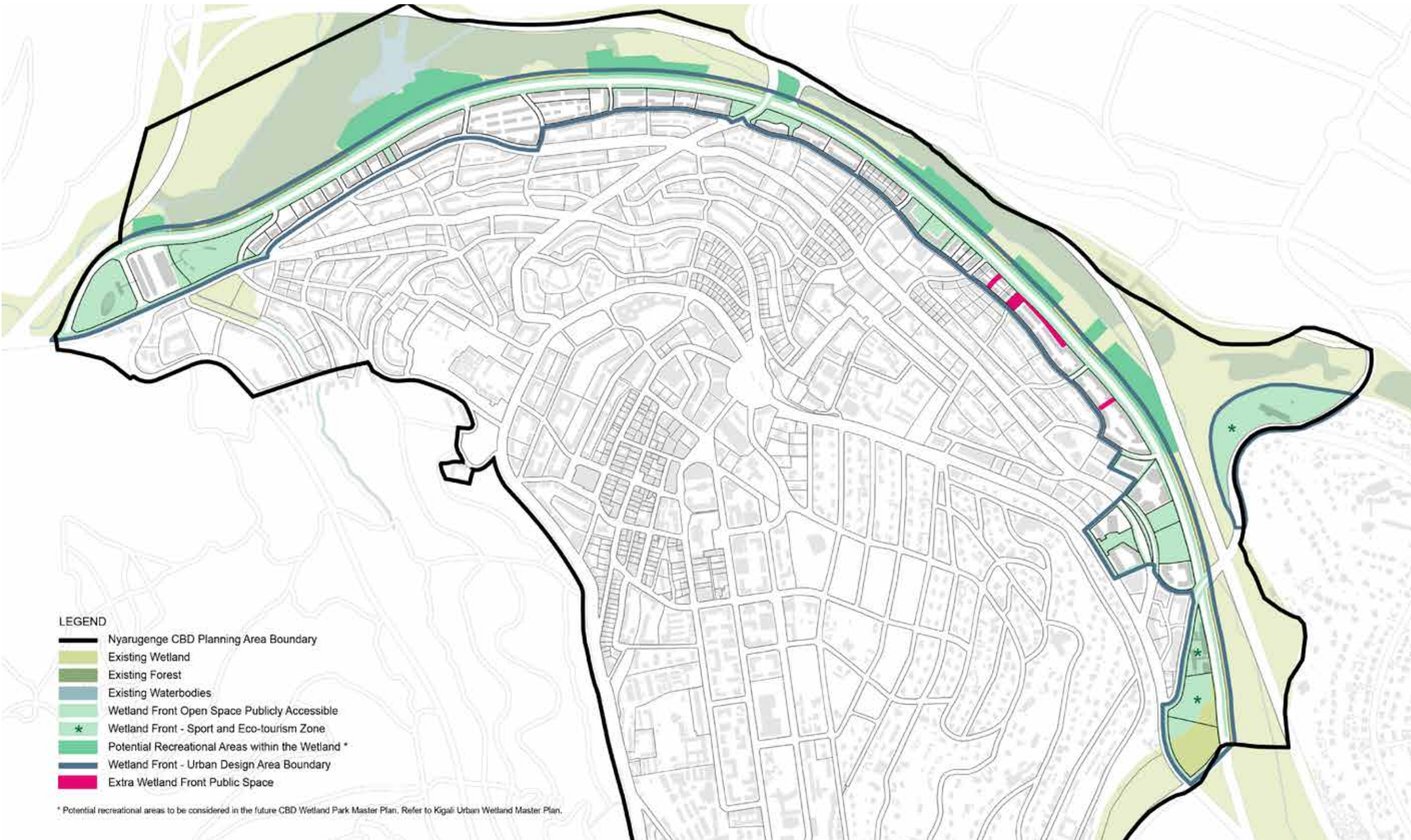
- LEGEND
- Nyarugenge CBD Planning Area Boundary
 - Existing Wetland
 - Existing Forest
 - Existing Waterbodies
 - Wetland Front Open Space Publicly Accessible
 - Wetland Front - Sport and Eco-tourism Zone *
 - Potential Recreational Areas within the Wetland *
 - Wetland Front - Urban Design Area Boundary
 - Mandatory active frontage and pedestrian covered walkways (Arcade/ Gallery)
- * Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Wetland Front - Building Edge and Covered Pedestrian Walkways Plan



| WETLAND FRONT | | |
|-------------------------------|--|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | <p>The Wetland Front Public Access Plan is part of the overall CBD public space and green strategies.</p> <p>The wetland front promenade should become a vibrant public park and an active multimodal corridor, with wide, high-capacity cycle tracks, wide walking paths, and high-quality transit stops and service.</p> <p>Promenades, urban parks and garden and Plaza are suggested in convenient locations along the wetland front, mostly linking or along the green corridors.</p> <p>The wetland front public access plan defines all the publicly accessible open spaces and main pedestrian connections and linkages. Publicly accessible open spaces should be dedicated for landscaping, pedestrian activities and outdoor refreshment area whenever allowed.</p> <p>A supplemental publicly accessible open spaces are required within the wetland front boundary in specific areas (refer to Wetland Front Public Access Plan and Special Urban Design Regulations Plan).</p> | <p>Wetland Front - Public Access Plan</p> <p>Nyarugenge CBD - Urban Design Report chapters:</p> <ul style="list-style-type: none">- ‘Pedestrian Network’- ‘Green Corridors’- ‘Wetland Front’ |

