# GOVERNMENT OF GHANA

MINISTRY OF LOCAL GOVERNMENT, CHIEFTANCY AND RELIGIOUS AFFAIRS

NEW JUABEN SOUTH MUNICIPAL ASSEMBLY

GHANA SECONDARY CITIES SUPPORT PROGRAMME (GSCSP)

# PREPARATION OF A STRUCTURE PLAN FOR KOFORIDUA (2026-2041)

## AUGUST, 2026

GLOBAL DEVELOPMENT ASSOCIATES

NEW JUABEN SOUTH MUNICIPAL ASSEMBLY

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# BACKGROUND

## 1.1 Introduction

The New Juaben South Municipal Assembly has received a loan facility from the World Bank under the Ghana's Programme for Results Ghana Secondary Cities Support Programme (GSCSP). The Assembly is a beneficiary of the thirty-five (35) districts countrywide. The preparation of Spatial Development Framework and Structure Plan is one of the components of the programme. The preparation of the Structure Plan for Koforidua (Nsukwao – Adweso -Ada Structure Plan) was carried out by Global Development Associates Company Ltd in collaboration with the New Jubane South Akim Municipal Assembly.

## 1.2 Structure Plan and Planning Process

A Structure Plan is a dimensionally specific and accurate spatial plan used to guide the development or redevelopment of an urban area, town or city and its peripheries, coastal belt or other significant development area. The Structure Plan defines the land use policy goals and guidelines which are to be followed when developing zoning schemes and local plans and is to be implemented in 15 years (covering four periods of the Medium-Term Development Plan (MTDP) and will be revised at each period.

The Structure Plan ensures that patterns and intensities of existing and proposed development and redevelopment are coordinated to enable efficient use of resources, services and facilities. Consequently, various developments are harmonized in location, function and character to prevent land use conflicts. It also provides a coordinated approach to the provision of infrastructure and services in large developing and growing areas with different areas in order to facilitate timely delivery of basic services and facilities to the population. In order to promote public interest as well as respond adequately to various, diverse investment interests, the structure plan provides guidance and greater certainty to prospective developers, government, the general public and other interested parties regarding what is permitted or permissible in a developing or developable area.

## 1.3 Objectives

The principal objective of the structure plan is to intensify business and services, environmental sustainability and agro-industrialisation in Koforidua including its neighbouring communities.

It aims to provide a strategic and spatial direction to guide the future growth and urban development of Koforidua by translating the municipal level strategies proposed for the Municipal Spatial Development Framework into the Structure Plan for Koforidua.

### 1.4 Process and Methodology

The process adopted in the preparation of Koforidua Structure Plan is elaborated below:

*Existing Context Analysis*

In order to facilitate envisioned development of a Structure Plan for Koforidua a municipal context analysis and detailed physical context analysis of the existing area is undertaken to understand the constraints and opportunities within the planning area. The analysis involves the study of the existing settlements, transportation and infrastructure linkages, developments patterns and identify potential areas suitable for future development.

*Consideration of Existing Planning Proposals and Planning Framework*

Apart from the existing site analysis, existing planning proposals for the municipal and urban network area including transportation and infrastructure plans are studied and adapted into the detailed physical plans for Nsukwao – Adweso -Ada enclave. Similarly, all approved and on-going projects were captured and incorporated in the proposed plans. The current planning guidelines and standards in Ghana is also reviewed and adapted in the physical planning process.

*Visioning & Programming*

The projected economic and demographic outlook and community aspirations are taken into consideration in deriving the vision of Koforidua to direct future planning approach. The vision is elaborated into series of goals, objectives, strategies, and recommendations, which ultimately feeds into the development programme and form the basis for the physical planning of the urban network.

*Development of Broad Land Use Requirements*

Broad land use requirements on economic activities, housing and public facilities, along with transportation and infrastructure in Koforidua is developed based on the vision, proposed economic growth and the projected populations as a basis for the development of the physical

master plan. This incorporates the considerations of developable land and the areas to be protected from the analysis in the previous task.

*Development Principles*

Key development principles for the urbanization of Nsukwao - Adweso-Ada enclave are developed based on the existing analysis and broad land use requirements. An integrated urban hierarchy to suit the context of Koforidua is proposed, with the definition of distinct neighbourhoods and industrial zones. Employment and population distribution are also determined based on the boundaries, which will further guide the development of the land use plan.

*Development of Concept Plan*

The vision, goals and key performance indicators are translated into the concept plan with a broad land use structure. Two conceptual planning scenarios are developed to demonstrate different possibilities of land use structures of the urban network, and the preferred concept option selection is finalized with the key stakeholders. The preferred option is then further refined as the final Nsukwao-Adweso-Ada Structure Plan.

*Development of Structure Plan*

In accordance to the Concept Plan, the Nsukwao-Adweso-Ada Structure Plan is prepared focusing on the development of detailed land use strategies for various sectors such as: commercial centres, agro-industries, housing, public facilities, transportation, public transit, infrastructure, environment and recreation thereby creating a distinct identity.

*Development of Zoning Plan*

Zoning serves as an effective planning tool for city planning authorities to guide development in a logical and orderly manner. The Zoning Plan is hence prepared as a set of development regulations to guide the private landowners and developers on the development of their properties according to the Structure Plan.

*Development Phasing*

The Structure Plan is developed for a horizon of 15 years till 2041. However, an intermediate plan to showcase the priority implementation projects up to the year 2035 will accelerate the growth of Koforidua.

*Stakeholders Consultations*

Constructive and interactive stakeholders were engaged to gather valuable inputs to guide the development of Nsukwao-Adweso-Ada Structure Plan. Meetings and discussions with the members of the Technical Sub Committee, Departments of the Municipal Assembly and Traditional Authorities.

## 1.5 Legal Framework and Policy

The country has an array of policies and legal frameworks designed to guide spatial planning. This section highlights legal frameworks and policies that are relevant for Nsukwao-Adweso-Ada Structure Plan.

- Land Use and Spatial Planning Act, 2016 (Act 925)

The Act seek to revise and consolidate the laws on land use and spatial planning, provide for the sustainable development of land and human settlements through a decentralized planning system, ensure judicious use of land in order to improve quality of life, promote health and safety in respect of human settlements and to regulate national, regional, district and local spatial planning, and generally to provide for spatial aspects of socio-economic development and for related matters.

- Local Governance Act, 2016 (Act 936)

The Act seeks to ensure local governance in accordance with the Constitution, establish a Local Government Service, provide for the establishment and administration of the District Assemblies Common Fund provide for a National Development Planning System, define and regulate planning procedures of District Assemblies, to co-ordinate, facilitate, monitor and supervise internal audit activities within District Assemblies and for related matters.

- National Urban Policy and Action Plan (2021-2037)

The Draft National Urban Policy and Action Plan (NUP), first published in 2012, was revised in 2021. The NUP is an attempt to approach urban development comprehensively, to "promote a sustainable, spatially-integrated and orderly development of urban settlements with adequate housing and services, efficient institutions, sound living and working environment for all people to support rapid socio-economic development of Ghana".

- Municipal Medium Term Development Plan

The Medium-Term Development Plan sets the government's development vision as following: *"create an optimistic, self-confident and prosperous nation, through the creative exploitation of our human and natural resources, and operating within a democratic, open and fair society in which mutual trust and economic opportunities exist for all". To realise this vision, the development plan defines the following priorities:* economic growth; digitisation; science, technology, and innovation; urbanization and infrastructural deficits; youth unemployment; public health; emergency preparedness, the fight against pandemics; and climate change.

### 1.6 Report Organization

In addition to the introductory chapter, the report consists of the following chapters:

- Physical Context Analysis
- Dimensions Of Growth
- Development Vision
- Concept Plan
- Structure Plan
- Zoning Plan and Regulations
- Implementation Plan

# PHYSICAL CONTEXT ANALYSIS

## 2.1 Planning Area and Administrative Division

The establishment of Nsukwao -Adweso-Ada Structure Plan takes into consideration the existing urban developments within the New Juaben South Municipality which includes developed, undetermined, proposed, ongoing initiatives and socio-economic concerns. The Plan Area is seven (7) zonal councils with several unit committees expected to ensure development activities at the lowest local.

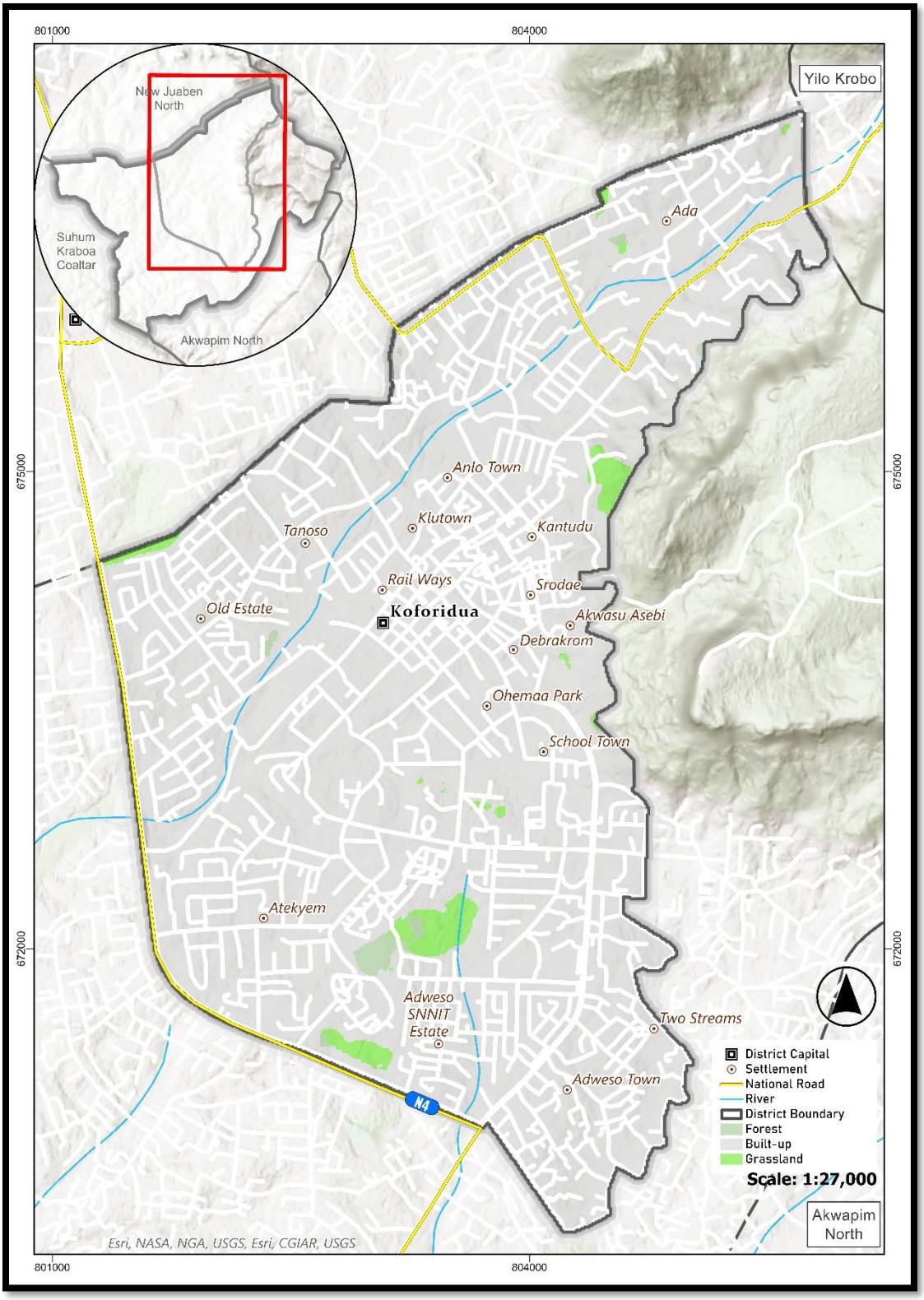
Currently, the Structure Plan area extends over an area approximately 15.88 square kilometre (sqkm). In view of the intended vision to intensify Koforidua as a Business and Services, Environmental Sustainability and Agro-Industrialisation. Nsukwao Primary node will serve as the major commercial and administrative centre in the district providing highest level of services. Adweso Secondary node will serve as minor commercial, administrative and centres providing social and economic services at the suburban scale. On the other hand, Ada serving as a Tertiary node will provide basic social and economic services at a reasonable level of accessibility within the municipality. These centres are expected to provide the full spectrum of urban services, including economic, social, engineering and administrative.

The purpose of preparing the Structure Plan is to comprehend the future needs of the growing urban area and guide its long-term development. The proposals would consider the larger planning area which includes communities outside the Plan area to accommodate increasing urban limits and ensure sustainable development till the year 2041.

### 2.1.1 Location and Size

Koforidua is the municipal capital of the New Juaben South Municipality and the primary node of all settlements in the municipal. It serves as a major commercial and service hub for all the districts and communities within its sphere of influence. It is located in the northern-eastern section of the municipality and it covers an area of about 15.88square kilometre (sqkm). It has major transport

terminal which serves as a major transport hub for the entire municipality and commutes people to and from Greater Accra, Central, Eastern, Ashanti and Volta region. Figure 2.1 to shows the location and extent of Nsukwao -Adweso-Ada Structure Plan.




GLODA, 2026

Figure 2.1 shows the location and extent of Nsukwao -Adweso-Ada Structure Plan

### 2.1.2 The Role of Nsukwao -Adweso-Ada Structure Plan

The spatial development concept for the Intensification of Business and Services, Environmental Sustainability and Agro-Industrialization development Scenario is based on the following building blocks; the provision of a green, open space system in order to protect the municipality's natural resources; the provision of an effective transport system, comprising different modes of transport, promoting public and non-motorised transport; a mix of land uses are included to create zones where transport and land use are integrated so that transit-oriented nodes can more easily develop and in doing so, support the compactness and efficiency of the municipality; and the linkage of the urban and rural areas through development corridors, nodes and functional activities.

## 2.2 Natural Environment

### 2.2.1 Topography and Drainage

The topography of an area aids as landmarks, recreational areas and rainwater catchment. The municipality is generally undulating with heights ranging between 154 meters and 286 meters above sea level and exposed to these processes.

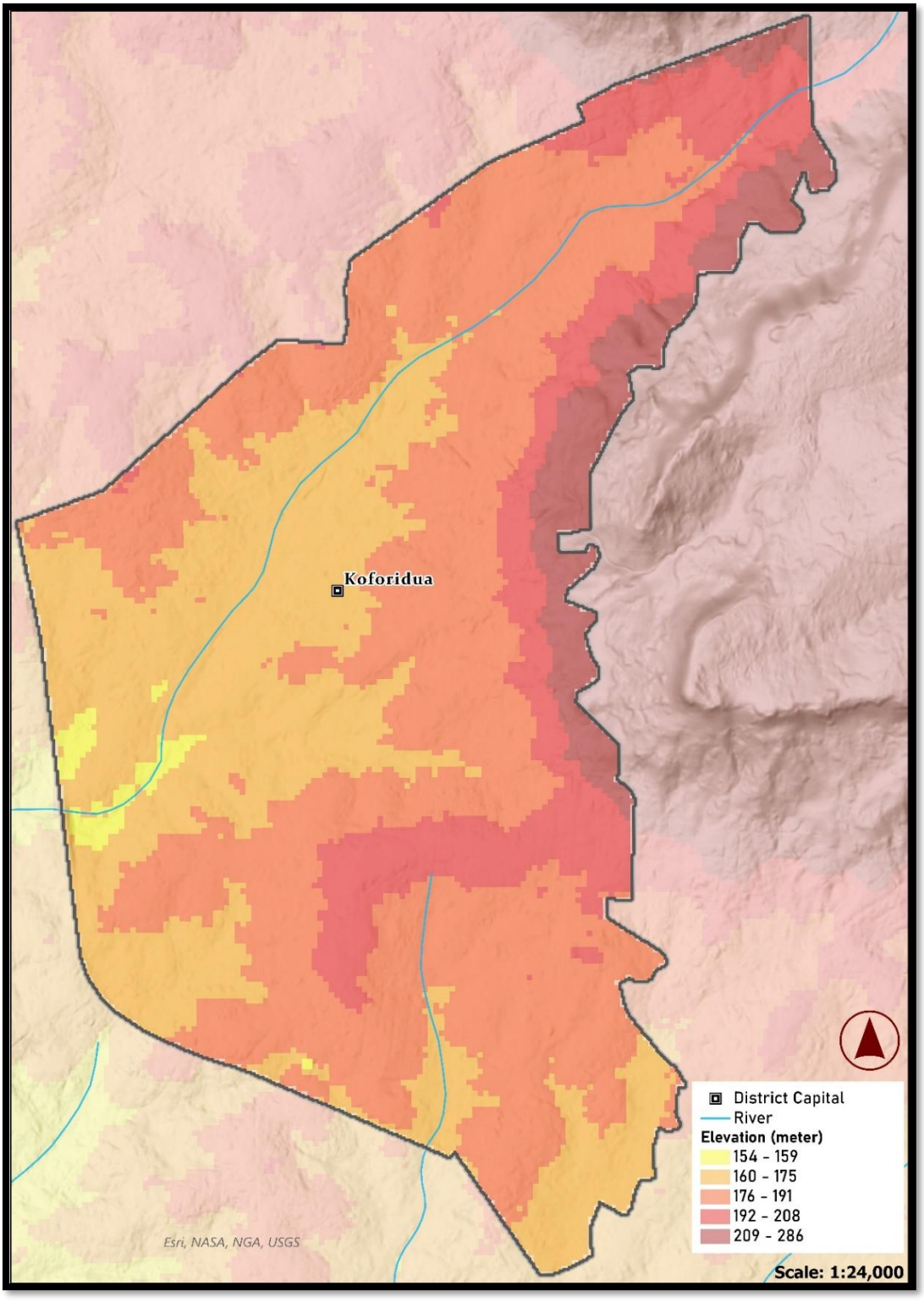
The Structure Plan area is drained mainly by the Densu River and its tributaries. The tributaries are mainly Bompom, Obopakko and Afena, Nsukwao and others. Figure 2.2 depicts the elevation and drainage of the Structure Plan area.

Key Issues

- Human activities such as development, improper waste disposal into some streams have contributed to the near extinction of some of these streams
- Flooding in low-lying areas
- Lack of drainage system;
- Blockage of drainage system by disposed garbage in the drains

Opportunities

- Flood diversion channels could be constructed to reduce the possibility of flash flooding:
- Green field sites may be allocated as a method of dealing with flood water
- Maintenance of existing storm water drains: Identify and remediate clogged drains to increase discharge capacity.
- Establishment of an integrated paved drainage network to improve drainage system;
- Opportunity to develop a sustainable storm water management system




Source: GLODA, 2026

Figure 2.2 Elevation of the Structure Plan Area

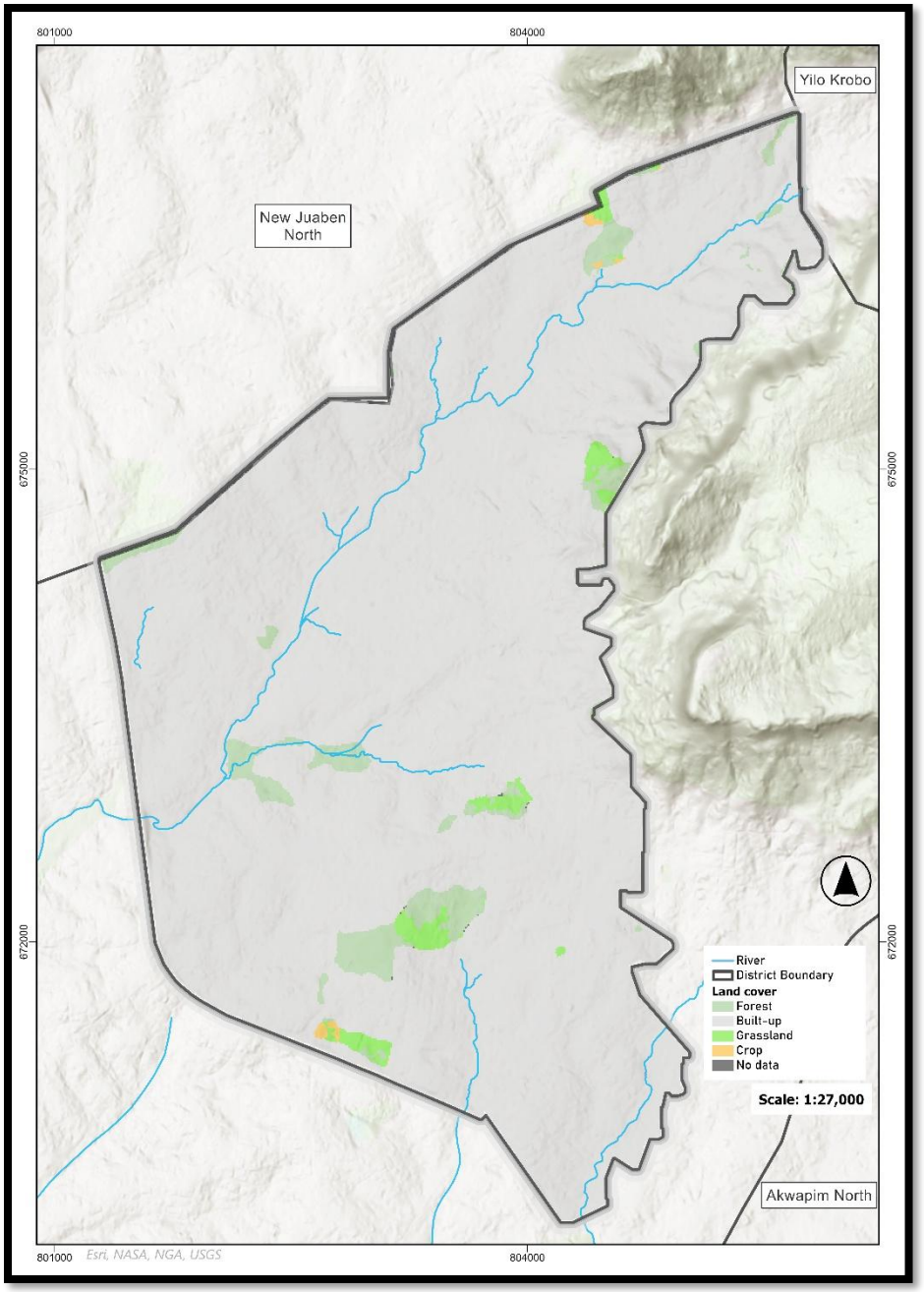
### 2.2.2 Land Cover and Change

An analysis of the land cover for the Structure Plan area covers a period of seven years (2017 and 2024). It is categorized into forest, crop, vegetation, built up and water. Table 2.1 shows the built-up in 2017 as the dominant land over at 94.9 percent, however the coverage has further increased to 96 percent in 2024. The increase in the built-up land cover can be attributed to population growth and urbanization. On the other hand, forest which used to be the second most dominant cover at 3.7 percent has reduced to 1.1 percent in 2024. The loss of the forest cover is likely to affect the environment, climate, economy, and human well-being. The loss of crop over in 2024 could lead to environmental degradation, reduced agricultural productivity, reduced soil fertility and quality and loss of biodiversity. The increase in the positive trend for grassland cover can lead to carbon sequestration, supports soil health and climate stability. Figure 2.3 and 2.4 displays maps of the 2017 and 2024 land cover status of the Structure Plan Area.

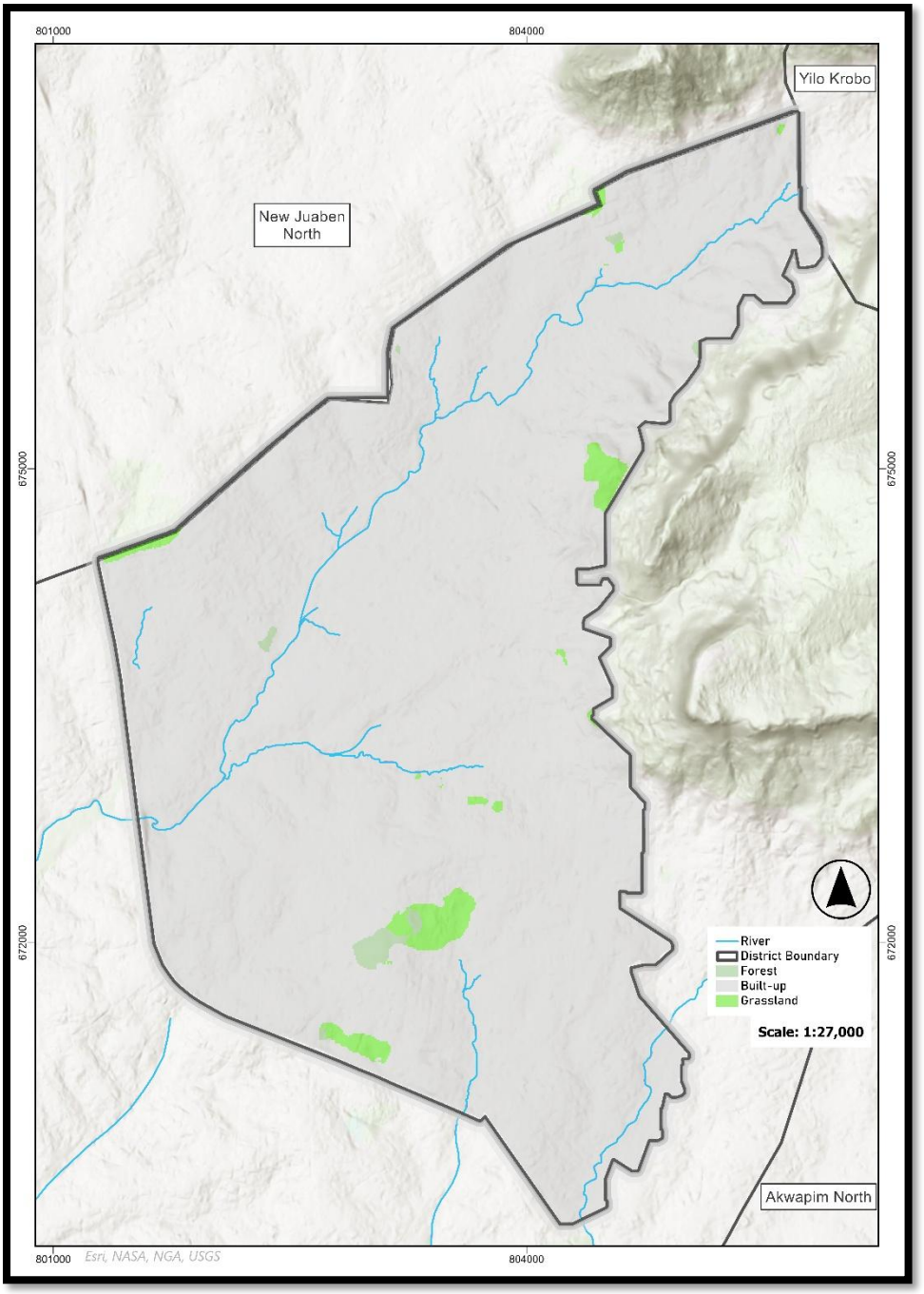
Table 2.1 Land Cover and Change (2017-2024)

| Land Cover | 2017(%) | 2024 (%) | Change |
|---|---|---|---|
| Forest | 3.7 | 1.1 | -2.6 |
| Crop | 0.1 | 0 | -0.1 |
| Built-up | 94.9 | 96 | 1.2 |
| Grassland | 1.3 | 2.8 | 1.6 |

Source: GLODA, 2025




Source: GLODA, 2025
Figure 2.3 Land Cover (2017)




Source: GLODA, 2025
Figure 2.4 Land Cover (2024)

Key Issues

- Rapid urbanization of the municipal capital especially is some of the activities which have affected the vegetation in the area.
- Rapid depletion of the economic trees, since no significant afforestation is being carried out by the timber firms and individuals. This has also contributed to the changing of the primary forest vegetation to secondary vegetation.
- Destruction of crops through indiscriminate felling and transportation of extracted timber from the bush.
- Charcoal burning.

Opportunity

- Protection and conservation of important natural assets, capitalising on the economic, social and environmental values.
- Strengthen tourism and recreation infrastructure to tap on the natural resources for passive recreation.
- Create better drainage infrastructure for flood protection.
- Establish buffers along rivers, wetlands and lakes to protect sensitive ecological areas from human settlements and activities, as well as enhance green connectivity, bringing greener into the urban centre.
- Provide specific education for the local population around ecologically sensitive zones to help protect the areas through everyday tasks or processes.
- A commitment to involve community members and local institutions in the management and conservation of natural resources.
- An interest in devolving power and authority from central and/or state government to more local and often indigenous institutions and people

### 2.3 Existing Land Use Utilization Pattern

Figure 2.5 illustrates the existing land use utilization in the planning area of Koforidua. Approximately, 87.8 percent of the existing land area is residential use. The current urban land utilization in the Nsukwao-Adweso-Ada area noticeably follows the multiple nuclei city

development model with Koforidua as the primary centre of economic and social activities with Nsukwao and Adweso serving as secondary hubs and Ada serving as a tertiary hub.

