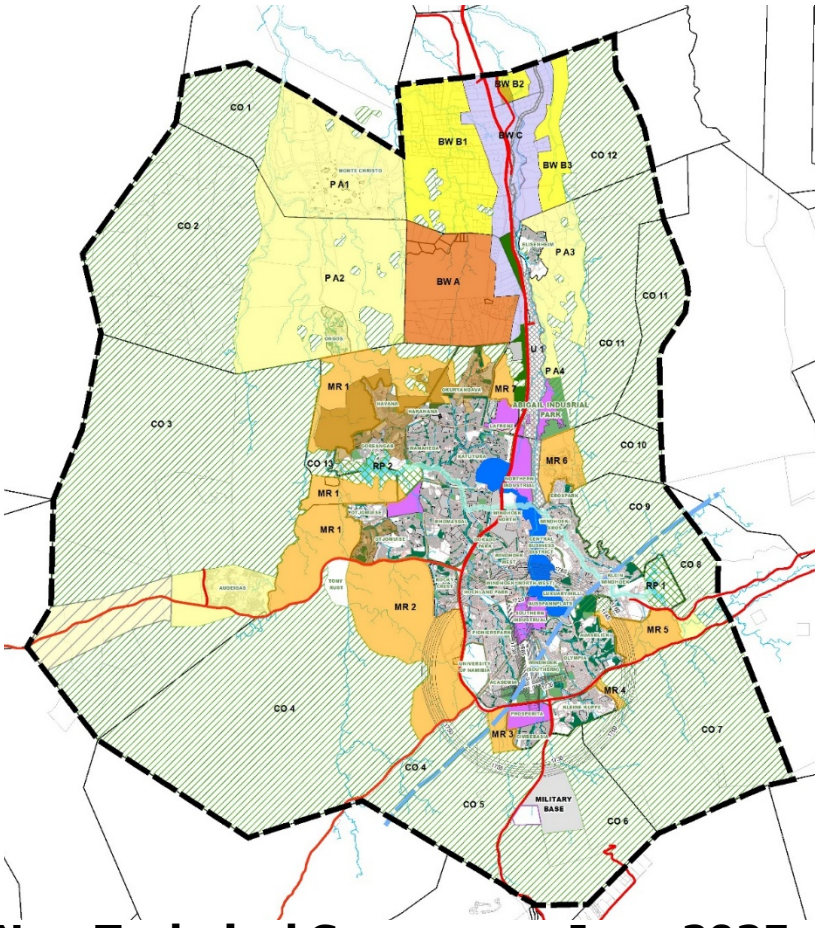
City of Windhoek

Urban Structure Plan: 2021 - 2041



Non-Technical Summary – June 2025

WINDHOEK

This Non-Technical Summary was prepared to make the Windhoek Urban Structure Plan and its provisions more accessible to residents who are not familiar with Urban and Regional Planning processes, procedures and principles. It aims to provide a short summary of a complex document and it should always be read with the full WUSP Document. Where there are any inconsistencies, the full text and intention of the Windhoek Urban Structure Plan will prevail.

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1 INTRODUCTION AND BACKGROUND

The coming into operation of the Urban and Regional Planning Act, 1018 (Act No. 5 of 2018) mandated the City to update and replace its current Urban Structure Plan which was prepared in 1996. This is to reflect the current reality and to comply with the scope and objectives of urban structure plans prescribed under the Act. Section 2 of the Act sets out the following objectives for spatial planning at the national, regional and urban levels:

- To provide for a uniform, effective and integrated regulatory framework;
- To set guideline principles and standards;
- To decentralise certain aspects of spatial planning;
- To ensure the promotion of social and economic inclusivity;
- To ensure equality in the planning process;
- To redress past imbalances with respect to land, land ownership and land allocation; and to promote national land reform objectives.

When approved, the Urban Structure Plan will enable the City of Windhoek to be declared a planning authority, which will enable it to take urban planning decisions by itself provided that they are in line with the provisions of the Urban Structure Plan.

The Urban Structure Plan is required to comply with international policy guidance, particularly responding to three important policy documents as follows:

The 2030 Agenda for Sustainable Development adopted by United Nations Member States in 2015. This sets out 17 Sustainable Development Goals (SDGs) seeking to end poverty and other deprivations through the implementation of strategies to improve health, reduce inequality, spur economic growth, reduce climate change and to preserve our oceans and forests. SDG 11, most relevantly, aims to make cities and human settlements inclusive, safe, resilient and sustainable.

The New Urban Agenda adopted by the United Nations in 2016 promotes well planned and well managed urbanisation. It highlights linkages between sustainable urbanisation and job creation and between livelihood opportunities and improved quality of life.

Agenda 2063, a plan for Africa's transformation, was agreed upon by the African Golden Jubilee of May 2013. This envisages cities and other settlements to be the hubs of cultural and economic activities, with modernised infrastructure, decent housing and all basic needs, including water, sanitation, energy, public transport and information and communications technology.

It is also required that the Urban Structure Plan contribute to the principles and intentions established in national Namibian policy frameworks. In addition to existing national and regional development plans, these include:

The Namibian Constitution, which ensures that all citizens have access to public facilities and services and that ecosystems, biological diversity and natural resources are managed so as to benefit all Namibians.

Vision 2030 which seeks to transform Namibia into an industrialised nation, to raise per capita income, to improve education and prosperity and to ensure social harmony, peace and political stability.

The Harambee Prosperity Plan which commits the government to accelerated development programmes and improvements to service delivery and economic growth.

The National Housing Policy where the overarching goal is to provide broad access to housing opportunities in order to improve living and socio-economic conditions in both towns and rural areas.

"Despite high growth rates, Namibia's urban areas will provide equitable access to safety, shelter, essential services and innovative employment opportunities with an efficiently managed, clean and aesthetically pleasing environment".

Finally, and of fundamental importance, the Urban Structure Plan has been drawn up to ensure conformity with the *COW Transformational Strategic Plan 2022-2027.* This plan focuses on financial sustainability and governance and on social progression, economic advancement and infrastructure development.

2 NATIONAL AND REGIONAL CONTEXT

2.1 National Context

Windhoek is the capital and seat of government. Despite many years of attempts to decentralise government functions to the regions, only a few ministries have successfully decentralised parts of its operations. With respect to the role of Windhoek in the national economy, and given the fact that virtually all economic activity in the Khomas Region takes place in Windhoek, in 2016 the City contributed 31.31% of National Gross Domestic Product (GDP). In comparison, the next region (Erongo) contributed only 12.92% to GDP. Both Swakopmund and Walvis Bay, as well as a large mining sector, are located in the Erongo Region.

According to the 2023 Population and Housing Census, the Windhoek population numbered 486 186, up from 325 858 in 2011. Out of the national population, some 1 512 685 people (50%) were found to live in the urban areas of the country. This means that 32.14% of the urban population in Namibia resided in Windhoek at the time. The next largest urban area was Rundu with a population of 118 632. Windhoek therefore, in terms of population size, was 4.09 times the size of the next largest urban area in Namibia.

2.2 Regional Context

In 2023, the Khomas Region had a population of 494 605, of which 486 186 resided in Windhoek. This meant that only 8 419 people (1.7%) in the Khomas Region were located outside of the city boundaries.

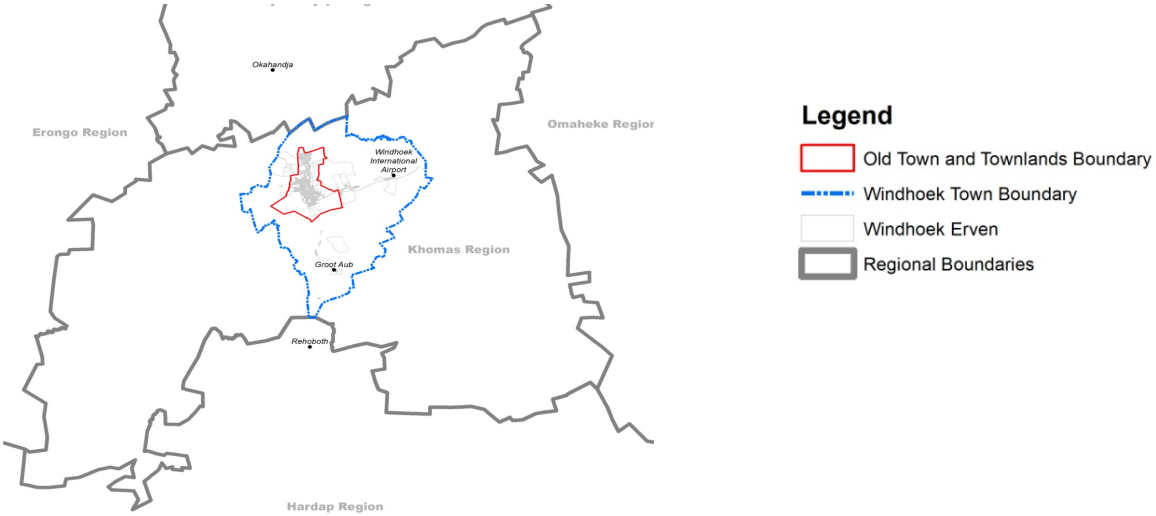


Figure 1: Windhoek in Regional Context

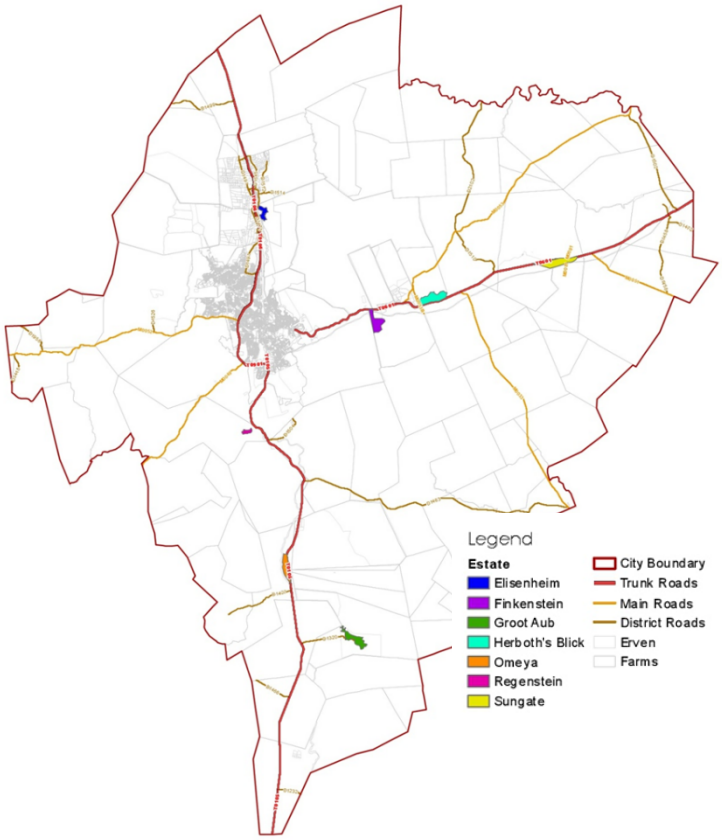
The Khomas Region covers a total land area of 36 964 km^2. Prior to 2011, the municipal boundary covered a land area of about 531 km^2. On 30 September 2011, the then Minister of Regional and Local Government published Government Notice 184 of 2011 in terms of which the area under the jurisdiction of the Windhoek Municipal Council was extended to 5,060 km^2. Through this boundary extension, the size of the municipal area was increased by a factor of 9.5. This means that the City of Windhoek now takes up some 13.69% of the land area of the Khomas Region. However, it is important to note that the enlarged municipal area includes virtually all settlements in the region, (with the exception of Dordabis and Solitaire), together with commercial farmland outside the city boundaries.