PUBLIC ACCESS PLAN



- LEGEND
- Nyarugenge CBD Planning Area Boundary
 - Existing Wetland
 - Existing Forest
 - Existing Waterbodies
 - Wetland Front Open Space Publicly Accessible
 - Wetland Front - Sport and Eco-tourism Zone
 - Potential Recreational Areas within the Wetland *
 - Wetland Front - Urban Design Area Boundary
 - Extra Wetland Front Public Space

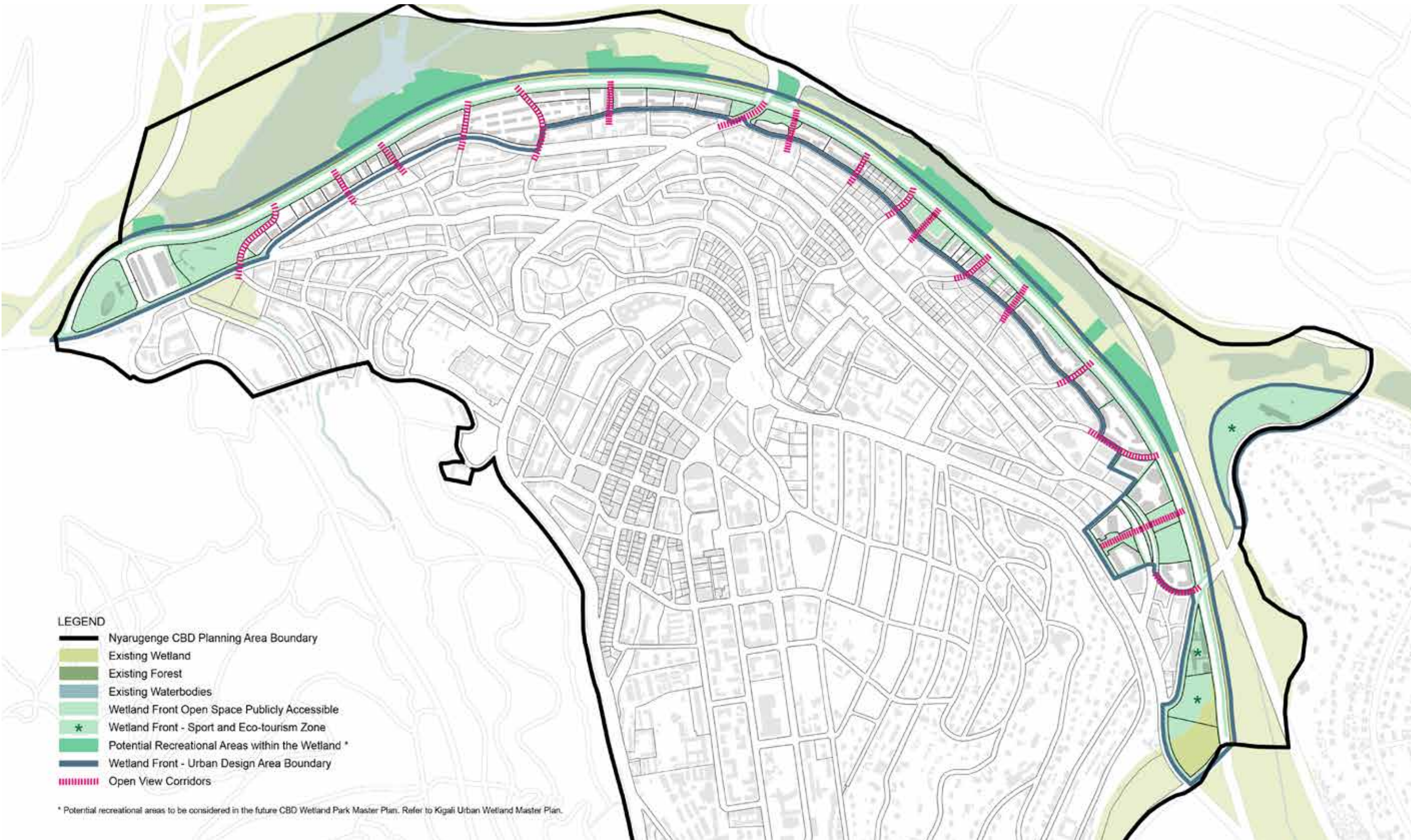
* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Wetland Front - Public Access Plan



| WETLAND FRONT | | |
|--|---|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Visual Corridors and Upland Pedestrian Connections | Visual Corridor shall be maintained free from obstructions along green corridors. In no event shall fencing be permitted in any open area of the visual corridor. Exceptions will be evaluated by the City of Kigali by introducing social fences or applying screening requirements. | Wetland Front - Public Access Plan Wetland Front - Visual Corridors Plan Wetland Front - Upland Connections Plan |