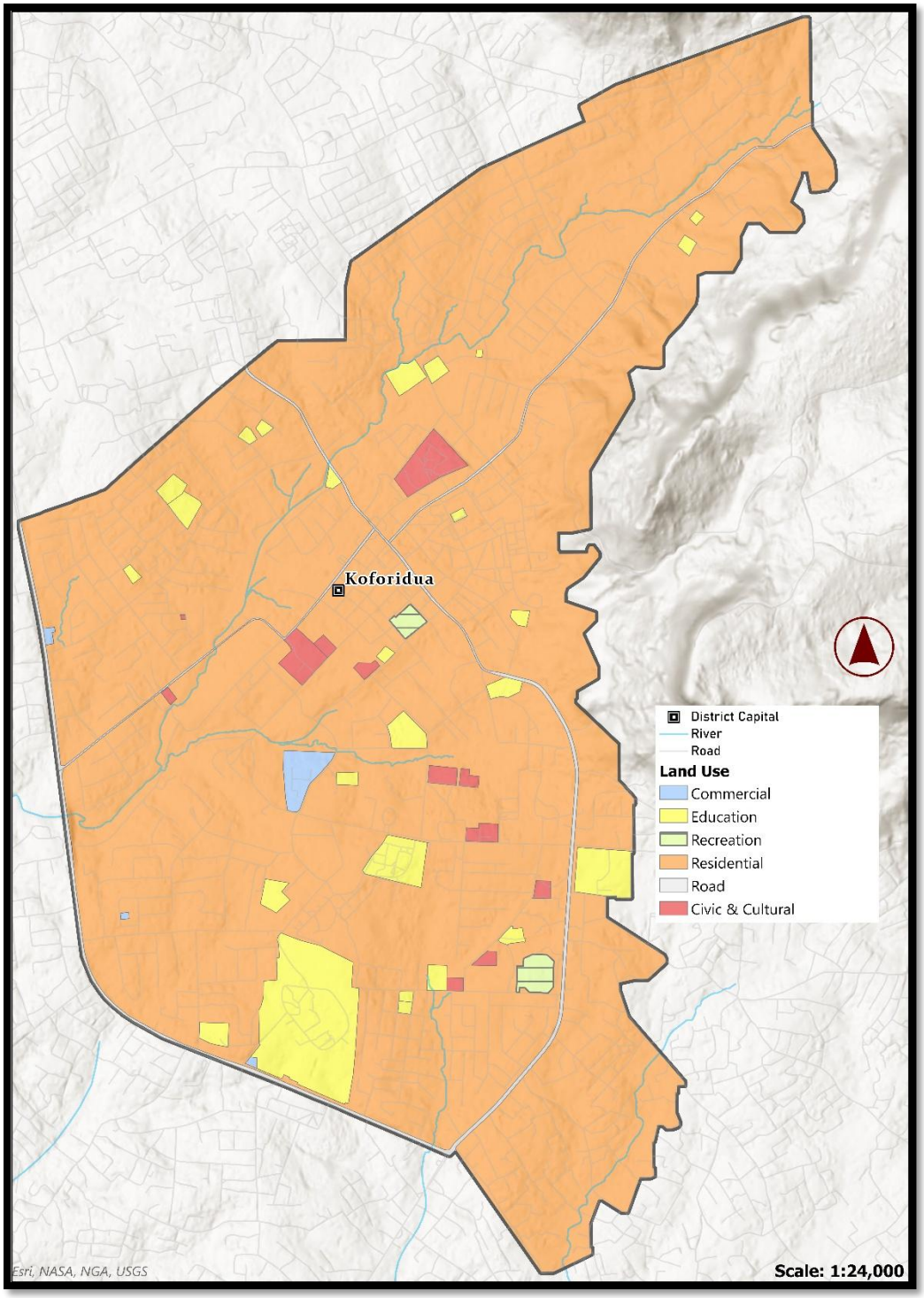
Koforidua is facing rapid expansion and high development pressure arising from the growing population in recent years. There is a significant expansion of residential land sprawling in the entire structure plan area. It is evident from Table 2.2 that residential is the largest land use in Koforidua representing almost 87.8 percent of the total land area. Local facilities such as commercial, civic and culture, education and industrial facilities are complementing and co-located among the residential areas to serve the daily needs of the population.

The major commercial land uses are located in the primary centre and is also located at the core of the Structure Plan Area. Informal mixed-use economic activities are observed to be linearly distributed along the main road corridors outside the residential houses.

There is currently limited industrial activity in area. It is currently located at the north-eastern edge of the Structure Plan Area. The civic and cultural facilities are concentrated mostly around the centre of the Nsukwao-Adweso-Ada Area. The civic and cultural facilities comprise religious facilities such as churches, mosques, clinics, health centres and a hospital. Koforidua is also home to the administrative and public functions with a substantial amount of land at the heart of the area used for the purpose of local government offices, as well as for public purpose including recreation and healthcare facilities. Educational facilities are dispersed in the entire Structure Plan Area. The educational facilities are in close proximity to the residential areas serving the population.

Table 2.2 Existing Broad Land Use Distribution in Koforidua

| **Land Uses** | **Size (acre)** | **Percentage of Contribution (%)** |
|---|---|---|
| Residential | 3458.0 | 87.8 |
| Education | 200.3 | 5.1 |
| Commercial | 117.9 | 3.0 |
| Open space | 20.9 | 0.5 |
| Industrial | 39.7 | 1.0 |
| Civic and Culture | 49.6 | 1.3 |
| Road | 53.0 | 1.3 |
| Total | 3939.5 | 100.0 |




Source: GLODA, 2025
Figure 2.4 Existing Broad Land Use Map of Koforidua

## 2.4 Residential Development

### 2.4.1 Existing Conditions

Currently, 87.8 percent of the total land area of Nksukwo-Adweso-Ada area is under residential land use as shown in Figure 2.5. There is currently an estimated total housing stock of 50614 with a total household population of 43840 and an average household size of urban areas is 2.7 while that of rural areas is 3.5.

The type of dwelling or housing units in the Structure Plan Area are compound houses, separate houses, semi-detached houses, flat/apartment, hut/building, tent, metal container, kiosk, wooden structure, living quarters attached to office/shop, uncompleted building, other etc. Analysis of existing situation revealed that majority of the total housing units in Koforidua are separate houses (25, 257) and it is followed by compound houses. Again, analysis of existing housing situation also revealed that when it comes to house ownership, private individuals dominate in home ownership.

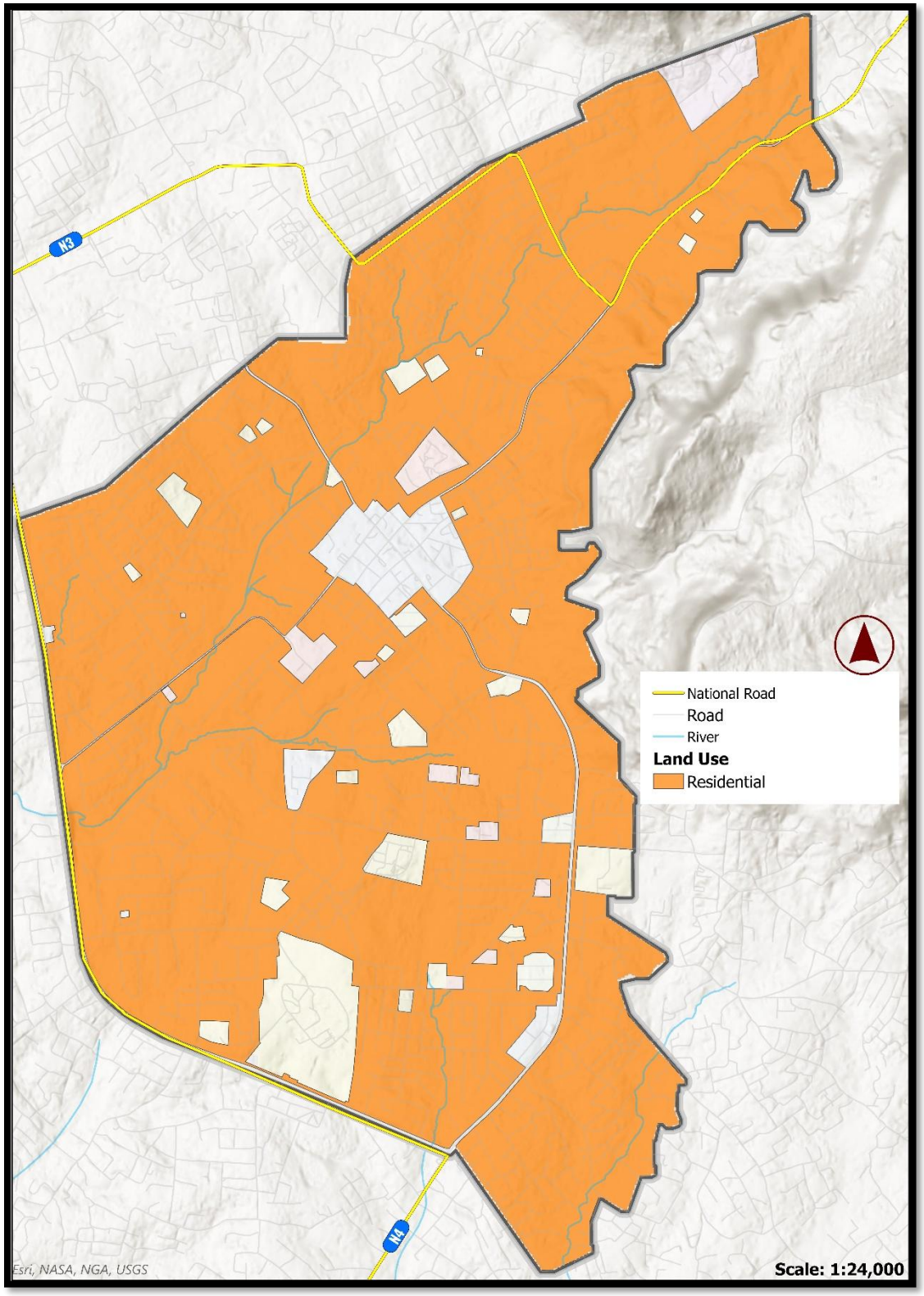
The main material for outer walls in the Koforidua is made up of cement blocks/concrete followed by mud bricks /Earth. It is also revealed that about 80 percent of Koforidua is planned with most of the local plans conforms to ground situation.

### 2.4.2 Key Issues

- Unplanned scattered developments with poor condition of road infrastructure and public amenities. Low electricity coverage and the high cost of industrial inputs.
- Poor building quality in terms of design structure and maintenance, leading to environmental and health hazards in urban settlements.
- Existing deficiency in affordable housing supply.
- Lack of support and funding of affordable housing programmes.

### 2.4.3 Opportunities

- Upgrade and revitalise existing residential areas with proper accessibility to basic amenities and services.
- Review and improve implementation of housing policies and social housing schemes
- Attract private real estate developers in quality and affordable housing development




Source: GLODA, 2025

Figure 2.5 Existing Residential Developments

## 2.5 Public Facilities

The category of public facilities include transportation, educational facilities, accessibility to health infrastructure and social amenities. The projected growth of the population, the adequacy and accessibility to these facilities need to be further improved as Structure Plan is prepared.

### 2.5.1 Educational Facilities

#### 2.5.1.1 Existing Conditions

In current context, education facilities constitute the second largest land use, constituting approximately 5.1 percent of the total land area for public facilities. In terms of the distribution of educational facilities, the facilities begin from kindergarten through to the Universities with both the government and the private sector are playing significant roles. However, with regards to the ownership of education facilities, private schools dominate in both Kindergarten and Primary levels.

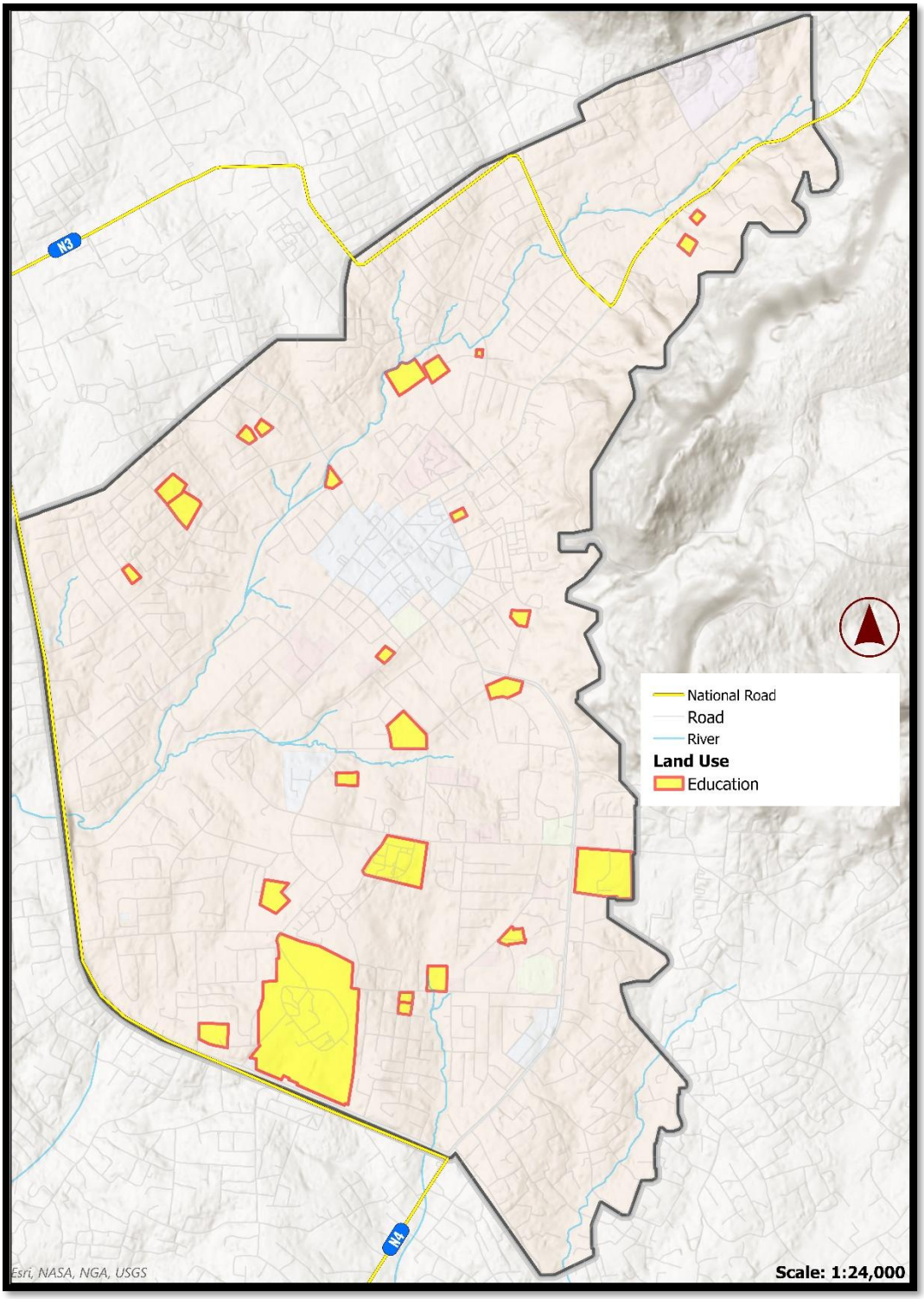
Most of the educational facilities are in poor conditions and unevenly distributed as can be seen in Figure 2.6.

#### 2.5.1.2 Key Issues

- Dilapidated and inadequate educational infrastructure.
- Uneven distribution of schools.
- High enrolment in public basic schools.
- Overcrowding, as the number of classes exceeds the number of classrooms.
- Inadequate and poor-quality educational infrastructure; public schools lack ancillary facilities (i.e., kitchens for school feeding programmes, ablution facilities, etc.).
- Poor quality of education at all levels.
- Inadequate classroom blocks.

#### 2.5.1.3 Opportunities

- Upgrade the existing primary, secondary and vocational and technical schools with improved infrastructure, basic services and facilities as the priority towards improving the quality of education delivery.




Source: GLODA, 2025

Figure 2.6: Existing Broad Land Uses on Education

### 2.5.2 Health Facilities

#### 2.5.2.1 Existing Conditions

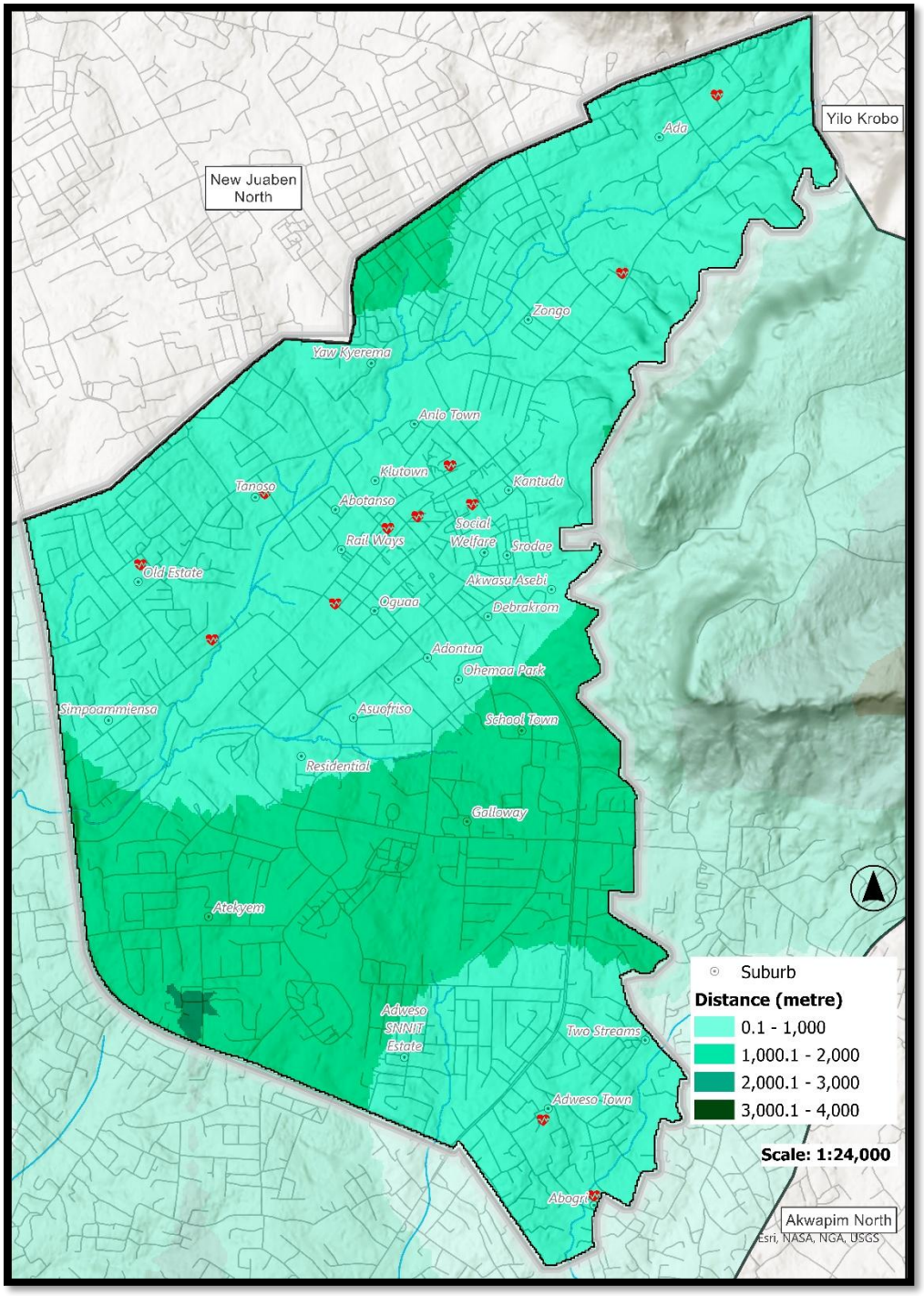
Health facilities which form part of civic and cultural facilities covers 1.3 percent of the total land area of Koforidua. The health care delivery over the years has been fairly good and satisfactory in the municipality. Analysis of the existing situation in health services revealed that there 58 health facilities in the Municipality comprising; two (2) government hospitals, a private maternity home, thirty (30) CHPS compound, eight (8) private clinics, a polyclinic and three (3) health centres. Analysis of the existing situation revealed that accessibility to health services favours the Structure Plan area as against rural communities in the Municipality. The standard walking distance in accessing a health facility is 2.5 kilometre. Figure 2.7 displays the existing accessibility map of health facilities in the Structure Plan Area.

#### 2.5.2.2 Key Issues

- Lack of quality healthcare infrastructure as well as healthcare professionals, which further weakens service quality and delivery. The limited availability of doctors impedes the access to proper medical treatment for the large population.
- Inadequate supply and uneven distribution of public healthcare facilities
- Gaps in physical access to quality health care.
- High incidence of HIV and AIDS among young persons.
- Inadequate coverage of reproductive health and family planning services.

#### 2.5.2.3 Key Opportunities

- Improve local road network connection and ensure that any healthcare facility is located at the most accessible place within the catchment area it serves.
- Increase supply of primary healthcare facilities in each residential neighbourhood to improve accessibility and urban-rural gap.




Source: GLODA, 2026

Figure 2.7 Existing Accessibility Map on Health Facilities

### 2.5.3 Open Space (Recreation)

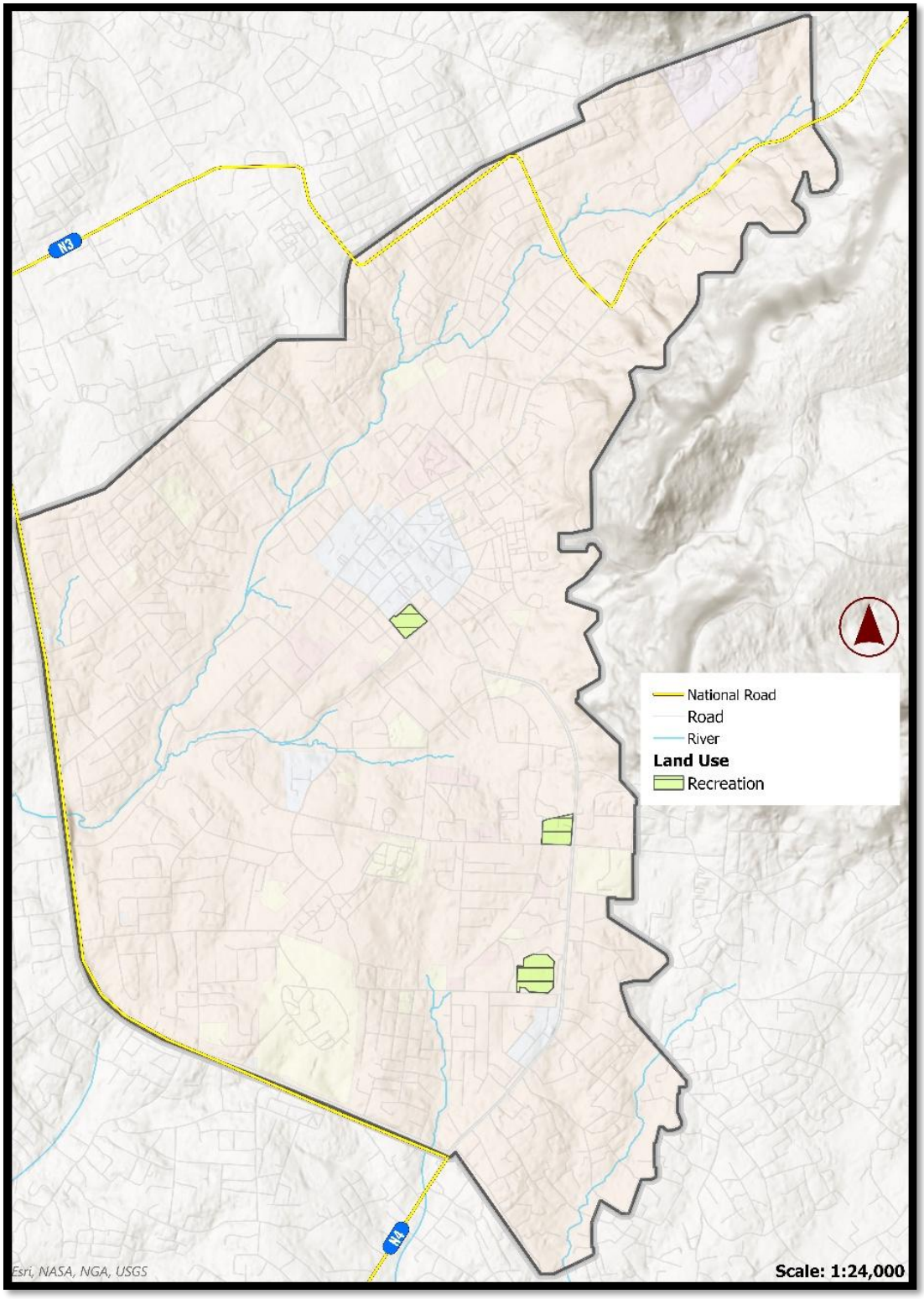
At present, open space constitute a total land area of 20.9 acres which represents 0.5 percent within Nsukwao-Adweso-Ada Structure Plan Area. The open space categorizes these spaces as both active and passive open space. These open spaces are used for recreational facilities including parks which are either grassed or bare but they are underdeveloped.

Key Issues

- Lack of local sports facilities that are accessible to the residents in the suburban areas, as well as recreational parks with facilities for the enjoyment of the residents.
- Underdeveloped sports and recreational facilities.

Key Opportunities

- Revitalise and modernize existing civic facilities as well as expand the supply at different provision levels based on the established zoning guidelines and planning standards and projected population size.




Source: GLODA, 2025

Figure 2.8 Existing development on Open Spaces

## 2.6 Commercial Development

### 2.6.1 Existing Conditions

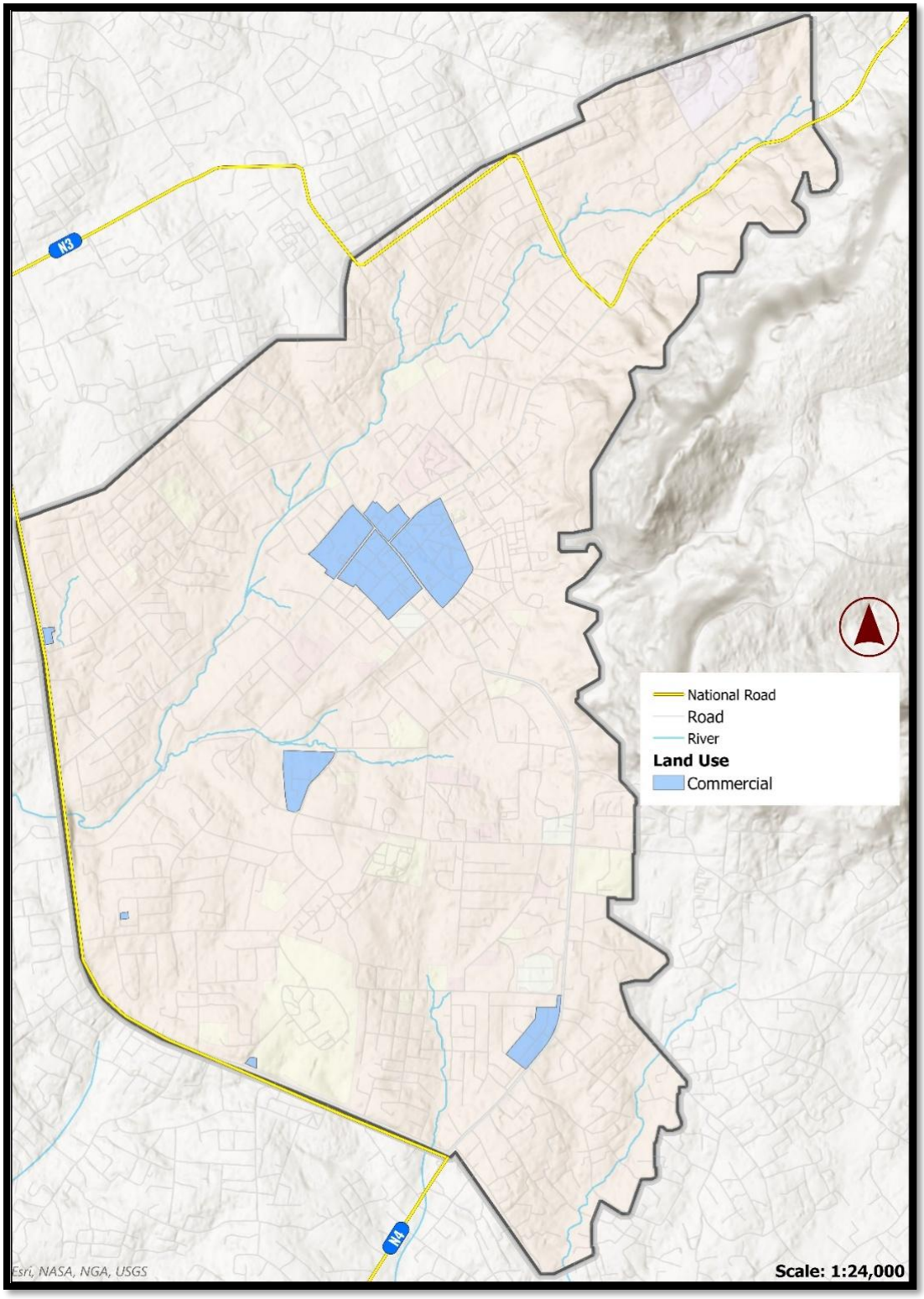
At present 3.0 percent of the existing land use utilization pattern in the Structure Plan Area is made up of commercial land use. Koforidua accommodates vibrant commercial hubs including markets, banks, financial institutions, offices and major commercial facilities are presently in good conditions. Majority of the commercial activities are limited to informal and low value-added service activities that meet the day-to-day needs of the residents. This includes the wholesale markets for agriculture. There are a number of hotels, and most of them are congregated in Koforidua and are in good conditions.