The general concept of a metropolitan area is that of a core supporting a large population, together with adjacent communities that have a high degree of economic and social integration with the core. For the purpose of this document, the extended boundary of the city is regarded as the area that defines the metropolitan scale of the Structure Plan.

2.3 Administrative Arrangements

The extended municipal boundary encompasses three older settlements: Aris, Kapp's Farm and Groot Aub. Aris and Kapps Farm are relatively small in size and constitute little more than accommodation establishments and some light industry. Groot Aub, on the other hand, constitutes a larger and more dense residential settlement. A socio-economic survey undertaken by the City of Windhoek in 2018 recorded a population of 8,977 inhabitants residing in 2,115 structures.

The City of Windhoek established physical presence in Groot Aub and extended the provision of municipal services to the area which included the drilling of additional boreholes, the treatment of water, re-establishing the use and functioning of the sewer ponds, the grading of roads and the introduction of a solid waste management system.



In 2011, the Elisenheim Township and its Extensions, with over 2,000 erven, were established between 10 and 15 kilometres north of the city centre. Elisenheim is a fast growing suburb and is seen as the first example of an ideal suburb due mainly to the generous allocation of land to supporting land-uses such as business, schools, parks and industry.

The standard regulatory document for land use in the Windhoek Municipal Area since 1976 has been the Windhoek Town Planning Scheme. When the Municipal boundaries were originally extended in 1992, the scheme area was widened to include the northern peri-urban area of Windhoek known as the Brakwater smallholding area. Kapps Farm and Aris each have their own Town Planning Schemes, but these are in the process of being combined

Figure 2: Key Developments in the Extended boundary area

3 WINDHOEK 2021: PRESENT STATUS

(Where are we now?)

3.1 At the Metropolitan Scale

The metropolitan area of Windhoek has a total area of 514 217 hectare and a perimeter of roughly 400 km. It consists of at least 75 privately owned farms and 46 smallholdings. Few of the smallholdings and farms have contributed in any meaningful way to crop production and the farms are mainly used for livestock farming. On a smaller scale, the rural economy has benefitted from game farming for tourism and hunting. These activities support accommodation establishments such as lodges and guest farms . Since 2003, a number of residential estates have been established outside the existing footprint of the city. These are Aredareigas Nature Estate (Regenstein), Finkenstein Estate, Omeya Golf Estate, Herbothsblick, Sungate and Elisenheim. With the extension of the boundaries, three peri-urban settlements namely Groot Aub, Aris and Kapps Farm were also included. There are also a number of projects under implementation which are located outside the existing city footprint. These include Ongos, Monte Christo, Augeigas, Herbothsblick and Sonnleiten. In addition, a number of farms were subdivided into smallholdings while there are ongoing efforts to create more subdivisions on existing commercial farmland. According to available figures in 2011, agriculture contributed only about 0.4% to the GDP of the Khomas Region, while it accounted for some 3.3% of employment.

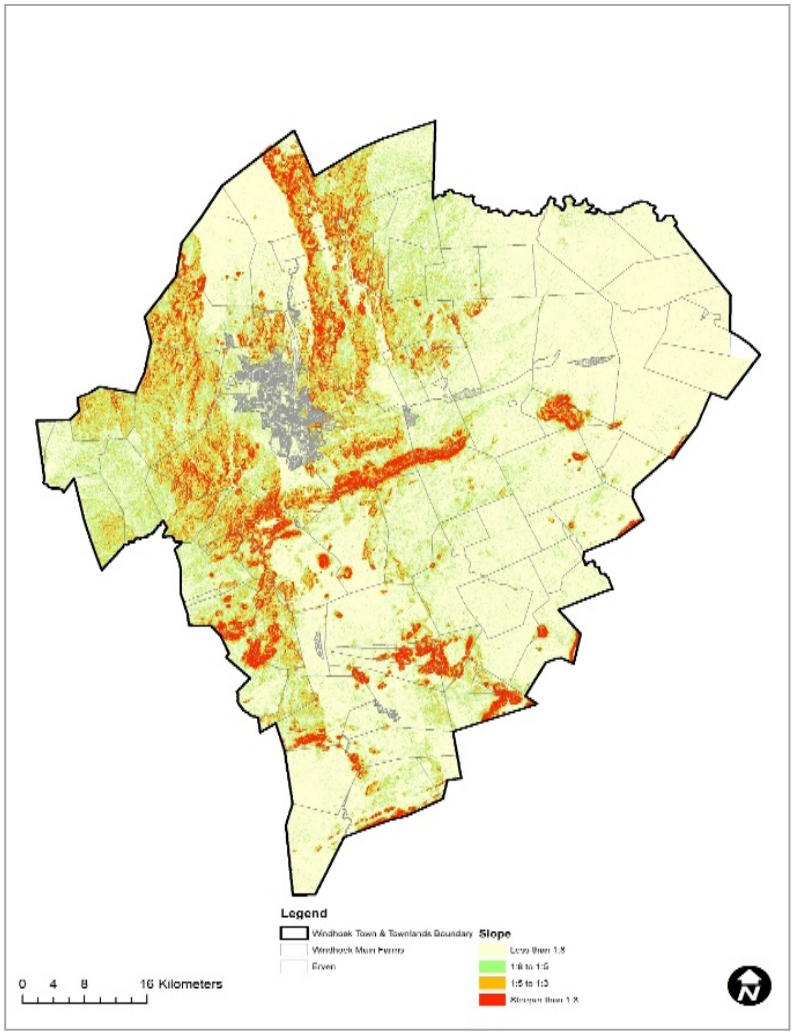


Figure 3: Metropolitan Slope Analysis

Although these settlements have made private arrangements to obtain engineering services to meet their needs (access roads, water, electricity, refuse removal and sewerage treatment), their supply of water comes from the limited amount available to the whole Windhoek area. Furthermore, most of the newly established scattered settlements make no provision for lower income households. Residents from these settlements depend on job opportunities and social services located in the central city. The result is that vehicular traffic has increased in the three major directions of expansion being north, east and south.

As shown in the figure, the city is located in a basin with the very sensitive Windhoek aquifer to the south, and mountainous areas to the south, west and east. The basin opens and flattens out to the north, and includes the Brakwater area. Current service infrastructure is limited to the Windhoek basin.

No utility services are available outside the existing footprint. Private developments have constructed their own bulk and reticulation networks and water and electricity is provided either by themselves or by the utility companies, namely NamWater and NamPower.

Infrastructure for sewage treatment is limited to the indicated catchments only. Currently, only the Gammams and Ujams sewer catchment areas can be provided with a sewer connection. Other catchments lie in close proximity to these and it is possible, through the use of pump stations, to connect these with the existing waste water treatment plants. However, the other catchments all would need completely new bulk infrastructure.

Geological features of sensitivity include quartzites, micaceous quartzites, fault or brecciated zones and surficial deposits of sand, gravel and calcrete. These units typically have a porous matrix which is vulnerable to contamination. The Windhoek metropolitan area falls completely within the Highland Savannah Biome of central Namibia. This biome is characterised by semi-arid climatic conditions with a relatively high variety of geomorphological features. This affects the local soil types, hydrology and the local climate.

The Windhoek Aquifer is located mainly on townlands to the south of the city, extending northwards from the Auas Mountains for 20 to 25 km as far as the city centre. The protection of the aquifer forms part of the Windhoek Managed Aquifer Recharge Scheme. Under the scheme the aquifer is recharged as an emergency water supply to the city during times of limited surface water availability.

3.2 At the City-Wide Scale

3.2.1 Population, Housing and Employment

The recently released 2023 Population and Housing Census Preliminary Report found the 2023 population of the city to be 486 169 living in 144 854 households. By 2041, this is expected to grow to 806 208 residing in 379,477 households, with a mean household size of 2.66 persons per household.

Population censuses and surveys undertaken in 1995, 2001, 2011 and 2016 revealed that there are some 134,000 dwellings in Windhoek, of which 42.5% are detached or semi-detached houses, 10,6% are apartments/flats and 43.3% are improvised shelters, including shacks. The vast majority of informal settlers live on unplanned and unserviced land without secure title and therefore have little opportunity to incrementally improve their housing conditions.

Unemployment is a major issue that urban economies need to deal with to ensure sustainability. The Table shows how unemployment increased from 2013 to 2018.

Table 1: Unemployment in Windhoek 2013 - 2018

Khomas Region	2013	2016	2018
Unemployment Rate	27.7%	28.4%	31.5%
Youth Unemployment	36.7%	37.5%	43.0%

These figures are important for the city since unemployment (especially youth unemployment) is on the rise. Together with a high population growth rate, this trend emphasises the importance of local economic development and the need to transform the local economy.