VISUAL CORRIDORS PLAN



- LEGEND
- Nyarugenge CBD Planning Area Boundary
 - Existing Wetland
 - Existing Forest
 - Existing Waterbodies
 - Wetland Front Open Space Publicly Accessible
 - Wetland Front - Sport and Eco-tourism Zone
 - Potential Recreational Areas within the Wetland *
 - Wetland Front - Urban Design Area Boundary
 - Open View Corridors

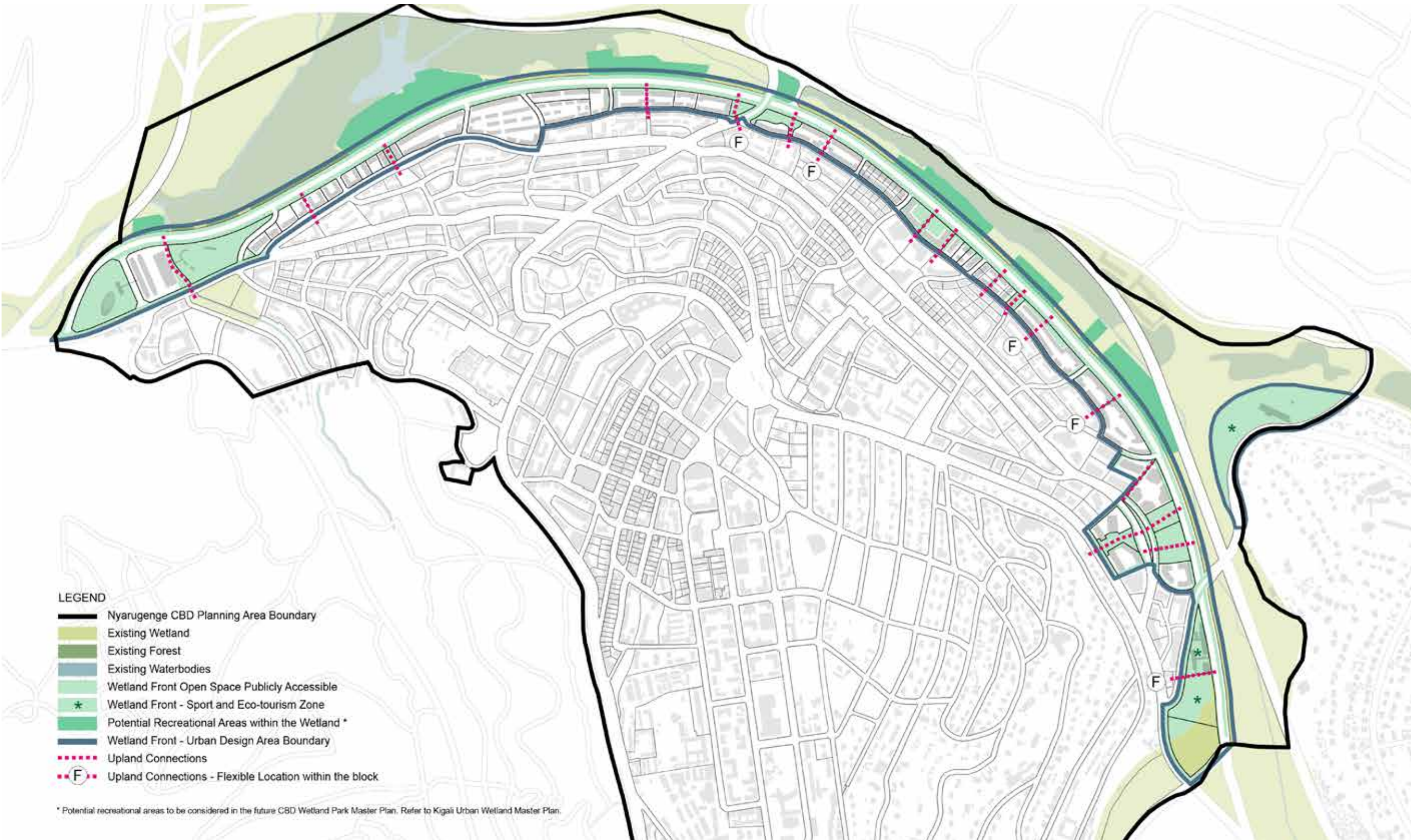
* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Wetland Front - Visual Corridors Plan



| WETLAND FRONT | | |
|--|--|--|
| URBAN DESIGN REGULATIONS | | |
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Visual Corridors and Upland Pedestrian Connections | Pedestrian upland connections shall be provided to guarantee wetland and wetland Front access. <i>Upland connections</i> shall be provided within flexible location zone only for specific cases, refer to ‘Upland Connections’ plan. | Wetland Front - Public Access Plan Wetland Front - Visual Corridors Plan Wetland Front - Upland Connections Plan |