### 2.6.2 Key Issues

- There is a high percentage of low value-added services activities and informal sector employment.
- There is a spatial inequity in the distribution of commercial facilities.

### 2.6.3 Opportunities

- Potential to create minor sub-commercial centres to control development and urbanization pressures in the core of the Structure Plan Area.
- Availability of developable lands to create more commercial and mixed uses to complement other existing land uses.




Source: GLODA, 2025

Figure 2.9 Existing Commercial Development

## 2.7. Civic & Cultural Facilities

Government Administrative Buildings

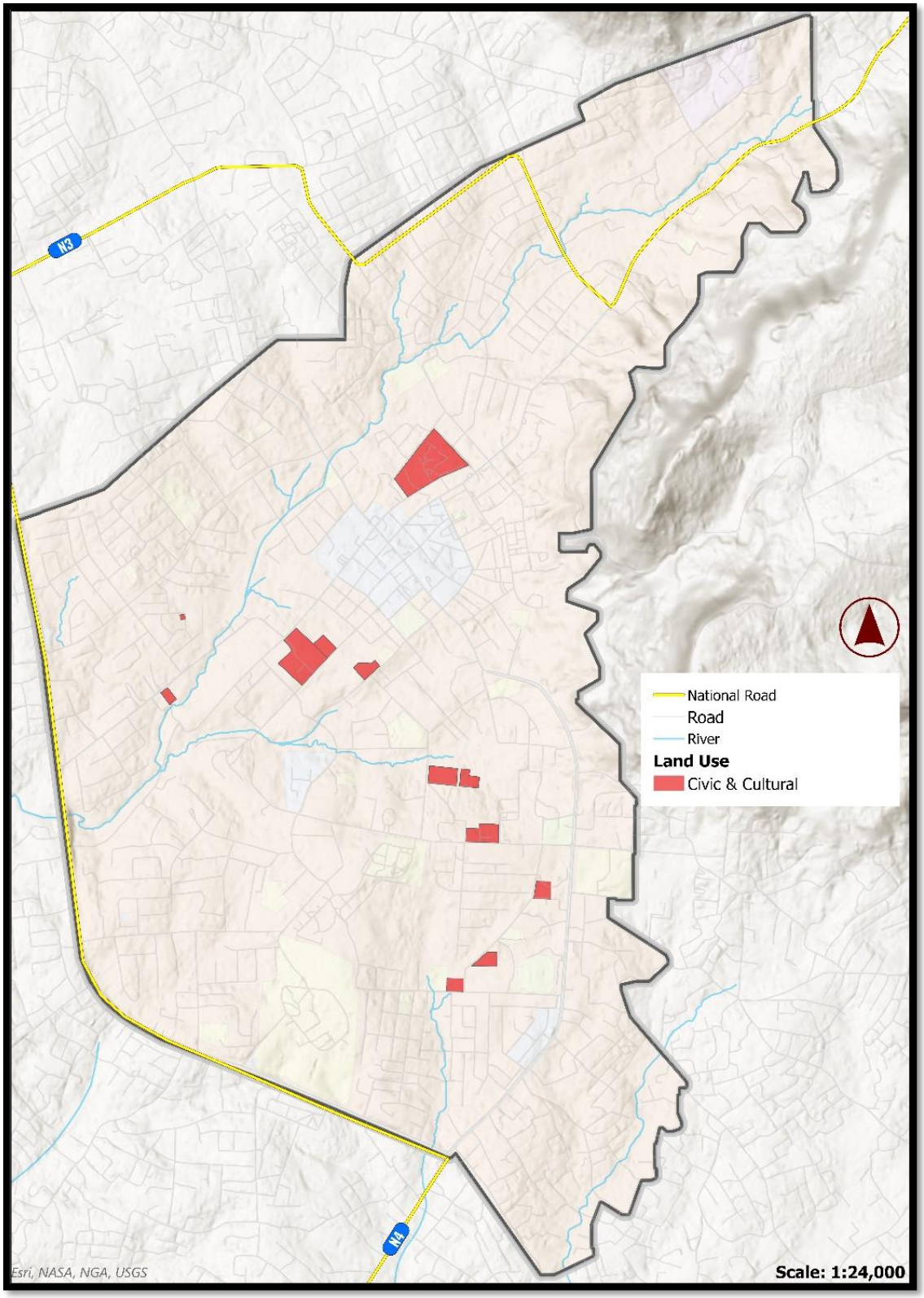
Koforidua being the municipal capital of the New Juaben South Municipal is home to important administrative functions and to many district government offices serving the population of the municipality. Some of the notable administrative offices are the District Assembly offices and other decentralized national institutions such as Immigration Service, Police Service, Judicial Service, Post Office, Fire Service, Ghana Revenue Authority etc.

Religious Facilities

A high percent (about 90%) of the population are Christians; the Structure Plan Area has multitude of churches located within it. Islam is the second most widely followed religion in the network, which explains the significant number of mosques that can be found in the area. These places of worships are distributed across the Koforidua. While serving the local needs, these religious buildings can potentially be further promoted as cultural sights for tourism development.

*Civic Facilities*

The Structure Plan Area has a number of civic facilities serving the populace. Some of these notable civic facilities are the Post office, Police stations, Durbar Grounds, Chief Palace and a host of others. However, most of these civic facilities are located in Koforidua. Civic facilities are important to satisfy the daily needs of the population and support the development of self-sufficient and sustainable residential communities. There is therefore the need to ensure an even distribution of these civic facilities in order to benefit all citizens.




Source: GLODA, 2025

Figure 2.10: Existing Development on Civic and Culture

#### 2.7.2 Key Issues

- Lack of adequacy in existing supply of civic facilities provision based on the established Ghana planning standards and current population size.
- Concentration of key facilities in Koforidua hinders convenient accessibility for the other population living in the suburban areas

#### 2.7.3 Opportunities

- Rejuvenate and modernize existing civic facilities as well as expand the supply at different provision levels serving different population catchment size.
- There is an opportunity for integration of civic facilities within the residential areas to help to increase accessibility to civic facilities at the local community level.
- Introduce a variety of civic facilities such as community centres to provide a shared communal space for social integration and activities for the communities.

## 2.8 Industrial Development

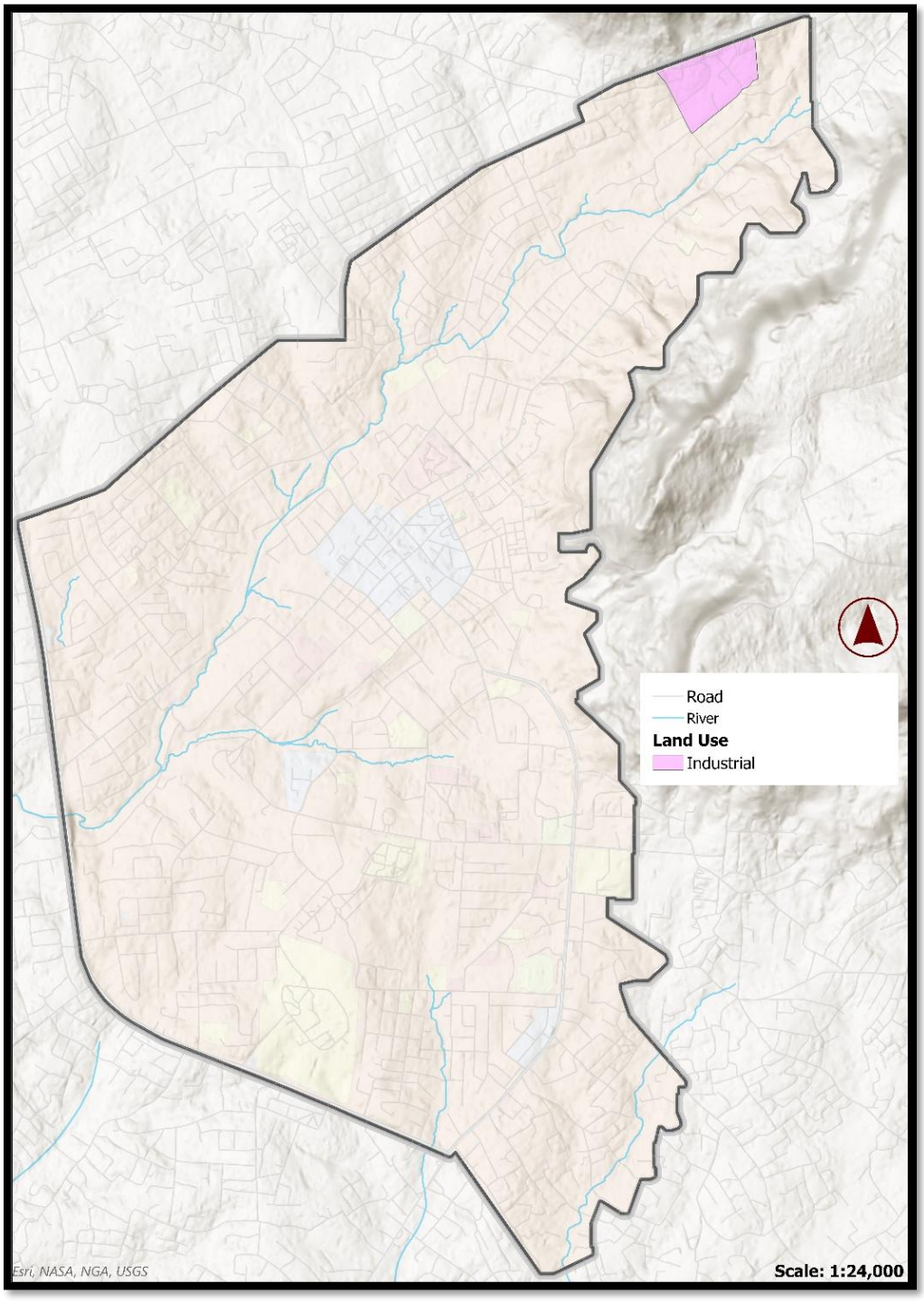
#### 2.8.1 Existing Conditions

At present, industrial activities are in a decline in the Structure Plan Area which is similar to other areas within the Municipality. The existing industrial land use covers 1 percent of the existing land use utilization pattern. The industrial sector activities involve manufacturing, construction, agro-processing in the Structure Plan Area is very basic. Industrial activities are mostly medium and small scale involving the production of alcohol and non-alcoholic beverages, textiles, crafts, soap making, carpentry and joinery, traditional medicine, palm and kernel oil production and beads making.

The private sector is the brainpower of the industrial sector in the Municipality. The establishment of block moulding factories, brick and tile, chippings, sand and stone and other related activities have significantly contributed to real estate development, road construction and providing inputs for housing development.

Also, agro-processing activities in the Municipality are mostly small scale and comprise palm oil located at Ada magazine and Adweso (not operational), soap making situated at Ada magazine

and gari-processing located at Atekyem, Adweso and Ada Magazine. Figure 2.10 shows how industrial activities are distributed throughout the Structure Plan Area.




Source: GLODA, 2025

Figure 2.11: Existing location of Industrial Activities

## 2.9 Transportation

Road transportation is the dominant means of transport within the Structure Plan Area. The Ghana Road Design guidelines classify urban roads in the municipality under major arterials, minor arterials and collectors.

### 2.9.1 Existing Conditions

The extent of distance covered by major arterials within Koforidua is 12.97 kilometres, 11.48 kilometres for minor arterials and 13.16 kilometres for collectors. Majority of the roads in the are poor in condition and this has been a major concern to residents and the Assembly. The Transport sector is huge and concentrated within the Central Business District (CBD). The means of transport are; Taxis, Trotro, Motor Tricycles (Pragya) and Okada. This has resulted in vehicular and pedestrian congestion at the CBD. There are fourteen (14) transport terminals that exists within the CBD. They include Metro Mass Station, Kumasi Station, Ho Station, Accra Station and Taxi Rank. These stations are being operated under various transport unions such as GPRTU, PROTOA, Vision, Bayana, Cooperatives and Fair Play. The services of these transport systems which are private and commercial, are usually at its peak on market days (Mondays and Thursdays) and weekends (Saturdays and Sundays).

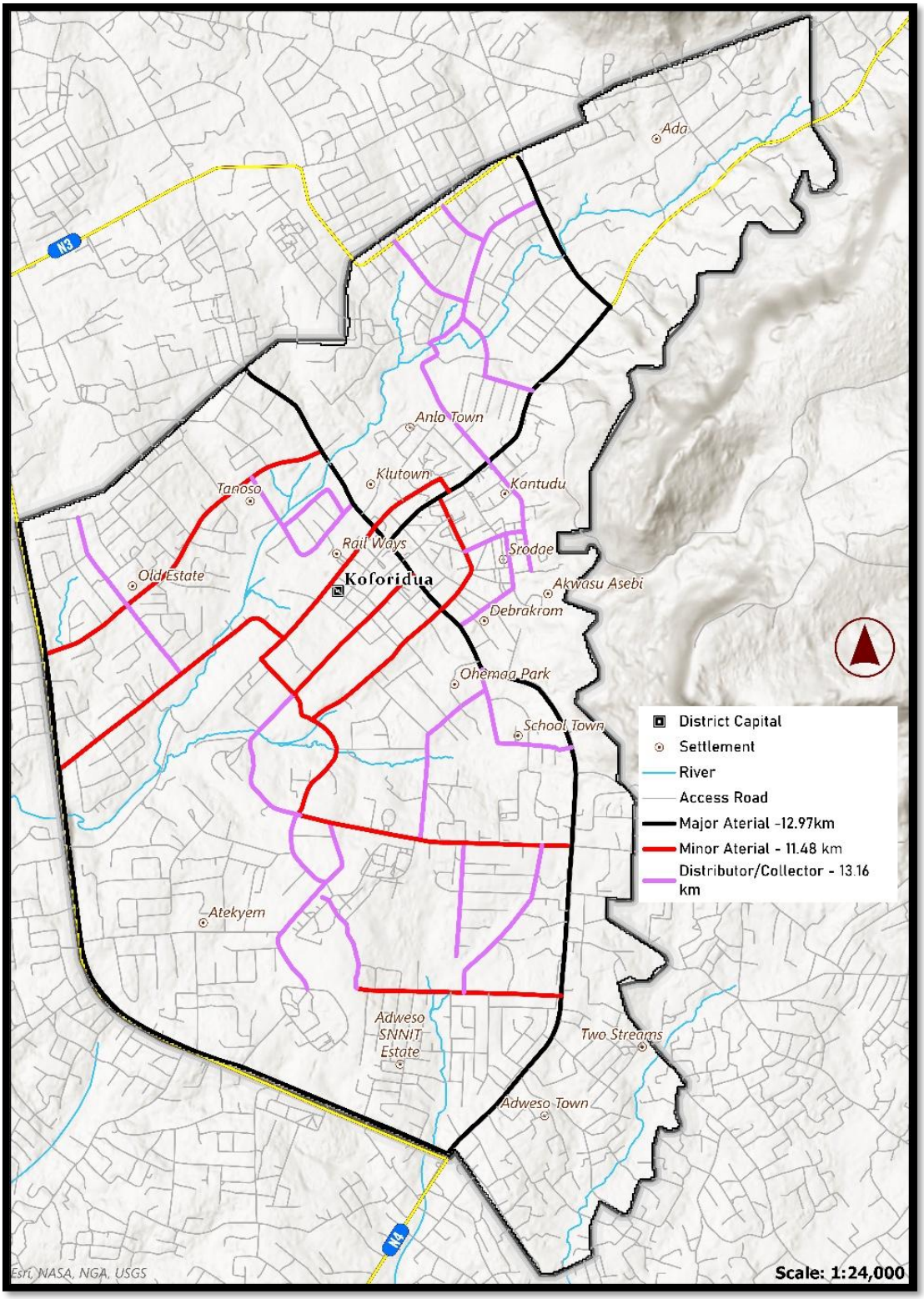
### 2.9.2 Road Classification

The National Roads, N3 and N4 traverses through the municipality. The National Roads, N3 and N4 traverses through the municipality. The Revised Zoning Guidelines and Planning Standards have classified urban roads into seven (7) categories, as shown in Table 2.1. The major arterial road displays a distance of 12.97km, the minor arterial road displays a distance of 11.48km and the collector has a distance of 13.16km.

Table 2.1 Road Classification Guidelines

| Road Category | Right-Of-Way (ROW) |
|---|---|
| National Road | 90m |
| Major Arterial | 90m |
| Minor Arterial | 40-60m |
| Collectors | 20-45m |
| Local Road | 18-30m |
| Cul-de-sac | 12m |
| T-head for cul-de-sac | 24m |
| Foot paths | 6m |

Source: Zoning Guidelines and Planning Standards, 2025




Source: GLODA, 2025
Figure 2.12: Existing Urban Road Network

#### 2.9.2 Non-Motorized Transport

Non-motorized transport is a type of transport that focuses on physical mobility such as walking and cycling and it is carbon-free. Walking has a strong relation to Ghanaian culture where walkers treat roads as their place of businesses. Hence, it is common to see pedestrians carry bulky items on road and perform transaction with motorists. Cycling is a common mode of transport in the Koforidua. Residents rely on cycling to run their daily activities. Unfortunately, cycling has a negative image which is associated with poverty.

#### 2.9.3 Key Issues

- Non-existent strong institutional framework that manages urban transport
- Inadequate planning for urban transport
- Poor conditions of road network

#### 2.9.4 Opportunities

- Presence of Railway Network
- Planned road network system with clearly road hierarchy.
- Identify proper parking strategies for all types of vehicles

## 2.10 Infrastructure

### 2.10.1 Power Supply

#### 2.10.1.1 Existing Conditions

Koforidua is connected to the national grid of Ghana. It is estimated that above 100 percent of the population have access to electricity supply. The low rate to electricity and the poor quality of electricity network has further slowed down the economic development of the Structure Plan Area. Electricity, LPG, charcoal and fuel wood are the main sources of energy in the Municipality. LPG, charcoal and fuel wood are used for cooking and small scale industrial and commercial activities while electricity is used for lightning. There is a number of LPG supply point located at Koforidua.

#### 2.10.1.2 Key Issues

Some key issues to be addressed which are critical to the Structure Plan Area include:

• The power supply is occasionally disrupted due to the aging power infrastructure.

• Poor grid network results in high transmission and distribution power losses;

• In view of the proposal for New Juaben South Municipal SDF to intensify business and services, environmental sustainability and agro-industrialisation, an increased power supply capacity as well as a reliable power supply has become crucial.

2.10.1.3 Opportunities

Various opportunities to achieve sustainability of power supply include:

- Market for energy availability because of the low electrification rate;
- Availability of Public Private Partnership (PPP) for power infrastructure development;
- Availability of investors to develop renewable energy e.g. solar farm

### 2.10.2 Water Supply

2.11.1 Existing Conditions

The main source of water supply for Asamankese urban network is Abukyen dam. It is managed by Ghana Water Company Ltd. Figure 2.16 displays a picture of the dam. Access to the urban water is 68 percent. However, due to limited access to the pipe-borne water boreholes have been erected at vantage points. The use of boreholes serves as an alternative means of water supply. Currently, two boreholes have been dugged and are functional within the network.

# DIMENSIONS OF GROWTH

## 3.1 Existing Economic Situation

### 3.1.1 Municipal Economy

According to 2021 Population and Housing Census, the total number of people who are employed in New Juaben South Municipality is 48553 with the Services Sector contributing 82.51 percent, Industrial, Manufacturing and Processing Sector constituting 14.29 percent; and Agriculture contributing 3.18 percent. On the other hand, the unemployment rate is 11.1 percent.

### 3.1.2 Existing Conditions of the Structure Plan for Koforidua

There is currently a lack of detail data with regard on the existing economic situation in Nsukwao -Adweso-Ada area. Extrapolating from the municipal level information of the New Juaben South Municipal, the main economic activity remains in the Service Sector including, the administrative and support service activities, wholesale and retail, and financial and insurance activities employing more than 29.9 percent of the employed population.

*Services and Commercial Sector*

Commercial activities in Koforidua are largely wholesale and retail trade. The Services sector's expansion is mainly driven by transportation and storage, wholesale and retail trade; repair of motor vehicles, arts, entertainment and recreation, accommodation and food service activities, public administration and defence; compulsory social security, human health and social work activities, education and other service activities. Wholesale and retail; repair of motor vehicles and motorcycles has the largest share of employees (29.9%) under the Services sector

*Agriculture*

The least contribution of the economy is the Agricultural sector at share of 3.9 percent. Major amongst the agricultural activities is crop farming engaging 92.6 percent of the agricultural households followed by livestock rearing (35.8%). Less than one percent of agricultural households is engaged in either fish farming (0.1%) or tree planting (0.4%).

*Industrial Activities*

The sub sectors with the Industrial sectors include manufacturing, mining and quarrying, electricity, gas, steam and air-conditioning supply, water supply, sewerage, waste management and remediation activities, and construction. The dominant contribution is manufacturing at 48.25

percent. It is closely followed by construction at 43.71 percent. The least contribution is mining and quarry activities at 0.59 percent.

Tourism

Koforidua is characterized by over 20 hotels and guest houses enhancing the tourism and economy of the city. It is a foundational infrastructure that provides accommodation, employment, and community support.

*Key Issues*

- Restricted structures to access loans
- Limited value addition of agricultural products
- Poor road network
- High cost of doing business

*Opportunity*

- Available market infrastructure
- Access to loans for microfinance
- Ready transport
- Officers Business Advisory Centre (BAC) and Department Agriculture
- Available financial institutions

### 3.2 Future Outlook of the Economy

The spatial development concept for the Intensification of Business and Services, Environmental Sustainability and Agro-Industrialization development Scenario is based on the following building blocks;

- The provision of a green, open space system in order to protect the municipality's natural resources;
- The provision of an effective transport system, comprising different modes of transport, promoting public and non-motorised transport;
- A mix of land uses are included to create zones where transport and land use are integrated so that transit-oriented nodes can more easily develop and in doing so, support the compactness and efficiency of the municipality;

- The linkage of the urban and rural areas through development corridors, nodes and functional activities.

**Nsukwao Primary Node**

Nsukwao Primary node will serve as the major commercial and administrative centre in the district providing highest level of services. It will be the major centre for commerce, trade, business, services, higher highest residential, mixed use and commercial densities and the greatest variety of services such as entertainment, educational, medical and social services. It will provide district and local government services.

**Adweso Secondary Node**

Adweso Secondary nodes will serve as a minor commercial, administrative and centres providing social and economic services at the suburban scale. The centre will provide land uses to support residential, commercial, financial services, sports and recreation, agri-business, wholesale and retail services.

**Ada Tertiary Node**

The enclave will provide basic social and economic services at a reasonable level of accessibility within the district. The centre is expected to provide the full spectrum of urban services, including economic, social, engineering and administrative.

### 3.3 Existing Demographic Situation

Population is among key factors determining classification of urban areas in Ghana. Urban population growth which is caused by natural growth and immigration plays a major role in the shaping of structural changes that take place in urban settlements in terms of land use, physical growth and expansion; level and distribution of infrastructure and services; investment, production and consumption patterns; labour force and its contribution towards the economy. Combined, these factors determine the socio economic characteristics that influence the physical structure of an urban settlement, its land use requirements and the general pattern of physical development. It is therefore imperative in planning to study the past trends of growth trend including changes in size and composition, structure of the existing population, and distribution of population over that area.

### 3.3.1 Municipal Population Share

The New Juaben South Municipal population is estimated to 129,741 people in 2021PHC, represents 4.3 percent of the regional population (2,925,653). The population of NJSM has an annual growth rate of 0.9 percent largely driven by the strong growth and urbanization rate. The Urbanization is 95 percent.

### 3.3.2 Nsukwao -Adweso-Ada area Socio-Economic Scenario

Due to the lack of socio-demographic data specific for the demographic scenario of Nsukwao - Adweso-Ada is inferred using the available information at the municipal level. As the municipal capital of the Koforidua, the municipal level data would provide some insights into the understanding of conditions of Koforidua. The 2021 Population and Housing Census (PHC), the total population base of the Structure Plan area is 92,797.

### 3.3.3 Key Issues and Implications

The existing socio-demographics of presents certain implications on the planning decisions. The high urban population, limited land size and urbanization within Koforidua suggests the huge potential for future urban development and thus increasing demand for urban more functions including quality affordable housing, economic growth and infrastructure. Thus, careful planning is required to accommodate and manage the growth of the town in supporting the economic development envisioned.

### 3.3.4 Projected Population

By the end of the planned period (2040), the projected projections for the Koforidua should accommodate a population of **151,879.**

# DEVELOPMENT VISION

## 4.1 Municipal Spatial Development Strategy

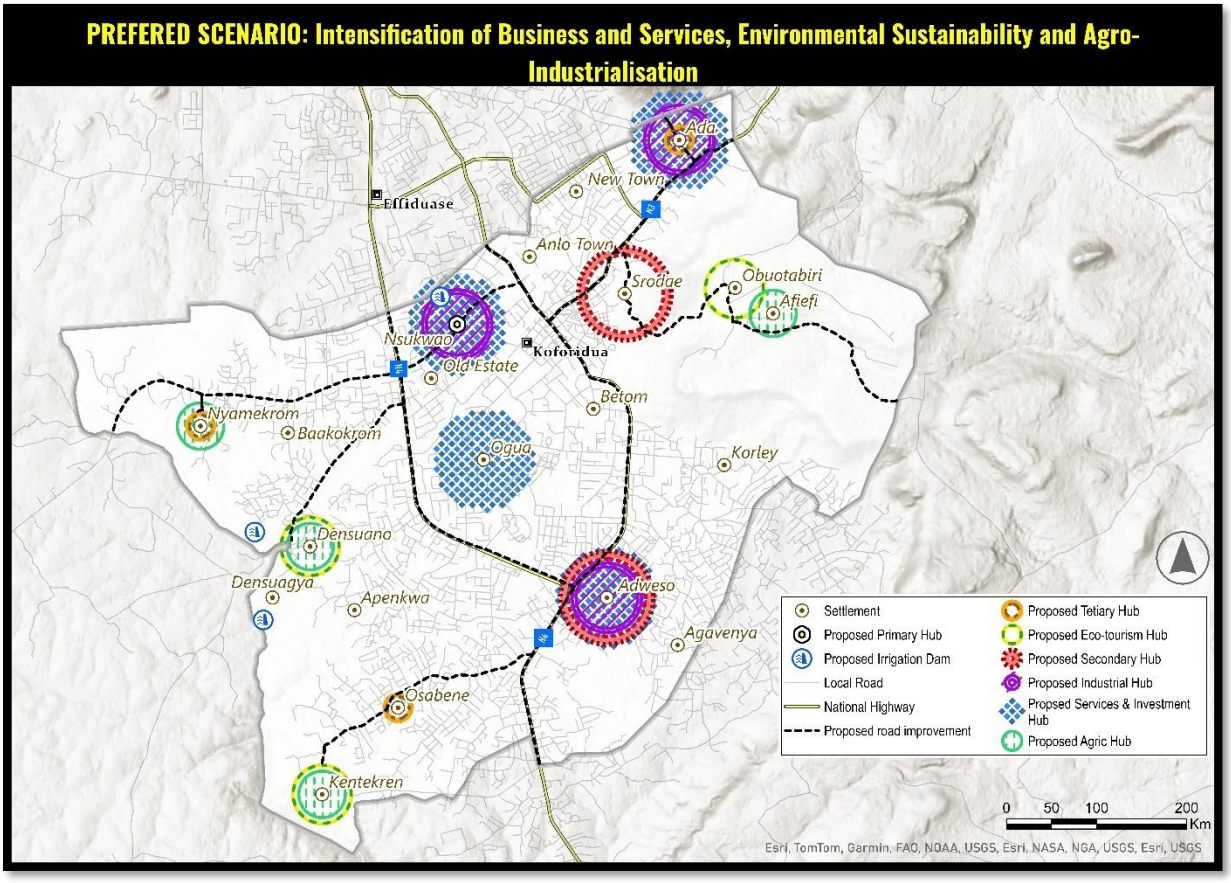
The spatial development strategy for settlement growth in the municipality in New Juaben South Spatial Development Framework (NJSMSDF) makes proposals for urban networks development. The development hubs created urban clusters within the Municipality to promote balanced spatial development and economic growth of the municipality. The hubs are expected to shape the spatial development of the municipality by creating urban clusters that will serve as economic hotspots and spatial nodes for the development of the municipality. NJSMSDF made proposals for the spatial development strategy to guide its sustainable spatial growth and foster sustained economic growth.