3.2.2 Spatial Characteristics and Broad Land Use

Following the country's independence in 1990, the Windhoek Municipal Area comprised some 10 farms measuring over 53,000 Ha. These were owned almost entirely by the Council, which meant that the City was fully in control of its expansion. This situation has now changed radically. Future long-term growth must look

beyond the City's pool of townlands and has therefore become reliant on privately owned farms to accommodate growth. The main impact of this is that more emphasis needs to be placed on guiding development on private land and on working in partnership with land owners to achieve the city's development objectives.

3.2.3 Urban Morphology

The urban morphology of the city is illustrated in the diagram below.

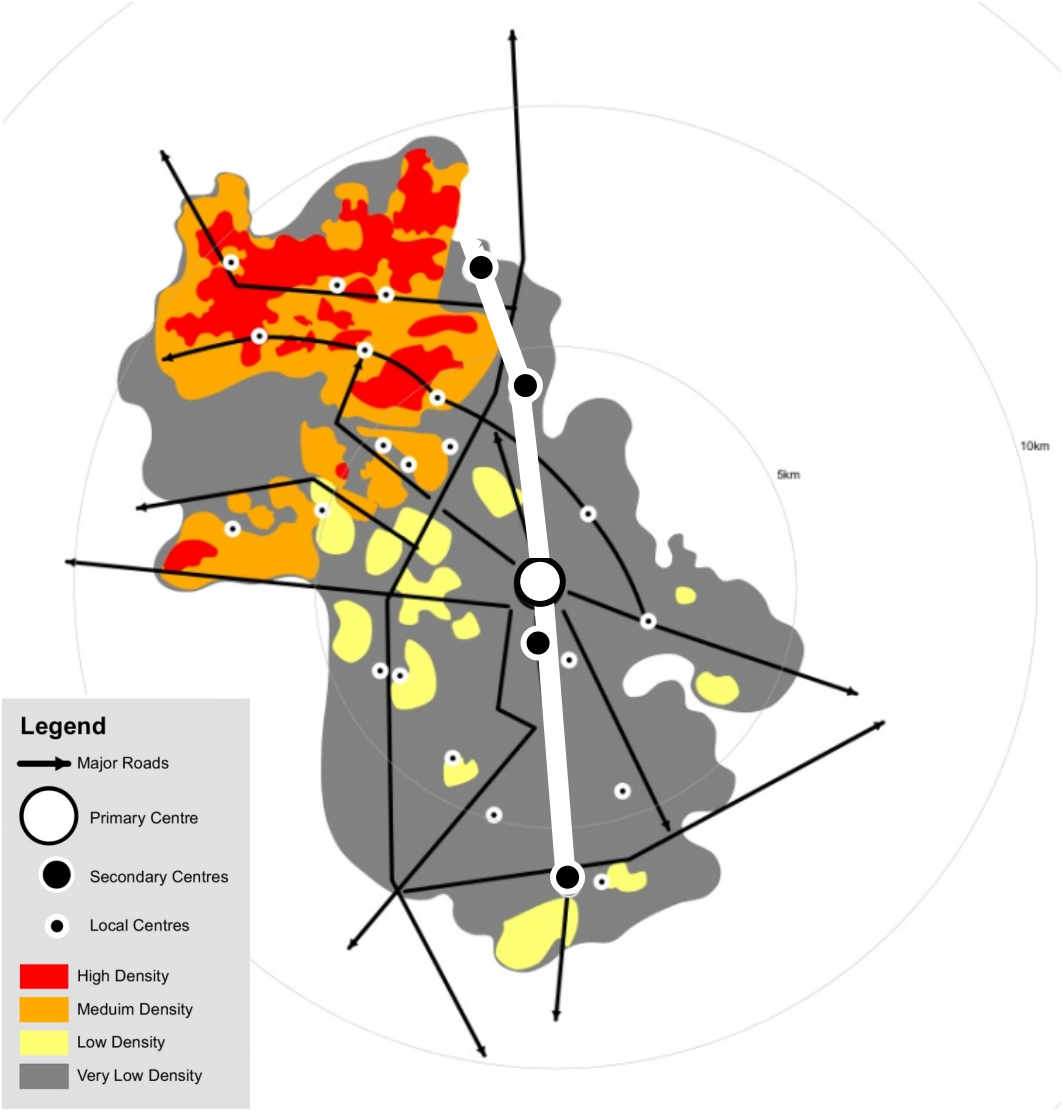


Figure 4: Illustration of the Windhoek Urban Morphology

The urban morphology of Windhoek deviates in virtually every principle from the traditional polycentric city model. . The key deviations are:

- The metropolitan core, albeit in a linear arrangement, is virtually devoid of any high density development;
- The high density areas of the city are mostly found in the north western suburbs and the informal settlement areas. Yet, those areas are not supported with any form of economic or employment nodes;

- There is therefore a mismatch between higher density residential areas and areas of job availability;
- The nodal structure is largely undefined and, generally, it comprises a concentration of a few business zoned erven without a logical nodal structure;
- Built densities are so low that transit orientated development cannot be considered in its current state;
- The larger part of the city is covered with low density suburban development and single use zoning which does not contribute to an integrated city form and reflects the legacy of the pre-independence planning philosophy of separate development;
- There is an unequal density of amenities. Whereas the north-western suburbs accommodate 76% of the population, only 50% of schools and 20% of hospitals are found there;
- Land use throughout the city is inefficient. Coverage and floor area ratios are low, as is the mean gross residential density at 13dw/ha if the informal settlements are included. If informal settlement is excluded; then the gross density decreases further to 7.75 dw/ha.
- Single residential subdivisions throughout the city constitute the major layout characteristic, and this has led to social and economic exclusion;
- Transport reigns supreme over transit. The city form mitigates against the viability of transit systems. The road classification and access management system contributes greatly to urban sprawl.

3.2.4 Utilities and Infrastructure Networks

Networked municipal infrastructure (water, sanitation, electricity and roads) are concentrated in the Windhoek Urban Core. Developments outside the existing municipal services footprint will require the creation of new municipal infrastructure networks. The form of future growth will have to follow the likely spatial development of five key infrastructure services; water, sanitation, roads, transportation, electricity and ICT networks.

It must be emphasised that the proactive provision of infrastructure can act as a powerful incentive to achieve spatial development efficiencies. Conversely, withholding (especially bulk) infrastructure can act as a powerful disincentive to counter urban inefficiencies such as sprawl.

3.3 Key Challenges and Drivers

The Table below provides a summary of the key spatial challenges which the Structure Plan needs to address and of the related key drivers of change that the plan must respond to at metropolitan and city-wide levels.

Table 2: Main Challenges and Drivers of Change

CHALLENGES	DRIVERS OF CHANGE
It is likely that pressure for development outside the existing footprint of the city will increase. A policy on how to deal with this need to be formulated to guide such applications.	Population growth and the desire of more affluent residents of the city to live outside of the city in lifestyle estates. The deteriorating situation with respect to safety and security in the city strengthens this driver.
The COW is not in a position to provide infrastructure services in the extended boundary area and this will continue to be driven by private development.	Increased emphasis on sustainability of resources and finances.

Developments outside the existing footprint of the city are accessed via the national road network and care needs to be taken to ensure the proper functioning of the national road system providing access to the city.	
History shows that private developments do not provide serviced land and housing satisfying the need of the entire affordability spectrum. The challenge lies in ensuring integrated neighbourhoods with mixed density, mixed land use, mixed income groups and provision for the full range of social services in such developments.	Increased emphasis on the creation of integrated urban settlements rather than pockets of affluent gated communities.
Formulation of practical, implementable and feasible development agreements wherein consumers are protected, minimum requirements are set, contributions to the city are agreed and inclusivity is guaranteed.	An increase in the holding cost of land within the metropolitan boundary, which is likely to lead to more and more subdivisions and township establishments being applied for.

4 WINDHOEK 2041: FUTURE SPATIAL VISION

(Where do we want to go?)

4.1 Finding the Strategic Direction

An in-depth consultative workshop was held with the political and executive leadership of the City of Windhoek on 22 and 23 February 2021. The findings of this workshop, together with the challenges identified from the status quo investigation and with relevant international, national and local guiding policies were combined to formulate a vision for the spatial development of the city for the next 20 years. It is evident that the COW faces a number of challenges to transform its spatial form to create an inclusive, fair and vibrant city with suitable opportunities for all its residents while remaining economically, financially and environmentally sustainable. Dealing with these challenges will require strong resolve as well as decisive and planned interventions.

The future spatial vision for the Structure Plan has been based around five fundamental aims which are depicted and elaborated in the "hand diagram" below. These aims are growth, transformation,spatial justice, economic growth and sustainability.