UPLAND CONNECTIONS PLAN



Wetland Front - Upland Connections Plan



| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Cyclist | The Wetland Front - Cycle Network Plan is part of the overall CBD Cycle Network Plan. Bicycle facilities shall be located in relation to the main open spaces. Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | Nyarugenge CBD - Urban Design Report: 'Cycle Network' Chapter |
| Parking Strategy and Local Accessibility | A service road is proposed on the south side of the wetland front road, to serve the Muhima developments and the developments facing the Wetland. The service road is proposed to be elevated along land portions facing the wetland with higher slope gradients in order to facilitate the connections between KN 7 Rd and the upper roads KN 12 Ave, KN 19 St, KN 21 St. On-street Parking are recommended along the service road, with interruptions, in in relation to the open spaces (urban parks, promenade or plaza). All Muhima neighborhood streets are potentially available to accommodate on street parking. Appropriate parking fees strategies should be evaluated to favor local residents (free car parking for resident). | Nyarugenge CBD - Urban Design Report chapters: - 'Parking Strategies and Loading' - 'Wetland Front' Zoning Regulations – 6.7 Parking Requirements |
| | Three Interchange Parking are proposed to serve Nyabugogo Bus Rapid Transit (BRT) terminal (TIII/2), DownTown (City Center) BRT Terminal (TI/2) and the BRT Station in relation to the CBD Transect in front of the new Muhima Market and Cultural Cluster (St IV/9). | Nyarugenge CBD Report chapters: - 'Public Transport Network' - 'Parking strategies, Loading and City Services' Chapter |
| Loading and City Services | Wetland Front – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy. | Nyarugenge CBD Urban Design Report - 'Parking strategies, Loading and City Services' Chapter Zoning Regulations - 4.7 Service areas and equipment |

| WETLAND FRONT URBAN DESIGN REGULATIONS | | |
|---|--|-----|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Transit | <p>Ensure integrated public transit systems and Improve legibility and wayfinding.</p> <p>Ensure high-quality open spaces in correspondence of pedestrian entrances in proximity of green corridors.</p> <p>A specific design guidance should regulate the wetland front road design by including the following design strategies:</p> <ul style="list-style-type: none"> - Reduce the number and width of travel lanes to widen promenade space. - Dedicate space for collective transport to increase the street capacity. Transit can be accommodated in a side-running transitway because of the lack of crossing conflicts. - Add taxi drop-off areas and selected parking areas for accessible parking, and locate these to minimize conflict with transit, cycle, or travel lanes. - Design specific gateways to access these destinations as safe intersections between all users. - Provide pedestrian refuge islands between the cycle tracks and transit lanes to shorten crossing distance. - Raise pedestrian crossings to slow traffic speeds and prioritize pedestrians and adopt traffic calming strategies. | |