## 4.2 Nsukwao-Adweso-Ada Structure Plan

Settlements that form the Structure Plan for Koforidua involve Nsukwao, Adweso, SSNIT Estate, Anlo Town, Ogua, Atekyem, Old Estate, Srodae, Betom, Zongo and Ada. The Structure Plan for Koforidua will serve a ***Services and Investment Hub*** of the Municipality. Opportunities and services within this enclave include banking, insurance, small and medium scale enterprises, transportation hubs, health facilities, hotels, research institutions, educational institutions, and administrative functions. With increasing demand and projected population growth, the enclave will continue to be the largest financial hub in the municipality.

This primary node (Nsukwao) is envisaged to boost services, investment and industrial activities in the municipality. This involves intensive commercial centres for major commerce, administrative services, financial services, agri-business, trade and general business, and the springing up of service investment centres to boost services and business growth and development in the municipality. Industrial sites are to be zoned to promote industrial development in the municipality with provision to support for small- and medium-scale agro-processing enterprises.
The secondary node (Adweso) is envisioned to increase minor commercial centres for minor commerce, services, trade and business. Industrial nodes are to be created creating space for agro-processing and manufacturing industries while creating service investment centres.

The tertiary node (Ada) provides basic social and economic services at a reasonable level of accessibility adjoining rural settlements. The node involves creation of industrial nodes and service investment centres.




*Source: GLODA, 2026*
*Figure 4.1 Koforidua Structure Plan in the context of New Juaben South Municipal SDF*

### 4.3 Urban Sustainability Framework

The Urban Sustainability Framework (USF) is developed for Nsukwao-Adweso-Ada Structure Plan considering the specific issues and future sustainability challenges. The USF addresses these aspects by providing guiding principles for the subsequent planning processes that will ensure the long-term sustainability of the Structure Plan. Table 4.1 presents the key issues, broad directions, challenges and the proposed planning framework for Koforidua. This framework forms the basis for the Koforidua Structure Plan as well as for lower-level local planning and implementation.

Table 4.1: Urban Sustainability Framework for Koforidua Structure Plan

| Components | Key Issues | Direction | Challenges | Recommendations |
|---|---|---|---|---|
| **Economic Development & Diversification to boost growth and Create Jobs** | • Inadequate and unreliable electricity supply.<br>• Severe poverty and underdevelopment among peri-urban and rural communities.<br>• Predominantly informal economy.<br>• High cost of production inputs.<br>• Low application of technology especially among smallholder farmers leading to comparatively lower yields | • Ensure the necessary investment to upgrade, renew, and expand the power transmission and distribution network.<br>• Implement strategic anchor industrial initiatives.<br>• Improve access to finance for informal economy operators and agricultural enterprises in rural areas and strengthen consumer financial protection.<br>• Facilitate capacity building in negotiations, standards, regulations and skills development in contracting for actors along the value chain.<br>• Intensify and increase access to mechanisation along the agriculture value chain. | • Funding limitation and local access to finance.<br>• Low knowledge and skills.<br>• Inability to attract foreign direct investment (FDI) | • Explore PPP potentials for capital investment and improve access to finance.<br>• Build up knowledge and skills of farmers on commercial agriculture and agriculture technology; manufacturing, transport, logistics and supporting services sector.<br>• Reserve land for large scale commercial agriculture, and agro processing industries; for heavy and general industries (SEZ); |
| **Social Inclusion Focus on inclusive social development to improve living standards** | • Poor quality of education at all levels.<br>• Low participation of females in learning of science, technology, engineering and mathematics.<br>• Gaps in physical access to quality healthcare. | • Provide sufficient social facilities (education/healthcare) for communities in the network<br>• Expand infrastructure and facilities at all levels.<br>• Ensure inclusive education for all boys and girls with special needs | • Centralized funding sources for health and education infrastructure.<br>• Lack of devoted financial resources for development control<br>• | • Continue implementation of free SHS and TVET for all Ghanaian children<br>• Accelerate implementation of Community-based Health Planning and Services (CHPS) policy to ensure |

| | | | | |
|---|---|---|---|---|
| | • Inadequate and inequitable distribution of critical staff mix.<br>• Weak enforcement of planning and building regulations. | • Fully implement Land Use and Spatial Planning Act, 2016 (Act 925) | | equity in access to quality healthcare<br>• Expand and equip health facilities.<br>• Improve production and distribution mix of critical staff. |
| **Sustainable Environment**<br><br>**(Focus on Environmental Management for Sustainable future)** | • Degradation of the natural environment<br>• Urban Sprawl<br>• Environmental pollution due to lack of solid and liquid waste infrastructure.<br>• Low lying areas and unpaved roads prone to flooding.<br>• High incidence of wildfires. | • Reduce environmental pollution.<br>• Reserve and protect nature resources for inclusive environment.<br>• Control urban sprawl and ensure balanced spatial development with green environment.<br>• Promote a clean environment through waste generation reduction and recycling. | • Urbanization and pressure on nature.<br>• Rapid urbanization and protection of biodiversity amid development priorities.<br>• Limited funding for investment in waste management and infrastructure.<br>• Limited knowledge and skills in waste management, recycling and green infrastructure. | • Ensure enforcement of National Wildfire Management Policy and local bye-laws on wildfire.<br>• Conserve natural environment to promote biodiversity.<br>• Develop flood mitigation plan for flood free urban network.<br>• Specify urbanization areas, identify potential high & medium density areas to reduce sprawl. |

### 4.4 Development Vision

The spatial vision of the Nsukwao-Adweso-Ada Structure Plan from 2026 to 2040 is to be ***"The Services and investment hub of the New Juaben South Municipality"***. As the services and investment hub of the New Juaben South Municipal, the structure area will be the hotspot for the location of financial services such as banking, insurance, small and medium scale enterprises, transportation hub, health facilities, research institutions, educational institutions, and administrative functions.

### 4.4 Strategic Goals

The statement of a structure plan vision provides a strategic imagery of how a planning area could be developed in terms broad land use zones. The achievement of the structure plan vision will be directed by a set of strategic goals with desired outcomes for the Structure Plan area by the end of the plan period. These goals provide a focus for specific objectives and sector strategies outlined in this plan. The Structure plan identifies four strategic goals with key strategic objectives, strategies and the respective programmes that the structure would adopt to realize the spatial vision.

*Strategic Goal One: A Network of Vibrant Economy and Strong Local Economic Development*

Nsukwao-Adweso-Ada area from the Municipal Spatial Development Framework has been marked as the major commercial and services investment hub of the New Juaben Municipality. The location of Koforidua within the municipality and its strategic location and good national connectivity makes it imperative to reinforce its economic and administrative role within the New Juaben South Municipality. To actualize this goal, diversification is required into strong commercial, industrial, service and educational sector.

*Strategic Goal Two: A Primary Hub of Expanded Infrastructural Development and Resilient Built Environment*

The ambition to develop Nsukwao-Adweso-Ada area as a cohesive community is to enhance the socio-economic status and well-being of the population by providing variety of housing options for different income groups with adequate public facilities and healthy living environment.

*Strategic Goal Three: A hub of Nature Conservation and Recreation*

This goal purposes to transform Nsukwao-Adweso-Ada area into a green and environmental responsive cluster. All the natural resources in Koforidua enclave will be conserved and used as passive recreation areas. New areas will be zoned for passive and active recreational areas to promote environmental sustainability. The different hierarchy of park and sports facilities will provide variety of recreational opportunity for the populace.

*Strategic Goal Four: A hub of Sustainable Environmental and Resource Management*

The goal aims to achieve sustainable infrastructural development in the structure plan area responsive to the environment. By this, the strategies will be to address flooding, water resource management, energy conservation and waste management as a way of sustainable environmental and resource management.

### 4.5 Strategic Objectives and Strategies

*Strategic Goal One: A Network of Vibrant Economy and Strong Local Economic Development*

**Strategic Objectives**

- Diversify and expand the tourism industry for economic development.
- Ensure improved skills development for local Industry by 2036.
- Construct warehouses and storage facilities in rural agrarian communities in the network.
- Improve access to credit for MMSMEs by 20% by 2032.
- Create industrial enclave to boost the confidence of investors
- Create industrial sites for artisans.
- Anchor Koforidua as the commercial hub of New Juaben Municipality.
- Expansion and restructuring commercial centres in Koforidua.
- Creation of mixed-use zones along transport routes to accommodate changing market demand.

*Strategic Goal Two: A Primary Hub of Expanded Infrastructural Development and Resilient Built Environment*

**Strategic Objectives**

- Promote a sustainable, spatially integrated, balanced and orderly development of human settlements.
- Efficient and equitable distribution of urban infrastructure, facilities and services.
- Mixed densities including some high rise to extend choice, increase density and efficient use of infrastructure.
- Improve efficiency and effectiveness of road transport infrastructure by 5% annually.
- Promote the preparation of local plans for all local areas which will ensure controlled development.
- Create open spaces assigned for specific future uses.
- Ensure quality living environment for residents of the structure plan area.
- Enhance inclusive and equitable access to, and participation in quality education at all levels.
- Ensure affordability, equitable, easily accessible and Universal Health Coverage.

*Strategic Goal Three: A hub of Nature Conservation and Recreation*

**Strategic Objectives**

- Enhance sports and recreational infrastructure.
- Conserve natural resources and promote them for passive recreation
- Promote a clean and environmentally friendly network.
- Promote smart growth and conserve agricultural land from urban sprawl.

*Strategic Goal Four: A hub of Sustainable Environmental and Resource Management*

- Enhance Climate Resilience.
- Create a flood free urban network.
- Ensure adequate and reliable water supply.

- Provide availability and reliability of power supply.
- Provide improved sanitation facilities.
- Promote integrated solid waste management and responsible usage of the resources.
- Promote proactive planning for disaster prevention and mitigation.

**Goal One: A Hub of Vibrant Economy and Strong Local Economic Development**

| Objectives | Strategies | Programme |
|---|---|---|
| Ensure improved skills development for local Industry by 2031. | • Invest in training and the capacity building of the youth in targeted skills development to take advantage of existing job and business opportunities.<br>• Resource the Business Advisory Centre to provide the requisite skills development training. | • Create spaces for emerging business opportunities.<br>• Allocate land for small and medium scale enterprise. |
| Protect agricultural lands from urban and rural invasion through the creation of land banks. | • Conserve 20% of undetermined land for agriculture.<br>• Promote innovative ways to manage urban agriculture.<br>• Training of indigenes to acquire new and modern techniques in farming. | • Conserve over 1,000 ha land for agriculture and use this land for high value crops and mechanized farming.<br>• Initiate projects to promote urban agriculture.<br>• Establish the development boundary to protect urban agricultural lands. |
| Establish and resuscitate small scale and medium scale agro-based industries in the hub. | • Designate areas for agro-based industries.<br>• Source more donor funding to support agricultural activities. | • Allocate 5 ha for agro-based light industries. |
| Diversify and expand the tourism industry for economic development. | • Expand the tourism sector through investment, innovation, and pursuit of service excellence.<br>• Upgrade tourism infrastructure and services riding on existing facilities.<br>• Develop variety of tourism destinations.<br>• Promote and enforce local tourism and develop available and potential sites to meet international standards. | • Develop new hotels, upgrade existing ones and establish tourism promotion and information centre.<br>• Develop new destinations for active recreations such as theme parks, golf course, indoor entertainment areas. |
| Improve access to credit for MSMEs by 10% by 2031. | • Mobilise resources from existing financial and technical sources to support MSMEs.<br>• Create an entrepreneurial culture, especially among the youth.<br>• Provide opportunities for MSMEs to participate in all public-private partnerships (PPPs) and local content arrangements | • Support MMSMEs activities and programmes. |
| Anchor Koforidua as the commercial hub of New Juaben South Municipality. | • Develop mixed use zones to accommodate changing market demand.<br>• Expand and restructure commercial centres. | • Allocate 200 ha for commercial and mixed-use development.<br>• Strengthen the CBD with upscale of offices and commercial developments. |

*Table 4.2: Strategic Goal One: A Network of Vibrant Economy, Strong Local Economic Development and Modernized Agriculture*

**Goal Two: A Hub of Expanded Infrastructural Development and Resilient Built Environment**

| Objectives | Strategies | Programme |
|---|---|---|
| Efficient and equitable distribution of urban infrastructure, facilities and services. | • Expand and maintain the internal road network.<br>• Promote walking and cycling as a transportation mode.<br>• Plan community facility provision within 400m to 800m serving radius. | • Design roads with dedicated bicycle lanes.<br>• Liaise with Urban Roads to allocate funds for road improvement in their annual budget.<br>• Seek support for the refurbishment of existing internal roads. |
| Mixed densities including some high rise to extend choice, increase density and efficient use of infrastructure. | • To provide variety of housing choices for different income groups.<br>• Improve existing residential areas, especially informal settlements. | • Upgrade existing residential areas in the hub with adequate facility and infrastructure provision. |
| Promote a sustainable, spatially integrated, balanced and orderly development of human settlements. | • Prepare local plans for the broad land use zones in the structure plan.<br>• Fully implement Land Use and Spatial Planning Act, 2016 (Act 925) | • Apply the planning standards and guidelines in the preparation of |
| Ensure quality living environment for residents of the network. | • Plan community facility provision within 400m to 800m serving radius.<br>• Create new spaces for residential development and expansion. | • Allocate 600 ha of land for new residential development.<br>• Review existing Ghana Planning Guidelines and establish detail Community Facility Standards for the different planning hierarchy such as; commercial centres, education, health, parks, recreation areas and public administration areas. |
| Enhance inclusive and equitable access to, and participation in quality education at all levels. | • Expand infrastructure and facilities at all levels.<br>• Ensure inclusive education for all boys and girls with special needs.<br>• Continue implementation of free SHS and TVET for all Ghanaian children. | • Allocate 5 ha for the development of vocational institutions. |
| Ensure affordability, equitable, easily accessible and Universal Health Coverage. | • Expand and equip health facilities.<br>• Accelerate implementation of Community-based Health Planning and Services (CHPS) policy to ensure equity in access to quality healthcare.<br>• Promote use of ICT and e-health strategies in healthcare delivery. | • Allocate 50 ha for development of new health facilities. |

*Table 4.2: Strategic Goal Three: A Hub of Nature Conservation and Recreation*

**Goal Three: A Hub of Nature Conservation and Recreation**

| Objectives | Strategies | Programme |
|---|---|---|
| Conserve natural resources and promote them for passive recreation | • Develop Natural Environment Management Strategy to protect existing forest, water bodies and biodiversity areas.<br>• 100 % conservation of nature areas | • Protect nature areas by establishing environmental buffers<br>50m to 25m for river streams. |
| Enhance sports and recreational Infrastructure. | • Well distributed network of parks, open spaces & recreational areas.<br>• Develop and maintain sports and recreational infrastructure. | • Based on the population, reserve over 20 ha of land for parks and sports facilities in the Structure Area.<br>• Establish parks and sports facilities in the hub. |
| Promote smart growth and conserve agricultural land from urban sprawl. | • Establish urbanization boundaries and promote compact development.<br>• Promote innovative ways to manage urban agriculture.<br>• Conserve up to 20% land for agriculture. | • Define the development boundary in the Structure Plan for urbanization based on the population projection.<br>• Initiate projects to promote urban agriculture. |
| Promote a clean and environmentally friendly network. | • Promote the use of environmentally friendly methods and products. | • Initiate the implementation environmentally friendly policies in all sectors. |

*Table 4.3: Strategic Goal Three: A Hub of Nature Conservation and Recreation*

**Goal Four: A Hub of Sustainable Environmental and Resource Management**

| Objectives | Strategies | Programme |
|---|---|---|
| Promote proactive planning for disaster prevention and mitigation. | • Strengthen early warning and response mechanisms for disasters.<br>• Strengthen capacity of the National Disaster Management Organisation (NADMO) to perform its functions effectively. | • Identify spaces in the structure plan hub for the establishment of early warning systems. |
| Enhance Climate Resilience. | • Promote and document improved, climate-smart, indigenous agricultural knowledge.<br>• Promote climate-resilience policies for women and other vulnerable groups in agriculture | • Implement climate smart agricultural and environmental solutions to address climate change issues in lower-level plans. |
| Create a flood free structure plan hub | • Implement a network-wide storm water management plan.<br>• Provide efficient drainage network in the structure plan area. | • Conserve all the natural water drains in the hub.<br>• Propose covered drains for all major roads and masonry drains for other roads.<br>• Maintain and clean drains regularly to prevent chokage. |
| Ensure adequate and reliable water supply. | • 100% access to piped water network.<br>• Improve existing water infrastructure. | • Carry out regular leak detection and rehabilitate old and leaking pipes systematically.<br>• Implement rainwater harvesting system.<br>• Phased extension of the existing water supply network. |
| Provide improved sanitation facilities. | • Provide sewer network for urban development and septic tank for rural areas in the network.<br>• Recycle the treated sewage effluent for non-potable and industrial use. | • Phased rehabilitation of the existing sewerage network<br>• Mandatory on-site septic tanks for urban areas where sewer connections are not provided and rural areas |
| Provide availability and reliability of power supply. | • Provide 100% electricity access in the network.<br>• Revise self-help-electricity project and use means-testing approaches to enable the poor to connect to the national grid.<br>• Promote energy saving and renewable energy solutions. | • Construct new transformers and transmission lines. |

*Table 4.5: Strategic Goal Four: A hub of Sustainable Environmental and Resource Management*

# DEVELOPMENT PROGRAMME, STRATEGIES & CONCEPT OPTIONS

## 5.1 Nsukwao-Adweso-Ada area Development Programme

### 5.1.1 Land Provision for Future Growth

Koforidua as per the New Juaben South Municipal Spatial Development Framework seeks to be the financial, services and administrative hub of the New Juaben Municipality by 2040. The future outlook of Koforidua which is expected to see massive urban development will be guided by the Urban Sustainability Framework which includes the vision, strategic goals, strategic objectives and population projection. It is therefore imperative and critical that the Structure Plan identifies the land use requirements to ensure that urban uses are adequately allocated and meets the projected future demands. Based on the demographic projections, Koforidua should accommodate a population of 151,879. Based on these projections, additional land is required to cater for the new residents and economic development.

From the existing analysis, the current urbanized land in Koforidua is approximately 13.99 sqkm (about 87.8% of total land area). It is estimated that an additional 8.37 $km^2$ (837.30 hectares) of additional land is required by 2040 for the projected population. However, the structure plan area is fully built-up and this means that any future proposals will be implementation as regeneration of the existing land use development. For the purpose of this Structure Plan, the land use requirement for urbanized land use will be categorized into six types comprising residential, industrial, commercial, public facilities, transportation & infrastructure, recreation & open space. The Zoning Guidelines and Planning Standards published by the Land Use and Spatial Planning Authority in 2025 was used to estimate the total land requirements for the categories of land uses discussed above.

### 5.1.2 Residential Land Requirements

Presently, Nsukwao-Adweso-Ada area has a total population of 117,107 with an average household size of 2.7. The continuous urbanization rate and projected population growth necessitates that planned distribution of population densities is required across the structure plan area to provide its residents with quality living space including housing varieties supported by civic, recreational, roads and infrastructure facilities. Table 5.1 illustrates the broad land use requirements for urban living space based on three (3) proposed different housing densities. It is

estimated that a total of 837.30 ha of additional residential land is needed to accommodate the future population. The respective housing densities are classified as:

*Low Density Residential (Residential Zone A)*

Low density development in the structure plan area is intended for very low-density residential development. These are high-end or upscale residential neighbourhoods characterized by spacious plots and detached houses. Housing density in this zone is typically 4-6 plots per acre/4,047$m^2$, making it one of the least dense residential zones. Development in this zone will be predominantly single-family detached houses (duplexes) on large plots. The predominant development in this zone will be detached houses and it is proposed to house a large proportion of the high-income population in the structure plan area at 30 percent, occupying a land area of 167.46 ha.

*Medium Density Residential (Residential Zone B)*

Medium Density development in the structure plan area provides for medium-density residential development with a variety of housing types Development in this zone include a mix of single-family detached houses, duplexes, row (terraced) houses, and compound houses. The intent is to create neighbourhoods that are more compact whilst maintaining a good level of amenity and openness. This residential zone is proposed to house a large proportion of middle- and low-income families at 50 percent, occupying a land area of 418.65 ha.

*High Density Residential (Residential Zone C)*

High density residential development (Residential C Zone) is designed for intensive multi-storey residential accommodation such as blocks of flats or apartments complexes, condominiums, and housing blocks typically ranging from 3 storeys with potential for higher structures. Developments in this zone are typically more formally planned housing estates where land is used efficiently by building upward. This zone is confined to the inner-city areas or strategic locations where high density living is accommodated in apartment buildings rather than ground-level sprawl. The intent of this zone is to allow vertical residential growth while ensuring adequate light, ventilation, and support facilities for residents. About 50 percent of the population are proposed to be living in high density developments on a land area of 251.20 ha.

| Development Type | Housing Density (DU Per Ha) | Household Size | Density Share | Population | Land Area Required (ha) |
|---|---|---|---|---|---|
| **Low Density (Re A)** | 10-15 | 4 | 20% | 6,954 | 336.6 |
| **Medium Density (Re B)** | 16-30 | 4 | 30% | 10,431 | 1651.5 |
| **High Density High Rise** | 60 | 4 | 40% | 13,909 | 634.0 |
| **High Density Low Rise** | 30 | 4 | 10% | 3,477 | 336.6 |
| **Total** | | | **100** | **34,772** | **2,958.7** |

*Table 5.1: Broad Land Requirements for Residential*

### 5.1.3 Commercial Land Requirements

The Nsukwao-Adweso-Ada area is designated as the financial, administrative and industrial hub of the New Juaben South Municipal Spatial Development Framework requires the creation of space for the location of financial services such as banking, insurance, small and medium scale enterprises and space required for offices to house employees of current and future businesses, as well as supporting commercial retail facilities to support both the residential and working population. A broad land use distribution for commercial facilities is essential in the structure plan area. The Zoning Guidelines and Planning Standards provides for a minimum of three hectares(3ha) for large commercial areas for a whole settlement area and peripheral area of influence. As part of strategies to strengthen the commerce and services dominance of the structure plan area, and promote interconnectivity with the central business district, eighty-nine hectares (89.9 ha) of land is proposed for expansion of the Central Business District as well as twenty-nine (29 Ha) also proposed for broad commercial development for the next 15 years.

### 5.1.4 Industrial Land Requirements

The Spatial Development Framework makes proposals for the zoning of industrial zones with access to promote industrial development in the New Juaben South Municipality. Currently there are few industrial uses within the structure plan area which are mostly confined to the north-eastern and north-western ends of the network. The Structure Plan proposes thirty-nine hectares (39.9ha) land to be reserved for industrial activities in the Structure Plan Area.

### 5.1.5 Public Facilities Land Requirements

Around a hundred hectares (28.1 ha) of land is needed for public amenities including education facilities, health facilities, as well as other social amenities such as parks, recreational areas etc, bearing in mind the existing land provided and the new demand of land from the additional injection of population by 2046. The land required for public facilities is estimated based on the zoning guidelines and planning standards as can be seen in Table 5.2.

| Development Type | Provision Standards | Site Area (Ha) | Land Required For 34,772 Population |
|---|---|---|---|
| **Education** | | | **43.5** |
| **Nursery** | 1 per 5,000 pop | 1 | 7 |
| **Primary School** | 1 per 1,500-6,000 pop | 1.21 | 28.1 |
| **Junior High School** | 1 per 10,000 - 10,000 pop | 2.4 | 8.4 |
| **Health** | | | **10.4** |
| **Health Centre** | 1 per 5,000 - 25,000 pop | 1.5 | 10.4 |
| **Civic & Cultural** | | | **3.5** |
| **Cemetary** | 0.1 ha per 1000 pop | 0.1 | 3.5 |
| **Recreation & Open Spaces** | | | **34.8** |
| **Sports Field** | 0.5 ha per 1000 pop | 0.5 | 17.4 |
| **Public Open Space (Passive)** | 0.5 ha per 1000 pop | 0.5 | 17.4 |

*Table 5.2: Broad Land Requirements for Public Facilities*

### 5.1.6 Transportation and Infrastructure Land Requirements

The transportation land requirements for the development of the Structure Plan Area include the development of new road infrastructure to complement the existing roads. The standard for the provision of roads, transportation nodes and infrastructure in the Structure Plan Area is proposed approximately at 25% (209.33 ha) of total urban area in 2046.

### 5.1.7 Summary of Broad Land Requirements

The projection of the total land use requirement by 2046 has been determined in Table 5.3.

| Land Use | Existing (ha) | Proposed (ha) |
|---|---|---|
| **Residential** | 1,399.40 | 837.30 |
| **Commercial** | 47.71 | 4 |
| **Education** | 81.06 | 43.5 |
| **Industrial** | 16.07 | 15 |
| **Open Space** | 8.46 | 17.4 |
| **Road** | 21.45 | 209.33 |
| **Civic & Cultural** | 20.07 | 3.5 |
| **Total Land Requirement** | 11,267.67 | 9037.34 |

Table 5.3 Summary of Broad Land Requirements

## 5.2 Development Principles

The key development principles for the Nsukwao -Adweso-Ada Structure Plan are aligned to the urban sustainability framework and the development vision of being the financial and administrative hub of the New Juaben South Municipality. The key development principles and strategies are explained below.

### 5.2.1 A Thriving Commercial Hub with Good Infrastructure

The Nsukwao-Adweso-Ada enclave has been designated as the commercial and administrative hub of the municipality. This means that its current functionality needs to be strengthened, optimized and supported. The following are key strategies to achieve this development principle.

- The development of Koforidua as a primary services and investment hub expected to create a focus for more residential development and to provide a variety of services for local residents, including a mix of medium-high density housing, major commercial, shopping, offices, and personal services.
- Development of sub-centres as activity nodes.
- Good transportation for the linkage and connectivity of Koforidua as a primary services and investment hub and sub-centres in the Structure Plan Area.
- The hub shall have good intra-town mobility in terms of public transport and non-motorized transport system supporting urban economic activities.

### 5.2.2 Development Clusters

The Nsukwao-Adweso-Ada Structure Plan Area is made up of about three major settlements (3) with Nsukwao being the largest. It is imperative to reorganize these communities into functional areas with clear hierarchy of planning areas. These planning areas will guide the distribution of

commercial centres, employment hubs, recreational spaces and other public facilities within these development clusters. The hierarchy of this planning areas is based on settlement size and their projected population. These development clusters will serve as secondary nodes within the network to help redistribute activities to ensure a sustainable distribution of land uses and developments in the hub. The town centre which is Nsukwao will serve as the primary node where intensive commerce will take place whereas Adweso and Ada will serve as secondary nodes of minor commercial activities and centres for other social amenities.

#### 5.2.3 Environmental Protection and Balanced Urbanization

The Nsukwao-Adweso-Ada enclave have most of the industrial developments in the New Juaben South Municipal specifically light industries and the proposal in the New Juaben South Municipal Spatial Development Framework to allocate spaces as industrial hubs. It is therefore imperative that the agricultural, nature reserves and other ecologically sensitive areas though few be protected from urbanization. In the foregoing, sustainable physical planning strategies need to be developed in the Structure Plan to protect the existing nature areas, agriculture areas as well as promote greenery of the structure plan area by expanding the public green spaces in the hub. The proposed industrialization of certain spaces in the hub needs to be balanced through sustainable planning efforts.

Besides the overall vision and the urban sustainability framework, these key development principles shall guide the development of concept options for Nsukwao-Adweso-Ada Structure Plan.

## 5.3 Concept Plan

Two concept options are proposed to explore the possibility of growth of Nsukwao-Adweso-Ada to meet the future demand for urbanization, as well as to accomplish the proposed vision and goals. The proposed structure plan concepts will incorporate the key strategies and principles that will guide the transformation of the structure plan area. These two options are:

- Consolidation of Nsukwao township as a core commercial and administrative centre and the development of proposed secondary and tertiary nodes as sub-centres.