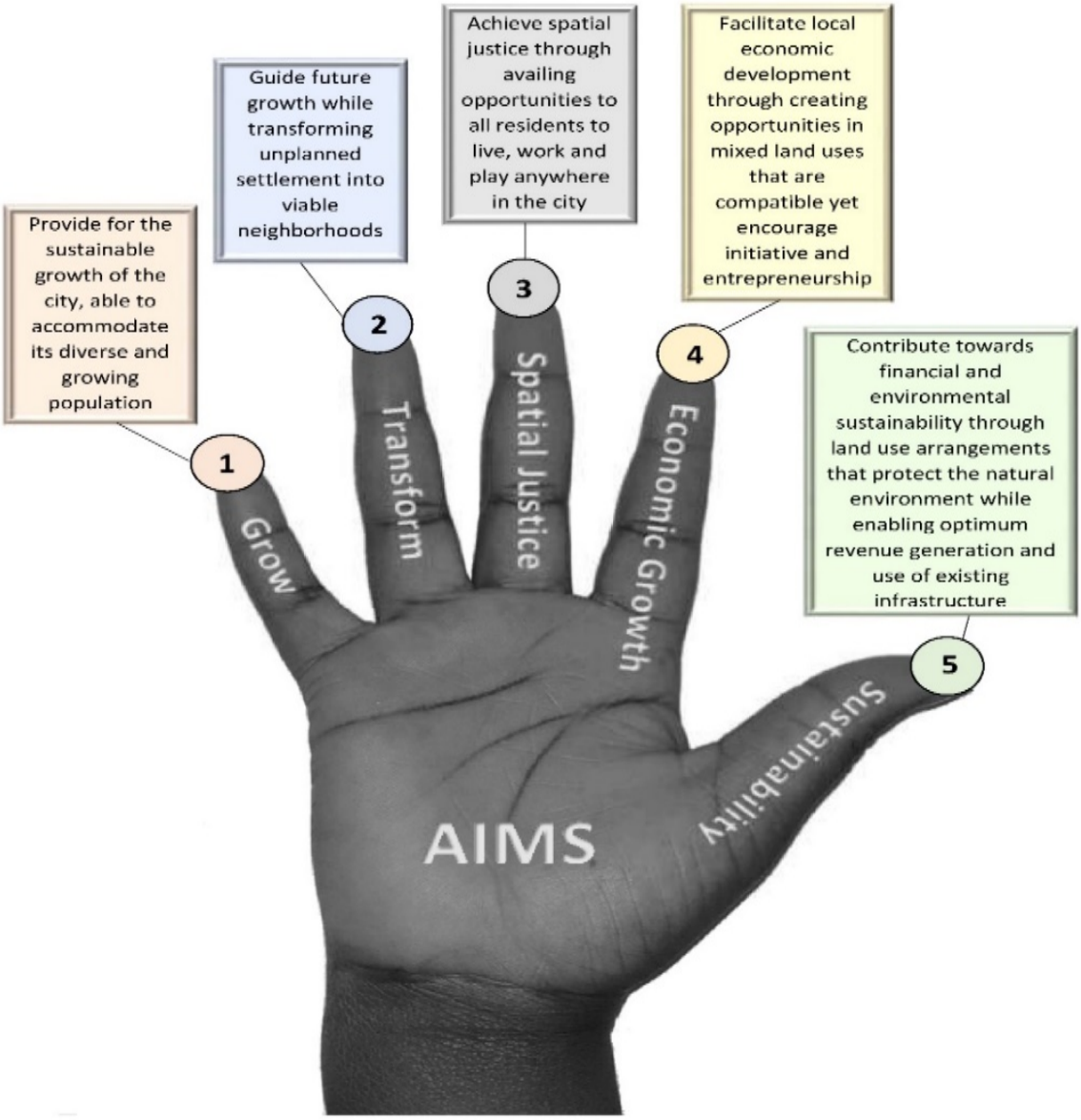


Figure 5: The Five Aims of the Windhoek Structure Plan

Based on these five broad aims a number of objectives and spatial opportunities were identified for further elaboration in the Spatial Development Framework. These are set out in the Table below.

Table 3: The Objectives and Spatial Opportunities of the Five Strategies underpinning the WUSP

STRATEGY	OBJECTIVES	SPATIAL OPPORTUNITIES
GROW **The Compact City: Targeted growth**	▪ To provide for growth driven by population pressure ▪ To optimise the use of land and services without compromising the natural environment ▪ To limit urban sprawl ▪ To limit the development of rural land ▪ To facilitate viable public transit ▪ Avoid the creation of new structural imbalances in the delivery of services ▪ To use infrastructure as efficiently as possible	▪ Densification ▪ Intensification of land use through infill and using land for its highest and best purpose ▪ Strengthening the urban core ▪ Re-purpose and use unused and underutilised land more effectively ▪ Mixed land use with diversity of people - ages, income levels, cultures, races ▪ The establishment of a firm urban edge ▪ Focused development areas ▪ Focus and limit development outside the urban edge
TRANSFORMATION **Transformative City**	▪ To transform informal settlement into viable neighbourhoods ▪ To provide space for economic and social activities to flourish ▪ To improve urban quality and the public realm ▪ To improve the way in which people can move through the city	▪ Designate land for the decongestion and upgrading of informal settlement areas ▪ A system of nodes and corridors to facilitate intensification and reach the required thresholds for public transit and unlock economic opportunity ▪ The provision of urban design guidelines to guide future urban development and township establishment ▪ NMT opportunities to facilitate walking and cycling as important means to travel
SPATIAL JUSTICE **Inclusive City**	▪ To avail opportunities for the entire spectrum of the city's residents ▪ To promote social interaction and break the barriers of social, spatial and economic segregation. ▪ To include all income groups in the virtues of city live	▪ Nodes and corridors of opportunity ▪ The introduction of a mixed land use zoning allowing diversity at all levels ▪ Opportunities within the existing urban fabric to provide affordable accommodation enabling the poorer residents to live closer to the main areas of employment
ECONOMIC GROWTH **Economically Progressive City**	▪ Create and maintain employment generating growth ▪ To enable access to economic opportunities for all including SMME and emerging entrepreneurs ▪ To cut red tape that negatively impact on the propensity to invest or start a business ▪ To lessen rather than increase regulatory requirements to an appropriate level.	▪ Nodes and corridors of opportunity ▪ Making it easier to enter the formal economy through availing opportunities that were not available to date ▪ Deregulate and make it easier to set up permissible business
SUSTAINABILITY **Financially and Environmentally Sustainable City**	▪ To use spatial levers to maximise the financial sustainability of the city form ▪ To secure finance to execute the spatial opportunities identified to reach the objectives of the plan ▪ To secure financial partnerships to deal with the COW's shortfall resulting from un-mandated services ▪ To protect the natural environment and critical natural assets ▪ To enhance the ability to withstand shocks and adapt to climate change ▪ To continuously innovate and transform to deal with unexpected events and trends.	▪ Use the resources (land and services) of the city optimally (densification, intensification, infill repurposing, mixed land use, the 60/40 principle) ▪ Identify and protect critical natural assets of the city to maintain biodiversity and ecosystem services ▪ Protect the vulnerable southern aquifer ▪ Built climate change risks into urban layouts, especially related to flooding and drought conditions resulting from increased variability in rainfall ▪ Lessen the city's carbon footprint through promoting NMT and transit oriented development

5 SPATIAL DEVELOPMENT FRAMEWORK

(How do we get there?)

5.1 Spatial Strategies

In line with the future spatial vision, the Structure Plan responds to identified challenges through the implementation of five key spatial strategies:

Building a Compact City with targeted growth,
Building a Transformative City
Building an Inclusive City,.
Building an Economic Progressive City, and
Building a Sustainable City

Although these strategies are the same throughout the structure plan area, their application differs depending on the scale. At the Metropolitan level the emphasis is largely on the control, growth and consolidation of existing small settlements. The emphasis within the city-wide area is on guiding development towards set spatial, social, economic and infrastructural objectives. The strategies, policies and desired outcomes for each of the five spatial strategies are summarised in the Tables which follow.

More detailed requirements, guidelines and desired land use outcomes are set out in the Structure Plan Report itself.

Table 4: Spatial Strategy 1

SPATIAL STRATEGY 1: BUILDING A COMPACT CITY WITH TARGETED GROWTH	
METROPOLITAN SCALE	**CITY-WIDE SCALE**
Two sub-strategies are envisaged: Control development outside the city boundary by supporting the urban edge. Allow limited rural residence on farmland to cement the existing situation, but limit it to particular areas. Discourage the subdivision of rural farmland for the purpose of settlement outside of the nodes and designated areas. Encourage integrated settlement patterns by ensuring that any new townships comply with the inclusionary housing policy of the City. The city will define two nodes around Aris and Kapps Farm and guide development within these at an appropriate level.	Four sub-strategies are envisaged: *Limit Urban Sprawl by* • Establishing a firm urban edge and concentrating development through the employment of various planning levers such as densification, intensification, infill, repurposing and redevelopment. • Take all possible measures to prevent people from settling spontaneously in unplanned areas. *Designate land for future Township Establishment by* • Identifying municipal land for future development • Considering available private land and set favourable conditions for developers • Acquire suitable privately owned land for city-led development *Optimise the use of existing infrastructure by* • Upgrading existing services rather than developing new sprawling infrastructure *Consider future transport requirements by* • The eventual development of a public transit system, balanced with strategies to reduce the need to travel long distances to work. Develop opportunities for walking and cycling.

Table 5: Spatial Strategy 2

SPATIAL STRATEGY 2: TRANSFORMATIVE CITY	
Metropolitan Scale	**City-Wide Scale**
Three sub-strategies are envisaged: Ensure sustainable service provision by instituting a system of development agreements to set the requirements of the city in terms of service provision, settlement management and rates and taxes. Protect the Public by requiring proof of sustainable service provision and a viable management system for any development in the metropolitan area, Provide space for economic and social activities to flourish by enforcing the COWs town planning standards and layout design guidelines for all township establishment applications.	Three sub-strategies are envisaged: Transform informal settlements into viable neighbourhoods by • Gradually upgrading settlements through a combination of in-situ upgrading and greenfields development, thereby transforming them with essential social services and economic opportunities. • Making suitable land available through the timeous planning of new erven. Provide suitable space and opportunity for economic and social activities by • Ensuring that all future planning layouts provide a full range of land uses to promote sustainable neighbourhoods and by emphasising viable nodes of social and employment opportunity. Improve urban quality throughout the city by • Planning for the integration of land uses with transportation opportunities, open spaces and streets and building forms which promote social activity and improved quality of life.

Table 6: Spatial Strategy 3

SPATIAL STRATEGY 3: INCLUSIVE CITY	
Metropolitan Scale	**City-Wide Scale**
One sub-strategy is envisaged: Create opportunities for the entire spectrum of the area's residents by promoting social interaction and by breaking the barriers of social and economic segregation through the strict application of planning guidelines and the provisions of the National Housing Policy.	Three sub-strategies are envisaged: Provide opportunities to attain quality of life for all city residents by • The creation of integrated and sustainable neighbourhoods, the provision of opportunities for housing and the support of economic opportunities for both large and small business. • Progressively improving urban quality wihin the CBD, business nodes and residential neighbourhoods through the application of suitable urban design principles. Promote integration and break the barriers of social, spatial and economic segregation by • Widening options of where to live for all residents across the affordability spectrum. • Strengthening the urban core by making it inclusive, lively and attractive for residential options. Ensure that development is integrative and inclusive by • Ensuring that new residential development provides a variety of opportunities for a cosmopolitan mix of land uses, affordability options and business opportunities.