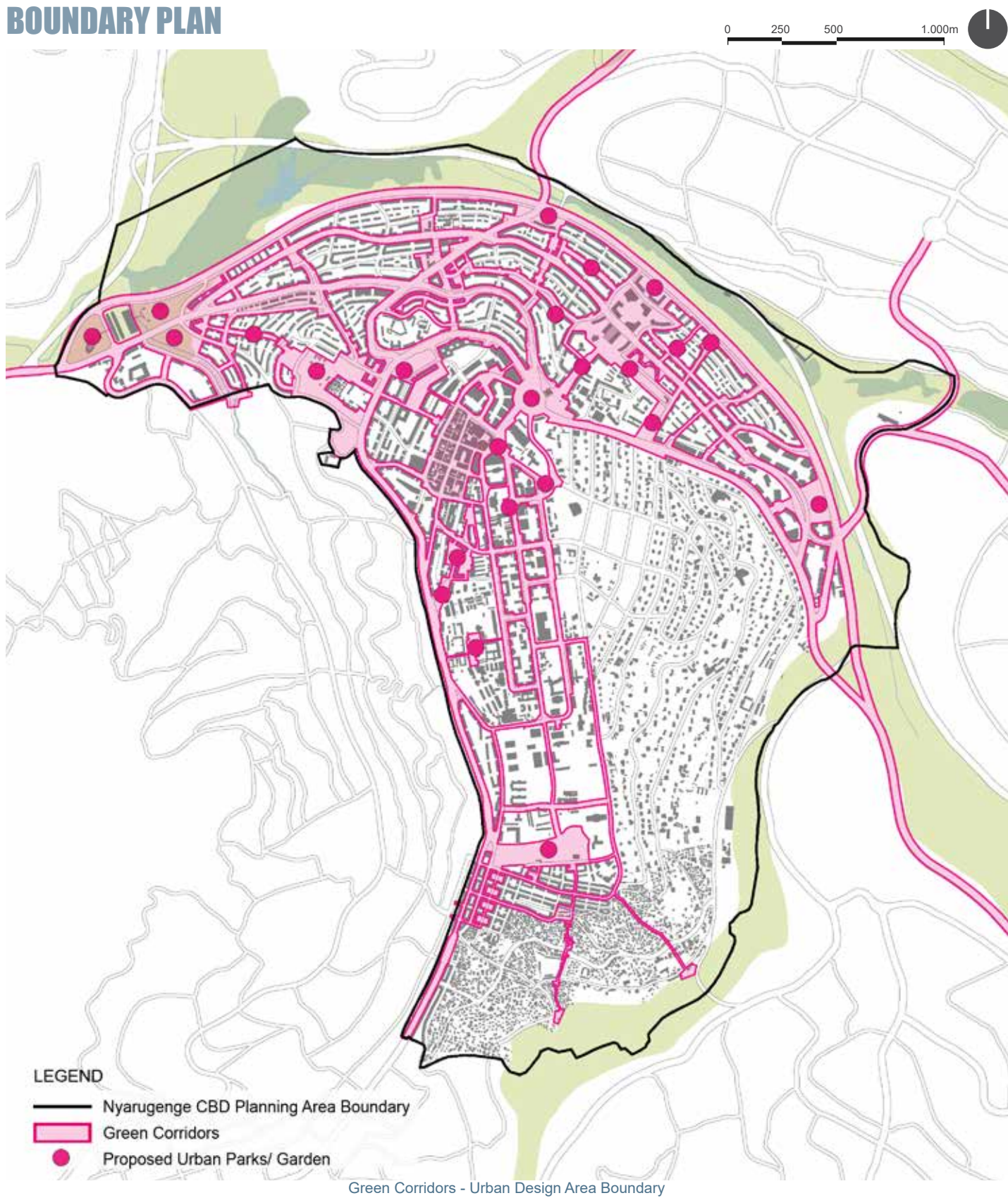
| WETLAND FRONT URBAN DESIGN REGULATIONS | |
|---|---|
| Regulations | Ref |
| SITE-SPECIFIC IMPLEMENTATION RECOMMENDATIONS | |
| Inclusivity and Community Involvement in the Planning of the Wetland Front Promenade are strongly recommended by establishing a participatory process to involve amenity societies, independent experts, local residents and businesses. | |
| Land assembly through participatory land readjustment or assisted land pooling approach is recommended. | Zoning Regulations – 7.3 Land Assembly Overlay Plan |
| Incrementality is encouraged to maximise current investment capacity without hindering future development potential. | |
| ENVIRONMENT AND SUSTAINABILITY | |
| All developments shall be guided by the Rwanda Green Building Minimum Compliance Guidelines (GBMC). Additional requirements may be requested by COK. <ul style="list-style-type: none">No large-scale land benching movement are permitted.Protect biologic, botanic, geologic and topographic features.Ensure Green Building and Energy Efficiency high level standard. Green roof and green wall are recommended for plots within the Wetland Front Special Urban Design Regulation Areas, and mandatory for plots within the ‘Extra Building Height’ Areas highlighted in the Wetland Front – Special Urban Design Regulations Plan.Ensure stormwater runoff treatment.Provide rain gardens - capturing, storing, and treating stormwater runoff from roof and hardscapes. | |
| Refer also to the ‘General Provisions’ chapter. | |

| WETLAND FRONT URBAN DESIGN REGULATIONS | |
|--|-----|
| Regulations | Ref |
| RECOMMENDED ACTIONS FOR COK TO UNDERTAKE | |
| <ul style="list-style-type: none">Evaluate the spatial pattern of distribution of Petrol filling stations along the wetland front and establish a regulation for their distributional pattern avoiding clusters that cause bottlenecks.Ensure Well Connected, Human Scale and Lively Wetland Front:<ul style="list-style-type: none">Provide Standards for the CBD Wetland Front Access Plan to ensure creation of continuous, high-quality public wetland front open space with ecologically functional design across properties and street ends, including opportunities for green infrastructure to reduce the impacts of runoff.Provide Streetscape guidelines and street-level building façade guidelines for green corridors and wetland front.Establish Architectural Design standards and Wetland front Design Manual to define and regulate building façade, walls, windows, roofs, materials, colours and other building features according to the character of the area.Establish a Wetland front program and Wetland Front planning tool:<ul style="list-style-type: none">Develop a multidisciplinary design team experienced in waterfront development to collaborate on the design, construction, and maintenance of the site.Provide an analysis of the project site to inform a design approach in line with site conditions and a baseline from which to measure performance over time.Engage community stakeholders in the vision, design, and implementation of the project to create a welcoming and equitable waterfront for all.Ensure the maintenance, ongoing performance, and adaptive management of waterfront projects in support of access, ecological health, and resiliency. | |

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GREEN CORRIDORS

BOUNDARY PLAN



Nyarugenge CBD Green corridors have been identified through the inventory of available nature corridors in the City, complemented by new proposed green-ways. They include:

- Green ways that connect the City to the wetland using the topography to enable water to flow towards strategically sited rain gardens and green street elements.
- Water front promenade.
- BRT corridor road-side.
- Streets with potential for a streetscape and landscaping improvement.
- Urban Parks:
 - The natural areas which have been identified for protection such as steep slopes and natural drainage corridors, to be enhanced as open green spaces or Urban Parks.
 - Existing green areas, not accessible or underutilized, that can be enhanced to become potential publicly accessible urban parks.
- Existing and proposed urban gardens and green pockets.
- Promenades, Plazas, Pedestrian streets or alleys and Courtyards.