- Consolidation of Nsukwao and Ogua townships as twin core commercial and service investments centres and the development of proposed secondary and tertiary nodes as sub-centres.

The two concepts are explained in detail in the following sections.

### 5.3.1 Option 1: Consolidation of Nsukwao as a Major Commercial and Administrative Centre

This concept consolidates the current commercial and administrative function of Nsukwao township as the primary node of the New Juaben South Municipal as can be seen in Figure 5.3. The concept therefore maintains the organic pattern of urbanization along the N4 and proposes the organization of spatial growth linearly along the current highway and the redistribution of population and urban development in the sub-centres. The proposal of this concept are as follows:

*Strengthen Existing Commercial and Administrative Function*

- The concept proposes to strengthen Nsukwao as the commercial and administrative centre in the Structure Plan Area and will do so by optimizing the available land in the central business area and the old town to further develop and enhance its capabilities as a commercial and administrative centre. This can be done so by revitalizing the existing commercial area and infill development for future business needs as anticipated in view of the economic restructuring. The town centre will continue to serve as the major hub for mix-commercial uses including retail and wholesale, offices for government and administrative functions, institutions, commerce and trade activities.

- The Nsukwao-Adweso-Ada enclave will be the hub for cultural and heritage development of Koforidua by conserving the existing cultural and built heritage elements to revitalise and retain th vibrancy of the old city centre.

- The Nsukwao-Adweso-Ada enclave will also be the hub for tourism, cultural and heritage development of Koforidua by conserving the existing tourism, cultural and built heritage elements to revitalise and retain the vitality of the old town centre.

*Development of Sub-Commercial Centres*

- Two (2) sub-centres are also proposed at Adweso as a secondary node and Ada as a tertiary node in line with proposals in the New Juaben South Municipal Spatial Development Framework. These secondary and tertiary nodes of centres will serve the sub-commercial and services needs of the existing major urban settlements in the Structure Plan Area.
- The Nsukwao primary node and other sub-centres will be inter-connected by development corridors and a new road infrastructure.

*The New & Revitalized Housing Communities in the Network*

Besides the Nsukwao, Adweso and Ada as major settlements to be regenerated to accommodate the future population in the Structure Plan Area, there are other towns and settlements scattered in the Structure Plan Area which needs to be developed. This concept proposes the regeneration of existing Nsukwao-Adweso-Ada townships and the other settlements within the cluster, by improving the housing conditions and the overall quality of life through provisions of fundamental infrastructure such as primary school, health centre and other social amenities. The concept proposes to conserve the environmentally sensitive areas such as existing nature reserves, water bodies and existing agricultural lands and promote sustainable approach to resource management.

*Tourism and Recreational Development*

Taking advantage on the existing natural assets in the Structure Plan Area, the concept proposes for the tourism and recreational development in the form of a recreational parks and open spaces to be located closer to the nature areas and all residential areas in the structure plan.

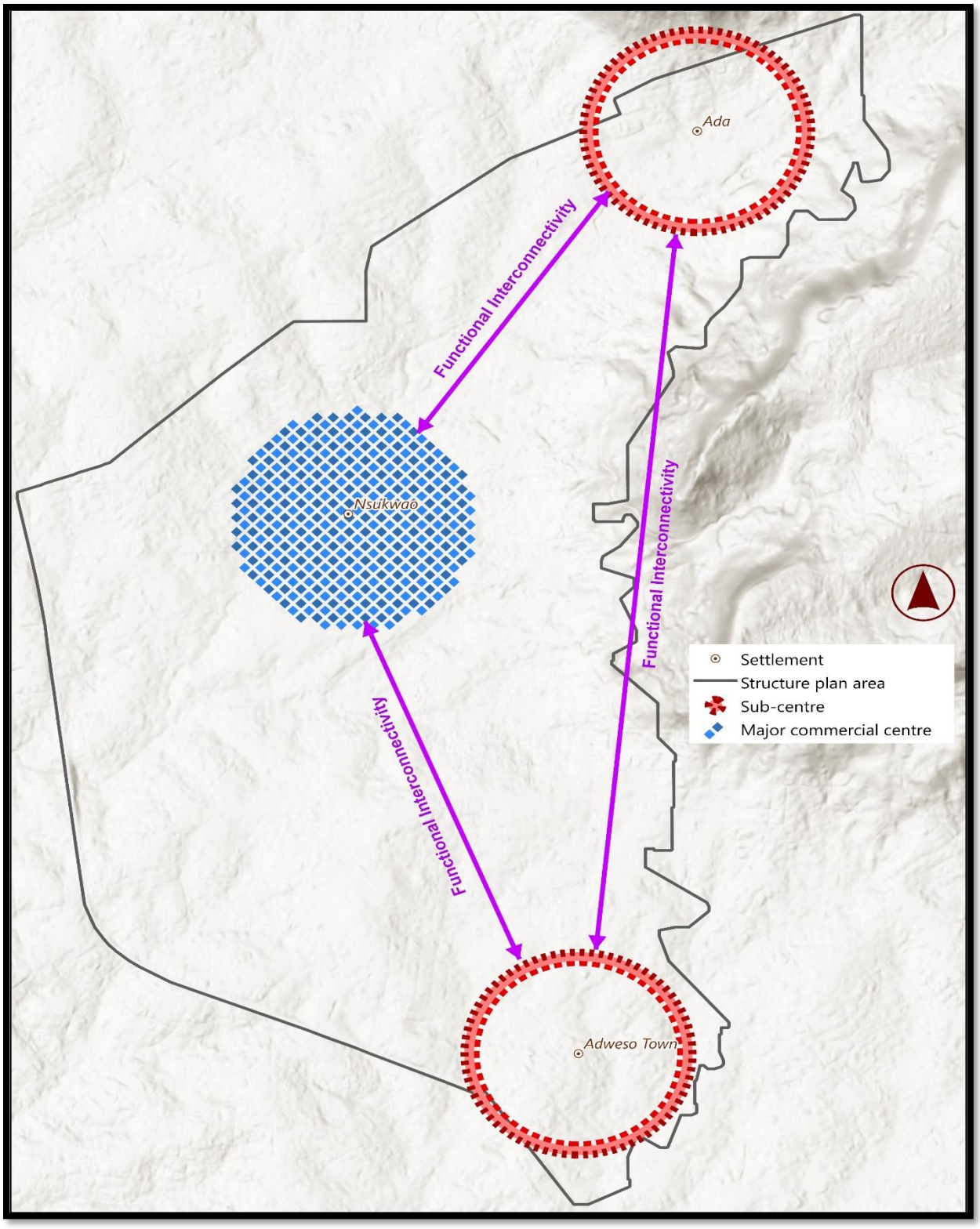



Figure 5.3: Structure Plan Option One: Strengthening of Nsukwao as Commercial and Administrative Centre

Source: GLODA, 2026

### 5.3.2 Option 2: Consolidation of Nsukwao and Ogua townships as twin core commercial and service investments centres

This concept consolidates Nsukwao and Ogua townships as twin core commercial and service investments centres in the Structure Plan Area as can be seen in Figure 5.3. The concept therefore maintains the organic pattern of urbanization along the N4 and proposes the organization of spatial growth linearly along the current highway and the redistribution of population and urban development in the sub-centres. The proposal of this concept are as follows:

*Strengthen Proposed Commercial and Administrative Function*

- The concept proposes to strengthen Nsukwao and Ogua as twin core commercial and administrative centres in the Structure Plan Area and will do so by optimizing the available land in the central business area and the old town to further develop and enhance its capabilities as a commercial and administrative centre. This can be done so by revitalizing the existing commercial area and infill development for future business needs as anticipated in view of the economic restructuring. The town centre will continue to serve as the major hub for mix-commercial uses including retail and wholesale, offices for government and administrative functions, institutions, commerce and trade activities.
- The Nsukwao-Adweso-Ada enclave will be the hub for cultural and heritage development of Koforidua by conserving the existing cultural and built heritage elements to revitalise and retain th vibrancy of the old city centre.
- The Nsukwao-Adweso-Ada enclave will also be the hub for tourism, cultural and heritage development of Koforidua by conserving the existing tourism, cultural and built heritage elements to revitalise and retain the vitality of the old town centre.

*Development of Sub-Commercial Centres*

- Two (2) sub-centres are also proposed at Adweso as a secondary node and Ada as a tertiary node in line with proposals in the New Juaben South Municipal Spatial Development Framework. These secondary and tertiary nodes of centres will serve the sub-commercial and services needs of the existing major urban settlements in the Structure Plan Area.

- The Nsukwao primary node, Ogua as service investments centre and other sub-centres will be inter-connected by development corridors and a new road infrastructure.

*The New & Revitalized Housing Communities in the Network*

Besides the Nsukwao, Adweso, Ogua and Ada as major settlements to be regenerated to accommodate the future population in the Structure Plan Area, there are other towns and settlements scattered in the Structure Plan Area which needs to be developed. This concept proposes the regeneration of existing Nsukwao-Adweso-Ada townships and the other settlements within the cluster, by improving the housing conditions and the overall quality of life through provisions of fundamental infrastructure such as primary school, health centre and other social amenities. The concept proposes to conserve the environmentally sensitive areas such as existing nature reserves, water bodies and existing agricultural lands and promote sustainable approach to resource management.

*Tourism and Recreational Development*

Taking advantage on the existing natural assets in the Structure Plan Area, the concept proposes for the tourism and recreational development in the form of a recreational parks and open spaces to be located closer to the nature areas and all residential areas in the structure plan.

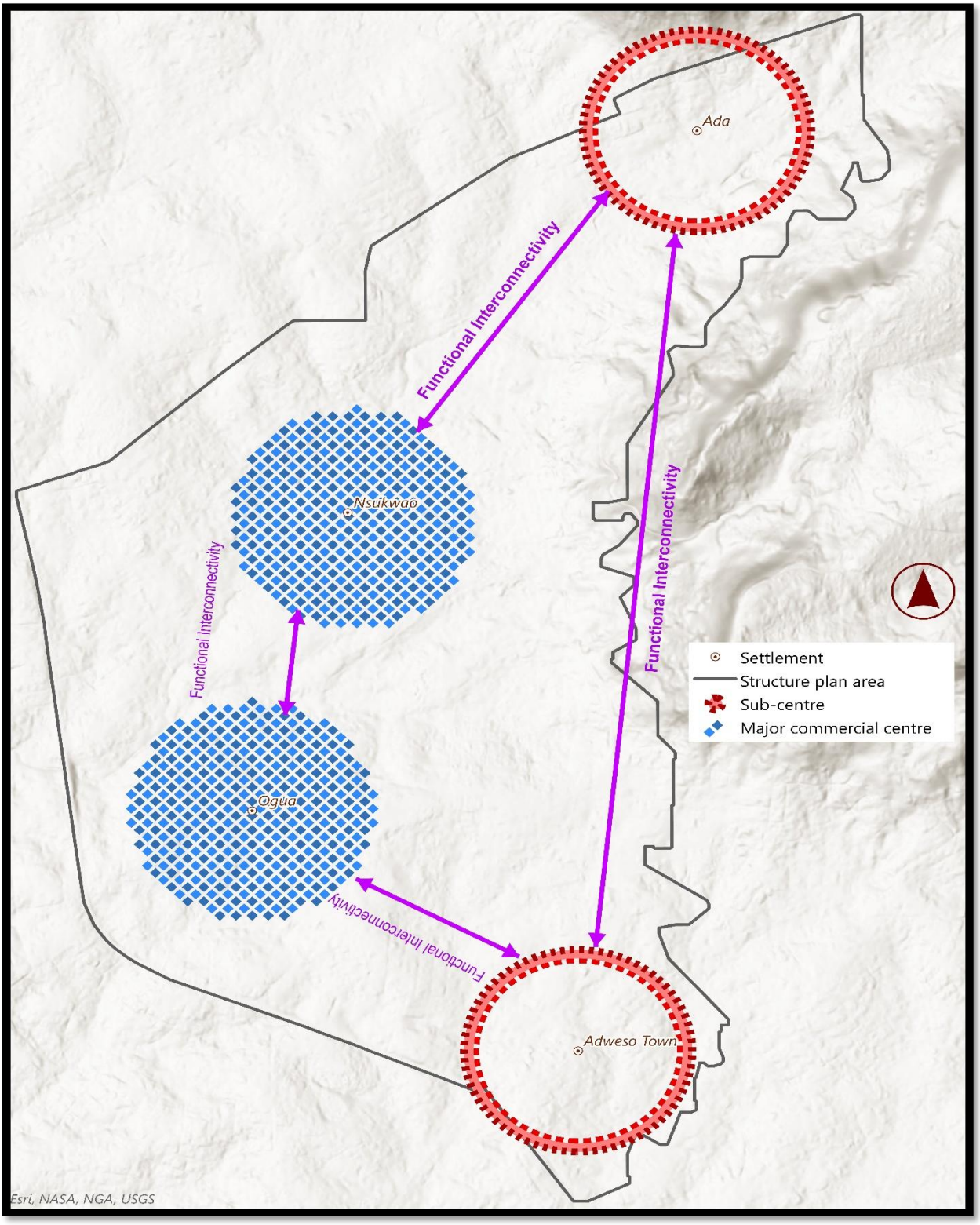



*Figure 5.4: Consolidation of Nsukwao and Ogua townships as twin core commercial and service investments centres*

Source: GLODA, 2025

### 5.3.3 Concept Comparison

The concept options are prepared under the common urban sustainability framework, and the vision and goals established for the Structure Plan Area. While environmental protection and sustainability is addressed in both concept options, however, these options differ in terms of growth focus, network development structure, development benefits and limitations.

*Consolidation of Nsukwao as a Major Commercial and Administrative Centre*

The consolidation of Nsukwao township as a major commercial and administrative centre is the organic growth concept which follows the current growth directions and organizes the new growth around the existing settlements similarly in a linear manner primarily along the N4. Although this option provides equal opportunities for redevelopment of existing settlements and takes advantage of the existing road infrastructure, the limitations of this option is that maintaining the current organic nature of development may worsen the traffic situation with aggravated congestion towards the town centre in view of the increasing growth pressure, and that the existing town centre may not have sufficient capacity to accommodate the new demands due to limited land availability.

*Consolidation of Nsukwao and Ogua townships as twin core commercial and service investments centres*

The consolidation of Nsukwao and Ogua Townships as twin core commercial and service investments centres provides an alternative concept of horizontal corridor development together by devolving commercial and administrative function and traffic to two settlements. This option provides an opportunity to establish two new growth areas for spatial expansion, establishing a new sustainable twin town models for future urban growth through an efficient use of available land. Again, it helps relieve development pressure on Nsukwao town centre and decentralize urban growth. The connectivity between Nsukwao town centre and the Ogua Town centre needs to be improved to ensure a balanced and integrated development of the Structure Plan Area. The limitations of this concept option is the duplication of functions the twin core towns may perform which may affect sound and sustained spatial growth and the balance of population in the Structure Plan Area.

### 5.3.4 Preferred Concept Option

The two concept options or scenarios were presented to stakeholders, and there was a general consensus that the scenario/concept option one (*Consolidation of Nsukwao as a Major Commercial and Administrative Centre*) as the preferred scenario option for the preparation of the Nsukwao-Adweso-Ada Structure Plan.

| Comparison Framework | Consolidation of Nsukwao as Major Commercial and Administrative Centre | Consolidation of Nsukwao and Ogua as Twin Core Commercial and Administrative hubs |
|---|---|---|
| **Growth Focus** | • Growth focused on existing linear pattern along the N4 and one core commercial and administrative centre. | • Growth focused on existing linear pattern along the N4 and twin core commercial and administrative centres. |
| **Network Structure** | • Linear development structure along the N4.<br>• Network organized into one commercial and administrative centre with 2 sub-commercial centres.<br>• Revitalization of existing town centre.<br>• All environmentally sensitive areas are maintained. | • Linear and horizontal development structure along the N4 and proposed core centres.<br>• Network organized into two twin commercial and administrative centres with 2 sub-commercial centres.<br>• New and Vibrant Mixed Use Network Centre and revitalization of existing town centre.<br>• All environmentally sensitive area are maintained. |
| **Development Benefits** | • The concept makes use existing infrastructure for urban growth.<br>• New financial and business district for new commercial activities to co-locate within existing CBD will have better synergy with old town centre. | • Creates new commercial and administrative hub to support the existing commercial centre.<br>• New CBD and development corridor to be integrated in the existing settlements; hence the greenfield development minimises constraints of existing buildings and infrastructure. |
| **Limitations** | • Intensive commercial activities as a result of new created spaces for commercial and administrative activities may worsen the traffic situation and congestion the old town centre.<br>• Infilling for major commercial development will conflict with land ownership rights making densification difficult. | • Connectivity of the two commercial centres has to be strengthened to ensure the viability of the new commercial centre development.<br>• Creation of a new major commercial centre may be expensive and requires lots of consultation with land owners/property owners to achieve that.<br>• Land consolidation and ownership issues for new CBD and new development corridor. |

*Table 5.4 Concept/Scenario Plan Options Comparison*

## NSUKWAO-ADA-ADWESO STRUCTURE PLAN

### 6.1 Accommodating 34,772 Population in Nsukwao-Ada-Adweso Area

#### 6.1.1 Broad Land Use Distribution

The Nsukwao-Ada-Adweso enclave is envisioned to be the financial and administrative hub of the New Juaben South Municipality and therefore it is imperative to safeguard sufficient land for urbanization. The strengthening of Nsukwao as a commercial and services hub concept as chosen by stakeholders formed the basis for the Nsukwao-Ada-Adweso Structure Plan.

Around 65 percent of land is proposed to be urbanized to meet the future economic and social aspirations of Nsukwao-Ada-Adweso enclave and also to accommodate a population of 34,772 in 2046. The urban land is secured for residential uses, commercial uses, light industrial uses and other public amenities including education, health and civic and cultural facilities including the open spaces. The structure plan makes proposal for 5 percent of the total urban land to be reserved as the Central Business District for purely commercial use to reinforce Nsukwao-Adweso-Ada as the commercial and services hub of the municipal.

Light industrial zones were safeguarded to ensure the establishment of agro-based and light manufacturing industries to support urban agriculture in the Structure Plan Area. The broad land use distribution of Nsukwao-Adweso-Ada Structure Plan Area by 2046 is presented in the Table 6.1.

| Land Use | Area (ha) | Percentage of Total Area |
|---|---|---|
| **Residential** | 602.94 | 65.12 |
| **Commercial** | 47.79 | 5.16 |
| **Education** | 81.79 | 8.83 |
| **Industrial** | 16.07 | 1.74 |
| **Open Space** | 75.84 | 8.19 |
| **Road** | 21.37 | 2.31 |
| **Mixed Business Zone** | 59.17 | 6.39 |
| **Civic & Culture** | 20.96 | 2.26 |
| **Total Land Requirement** | 925.93 | 100 |

*Table 6.1 Broad Land Use Distribution for Projected Population*

Source: GLODA, 2025

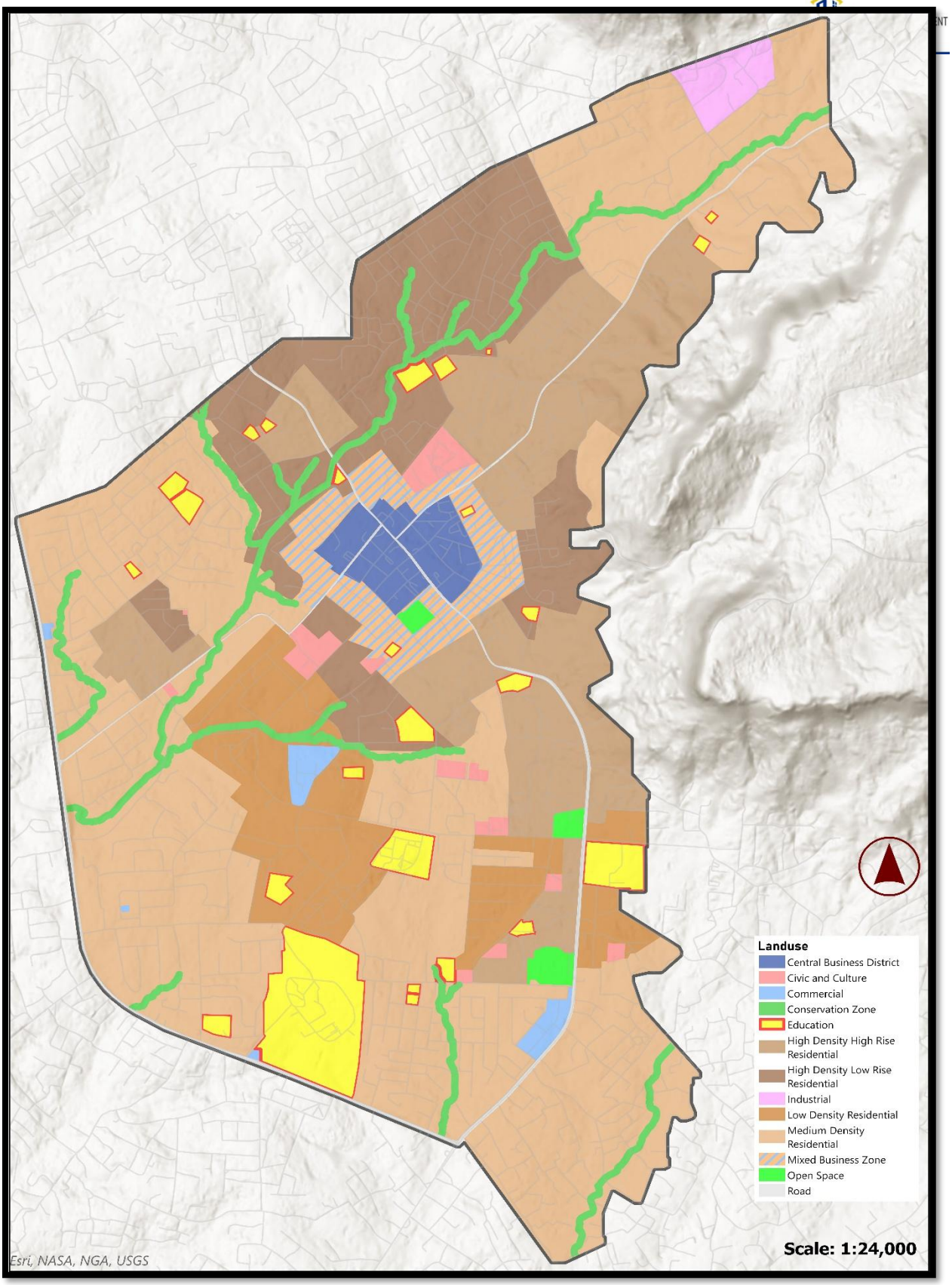



*Figure 6.1 Nsukwao-Adweso-Ada Structure Plan*

### 6.2 Proposed Commercial Plan

At present, only 3 percent of land is under commercial land use. Most of the commercial activities engaged by the population are low value-added services. The commercial activities are limited to informal and low value-added service activities that meet the day to day needs of the residents. This includes the wholesale markets for agriculture and livestock produce, along with few offices. The structure plan area is home to a number of commercial banks and financial institutions, which are mostly located in the Central Business District. The challenge of low productivity and income are ensuing of unregulated mixed-use sprawl along all the major roads in the network.

Thus, to achieve Nsukwao-Adweso-Ada's role to be a commercial and services hub of New Juaben South Municipal, there is a need to improve physical infrastructure including strategic land provision for commercial activities. This will boost service sector development and provide variety of job opportunities for the projected population growth. It is proposed that forty seven hectares (47ha) of land reserved and strengthened for commercial use within the Central Business District and this represents 5 percent of the proposed land use distribution in the structure plan area as can be seen in Figures 6.2 and 6.3.

ACTIONS

1. Prioritize growth of small- and medium-sized companies in a coordinated strategy for equitable economic development.
2. Assess the needs of small- and medium-sized businesses, focused on identifying specific barriers to growth for women businesses such as permitting process, physical space needs, access to capital.
3. Development of the Town centre to serve as the major hub for mixed commercial uses including retail and wholesale, offices for government and administrative functions, institutions, commerce and trade activities.
4. Revitalize the existing markets, mixed-use and other commercial areas to cater for increasing need for retail spaces with better facilities.
5. Revitalize the existing commercial area and initiate infilling development for future business needs as anticipated in view of the economic restructuring.

6. Design of open areas and its surrounding undeveloped areas for integrated commercial, mixed-use and high-density residential developments.
7. Locate business support services in neighbourhood centres, especially in low- and moderate-income communities.
8. Support programs that provide business training, firm-to-firm mentoring, and other services that help low-income residents start and grow businesses.
9. Expand the availability of goods and services in neighbourhoods by supporting small, locally owned businesses, especially women-owned businesses.
10. Provide more job opportunities in areas where informal sector workers live.
11. Support the growth of businesses in the informal trading sector.