Table 7: Spatial Strategy 4

SPATIAL STRATEGY 4: ECONOMICALLY PROGRESSIVE CITY	
Metropolitan Scale	**City-Wide Scale**
Two sub-strategies is envisaged: Attend to Local Economic Development at Groot Aub by ensuring that future planning within the settlement allows access by the community to agricultural land, which is their primary source of income. Ensure a balance between residential uses and business and industrial growth through proactive layout planning and development control throughout the metropolitan area.	Three sub-strategies are envisaged: Promote and maintain business and employment generating growth by • Expanding opportunities for the establishment of large and small business through the revitalisation of the CBD and by enabling the progressive development of nodes and corridors of opportunity. • Determining guidelines and standards to halt the practice of single land use and land segregation. • Supporting investment through improved information, the promotion of integrated planning and the removal of red tape. Enable access to economic opportunities for all by • Unlocking employment generating opportunities within the city's marginalised areas by supporting the development of small business.. • Designating land for the expansion of large scale business and industrial land use and by establishing residential settlement in close proximity. Integrate land use with economic and transport planning in order to support future public transport by • Integrating the development of higher level activity nodes and corridors with the provisions of the Sustainable Urban Transport Master Plan.

Table 8: Spatial Strategy 5

SPATIAL STRATEGY 5: FINANCIALLY AND ENVIRONMENTALLY SUSTAINABLE CITY	
Metropolitan Scale	**City-Wide Scale**
One sub-strategy is envisaged: Control and limit the provision of services by • Providing only essential social and health services in the metropolitan area based on an assessment of financial and economic viability. • Controling and protecting environmentally sensitive areas and areas of critical natural assets for biodiversity by requiring impact assessment and the preparation of environment management plans.	Three sub-strategies are envisaged: Apply spatial strategies to contribute to the financial sustainability of the City of Windhoek by • Working to accommodate more people within the same footprint, thereby increasing income from rates and taxes and ensuring the optimal use if infrastructure. This involves the promotion of the spatial policies of densification, intensification, repurposing, the use of unutilised or underutilised land and the strengthening of the CBD core. Protect the environment and critical natural assets by • Directing growth away from sensitive areas (especially the southern aquifer) within the city. Direct growth away from all areas at risk from natural hazards. • Protecting farming areas from urban encroachment and support appropriate development in the peri-urban areas. • Reducing the impact of urban development on downstream river systems and dams through effective wastewater and solid waste management and treatment.

5.2 Metropolitan Scale: Plan Highlights

At the metropolitan scale, the emphasis is on the control, growth and consolidation of existing rural settlements and on controlling the subdivision of farmland. A number of development nodes are created, together with the corridor between Kapps Farm and Seeis. The map depicting the metropolitan spatial framework is located below.

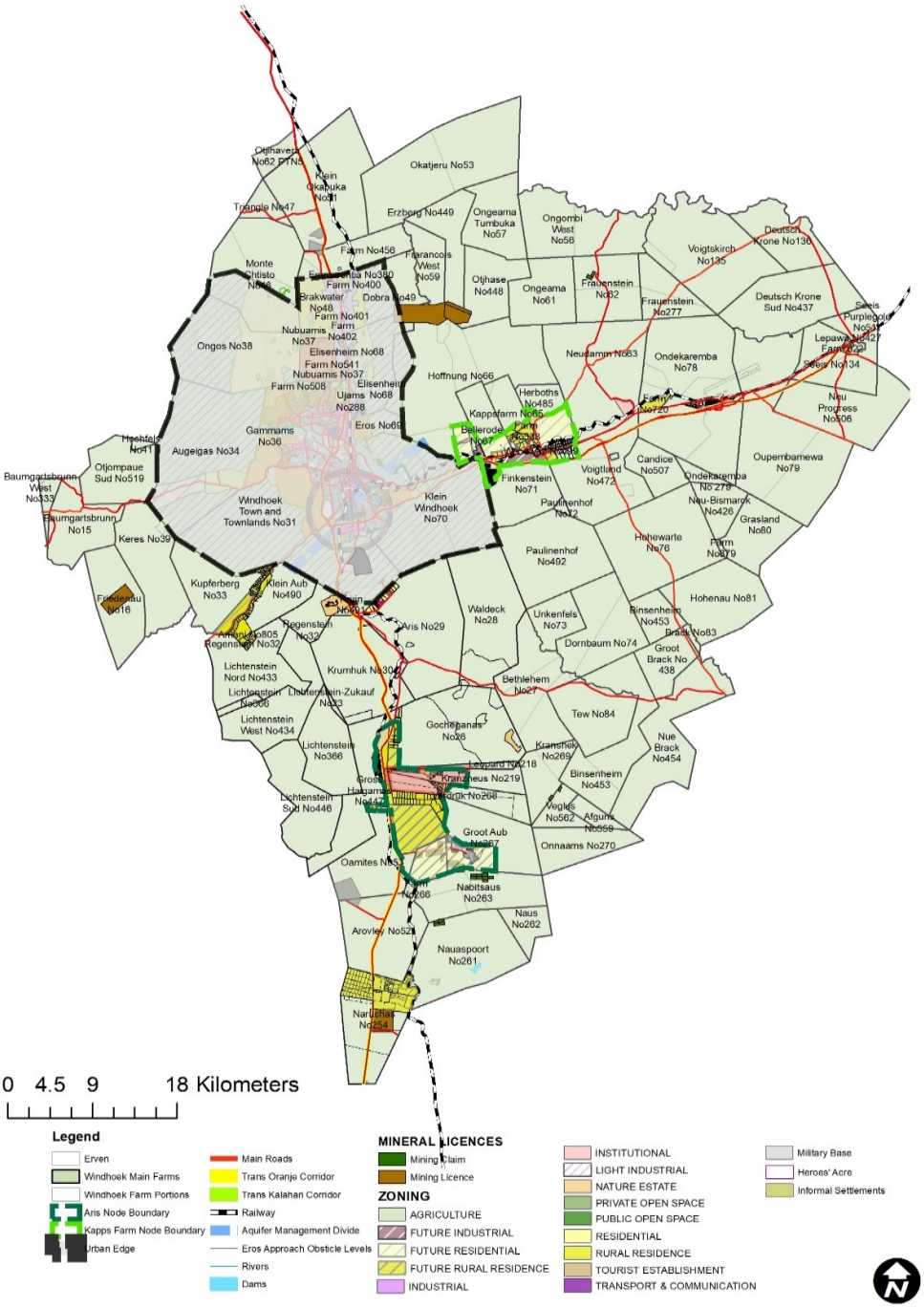


Figure 6: Metropolitan Spatial Framework

The two development nodes are Kapps Farm and Aris, which includes the settlement of Groot Aub within its boundary. Land use zonings are allocated, together with policy areas for industrial development and for existing and future residential development. Areas zoned "rural residence" will be allowed to densify. In addition to Kapps Farm and Aris, the smaller nodes of Kempinski, Kruin, Kupferberg, the Aris railway area and Aredareigas Nature Estate are also subjected to growth and policy prescriptions.

Also of importance is the Kapps Farm to Seeis Corridor (depicted in the figure below) which has major infill capacity following the construction of the new airport freeway.

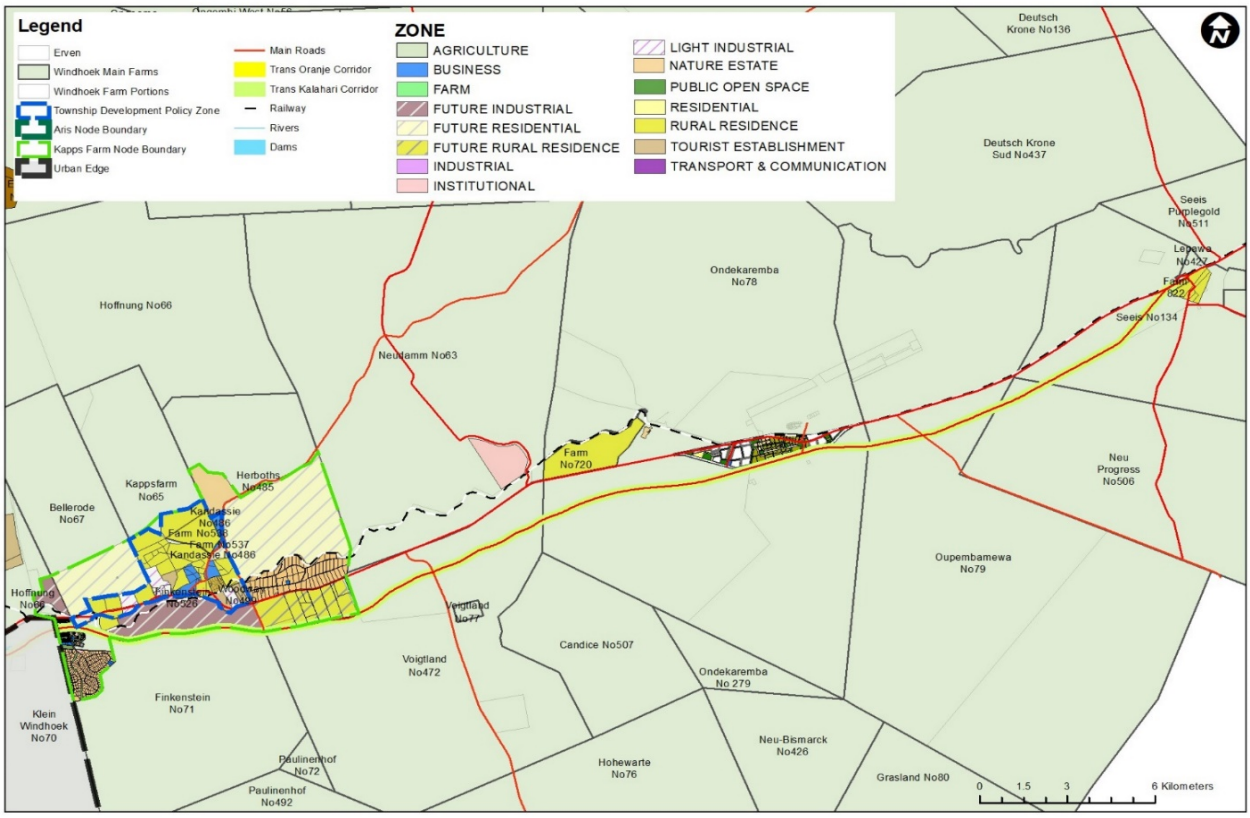


Figure 7: Area from Kapps Farm to Seeis

However, given the slow uptake of previous development in the area (including Ondekeremba, Sonneleit and Sungate), the COW will not allow further subdivision of farms along this corridor. This is to support the vision for a compact city.