Actual boundaries, size and design of each Green Corridor shall be defined by a detailed study and design to be conducted and approved by CoK OSC prior to any development along the corridor as outlined in this section.

Private developers may propose the establishment of additional green corridors or propose detailed design for the corridors already proposed in this section for CoK OSC approval. CoK OSC may request modifications, improvements or any other amendment in the interest of the public good, including awarding incentives to the developer in the form of extra GFA or No. of Floors against evident benefits to the community.

Incentive Zoning as per Special Urban Design Regulations Plan is identified for the Muhima Urban Renewal area only. Additional areas benefiting from incentives may be identified at detailed design stage upon assessment by CoK OSC.

Additional Incentive Zones may be identified in other parts of CBD and along Green Corridors according to CoK OSC assessment of market conditions, private sector interest leading to the establishment of improvement of local conditions and provision of public amenities or any other well-documented reason. Any additional Incentive Zone shall be approved by CoK OSC on the basis of a detailed design of the Area.

| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|---|---------|----------------------------|
| Regulations | | Ref |
| ZONING REGULATIONS | | |
| Zoning Regulations | Various | Nyarugenge CBD Zoning Plan |
| PARCELLATION | | |
| Suggested Parcellation | N.A. | |

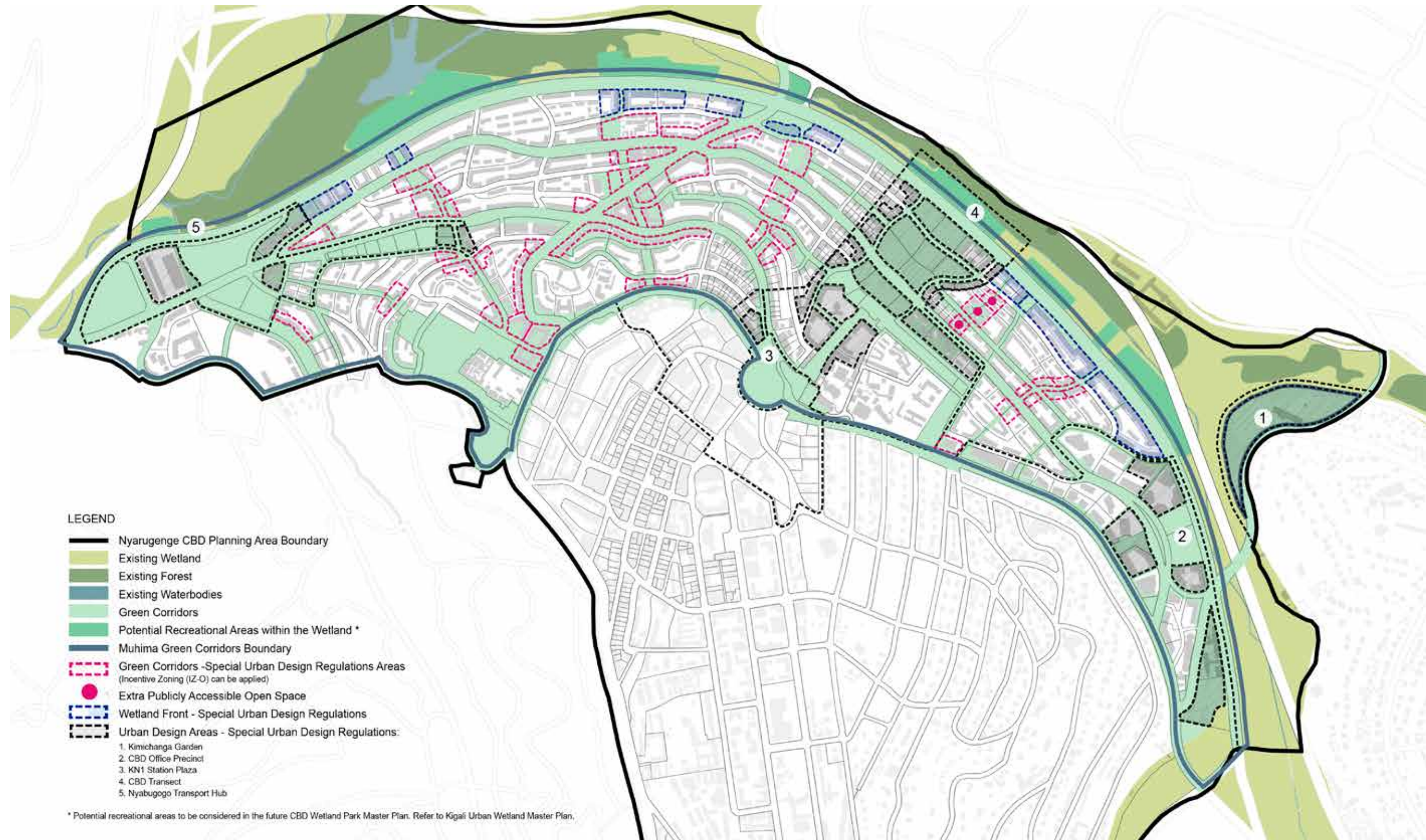


| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|--|--|---|
| Regulations | | Ref |
| USES | | |
| Permitted uses Prohibited uses Conditional uses | As per zoning regulations. | |
| Site-specific Recommended Uses | Accommodation, small restaurants, coffee and pub, retail and service establishments, small community facilities. | |
| | Cultural and entertainment uses are encouraged along all the green corridors. | |
| | Min. 15% of residential uses and/or accommodation shall be allowed/recommended to ensure a mixed-use development. | |
| Additional Prohibited uses | Within areas highlighted in 'Muhima Green Corridors-Special Urban Design Regulations' Plan, the following uses are not allowed: | |
| | Light industrial uses, including garages and wholesale activities are not allowed. Warehouse stores are not allowed. They may only be considered if such a use is ancillary to the main use. | |
| | Pollutive trades such as engineering, spray-painting, welding, plumbing, motor, metal and joinery workshops, tyre and battery shops, and plastic products manufacturing. | |
| | Prohibited uses at the Ground Floor level: banks, offices and other non-active uses. | |