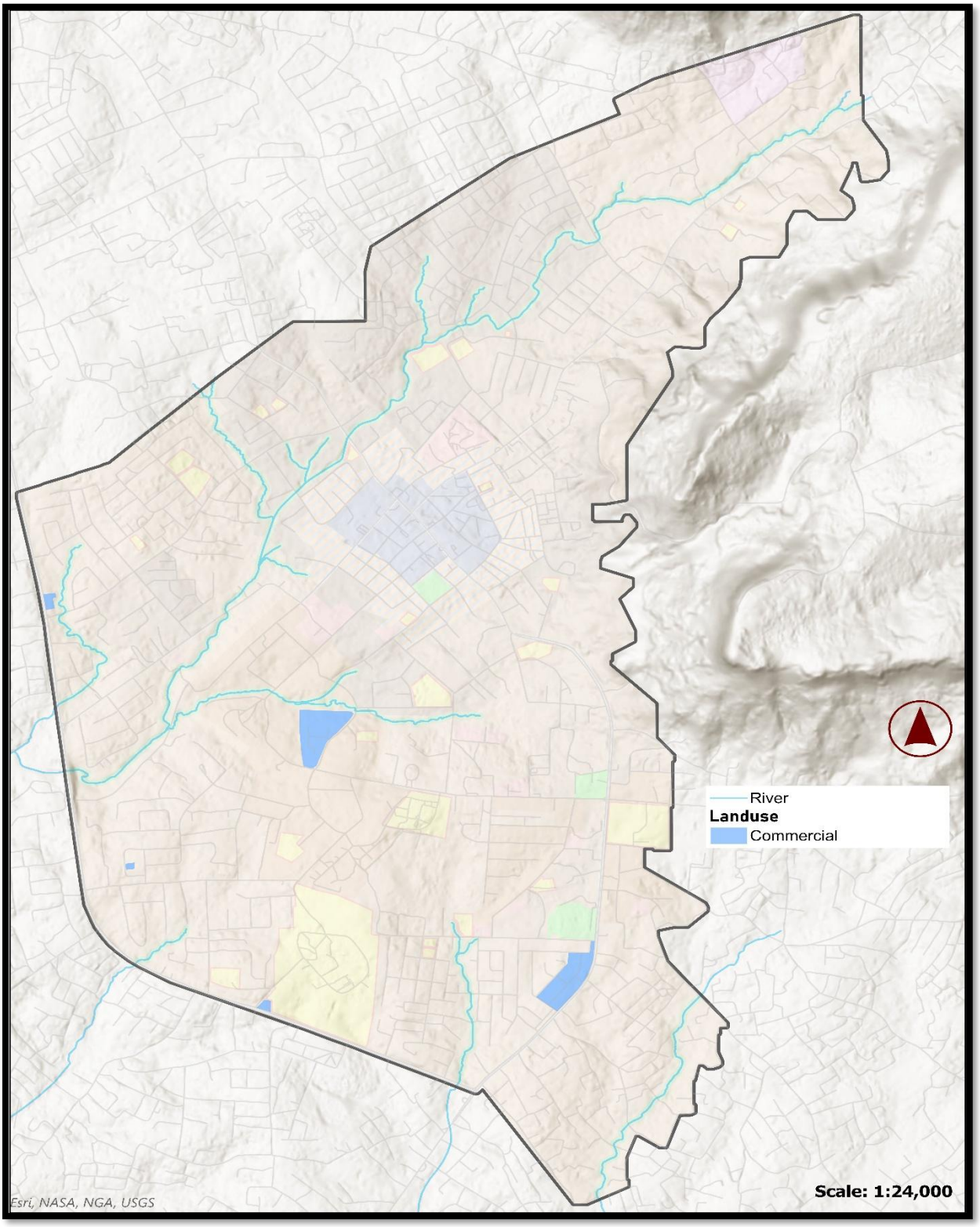



Figure 6.2 Proposed Commercial Plan for Nsukwao-Adweso-Ada

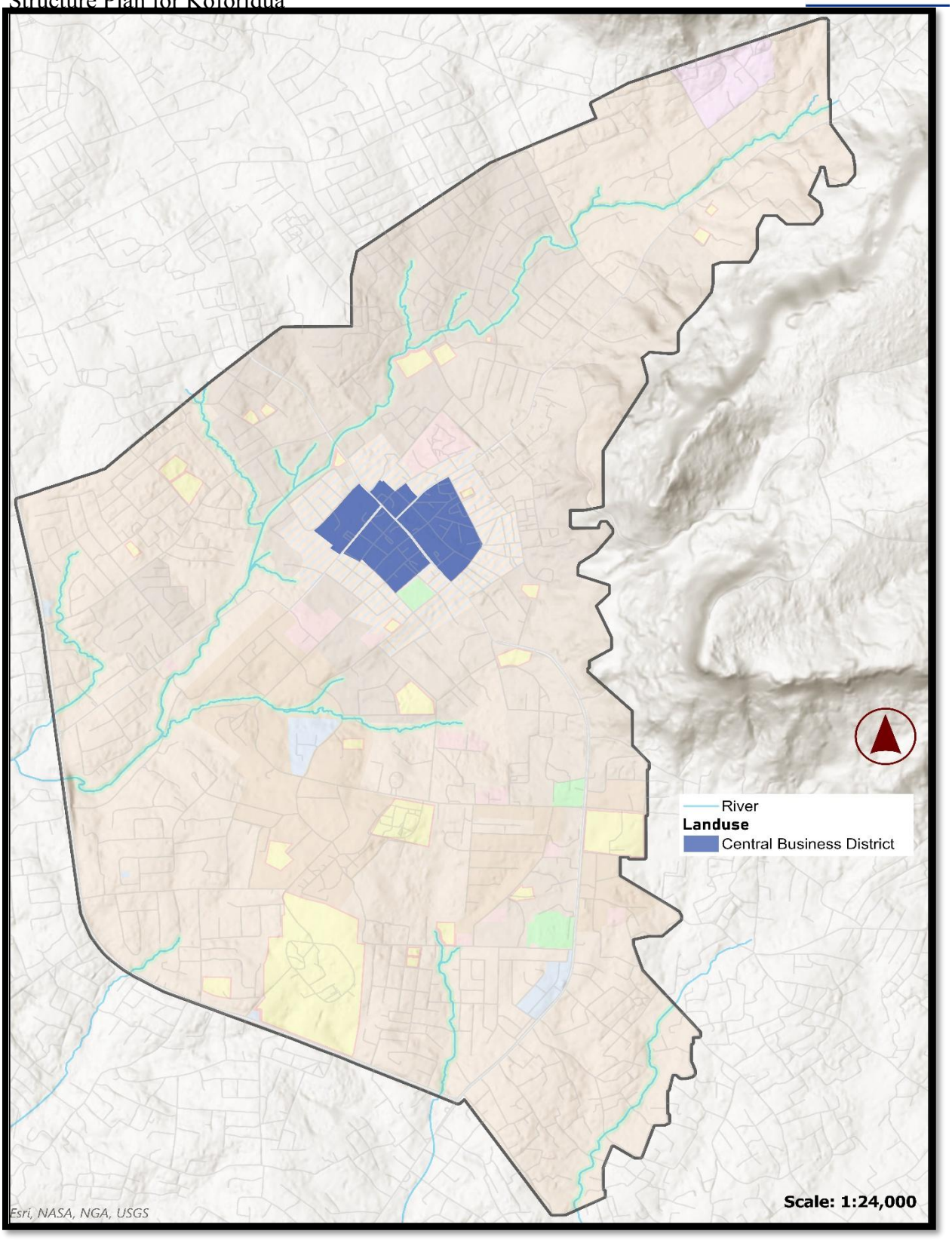



Figure 6.3 Proposed Central Business District for Nsukwao-Adweso-Ada

## 6.3 Proposed Industrial Plan

The industrial sector activities particularly manufacturing in the structure plan area is very basic. Food processing, tailoring, shoe making, cosmetics production and soap making are the most common manufacturing activities in the structure plan area. The industrial sector in the structure plan area is not well developed and also there is a weak linkage between agricultural production and industrial set-up. In the present scenario, there are very limited industrial activities in the structure plan area. The proposed land area for industrial zone is 16.07 ha which represents 1.74 percent of the proposed land use distribution in the structure plan area specifically in the north-eastern section as can be seen in Figure 6.4. The existing industrial uses are also retained to consolidate the industrial development in the structure plan area. The industrial development is proposed to focus on labour and skill intensive jobs to provide local employment and empowerment and utilize the available resources.

ACTIONS

1. Ensure that new industrial areas are connected to and well served by water, sanitation, solid waste and electric power infrastructure.
2. Assess the need and feasibility of allocating industrial land in local plans for developing new industrial areas.
3. Develop new industrial zones in line with ESG standards, which can render the areas more competitive and attractive to investors.
4. Strengthen the physical and virtual connectivity between the industrial zones.
5. Provide/improve public transport between worker-dense neighbourhoods and industrial zones, enabling workers to go easily to and from work.
6. Prioritise and target investment in increasing and ensuring stable power generation in industrial zones.
7. Plan to locate new housing developments (and associated infrastructure and services) near or accessible to industrial land and well connected to trunk transport networks to reduce travel times.

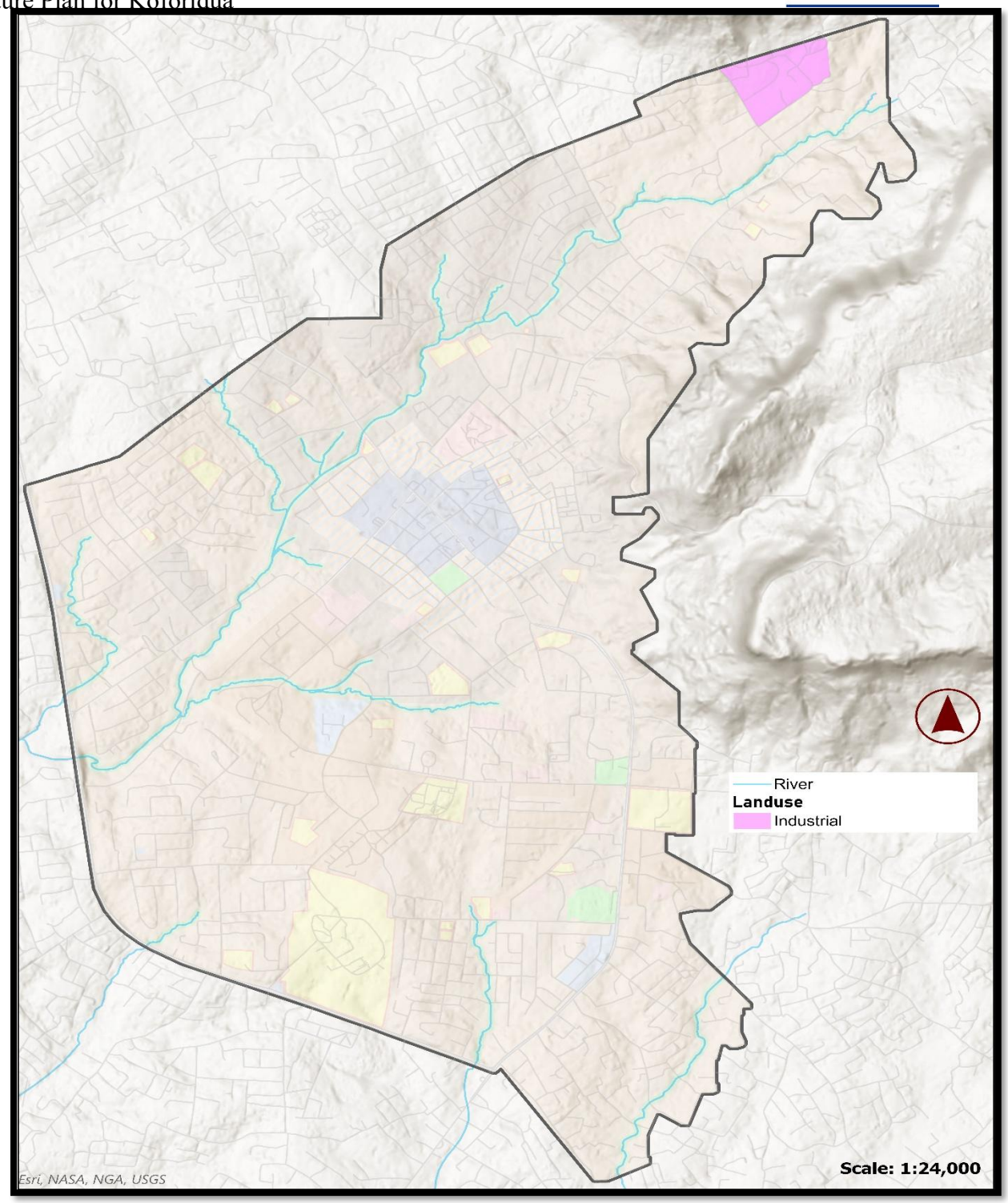



Figure 6.4 Proposed Industrial Plan for Nsukwao-Adweso-Ada

## 6.4 Proposed Residential Plan

The Residential Land Use Plan for the structure plan area seeks to organise and restructure the residential clusters in Nsukwao-Adweso-Ada to accommodate 34,772 population by 2046. In line with the broad development strategy, the plan aims to decentralize economic activities and create self-sustained economic hotspots and centres across the structure plan area as can be seen in Table 6.4.

| Development Type | Housing Density (DU Per Ha) | Household Size | Density Share | Population | Land Area Required (ha) |
|---|---|---|---|---|---|
| **Low Density (Re A)** | 10-15 | 4 | 20% | 6,954 | 336.6 |
| **Medium Density (Re B)** | 16-30 | 4 | 30% | 10,431 | 1651.5 |
| **High Density High Rise** | 60 | 4 | 40% | 13,909 | 634.0 |
| **High Density Low Rise** | 30 | 4 | 10% | 3,477 | 336.6 |
| **Total** | | | **100** | **34,772** | **2,958.7** |

*Table 6.4: Proposed Residential Land Use Distribution*

ACTIONS

1. Increase the development of rental units.
2. Diversify housing options through sites of different sizes, natures (greenfield/brownfield), locations (nodes and corridors), and ownership (public, private, institutional).
3. Densification of the existing Town Centre to allow development of higher density residential areas and the distribution of more employment and businesses to facilitate a more organised urban growth.
4. Locate more housing, -including low-income housing-, in or near centres, on public transport corridors, and in/around places of large-scale employment.
5. The land use plan for residential development in the structure plan area consists of 5 types of residential developments, which caters for the various housing needs of the population.
6. The 34,772 population is distributed in high, medium and low-density areas.
7. The town centre and sub-centres are equipped with commercial developments/uses, social infrastructure, recreational spaces and other amenities.

8. Provide a range of age-appropriate affordable and accessible housing options.

*Low Density Residential*

Land in low density residential in the structure plan area is intended for very low-density residential development as can be seen in Figure 6.5.1. These are high-end or upscale residential neighbourhoods characterized by spacious plots and detached houses. Housing density in Re A is typically 4–6 plots per acre/4,047m making it one of the least dense residential zones. Development is predominantly single-family detached houses (and duplexes) on large plots. The planning intention is to maintain a spacious, green environment free from intrusion by incompatible uses. Thus, industrial, large-scale commercial, or mixed-use developments are excluded from this zone to preserve its serene character. Re A areas are often found in suburban neighbourhoods or planned estates where exclusivity and privacy are desired. In summary, Re A remains almost entirely residential, with only very limited non-residential uses that directly support residents (clinic, nursery school, etc.) and do not generate traffic or noise beyond residential levels. Low density residential occupies 20 percent of the total residential land use in the structure plan area.

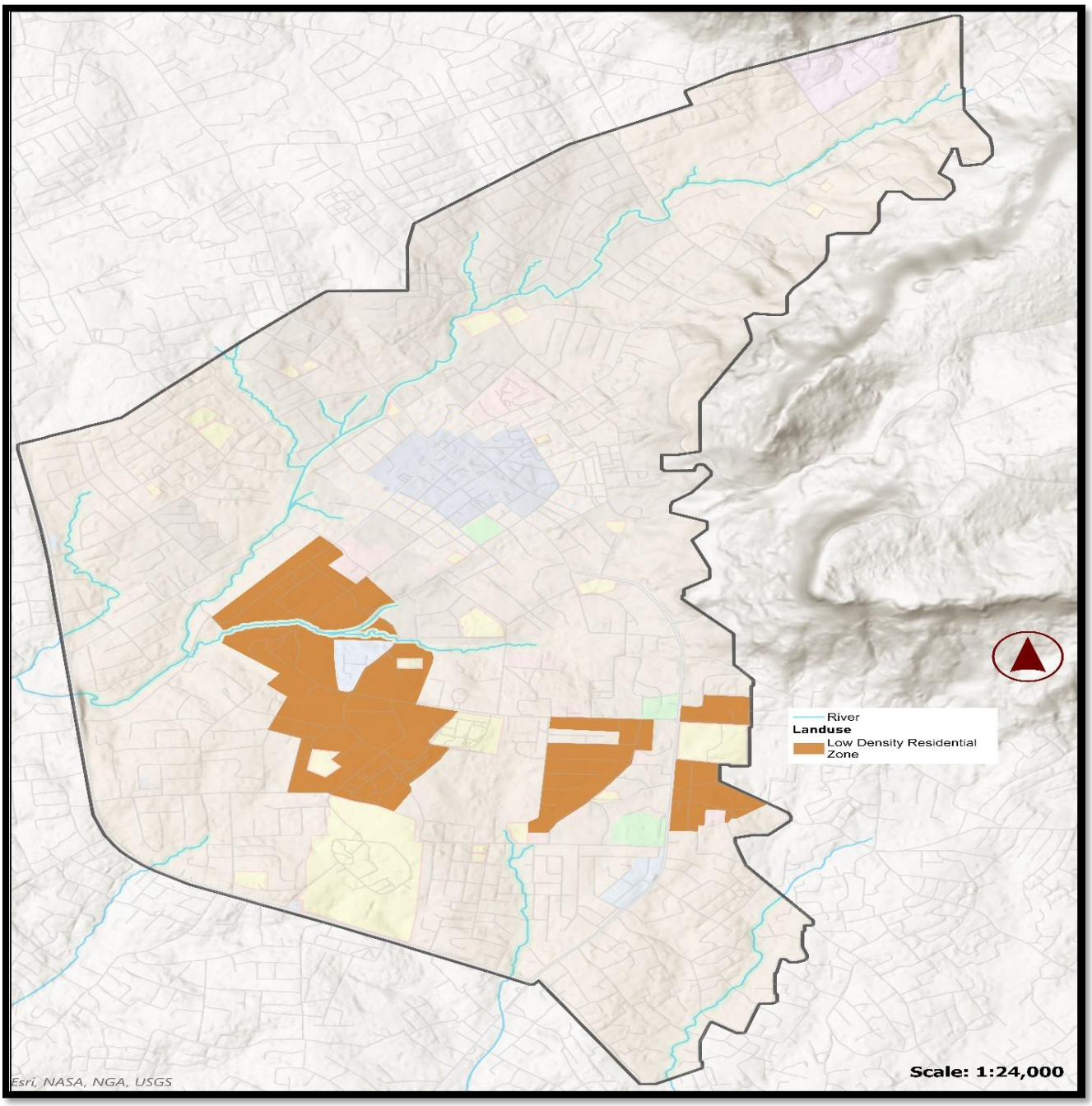



*Figure 6.5.1 Proposed Low Density Residential for Nsukwao-Adweso-Ada*

### *Medium Density Residential*

Land in Medium density residential zone in the structure plan area provides for medium-density residential development with a variety of housing types as can be seen in Figure 6.5.2. Development in this zone can include a mix of single-family detached houses, duplexes, row

(terraced) houses, and compound houses. The intent is to create neighbourhoods that are more compact than low density residential areas while still maintaining a good level of amenity and openness. Small convenience retail and services catering to daily needs of residents are permissible in selected locations within this zone so that residents have walkable access to shops. Medium density residential zone often serves as standard residential area or neighbourhood for middle-income residents. Medium density residential occupies 30 percent of the total residential land use in the structure plan area.

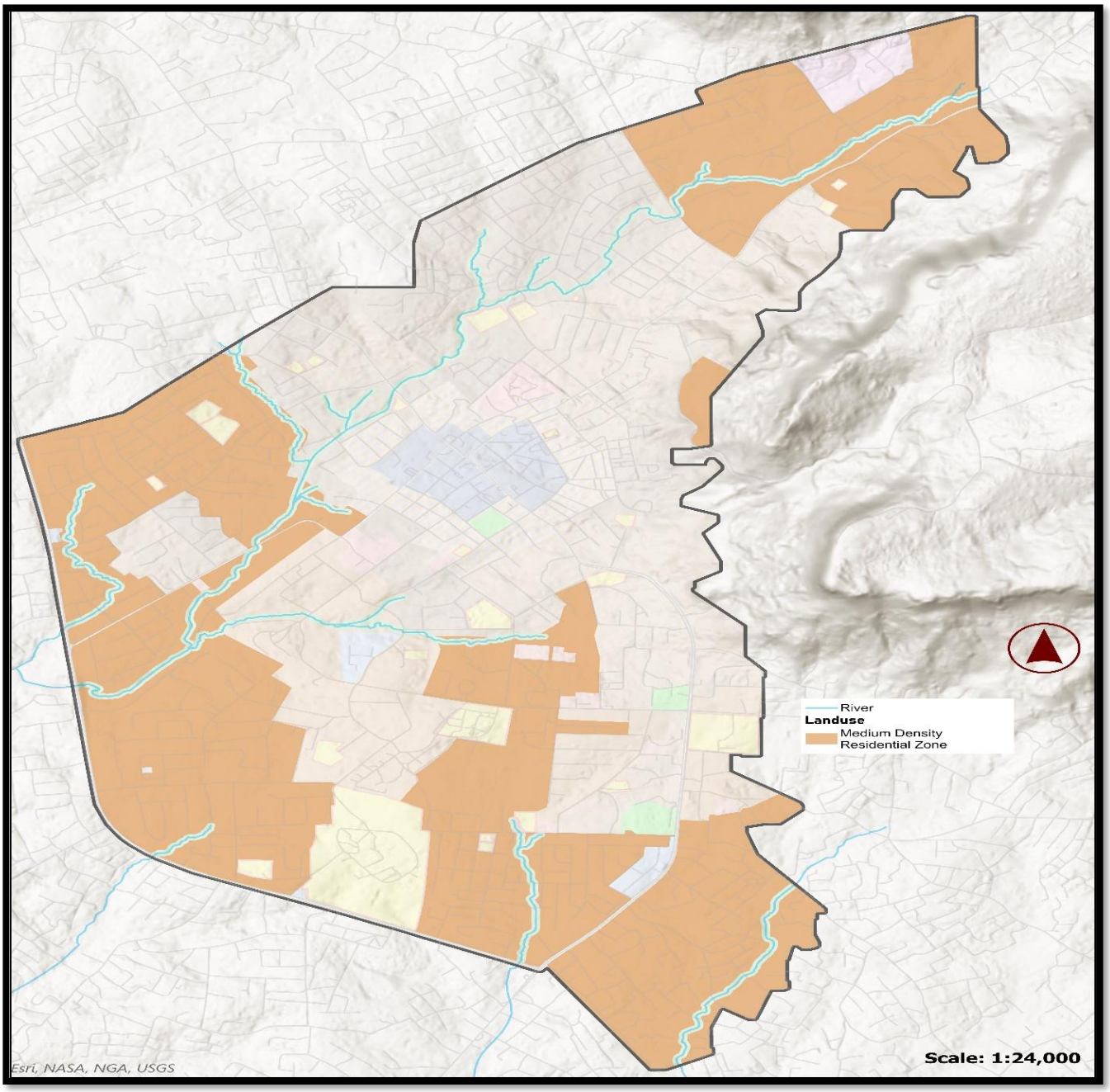


*Figure 6.5.2 Proposed Medium Density Residential for Nsukwao-Adweso-Ada*

### *High Density High Rise Residential*

High Density High Residential Zone in the structure plan area is designated for intensive multi-storey residential accommodation such as blocks of flats or apartments complexes, condominiums, and housing blocks typically ranging from 3 storeys with potential for higher structures as can be seen in Figure 6.5.3. Developments in Re C are typically more formally planned housing estates where land is used efficiently by building upward. These zones often appear in inner-city areas or strategic locations where high-density living is accommodated in apartment buildings rather than ground-level sprawl. The housing density in this zone is very high; for example, population densities may reach up to 120 persons per acre/4,047m$^2$ under normal conditions, and potentially more in central areas with taller buildings (with special approval). The intent is to allow vertical residential growth while ensuring adequate light, ventilation, and support facilities for residents. Developments in this zone are usually planned comprehensively, often as estates or clusters of apartment buildings with shared amenities. High density high rise residential occupies 40 percent of the total residential land use in the structure plan area.

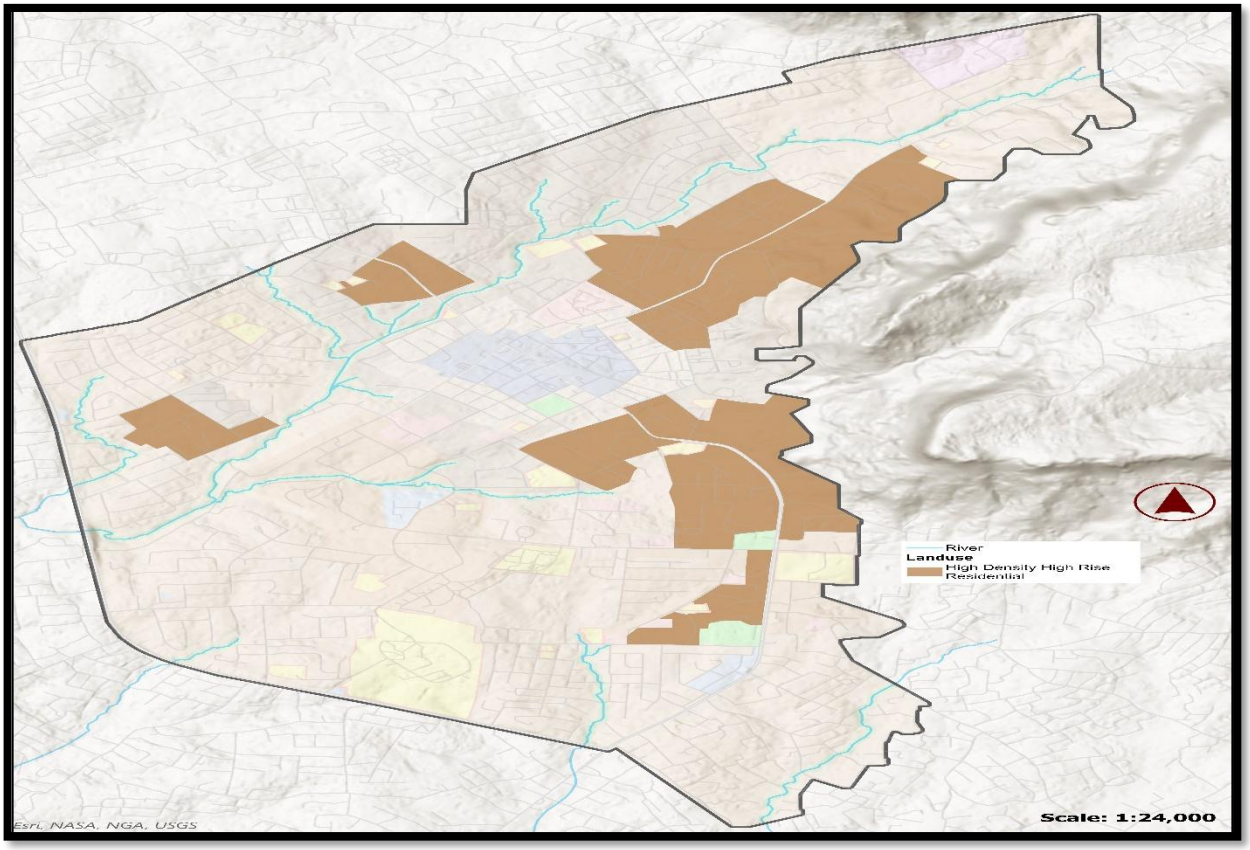


*Figure 6.5.3 Proposed High Density High Rise Residential for Nsukwao-Adweso-Ada*

### *High Density Low Rise Residential*

Land in High Density Low Rise Residential Zone in the structure plan area is an existing high-density urban residential development in low-rise to mid-rise building forms as can be seen in Figure 6.5.4. This zone accommodates low and middle-income neighbourhoods, including both formal and informal or semi-formal settlements that commonly have emerged in cities. Densities in Re D typically do not exceed 20 plots per acre/4,047m$^2$ Housing can be in the form of compound houses with multiple households, row houses and clustered units, or low-rise apartment blocks (up to 3–4 storeys) in some cases. It is expected that many of these areas will undergo upgrading and redevelopment. It can be upgraded to meet the minimum space requirements of 0.045 acre/185m$^2$

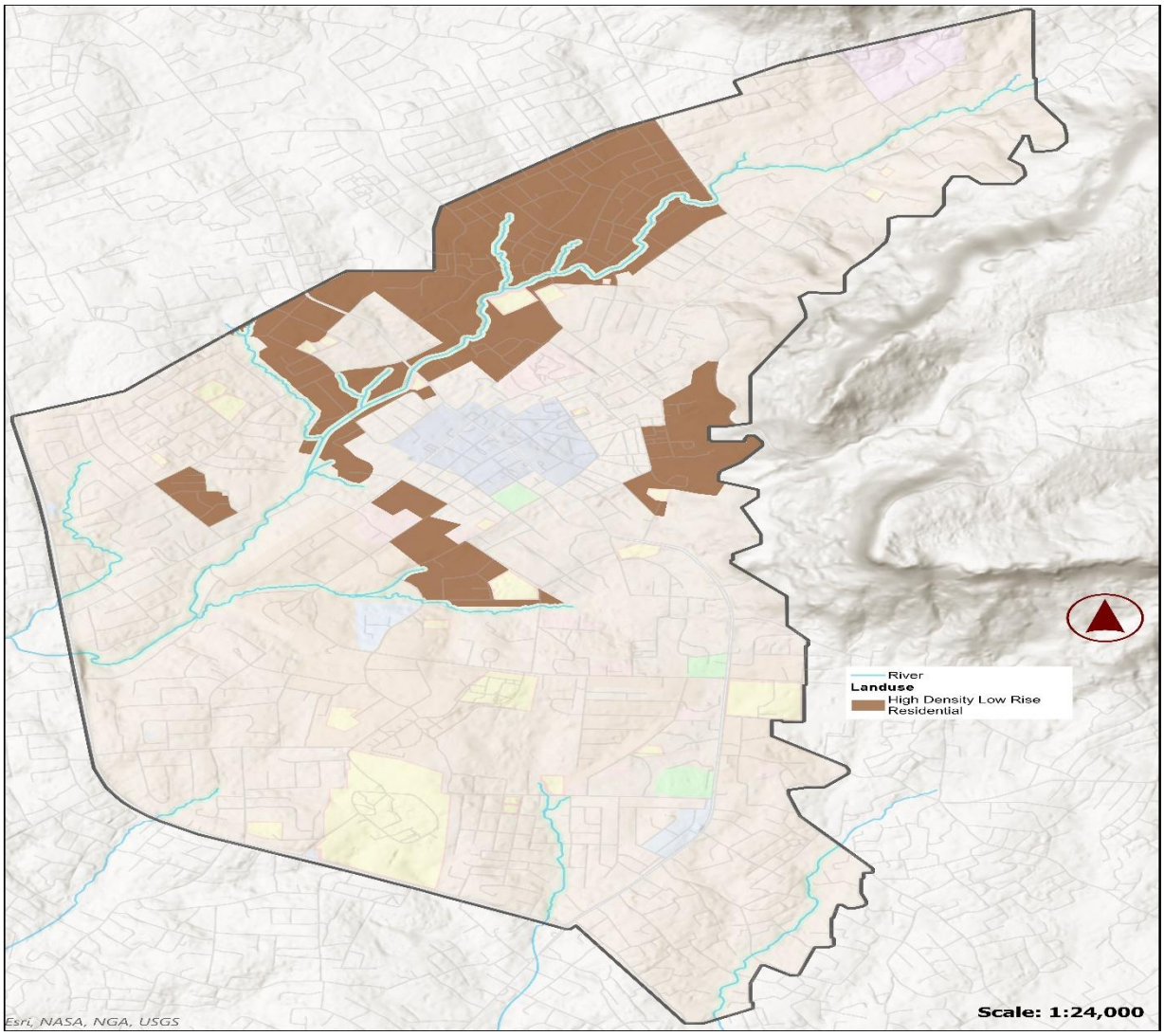



*Figure 6.5.4 Proposed High Density Low Rise Residential for Nsukwao-Adweso-Ada*

### 6.5 Proposed Public Facilities Plan

The structure plan area can boost of a sizeable number of public facilities comprising educational facilities such as tertiary institutions, primary schools, secondary school, and vocational school; health facilities such as hospitals, health centres, clinics and civic and cultural facilities such as district police headquarters, district health administration, post office, and religious buildings.