5.3 City-Wide Scale: Plan Highlights

At a city-wide level, the Structure Plan seeks to guide development towards set spatial, economic, social and infrastructure objectives. These are set out in the Tables above. Policies and prescriptions are made, inter alia, for the creation of a strong urban edge, on the proactive revitalisation of the CBD, on revised density and bulk provisions and on the deployment of city owned and private land to keep up with demands for growth and for dealing with informal settlement. A system of nodes and corridors are proposed in the context of existing, interim and future policy zones. Important proposals are made for the achievement of financial sustainability and for the protection of critical natural areas.

The map depicting the city-wide spatial framework is located below. Five components of the framework are worth highlighting.

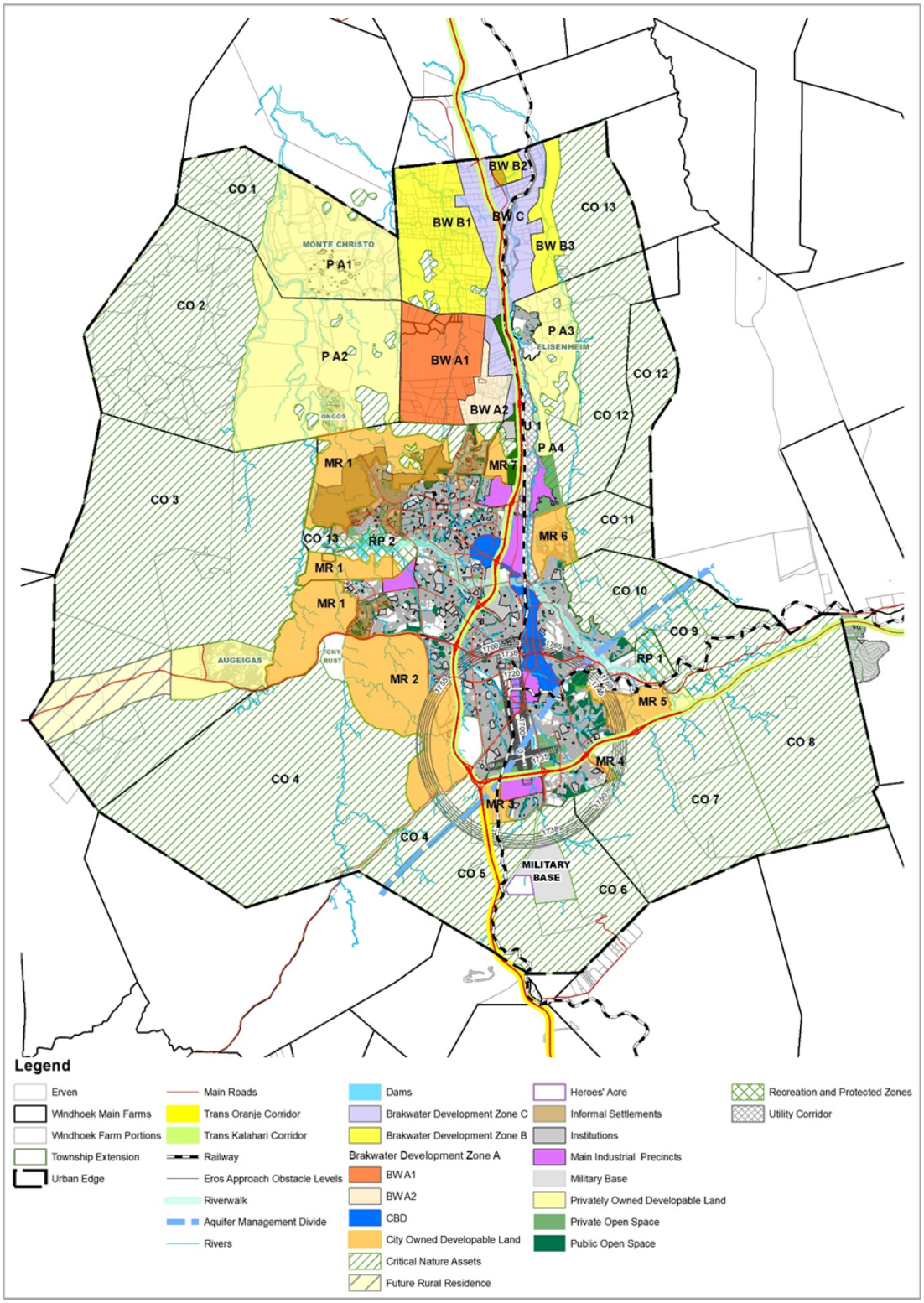


Figure 8: City-Wide Spatial Framework

5.3.1 Land for Future Growth.

The areas marked **MR**, **PA** and **BW** are areas reserved for future residential development on both city-owned and private land. Areas marked **CO1 -13** are identified for environmental protection due to their mountainous character. Residential development is largely excluded other than low density rural schemes. Areas **CO5 -8** incorporate Windhoek's aquifers, so development is restricted to recreational, tourist and educational activities. A strong edge is shown on the city-wide plan. It reflects the current development footprint and surrounding mountains. Its intention is to define the primary area for development and to limit growth outside this boundary.

5.3.2 Informal Settlement Upgrading

With nearly half of the city's households residing in informal settlements, areas marked **MR1** are earmarked to accommodate the overflow that will result form the formalisation of the informal settlements in the city. Informal settlement upgrading cannot be done entirely in situ and a combination of brownfield and greenfield development is required to accommodate this need. These areas are also earmarked for new greenfield development to accommodate new population growth in the lower affordability levels.

5.3.3 Brakwater Policy Zones

The existing Brakwater policy zones were amended to be more development friendly while also protecting the steeper residential areas found in Nubuamis while a central industrial spine completes the picture.

5.3.4 Densification

All low-density suburbs are subject to a general densification policy, which aims to substantially increase existing residential densities. This policy supports the rezoning of most residential erven (with a few exceptions) by a factor of two to a maximum of 1/300m^2. It also encourages subdivisions of single residential erven wherever the position of existing buildings allows. For business zones in the CBD, the existing maximum bulk provision of 4 will be increased to 6 in designated zones and to 8 where inclusionary housing is intended. Virtually all of the nodes are identified for intensification of development.

5.3.5 CBD Revitalisation and Extension

The CBD is substantially void of residential occupation and this severely handicaps its function as a lively, active and culturally rich core for the city. The COW intends to address this through the progressive encouragement of residential development in the CBD, especially in targeted areas where conditions of vacant land, blight and open space would facilitate increased bulk, densification and the implementation of urban design principles. The idea is to extend the boundary of the CBD to create a much larger area extending into Katutura (see figure below). In the Structure Plan, CBD precincts are treated in detail. Policy Zones are identified which spell out the development intention of the COW.

Figure 9: CBD Precincts

This will unlock real opportunities for more intense development within the eleven CBD precincts identified. Each precinct is given targeted strategies and policies aimed at reaching their full development potential. By way of example, the development intentions of the CBD North Precinct are depicted in the figure below.

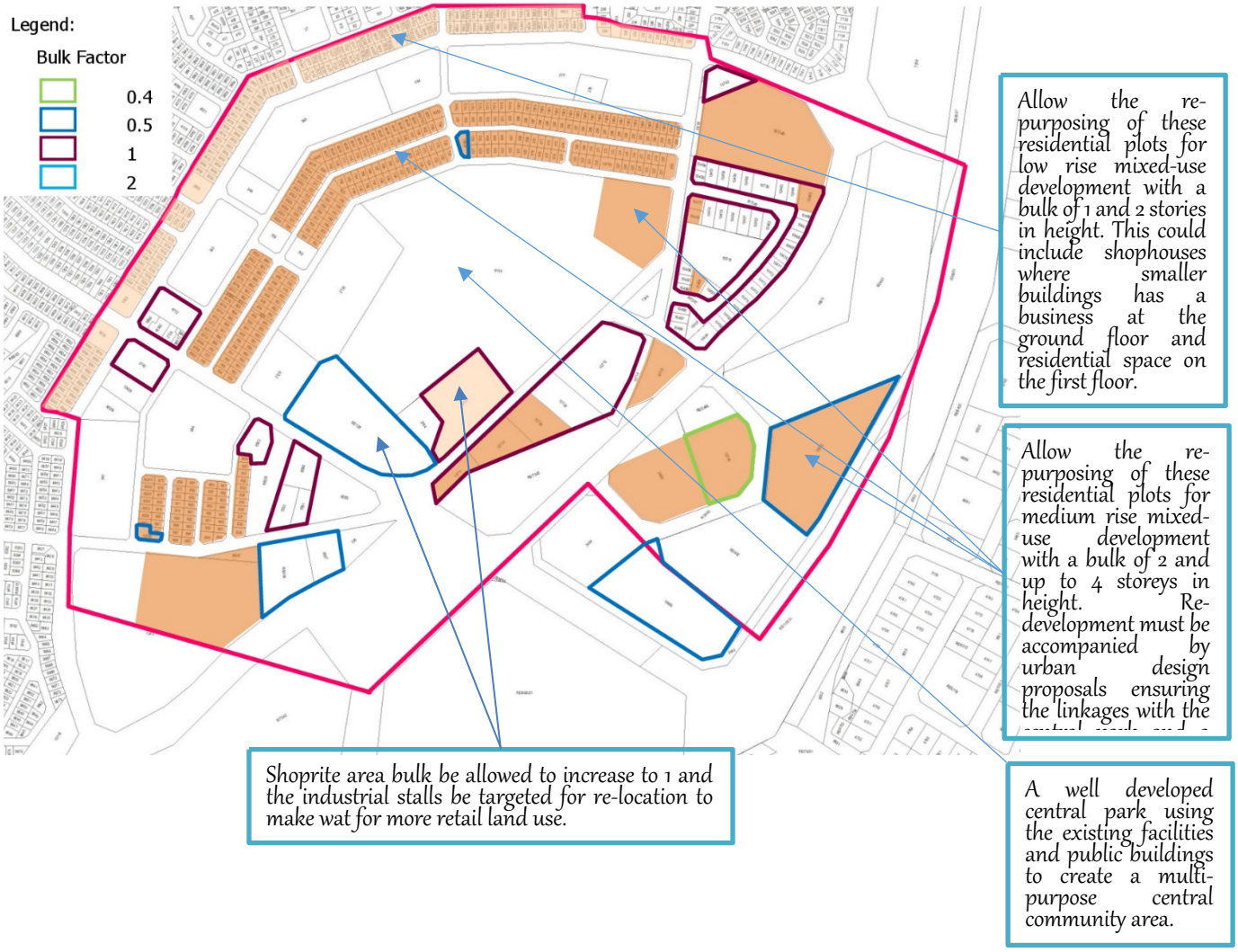


Figure 10: CBD North Precinct

5.3.6 Nodes and Corridors

Besides the intensification of use in the CBD, a system of nodes and corridors is seen as the most effective way to create more opportunities for small, medium and large businesses to establish. Nodes are areas of development that have a variety of land uses, with concentrations of density and a sense of place at the human scale. Corridors are major connections between nodes facilitating several modes of transportation. A total of 27 nodes have been identified and these are associated with the policy zones depicted on the map overleaf.