| Additional Conditional Uses | Workshops are conditional uses. | |
| Building Ground Floor Use | Mandatory active façade at the ground level | |
| | Permitted use of outdoor areas for refreshment and merchandise display to be evaluated and approved by City of Kigali – One Stop Center. | |
| Open spaces activities and streetscape provisions | Recommended activities and streetscape provision along wetland front promenade and green corridors are indicated in the Urban Design Regulations – General Provisions. | Urban Design Regulations – 'General Provision' Chapter |

| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| SPECIAL URBAN DESIGN REGULATIONS | | |
| Incentive Applicability | Incentive Zoning as per point 'b' or 'c' of paragraph 7.2.1 of Zoning Regulations are applicable within specific areas identified in the 'Green Corridors (Muhima) – Special Urban Design Regulations' Plan. | Green Corridors (Muhima) – Special Urban Design Regulations Plan |
| Maximum Number of Floors and Building Height | Additional Number of Floors is subject to City of Kigali, One Stop Centre evaluation and it is allowed only in specific areas identified in the 'Green Corridors – Special Urban Design Regulations' Plan. For plots within the 'Special Urban Design Regulations Areas', maximum five (5) extra floors on top of current Zoning Regulations are permitted, provided that at least 15% of the dwelling units dedicated for affordable housing or adequate public amenities are developed, as per point 'b' or 'c' of Incentive Zoning Conditions. | Green Corridors (Muhima) – Special Urban Design Regulations Plan Zoning Regulations: 7.2 Incentive Zoning Overlay (O-IZ) |
| | For landmark such as sculpture, monument or art installation, there is no height regulation applicable. Maximum height will be subject to City of Kigali, One Stop Centre approval | |
| Building Setback | As per Zoning Regulations. | Zoning Regulations - 6.8 Setback Regulations |
| | For plots within Urban Design Areas refer to the respective Setback Plan. | Nyabugogo Transport Hub, CBD- Transect, CBD Office Precinct Setback Plans |

SPECIAL URBAN DESIGN REGULATIONS PLAN

0 100 250 500m



LEGEND

- Nyarugenge CBD Planning Area Boundary
- Existing Wetland
- Existing Forest
- Existing Waterbodies
- Green Corridors
- Potential Recreational Areas within the Wetland *
- Muhima Green Corridors Boundary
- Green Corridors -Special Urban Design Regulations Areas
(Incentive Zoning (IZ-O) can be applied)
- Extra Publicly Accessible Open Space
- Wetland Front - Special Urban Design Regulations
- Urban Design Areas - Special Urban Design Regulations:
 - 1. Kimichanga Garden
 - 2. CBD Office Precinct
 - 3. KN1 Station Plaza
 - 4. CBD Transect
 - 5. Nyabugogo Transport Hub

* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Green Corridors - Special Urban Design Regulations Plan



| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|---|---|--|
| Regulations | | Ref |
| BUILDING EDGE | | |
| Alignment | Building edge alignment along the Green Corridors is subject to City of Kigali – One Stop Center evaluation. For plots within Urban Design Areas Boundary, refer to correspondent Urban Design Regulations. Building front setback shall be dedicated to a continuous publicly accessible open space. | |
| | No plot boundary wall or fence shall be allowed. Exceptions will be evaluated case by case by City of Kigali – One Stop Center | |
| Ground Floor Covered Pedestrian Walkways | Arcade or gallery shall be provided on buildings along the green corridors to create a continuous covered pedestrian walkway. | Zoning Regulations - 6.8 Setback Regulations (Arcade/ Gallery setback) |
| Above Ground Floor | Recommended arcade/ gallery at the first floor (min 3 m depth). | |
| | Partially raised or first floor terrace overlooking the street are allowed and recommended as additional interactive experience with the street, providing a privacy gradient in line with Rwandan culture. | |
| | Partially raised terraces extended from building-alignment within the outdoor refreshment area (whenever allowed) shall be evaluated and approved by City of Kigali – One Stop Center. | |
| | Veranda as extended canopy at the first floor is allowed. | |
| | First and Second floor facade articulation through balconies is allowed | |
| | Roof Terrace is recommended. | |

| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|--|--|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Public Access Pedestrian | The Green Corridors Public Access Plan is part of the overall CBD public space and green strategies. The Green Corridors public access plan defines all the publicly accessible open spaces and main pedestrian connections and linkages. Publicly accessible open spaces should be dedicated for landscaping, pedestrian activities and outdoor refreshment area whenever allowed. A supplemental publicly accessible open spaces are required within the Green Corridors boundary in specific areas (refer to Green Corridors - Public Access Plan and Special Urban Design Regulations Plan). | Green Corridors (Muhima) -Public Access Plan Green Corridors (Muhima) – Special Urban Design Regulations Plan Nyarugenge CBD - Urban Design Report chapters: - ‘Pedestrian Network’ - ‘Green Corridors’ - ‘Wetland Front’ |
| Visual Corridors and Upland Pedestrian Connections | Preserve views and ecological corridors to the wetland. Visual Corridor along green corridors shall be maintained free from obstructions. In no event shall fencing be permitted in any open area of the visual corridor. Exceptions will be evaluated by the City of Kigali by introducing social fences or applying screening requirements. | Green Corridors (Muhima) - Public Access Plan |
| Public Access Cyclist | The Green Corridor - Cycle Network Plan is part of the overall CBD Cycle Network Plan. Bicycle facilities shall be located in relation to main open spaces. Additional or alternative cycle routes and bike shared stations or bicycle parking maybe evaluated by City of Kigali. | Nyarugenge CBD - Urban Design Report: ‘Cycle Network’ Chapter |
| Parking Strategy and Local Accessibility | Green Corridors Parking Strategy is part of the overall CBD Parking and Loading Strategy. Accessibility shall be guaranteed for cleaning or emergency vehicles within all green corridors. | Nyarugenge CBD - Urban Design Report: ‘Parking strategies, Loading and City Services’ chapter Zoning Regulations – 6.7 Parking Requirements |

PUBLIC ACCESS PLAN



- LEGEND
- Nyarugenge CBD Planning Area Boundary
 - Existing Wetland
 - Existing Forest
 - Existing Waterbodies
 - Green Corridors
 - Potential Recreational Areas within the Wetland *
 - Muhima - Green Corridors Boundary
 - Extra Publicly Accessible Open Spaces

* Potential recreational areas to be considered in the future CBD Wetland Park Master Plan. Refer to Kigali Urban Wetland Master Plan.

Green Corridors - Public Access Plan



| GREEN CORRIDORS URBAN DESIGN REGULATIONS | | |
|--|---|--|
| Regulations | | Ref |
| CIRCULATION AND ACCESSIBILITY | | |
| Loading and City Services | Green Corridors – Loading Areas and City Services is part of the overall CBD Loading and City Services strategy. | Nyarugenge CBD Urban Design Report - ‘Parking strategies, Loading and City Services’ Chapter Zoning Regulations - 4.7 Service areas and equipment |
| Transit | Ensure integrated public transit systems and improve legibility and wayfinding. Ensure high-quality open spaces corresponding to the pedestrian entrances in proximity of green corridors. | |
| SITE-SPECIFIC IMPLEMENTATION RECOMMENDATIONS | | |
| No site-specific implementation recommendations. Refer to ‘general implementation recommendations’ in the ‘General Provisions’ chapter. | | |
| ENVIRONMENT AND SUSTAINABILITY | | |
| All developments shall be guided by the Rwanda Green Building Minimum Compliance Guidelines (GBMC). Additional requirements may be requested by COK. <ul style="list-style-type: none"> • No large-scale land benching movement are permitted. • Protect biologic, botanic, geologic and topographic features. • Ensure Green Building and Energy Efficiency high level standard. Green roof and green wall are recommended for plots within the Green Corridors (Muhima) within the ‘Special Urban Design Regulations’ Areas. • Ensure stormwater runoff treatment. • Provide rain gardens - capturing, storing, and treating stormwater runoff from roof and hardscapes. | | |
| Refer also to the ‘General Provisions’ chapter. | | |
| RECOMMENDED ACTIONS FOR COK TO UNDERTAKE | | |
| Refer to ‘General Provisions’ chapter | | |