Public facilities are a critical component of the sustainable communities and it is important to provide adequate and accessible public facilities within the residential communities. The current zoning guidelines and planning standards specifies the provision of standards for public facilities based on the population. The future Nsukwao-Adweso-Ada enclave is estimated to be home to 34,700 residents in the long term.

Around 178.59 ha of land is planned for public facilities. The Structure Plan ensures that the hierarchy of public facilities are provided within convenient reach of the residents. The public facilities can mainly be categorized into three levels:

- The expanding population provides opportunities to develop larger town level facilities in in the structure plan area. Town level facilities are clustered in the main town centre of Nsukwao-Adweso-Ada.
- Sub-centre level facilities are provided in each of the centres as proposed in the development model.
- Local level facilities comprise of more local facilities addressing daily needs and are proposed to be provided in each local residential cluster within the walking distance.

Other smaller facilities such as local shop, health clinic and kindergarten can be developed within the residential clusters as needed. The proposed public facilities land use breakdown can be seen in Table 6.3.

| Development Type | Provision Standards | Site Area (Ha) | Land Required For 34,772 Population |
|---|---|---|---|
| Education | | | 81.79 |
| Nursery | 1 per 5,000 pop | 1 | 20 |
| Primary School | 1 per 1,500-6,000 pop | 1.21 | 35.1 |
| Junior High School | 1 per 10,000 - 10,000 pop | 2.4 | 26.69 |
| Health | | | 10.4 |
| Health Centre | 1 per 5,000 - 25,000 pop | 1.5 | 10.4 |
| Civic & Cultural | | | 10.96 |
| Recreation & Open Spaces | | | 75.84 |
| Sports Field | 0.5 ha per 1000 pop | 0.5 | 25 |
| Public Open Space (Passive) | 0.5 ha per 1000 pop | 0.5 | 50.84 |

*Table 6.3: Proposed Public Facilities Land Use Breakdown*

Source: GLODA, 2026

### *Education Facilities*

With the population projected to grow in the structure plan area, there is a need to augment the provision of nursery, kindergarten and basic school level educational facilities. New nurseries, kindergarten and basic schools are proposed to be developed in all the communities within walking distance of the residents. It is proposed that the current educational facilities in Nsukwao-Adweso-Ada which are in poor conditions be upgraded and improved.

### *Health Facilities*

Approximately 10.4 hectares of land is proposed for the development of health facilities in the structure plan area. It is proposed that local level health facilities such as health centres, clinics and functional CHPs be well distributed within communities in the structure plan area.

### *Sports and Recreational Facilities*

Sports and recreational facilities are important for a healthy community. Recreational facilities such as sports field and sports complex are planned in all the residential clusters and centres with public parks and other community facilities to create an urban or community node. It is proposed that 25 hectares be reserved for sports and recreational facilities in the structure plan area specifically for local sports field. This will help address the lack of adequate local sports facilities

that are accessible to the residents in the suburban areas, as well as recreational parks with facilities for the enjoyment of the residents in the structure plan area.

### *Civic and Cultural Facilities*

Koforidua as the administrative capital of the New Juaben South Municipal, the structure plan area will house major civic facilities. It will have important government offices and public institutions. Along with the provision of general civic facilities. The structure plan area also envisions to coin its unique image by enhancing its cultural identity by provision of cultural centre, museum, community centres etc. It is proposed that a community centre is planned to be developed in each neighbourhood within the structure plan area providing space for residents to conduct local community and social activities.

ACTIONS

1. Expand green areas to improve the local thermal comfort in parks, roads, open spaces, parking lots, and green corridors and plant on green roofs, walls/facades, and around buildings.
2. Increase the use of water bodies and features to act as countermeasures to improve the overheated buildings.
3. Increase the use of shading in outdoor spaces, streets, and buildings, and use arcaded building form.
4. Do not permit building in river areas.
5. Implement strategies to reduce pollutants such as solid, hazardous and e-waste entering waterways.
6. Collaborate with the private sector to provide basic educational facilities in new communities to reduce commuting time for learners and caregivers.
7. Construct community libraries to promote literacy for both adults and children.
8. Promote funding for higher education programmes for women in the tertiary sector.
9. Introduce measures to promote change in the socio-cultural norms and values inhibiting gender equality.
10. Set up museums and cultural centres to promote cultural knowledge.
11. Promote the participation of women in community sports competitions.

12. Work with appropriate agencies to ensure access to funds to enhance female participation in sports at all levels.
13. Sensitize community/traditional leaders on the important opportunities in sports for women.
14. Ensure that high-quality, affordable primary health centres are available and accessible to all residents.
15. Assist local partners in expanding access to health care services for underserved populations.
16. Distribute basic level and emergency medical facilities so that all residents have safe, convenient access to such services.
17. Partner with healthcare entities to promote, support, and expand the availability of public
18. health services and programs.
19. Ensure proper coordination with stakeholders in the health sector to carry out strategies for increased access to health for vulnerable people.
20. Use the data from the Fast-tracking Digitalization of Ghana Cards and health records to target neighbourhoods and people with the greatest health care needs.
21. Rehabilitate or develop new healthcare facilities in underserved and/or high-poverty neighbourhoods, and in areas with high populations of senior citizens, the physically disabled, and others with unmet healthcare needs.
22. Seek funding through partnerships and grants to provide health, human care, and shelter accommodations.
23. Enhance facilities such as braille and sign language in public places to improve the accessibility, usability and travelling experience for the visually, hearing and speech impaired populations.
24. Equip public facilities with ramps and handrails to facilitate the mobility of the physically challenged.
25. Partner with businesses, healthcare organizations, schools, and residents to promote local, preventative health education programs.

## 6.6 Proposed Transportation Plan

### 6.6.1 Proposed Road Transport Plan

Urbanization and the projected population will have significant impact on transportation infrastructure if no action is taken to address the traffic and other congestion issues that will emanate from the increased population. There will be serious congestion on the roads and other traffic problems such as diminished safety and loss of pedestrian space on streets through urbanisation if no action is taken. An established road network system is required to support the development and the movement of goods and people.

*Road Hierarchy System*

The Department of Urban Road (DUR) and Department of Feeder Road (DFR) are responsible for the development of the variant categories of roads in the structure plan area. Paved roads are classified into three categories as part of the traffic management system to cater the increased demand of transport. These Classification is primarily used at structure plan level to identify the Right-Of-Way widths, traffic speeds and cross-section elements for the different road classes. Local access roads are recommended to be earth or gravel road and therefore it is not included in the classification. Table 6.4 displays the road classification adopted for the Nsukwao-Adweso-Ada Structure Plan Area.

*Major Arterial*

Major arterial roads represent critical road spines that anchor future urban evolution and economic activity. The major arterial roads will primarily link the development clusters/centres in the network. Population and developments are concentrated adjacent to major arterial roads Major arterial roads must not connect to the development directly so that traffic could operate at desirable speed.

*Minor Arterial*

Minor arterial roads provide mobility for medium distance traffic that partially connect to some of the developments and lower density residential area. Minor arterial collects traffic from collector roads and feeds traffic to major arterial road.

*Collector*

Collector road distributes traffic to development. Vehicular traffic and speed are expected to be low as the roads are designed for mixed traffic used with pedestrian and cyclist.

*Planning Approach for Road Cross Section*

Road width and elements are designed conforming to Ghana's planning standard and referenced to international guidelines as can be seen in Table 6.4. and Figure 6.6. Design considered:

- Community's aesthetic quality, identity, safety, capacity, economic activity, health, social cohesion and opportunity, not just its mobility.
- Possibility of future road elements scenarios to ensure the design of road cross section is resilient to adapt to future changes and uncertainty whilst minimising the cost of redesign and refurbishment.
- Segregated pedestrian and cycling path on major and minor arterial.
- Flexibility to include cycling lane on collector roads as the vehicular traffic is low which is suitable for mixed traffic use.

| Road Classification | | Right of Way(m) | Carriageway (m) | Median(m) | Shoulder(m) | Layby(m) | Walkway/Bicycle (m) | Sidewalks | Tarred width (m) | Max incline (%) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Highways | Motorway/Expressway | 90 | 7.3 X 2 | 5-10 | 3.0 X 2 | - | - | | 7.3 X 2 | 6 | Ditch, buffer and utility considered |
| | National Roads | 90 | 3.65 X 2 | - | 2.5 X 2 | 3.5 X 2 | - | | 7.5 | 8 | End of fill, buffer and utility considered |
| | Inter-regional/Regional roads | 60 | 3.5 X 2 | - | 2.5 X 2 | 3.5 X 2 | - | | 7.0 | 8 | End of fill, buffer and utility considered |
| Urban Roads | Major Arterial | 90 | 11.0 X 2 (3 lane) | 2.0 X 2 | - | 3.5 X 2 | 6.0 X 2 | | 11.0 X 2 | 6 | Drain, Service Lane, Separator, buffer and utility considered |
| | Minor Arterial | 40-60 | 7.3 X 2 | 2.0 X 2 | - | - | 5.0 X 2 | | 7.3 X 2 | 8 | Drain, Service Lane, Separator, |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | buffer and utility considered |
| | Collectors | 20-45 | 3.65 X 2 | - | - | 3.5 X 2 | 5.0 X 2 | | 3.65 X 2 | 8 | Drain, Service Lane, Separator, buffer and utility considered |
| | Local Road | 18-30 | 3.65 X 2 | - | - | 3.5 X 2 | - | | - | 10 | Drain, Service Lane, Separator, buffer and utility considered |
| | Cul-de-sac | 12 | 3.0 X 2 | - | - | - | - | | - | 12.5 | |
| | T-head for Cul-de-sac | 24 | | - | - | - | - | | - | | |
| | Footpaths | 6 | | - | - | - | - | | - | | |
| Feeder Roads | District/Sub-district | 30 | 3.0 X 2 | - | - | - | - | | - | 10 | Drain, Service Lane, Separator, buffer and |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | utility considered |
| | Community road | 15 | 2.5 X 2 | - | - | - | - | | - | 12.5 | Drain, Service Lane, Separator, buffer and utility considered |

***** Length of any Cul-de-sac should not exceed 200m***

*Table 6.4 Road Classification in the structure plan area*

Source: Zoning Guidelines and Planning Standards, 2025

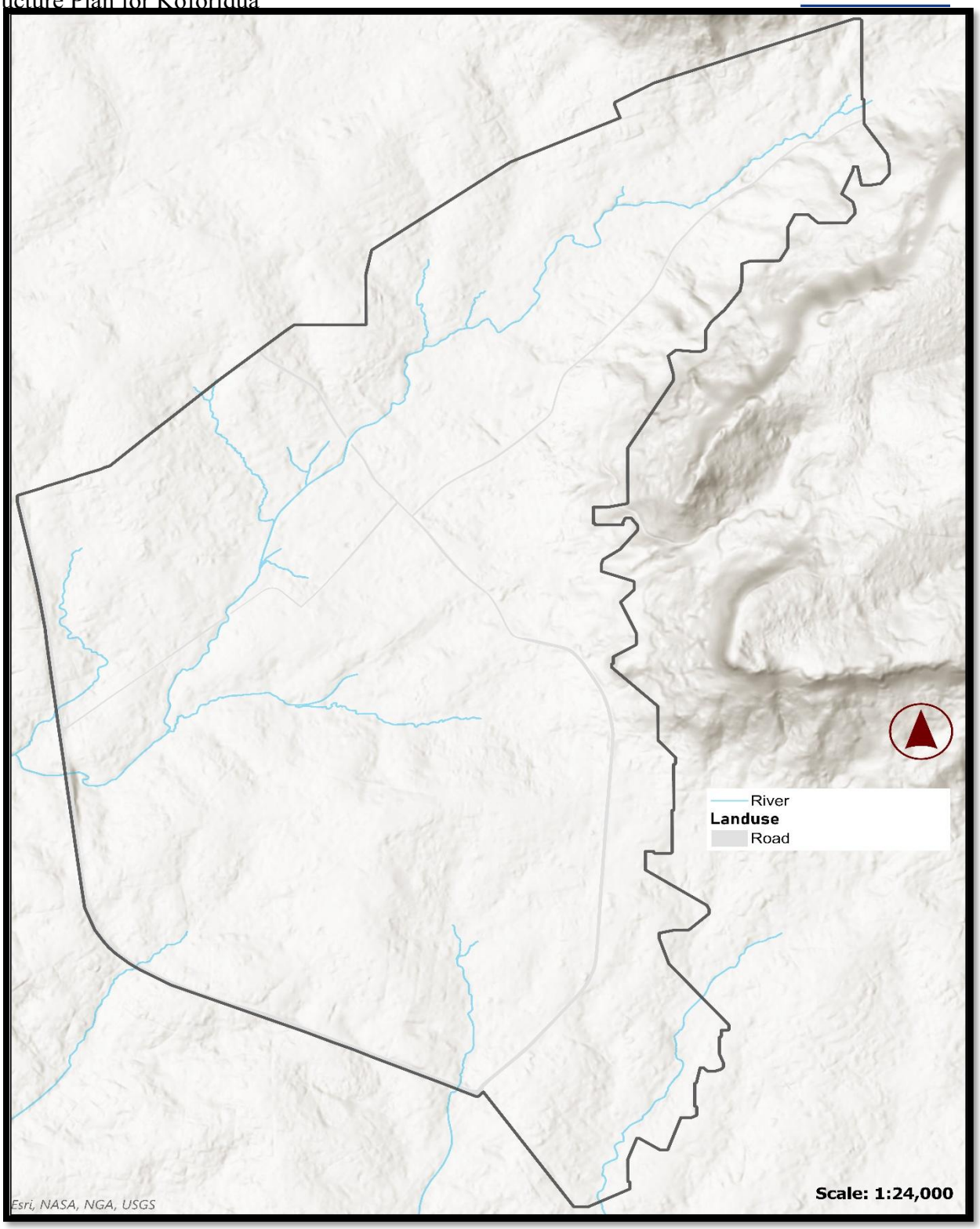



*Figure 6.6: Proposed Road Transportation Plan*

### 6.6.2 Proposed Public Transport Plan

Public transport constitutes the lion share of modal share in the structure plan area. The means of transport are; Taxis, Trotro, Motor Tricycles (Pragya) and Okada. This has resulted in vehicular and pedestrian congestion at the CBD. There are fourteen (14) transport terminals that exist within the CBD. They include Metro Mass Station, Kumasi Station, Ho Station, Accra Station and Taxi Rank. These stations are being operated under various transport unions such as GPRTU, PROTOA, Vision, Bayana, Cooperatives and Fair Play. The services of these transport systems, which are private and commercial, are usually at their peak on market days (Mondays and Thursdays) and weekends (Saturdays and Sundays).

*Public Transportation System in Nsukwao-Adweso-Ada Enclave*

It is proposed that a structure plan enclave-wide bus system should be operationalized to ensure connectivity and accessibility of essential services in all the centres. The current public transport modes including bus and taxis will be maintained and managed to reduce traffic issues in the structure plan area. Bus terminals should be built in all the centres to support the structure plan enclave-wide bus system.

*Public Transport Infrastructure*

Public transport infrastructure plays a vital part in the operation and function of an efficient, convenient and safe public transport system. Transport infrastructure such as maintenance depots, bus parks, repair and operational docks for the public transport systems should also be planned in tandem with the Structure Plan. Such facilities should be located within industrial and light zones where possible and have good access to the major arterial roads so that maintenance freight may be delivered.

### 6.6.3 Non-Motorized Transport (NMT)

United Nations Environment Programme (UNEP) has initiated a “Share the Road” programme to invest in walking and cycling infrastructure focusing on national-level projects with interested governments in Africa. The mid-term goal is to build an Africa regional partnership for financing, involving major donors–a public private partnership that can support countries in responding to the great demand for safe, convenient and enjoyable walking and cycling. Cycling is a common mode of transport in the urban network. Residents rely on cycling to run their daily activities and it is therefore important to improve the quality of facilities for the non-motorised transport and

promote more sustainable and pedestrian-friendly road infrastructure. This will not only make the roads safer for these groups but will also encourage good road habits.

By making NMT networks a key priority, pedestrian and cyclists' participation in long distance travel in 2046 may be maintained, and possibly increased, especially if the networks are integrated seamlessly with other modes of transport such as public transport.

*Non-Motorized Transport Network*

In order to promote walking and cycling, and to improve the overall walking environment, an NMT-friendly approach is required. Traffic and transport planning must put more emphasis on the interests of pedestrians. In the last decade NMT schemes have been implemented all over the world with the following objectives:

- To improve pedestrian and cyclists' safety and mobility
- To promote walking as a transport mode
- To discourage access for non-essential vehicles
- To reduce air pollution
- To improve overall pedestrian environment

The NMT Network Plan consists of the reserving and constructing the pedestrian and cycling paths and infrastructure in the road reserve. Cycle corridors are to be provided within the network boundary. The development of NMT networks should be prioritised along public transport nodes to facilitate first/last mile connectivity to and from public transport. Ghana's aspiration to achieve 80% public transport mode share will be achievable when NMT arrangement is seamlessly integrated with public transport network system.

ACTIONS

1. Establish effective, convenient, and frequent public transport and shared transport services on key corridors and in sub-regions. Identify opportunities for increasing the frequency of public transport services over time.
2. Promote multimodal and shared transport by encouraging employers to provide public transport passes, cycle facilities, shared-used mobility, and opportunities for car and vanpools.

3. Expand and enhance public transport, carpool, and vanpool programs through branding, outreach, improved infrastructure, and financial incentives.
4. Increase, on key corridors, NMT facilities such as bike racks, storage and shared use mobility stations, especially to support feeder/first/last mile trips.
5. Align road infrastructure maintenance and upgrade with future urban and economic growth priorities, as well as desired land use development.
6. Ensure adequate annual funding for infrastructure maintenance.
7. Repave roads that are in poor and fair state while maintaining the good roads in a good state.
8. Ensure that all primary and secondary roads within the structure plan area are paved.
9. If guided by an e-mobility strategy, create and install charger networks for electric cars along key corridors to reduce emissions.
10. Make public transport more affordable, especially for vulnerable groups.
11. Provide extra security personnel at busy stations/stops and in vehicles.
12. Prioritize opportunities to use phone apps to improve public transport information and operations.
13. Build new streets or pathways to increase connectivity, walkability and cyclability within large sites.
14. Ensure street design standards integrate all transport and mobility modes, including public transport, pedestrian, cycling and shared mobility facilities.
15. Promote human-scaled streets and streetscapes that accommodate pedestrians, bicycles, public transport, and vehicles in higher-density areas.
16. Improve coordination in planning, design, and implementation of infrastructure and utility improvements.

## 6.7 Sustainable Environmental Proposals

### 6.7.1 Proposed Environmental Strategies

The structure plan area is targeted to be developed as a flood free enclave that is also clean and environment friendly. The structure plan area is expected to be a flood-free enclave through reforestation, enhanced greenery as well as through sustainable storm water management measures by 2046. Again, the Structure Plan aims at making the Nsukwao-Adweso-Ada enclave clean and environment friendly through use of renewable energy and recycling, and sustainable resource management. Figure 6.7 & 6.8 proposes blue and green areas within the structure plan area. The following are the key environmental strategies adopted in the Structure Plan.

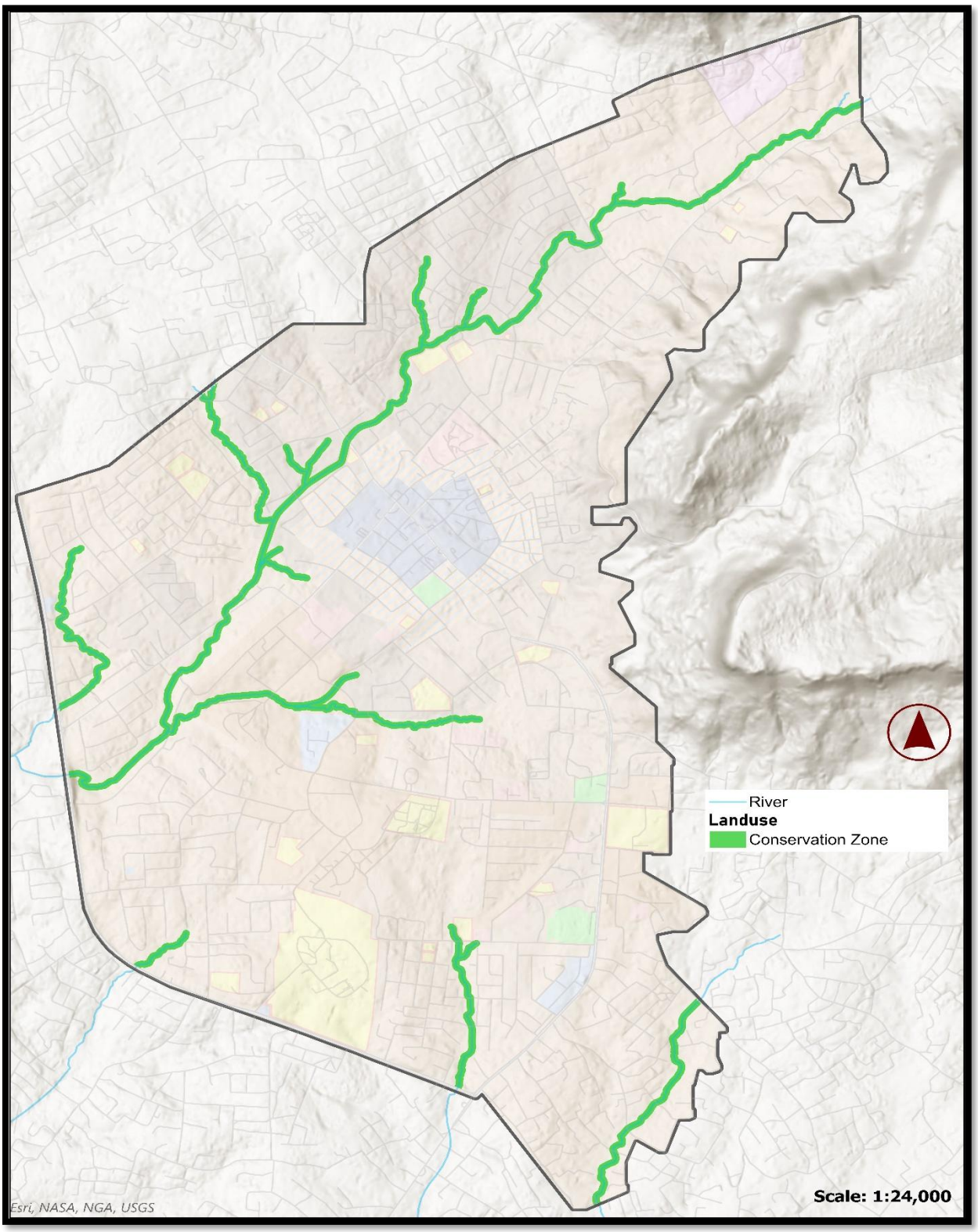



*Figure 6.7: Proposed Conservation Zone Plan*

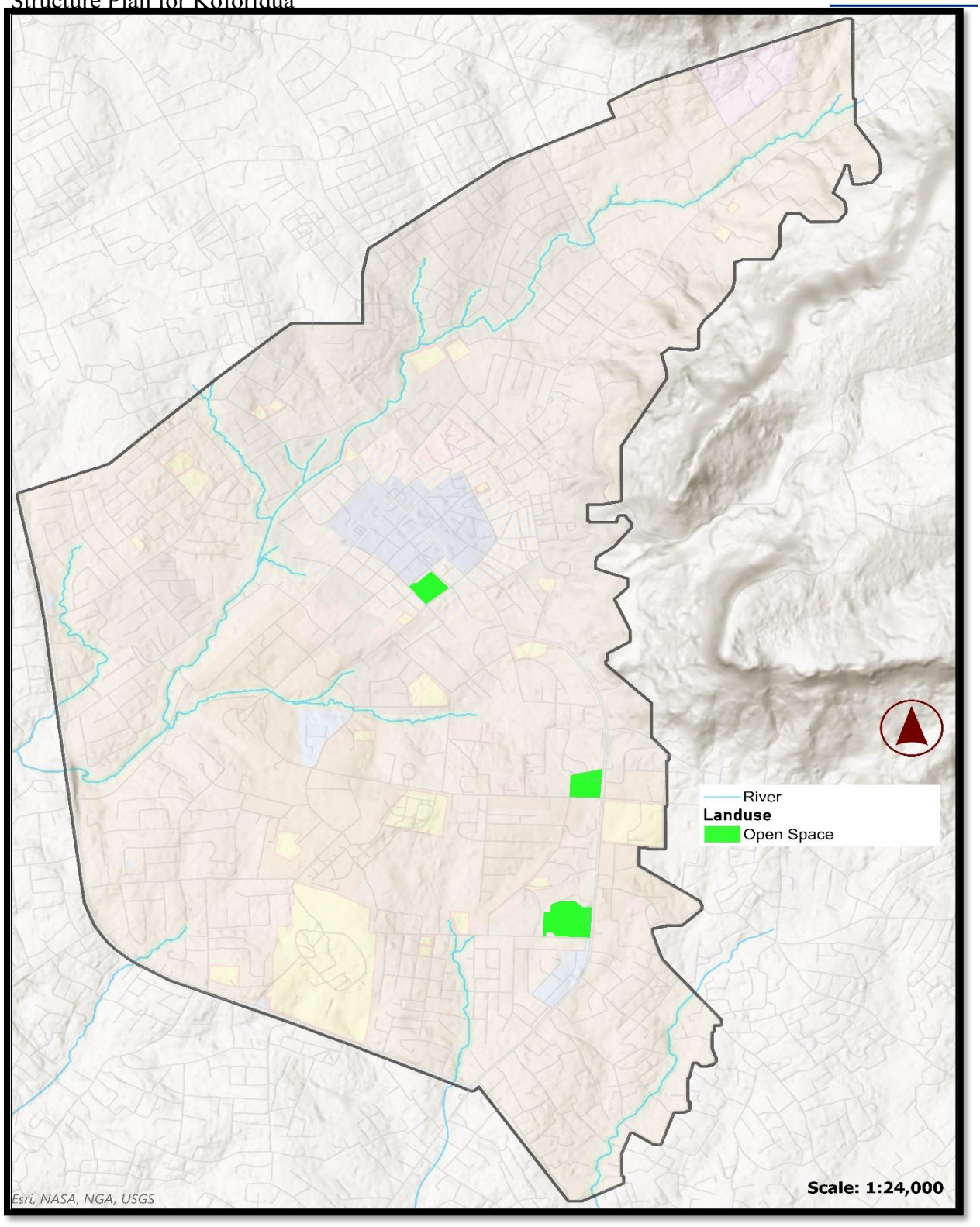



*Figure 6.8: Proposed Green Areas (Open Spaces) Plan*

### 6.6.2 Proposed Blue and Green Plan

The Structure Plan ensures an enhancement of overall green open spaces in the structure plan area. In respect of the provision of open spaces, the following are the four key categories of open spaces in Nsukwao-Adweso-Ada enclave.

- Nature areas comprising of all the existing wetland and water bodies. The structure plan proposes the protection of these environmentally sensitive areas.
- The open space system also comprises of urban agriculture land.
- The Structure Plan also proposes a hierarchy of green urban open spaces that needs to be provided in the structure plan area. This includes provisions of public park and recreation spaces within the town and neighbourhoods, mostly incorporated with the town centre or the neighbourhood centre, and where possible along the existing rivers and streams.
- Remainder of the open spaces are largely the vacant land outside of the urbanization zone, that could potentially be used for future urban expansion.

The hierarchy of public parks and open spaces proposed for the Nsukwao-Adweso-Ada Structure Plan Area are elaborated in the following section.

*Nature Parks*

The nature areas such as forests, wetlands and river provide opportunities to expand into a public space that will bring people closer to nature and build their awareness on nature preservation while providing recreation alternatives. Hence, the nature areas are proposed to be established as nature/ wetland parks allowing passive recreation that is nonintrusive to the environment.

*Town Parks*

There are proposals for the development of town parks in Nsukwao-Adweso-Ada enclave. The town parks will occupy around 9.3 hectares distributed within the structure plan area. The town parks are proposed to have park facilities such as walking trails, playing field, children playground, benches and picnic tables, landscaping and other recreational/ancillary facilities.

*Neighbourhood Park and Sports Field*

Neighbourhood parks and sports field are proposed to be developed in all neighbourhoods and can be located around the community centres such that the spaces could be shared during the gatherings

and social activities. The Neighbourhood Parks shall have basic park facilities such as children playground, sports field, benches and landscaping.