The Structure plan provides a detailed zoning map for these policy zones. In each case, the objective is to create compact, transit orientated, pedestrian-friendly areas where high concentrations of residential, employment, retail and other uses co-exist.

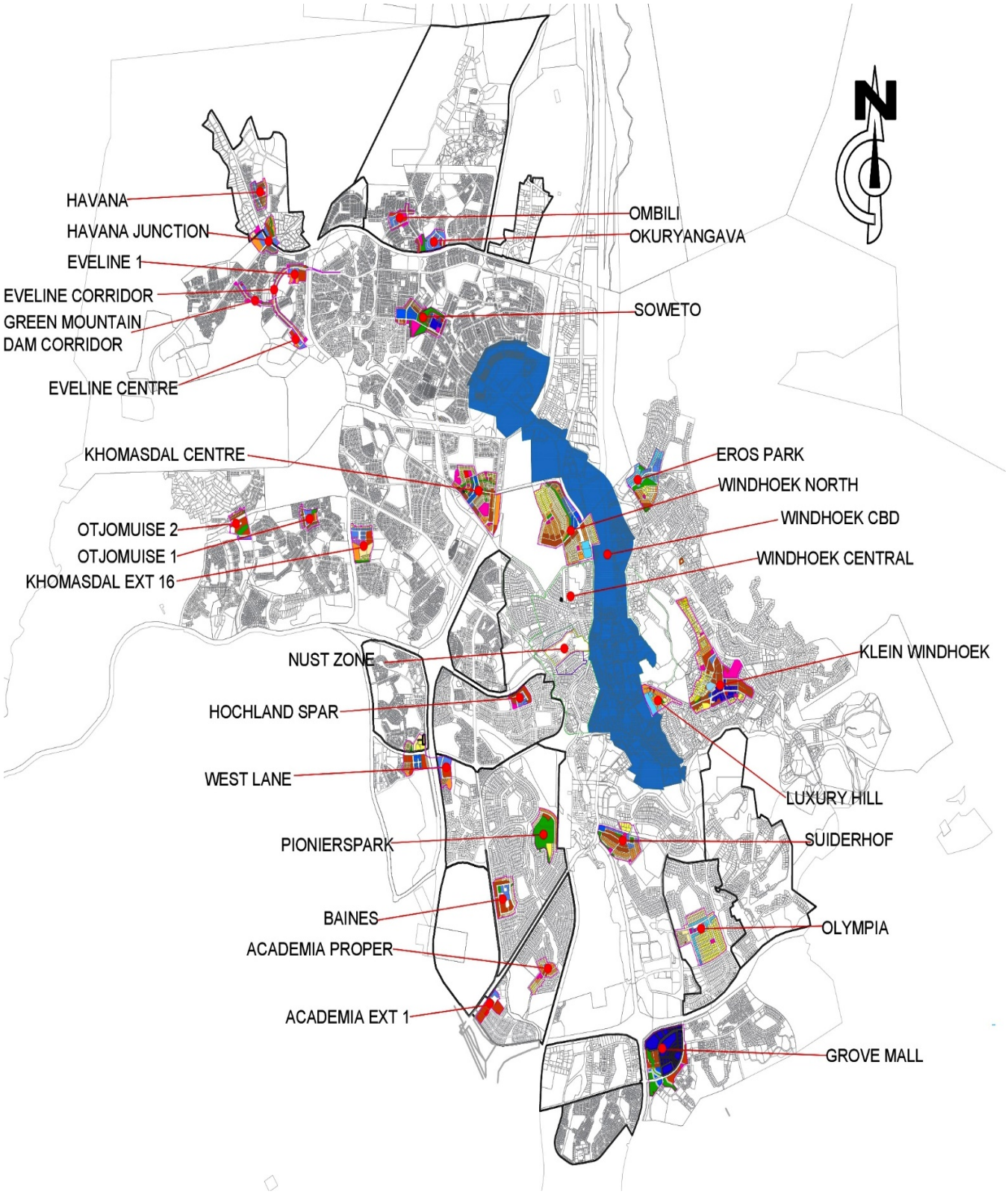


Figure 11: Locality Map of the Nodal Policy Zones

5.3.7 The River Walk

Although not shown on the policy zone map, the River Walk Corridor is a project which has long been on the radar of the City and it has been integrated into the Structure Plan outputs. The project envisages the use of the Klein Windhoek and Gammans rivers to create a cycling and pedestrian route from the Avis Dam to the Goreangab Dam with a non-motorised link between the two using the road system. The diagram below shows the 1:50 floodline and land gain in the Klein Windhoek River.

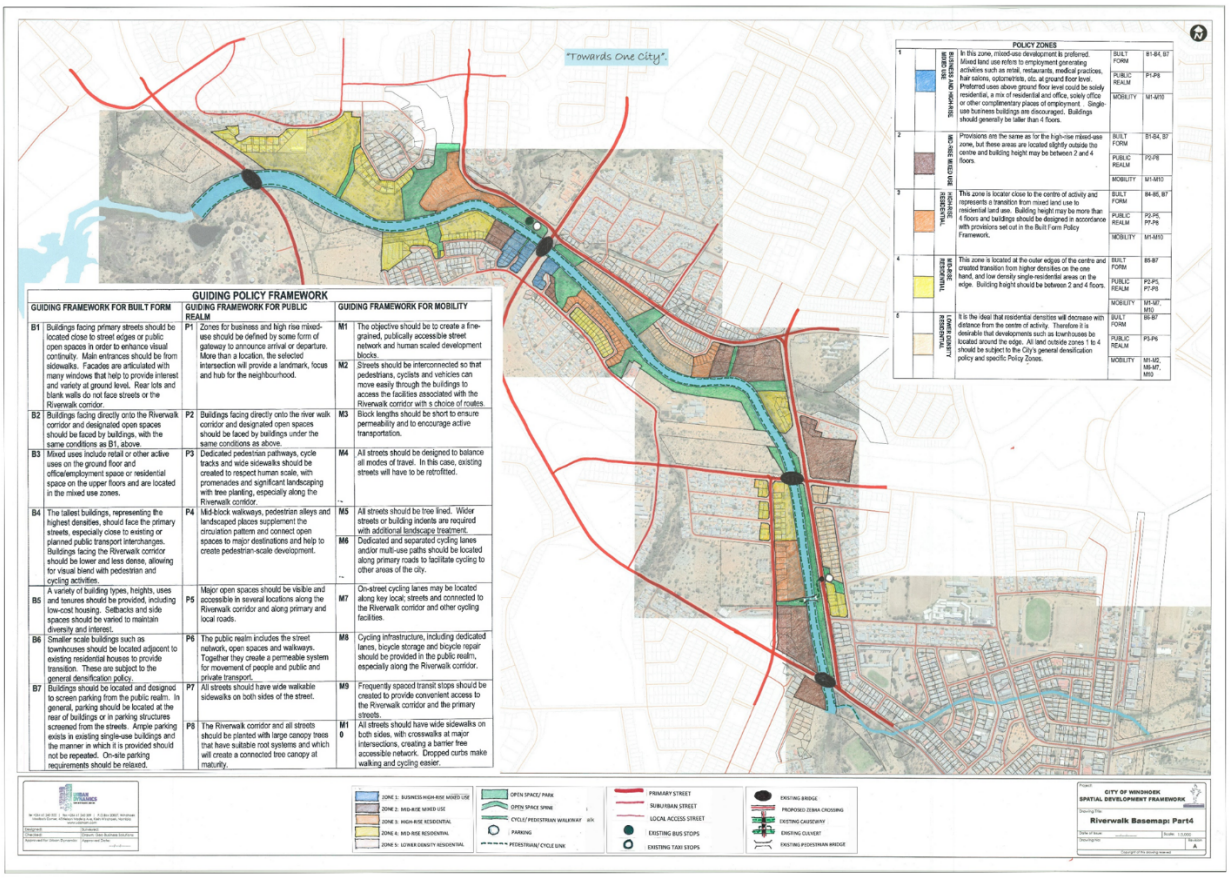


Figure 12: River Walk Part 4: Khomasdal to Goreangab Dam

The project will not only benefit the city from a tourism point of view, but it also offers the benefit of flood protection and, accordingly, of the release of a substantial amount of land freed up for development.

6 IMPACT OF THE STRUCTURE PLAN ON THE BROADER TRANSPORTATION SYSTEM

It is important that the Structure Plan and all transportation planning are fully integrated. Indeed, most strategies and guidelines for the regional and urban road systems are incorporated into the Structure Plan Five proposals in particular have direct implications on the broader transport system, and visa versa.

- *Development/Upgrading of the Okahandja, Airport and Rehoboth Freeways.*
  This will remove much of the heavy traffic from the city's urban road network. It will also downgrade the existing airport road and facilitate new developments around Kapps Farm and, to a lesser extent, around Aris.
- *Proposals for bus rapid transport and possible future light and commercial rail transport.*
  This facilitates the continuous development of nodes and corridors. The feasibility of transport systems are enhanced through general densification policies.
- *Proposed revitalisation and intensification of the CBD.*
  This will increase pressure on the CBD's road network, but will also encourage the greater use of public transport and the pedestrianisation of the CBD..
- *Proposed system of roads and corridors.*
  This may enhance the viability of public transport away from individual motorised transport.
- *General Densification Policy.*
  If not countered by a modal shift, this may contribute towards further congestion of the urban road network.

7 SPATIAL DEVELOPMENT FRAMEWORK FOR LOCAL AREAS

7.1 Local Area Plans

Local area plans are where the high-level strategic direction and supporting policies of a spatial framework are given effect. Along with larger citywide or regional infrastructure investments, they are the "implementing arm" of spatial planning. To be effective they need to harness and direct the actions and investments of both the public and the private sector. Not only must plans provide urban design guidance in terms of building form, the public realm and mobility, they must also provide guidance as to the most appropriate land use and zoning policies that would best contribute towards effective and harmonious development and growth in such local areas. Accordingly, a Local Area Spatial Development Framework (LASDF) forms an integral part of the Structure Plan, serving as a template for local area planning.

7.2 Urban Design Response to Windhoek Issues

The urban design morphology of Windhoek deviates in virtually every principle from the conventional polycentric city model. This has already been discussed in the WINDHOEK 2021 section of this Executive summary which describes the city, inter alia, as virtually devoid of high density development, as a mismatch between residential and employment areas, as dominated by single use zoning and as being non-viable to the development of public transit.

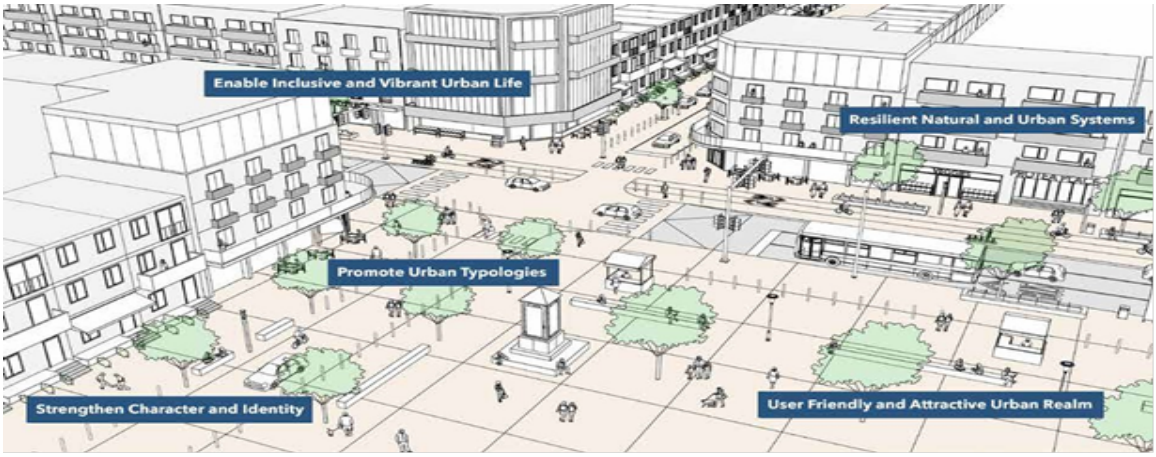


Figure 13: Urban Principles: The Good Design Guide, N T, South Africa

The key urban design strategies which are required to address these conditions, and which form the basis of the approach to the preparation of the Local Area Spatial Development Frameworks can be summarised as follows.

- Re-establish spatial structure. Reorganise access, movement, land use and activity intensity into a more legible, diverse, efficient and sustainable development pattern.
- Reimagine and reprioritise the public realm (i.e., streets, squares, parks, open space, and public buildings) as useable, functional, attractive, and meaningful "places".
- Encourage, promote and incentivise the built form of both public and private buildings so as to contribute to diverse, vibrant, safe, human scaled urban environments for people

The development objectives which attach to these responses are summarised below, but are set out in significantly more detail in the Structure Plan Report.

- Create streets that allows for mixed traffic, but which place priority on the pedestrian.
- Introduce landscaping to create a high quality and active environment by providing safe walking conditions, shelter from the elements, trees, seating and lighting.
- Create safe pedestrian environments using level crossings, wide sidewalks and paved surfaces.
- Create vibrant and safe environments with positive, active and attractive building frontages and street interface qualities.
- Allow for seasonal flexibility for parking by creating multi-functional, integrated parking & loading bays.
- Accommodate stormwater drainage within the landscaping of the street and public spaces.
- Design streets to accommodate a range of users, including pedestrians and cyclists, public transport

and private vehicles.

7.3 LASDFs Identified and Amplified in the Structure Plan

Based on the guiding principles, design responses and development objectives discussed, seventeen LASDF Nodes are identified for Windhoek and are included in the Structure Plan. These are:

Klein Windhoek Node	Ombili	Soweto	Grove Mall
Khomasdal Centre	Eveline Street 1	Eros Medical	Suiderhof
Havana Junction	Eveline Corridor	Hochland Spar	
Okuryangava Stop & Shop	Evelyne Centre	Khomasdal Ext 16	
Otjomuise 1	Havana	Baines Centre	

Each of these nodes are supported by a guiding framework together with proposals and development sketches for the built form, public realm mobility and policy zones. In the case of the Klein Windhoek Node, Khomasdal Centre and Havana Junction, these are set up respectively as examples of a Downtown Node, a Suburban Node and a Township Node. Accordingly, they are treated in much greater detail in terms of key informants, vision and concept, spatial structure, land use, public realm guidelines and specific proposals for built form. The sketches below shows the Khomasdal Centre concept diagram.

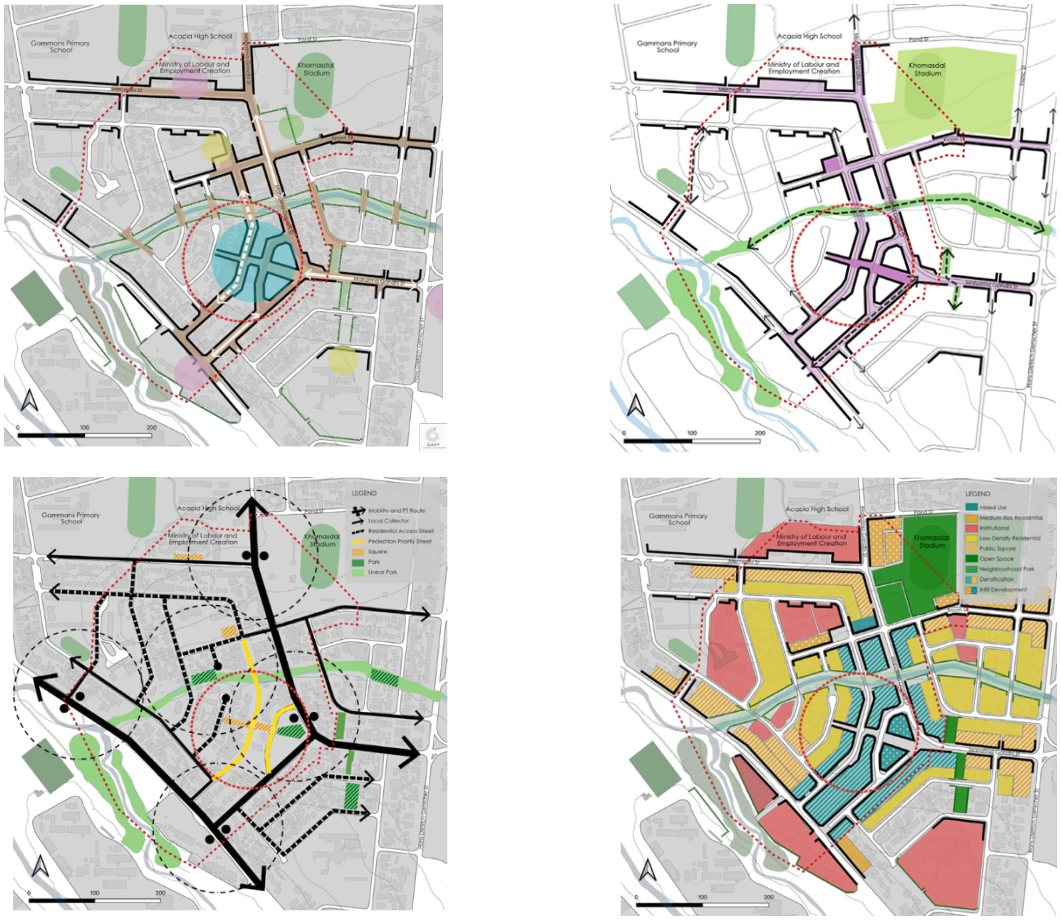


Figure 14: Khomasdal Centre Concept Diagrams

8 INFRASTRUCTURE CAPACITY, RENEWAL AND PROVISIONS

The structure plan places strong emphasis through most of its strategies on the optimal use of existing infrastructure. At the same time its main drive is also for substantial densification and intensification of land use. With a relatively old infrastructure "stock", these strategies will undoubtedly place increasing pressure on the existing ageing infrastructure. To successfully reach the objectives and spatial vision of this plan, it is of importance that infrastructure is maintained, renewed and expanded. Although the strategies of densification and intensification will be gradually implemented, infrastructure provision for new growth will directly determine the pace of implementation.

Infrastructure planning and provision must follow the provisions of the plan and align with the timing thereof, be-it for intensification, densification or new development. The land use provisions of this plan must now be followed with detailed infrastructure assessment and planning to determine what capacities are available, where it is available, how long it will be sufficient using different take-up scenarios and how renewal and expansion programmes will be rolled out.

9 CONCLUSION

The successful implementation of the decision framework of the plan is highly dependent on the resources allocated, especially regarding the infrastructure needed to support the plan policies and guidelines. However, the plan provisions are designed to be resource efficient in order to service as many people as possible on limited infrastructure.

The successful implementation of the Plan will require strong resolve, good cooperation between all role players and timeous planning to respond to the rate at which residents are ready to take up the opportunities that are unlocked.

As a planning decision framework, the Structure Plan provides the required guidelines and clear intentions as to how the COW plans to deal with urban planning issues and applications.

A clear and concise implementation framework for the plan is to be developed as soon as basic agreement among stakeholders is reached. This will serve as a comprehensive but targeted decision framework on how the COW intends to apply policy in pursuit of its spatial vision for the future.