*Local Park, Linear Parks and Park Connectors*

Local open spaces which are smaller than the nature and town parks are proposed to be developed within the local residential clusters. Additional to the nature park, town parks, and the neighbourhood parks, a network of green web is proposed to be developed that connects the overall park and open space system in Asamankese. These linear parks and park connectors will provide infrastructure for active transport such as walking and cycling in addition to the recreational opportunities.

ACTIONS

1. Enhancement of overall green and open space system in Nsukwao-Adweso-Ada and encourage reforestation to expand nature areas as well as mitigate flooding.
2. Identify rivers and natural streams restoration projects under active, beautiful and clean river projects thus managing the flood issues as well as providing riverside recreational opportunities to the residents and visitors.
3. Plan for alternative energy such as solar power targeting at least 20% renewable energy usage to meet the power demand of the network.
4. Develop waste processing plant and the sanitary landfill site for proper disposal of waste, thus ensuring a clean and sustainable environment.
5. Plan for the waste recycling plant to ensure at least 30% of the waste is recycled.
6. Adopt tree planting and manage ordinances for trees on public property and private property.
7. Prioritise the protection of existing tree canopy because of its shade quality and root structure.
8. Require a permit to remove healthy trees based on size.
9. Create new parks and green spaces to ensure residents are within proximity to parks and trails.
10. Plan for a diverse range of active and passive recreation amenities.
11. Create new parks and trails that connect centres to rivers, lakes, and other water bodies.

12. Review park features and amenities to ensure assets are of high quality and appropriate for surrounding neighbourhoods.
13. Expand the structure plan area open spaces network by connecting with existing parks and identifying land uses that can function as open spaces.

## 6.7 Proposed Infrastructure Plan

### 6.7.1 Power Supply

GRIDCo. is the transmission power service provider and it owns and operates the transmission facilities in Ghana. Electricity Company of Ghana is the distribution power service provider, it distributes power to various settlements in the New Juaben South Municipal, including settlements within the Nsukwao-Adweso-Ada enclave. It is estimated that above 60 percent of the population in the structure plan area have access to electricity supply. This number is considerably low as compared to 86 percent (2020) of household in Ghana having this access to electricity. Power demand is expected to increase as a result of rapid urbanisation and population growth.

The following strategies present an overview on how each of the requirements for power supply may be addressed in the Structure Plan.

- Consider economic optimization. Different power supply sources for urban & rural area developments are recommended.
- Single contingency should be built into the transmission network to provide reliable power supply.
- Development of renewable energy sources shall be encouraged to supplement at least 30 percent of the conventional power supply in Asamankese Urban Network.

*Renewable Energy as Alternative Power Supply*

The economic growth of Asamankese will increase drastically in the future and will cause an increase in power supply demand required. Therefore, the development of renewable energy sources could be considered an alternative source of power supply to cater for this growing network. This can be done by encouraging the development of renewable energy sources such as solar and wind energy within spatial planning area through policies and development guidelines.

### 6.7.2 Water Supply

It is expected that Nsukwao-Adweso-Ada enclave will experience a major population growth as well as rapid urbanization by the year 2046. This gives rise to a significant increase in water supply demand in the distant future by the population of the structure plan area. Currently, there is a gap in water supply in the structure plan area as access to the urban water. The following issues associated with the water supply sector have been identified and are listed below:

- Decrease in water yield from boreholes and preventing their discharge into the other water river during drought periods; and
- Inadequate water supply infrastructure to meet the demand of new developments.

The following approaches are proposed to resolve the stated issues and to improve water supply management in Nsukwao-Adweso-Ada enclave:

- Encourage the use of greywater in public and private facilities.
- Minimize drinking water waste through infrastructure improvements.
- Use water conservation-oriented rates to extend supply, promote equity and meet minimum flow levels.
- Develop incentives for commercial/institutional water reduction.
- Different Water Supply for Urban and Rural Developments.
- Benchmark water use in all public facilities and develop a plan to reduce water consumption.
- Modernization of the distribution system to minimize waste and illegal connections in existing communities.
- Provision of overhead storage facilities to the expanded settlements.
- Develop and implement a plan to address illegal water tapping and losses to circumvent water meters and obtain free water.
- Address the problem of pipes that are damaged by construction activities, especially in the slums and old neighbourhoods.

### 6.7.3 Storm Water Management

Currently, there is no proper drainage infrastructure in the structure plan area and as such, flooding occurs rampantly whenever it rains. As more parts of the planning area will be urbanised, this gives rise to higher runoff co-efficient due to increased concrete pavements. The higher runoff coefficient means that run-off from flood water will increase and so does the risks involved. By the year 2046, a suitable and robust storm water management system needs to be developed to reduce the risks from flood. This section will focus on the proposed measures to manage the storm water runoffs.

The goal for Nsukwao-Adweso-Ada Structure Plan Area in the year 2046 is to develop the enclave, but also reduce its flood risks by implementing the following strategies:

- Establishment of an integrated sustainable drainage system.
- Sustainable drainage systems.
- Provision of flood control and erosion control measures.
- Incorporating existing streams into green spaces.
- Efficient drainage network system.
- Explore the use of incentives or zoning to encourage green -hence porous-infrastructure on private property.
- Identify opportunities for green infrastructure on public lands and rights-of-way; explore creating green infrastructure guidelines.
- Fund programs to plant trees and educate the public on the importance of trees.
- Develop guidelines for use of porous paving materials for road and parking area re-paving.
- Consider developing a stormwater credit program to reduce fees in exchange for landowners' planting of vegetation that reduces the quantity and improves the quality of stormwater runoff.

### 6.7.4 Sewerage Proposals

There is currently no existing sewerage network in the structure plan area. The lack of sewerage infrastructure results in the degradation of the surrounding environment and pose risks to human health.

The ultimate goal is to provide the people in the structure plan area with improved sanitation facilities by the year 2046. The following strategies are to be implemented in order to achieve the goal set out for the year 2046.

- Study the need and feasibility of extending the sewer network.
- Explore the feasibility of re-activating small, individual sewage treatment plants at all locations within the structure plan area.
- Develop a program to provide all households with their own toilet and eliminate shared toilets.
- Centralized Sewerage System in Urban areas.
- encourage developers to develop central sewage systems for all newly developed communities, beginning with priority neighbourhoods.
- Encourage recycling of wastewater in residential developments.
- Decentralized sanitation facilities in rural areas.
- Reuse of the treated effluent for non-potable use.
- Develop a program for all households to have access to a watered toilet, prioritising households with no toilet, pit latrine and KVIP.
- Elaborate on a plan for public education on behaviour change on discharging faecal waste into drainage systems.

### 6.7.5 Solid Waste Proposal

The responsibility of implementing a solid waste management system has yet to be taken up by the New Juaben South Municipal Assembly. Due to the lack of proper waste infrastructure in the structure plan area, wastes are dispose-off haphazardly i.e. on streets. The capacity for the existing dump sites is unknown; however, it may be assumed that dump sites would probably expand uncontrollably due to the lack of planning and enforcements. Moreover, these dump sites should be phased out in the distant future due to the improper techniques of disposal and lack of proper lining/leachate collection system.

The following strategies are proposed for solid waste disposal in the structure plan area.

- Educate the public on 3Rs (Reduce, Reuse and Recycle) concept and strategies in schools and workplaces.
- Provide at least one recycling bin at every community centre and residential clusters in the urban areas.
- Introduction of low-cost operating systems for disposing solid waste.
- Consult the Municipal Assembly to initiate solid waste collection projects with recycling companies.
- Engage the community in environmental sanitation and sound solid waste management.
- Ensure an all-encompassing final deposit of collected solid waste
- Exploit possibilities of recycling and energy production from solid waste.
- Provide incentives for industries to recycle their waste.

### 6.7.6 ICT Infrastructure Plan

The Nsukwao-Adweso-Ada enclave is expecting to be the Services and financial hub of New Juaben South Municipal in the year 2046. In order to achieve that, an accessible, credible and resilient internet environment has become crucial. The ICT must be improved from its current contribution to become true facilitator for almost every other economic activity, such as banking, insurance, transport, agriculture and even in the social sectors.

The following strategies are proposed for ICT development in the structure plan area.

- Optical fiber network should be considered to be implemented for backbone as well as access network in order to provide fast internet services to end users.
- Priority for installing optic fibre cables as a long-term strategy to promote ICT services.
- Every community and school going child should be introduced to ICT.
- Encourage the use of ICT as a tool to enhance the management and efficiency of businesses and provision of public services.
- Improvement of the quality ICT services in the network.
- Provision of adequate ICT facilities in the network.
- Provision of internet infrastructure to support internet usage in the network.

# ZONING PLAN AND REGULATIONS

## 7.1 Proposed Zoning Plan

The Zoning Plan (Fig. 7.1) indicates the specific boundaries of the various zoning areas proposed for Nsukwao-Adweso-Ada Structure Plan Area. These boundaries are defined and demarcated based on the proposed structure plan, with the principles to safeguard and respect the existing physical character of the local area, as well as to ensure that there is no conflicting uses in the neighbouring zoning districts.

## 7.2 Identification of Zoning Classification in Nsukwao-Adweso-Ada

Table 7.1 summarizes the various zoning classifications proposed at the Structure Plan level for Nsukwao-Adweso-Ada and a general description of each sub-classification is presented in the next section. The regulations of each sub-classification take into consideration of the existing guidelines as outlined by the National Zoning Guidelines and Planning Standards published by the Land Use and Spatial Planning Authority in 2025, while proposing additional details to enhance the existing guidelines.

**ZONING CLASSIFICATIONS**

| |
|---|
| RURAL ZONES |
| Rural A (Ru A) |
| Rural B (Ru B) |
| RESIDENTIAL ZONE |
| Low Density Residential Zone (Re A)<br>Medium Density Residential Zone (Re B)<br>High Rise Apartments Zone (Re C)<br>High Density Residential-Low Rise (Re D)<br>Redevelopment/Renewal/Upgrading Zone (Re Z) |
| BUSINESS ZONE |
| Central Business Zone (CBD)<br>Sub-Regional Business Zone (SBZ)<br>Mixed Business Zone (BM)<br>Informal Business Zone (BI) |
| INDUSTRIAL ZONE |
| Light Industry (LI)<br>Service Industrial Zone (SI)<br>Heavy Industrial Zone (HI)<br>Extractive Industrial Zone (EI) |
| PUBLIC SPACE ZONE (PS) |
| CONSERVATION ZONE (CA) |
| TRANSPORT & LOGISTICS ZONE (TL) |
| PROTECTED COASTAL/WATERFRONT ZONE (CZ) |
| TOURIST ZONE (TZ) |
| UTILITY ZONE (SU) |

| |
|---|
| EDUCATION ZONE |
| EMERGENCY AND SECURITY ZONE |
| AGRICULTURAL ZONE |
| HEALTH ZONE |

*Table 7.1 Proposed Zoning Classification for Nsukwao-Adweso-Ada Structure Plan Area*

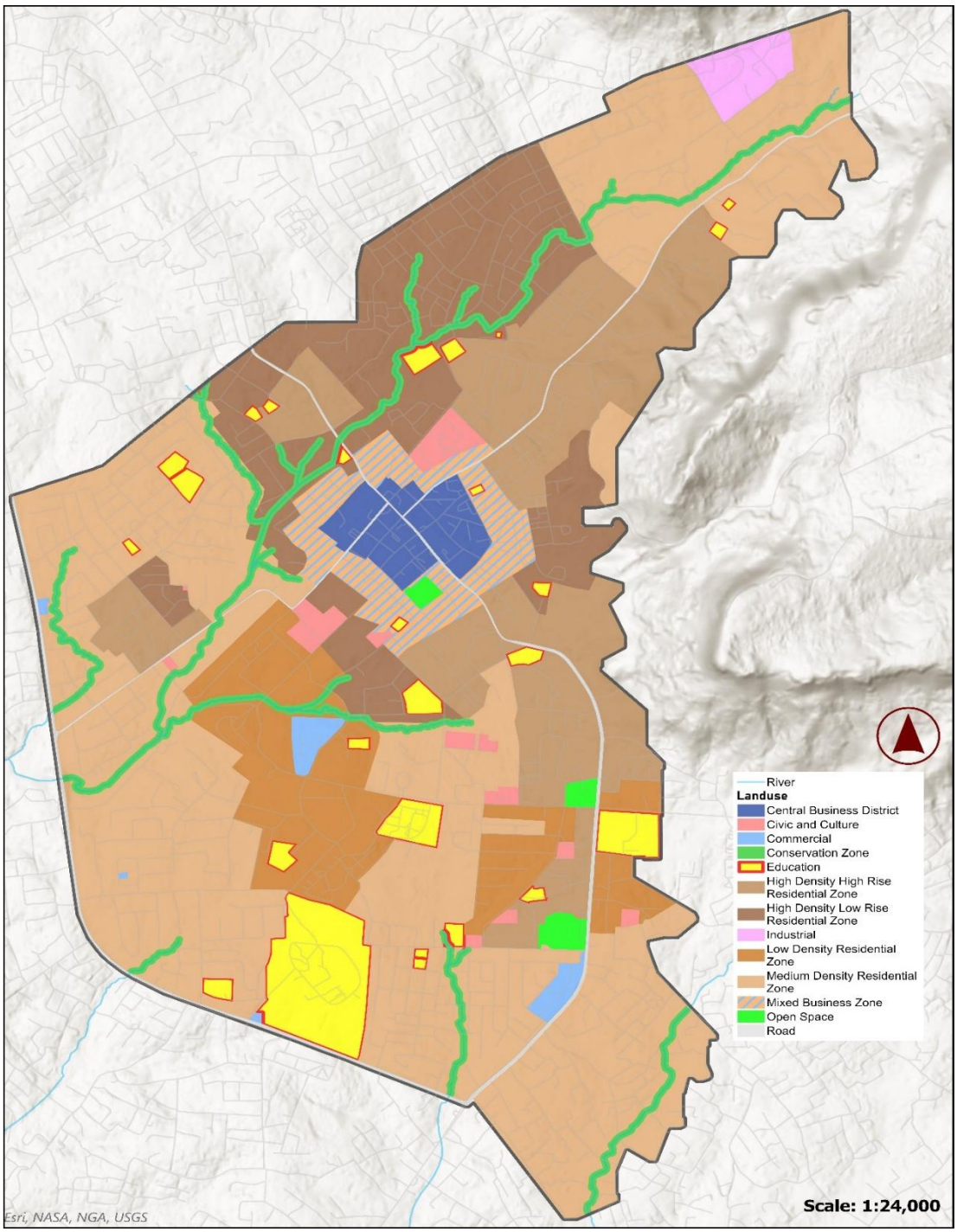



*Figure 7.1 Proposed Zoning Plan for Asamankese Urban Network*
Source: GLODA, 2025

### 7.3.1 Low Density Residential Zone (Re A)

The proposed Low Density Residential Zone (Re A) is Land in low density residential in the structure plan area is intended for very low-density residential development as can be seen in Figure 6.5.1. These are high-end or upscale residential neighbourhoods characterized by spacious plots and detached houses. Housing density in Re A is typically 4–6 plots per acre/4,047m making it one of the least dense residential zones. Development is predominantly single-family detached houses (and duplexes) on large plots as can be seen in Table 7.2 and Figure 7.2.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Detached/Duplex/Courtyard Houses<br>• Public Open Spaces eg. Playground<br>• Neighbourhood Shops, Clinics, Pharmacies (0.06 acre/250m$^2$ ) floor area.<br>• Educational and Child Care facilities (Pre-School and Basic School).<br>• House-Based small family businesses (max 2 employees).<br>• Public Places of Worship Min. 0.5 acre/2023m$^2$ ) floor area.<br>• Cylinder Exchange Points<br>• Electric Vehicle Charging stations and solar integrated facilities. |
| **Prohibited Uses** | • Transportation for haulage<br>• Block of flats<br>• Industrial Development<br>• Large Commercial Complex<br>• Crematorium or Cemetery<br>• Animal Husbandry<br>• Mixed Use Buildings with significant business component<br>• Gas Filling Stations. |
| **Density** | • Maximum of 6 plots per acre/4,047m$^2$ |
| **Occupancy** | • 1.5 persons per room |
| **Infrastructure** | • All developments must be connected to utility networks where available<br>• All urban services; potable water supply, electricity, waste collection, drainage etc.<br>• Where municipal sewerage is not available, each plot must have an approved septic system or other on-site sewage treatment. |
| **Roads** | • 60ft/18 m for local roads<br>• 66ft/ 20 m for collector roads<br>• layouts should limit through-traffic |
| **Landscaping** | • 20% of plot reserved for landscaping including trees and lawns<br>• Tree planting along streets is required to promote green environment. |

| | |
|---|---|
| **Neighbourhood Amenities** | • park or playground, a community centre or clubhouse<br>• A playground of 0.5 acre/2,000m²<br>• Minimum of 30m² of green space per person is recommended.<br>• 20 percent should be allocated for public green spaces. |
| **Parking** | • 1 parking space per dwelling (minimum) |

*Table 7.2 Low Density Residential Zone (Re A) Regulations*

Source: Zoning Guidelines and Planning Standards, 2026

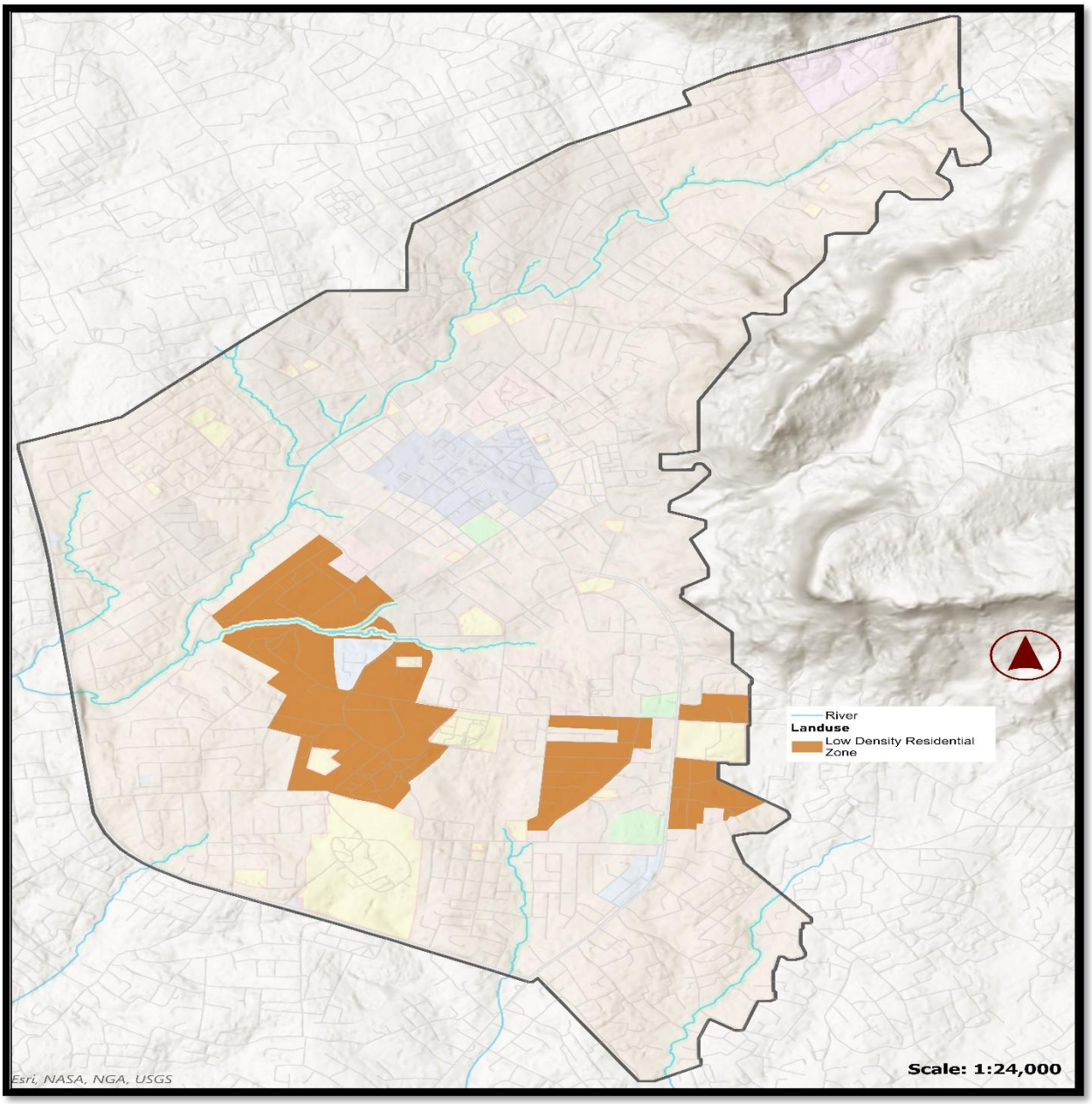



*Figure 7.2 Proposed Low Density Residential Zone (Re A)*

Source: GLODA, 2025

### 7.3.2 Medium Density Residential Zone (Re B)

Land in Medium density residential zone in the structure plan area provides for medium-density residential development with a variety of housing types as can be seen in Table 7.3 and Figure 7.3. Development in this zone can include a mix of single-family detached houses, duplexes, row (terraced) houses, and compound houses.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Detached/Duplex/Row Houses, Compound Houses<br>• Open Space<br>• Local Shop<br>• Basic education and Child/ Daycare Centre<br>• Community Facilities e.g. clinic, post office.<br>• Places of worship<br>• Government Business<br>• Limited road network to provide access<br>• Markets with repair workshops<br>• Home businesses (such as home offices or<br>• artisanal work) with up to 3 employees<br>• Public transport stops or a minor terminal e.g. “trotro” or minibus stop, taxi rank<br>• Segregated waste collection<br>• Cylinder Exchange Points<br>• Electric Vehicle charging stations and solar integrated facilities. |
| **Prohibited Uses** | • High-density residential blocks e.g. multi-storey apartment blocks<br>• Major Industrial Development e.g. Factories and warehouses.<br>• Major Commercial Development e.g. large-scale retail developments, major office complexes, nightclubs, large restaurants<br>• Transportation Hubs e.g. Bus terminals or truck depots<br>• Warehousing<br>• Major Sports Facilities<br>• Cemeteries<br>• Animal husbandry<br>• Stockyard<br>• Noxious or hazardous uses<br>• Gas Filling Stations. |
| **Occupancy** | • 1.5 persons per room |
| **Infrastructure** | • All developments must be connected to utility networks where available<br>• All urban services; potable water supply, electricity, waste collection, drainage etc.<br>• Where municipal sewerage is not available, each plot must have an approved septic system or other on-site sewage treatment. |

| | |
|---|---|
| **Roads** | • 60ft/18 m for local roads<br>• 20-23ft/3.65*2m carriageway<br>• 8ft/2.5m sidewalks on each side<br>• layouts should limit through-traffic<br>• The use of cul-de-sacs and crescents is encouraged<br>• Space must also be allocated for utility corridors and drainage. |
| **Open Space** | • 15% of plot reserved for public open space<br>• Provision of parks or playgrounds is mandatory. |
| **Utilities** | • Piped water and electricity must be extended to all plots.<br>• Drainage systems shall be built along roadways.<br>• Where sewers systems are not available, grouped septic tanks or simplified sewers can be considered subject to environmental health standards. |
| **Parking** | • 1 parking space per dwelling (minimum) |

*Table 7.3 Medium Density Residential Zone (Re B) Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

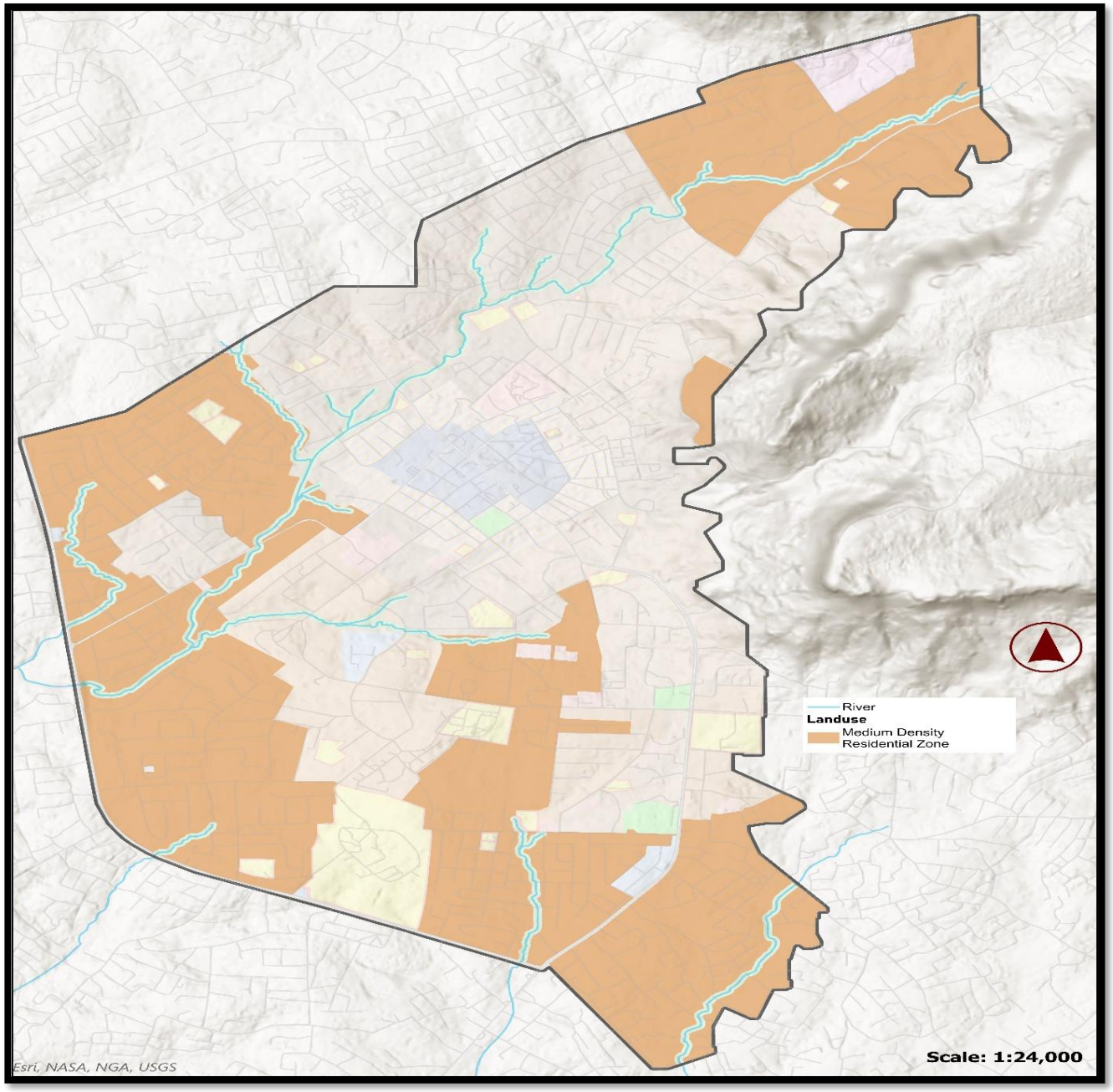



*Figure 7.3 Proposed Medium Density Residential Zone (Re B)*

Source: GLODA, 2025

### 7.3.3 High Rise Apartments Zone (Re C)

High Rise Apartments Zone (Residential Zone C) in the structure plan area is designated for intensive multi-storey residential accommodation such as blocks of flats or apartments complexes, condominiums, and housing blocks typically ranging from 3 storeys with potential for higher structures as can be seen in Table 7.4 and Figure 7.4.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Multi storey flats & apartment buildings<br>• Hostels e.g. Student hostels,<br>• single room occupancy blocks<br>• Institutional accommodation e.g. staff housing, barracks etc.<br>• Public open spaces<br>• Places of worship<br>• Pharmacies & Clinics<br>• Home Business, Childcare Centre<br>• Pre-School, Primary and JHS<br>• Public Transport Facilities<br>• Hotels, guest houses, motels, lodges<br>• Recreation Facilities serving<br>• the community<br>• Commercial development: Informal economic activities, Shops at ground floor level only, etc.<br>• Cylinder Exchange Points<br>• Electric Vehicle charging stations and solar-integrated facilities |
| **Prohibited Uses** | • All industrial development e.g. factories, workshops, and warehouses<br>• Animal husbandry<br>• Cemetery & Crematorium<br>• Transport use warehousing e.g. bus depots, lorry park, or logistics<br>• Major sports and Recreation Facilities e.g. stadiums or large sports complexes<br>• Re C is exclusively residential in character, with only minor commercial elements permitted to serve residents<br>• Gas Filling Stations |
| **Environment and Health** | • Effective solid waste management, wastewater, bio-digester and proper ventilation are critical for resident health and environmental quality. |
| **Service Infrastructure** | • full infrastructure including water, power, waste management. |
| **Roads** | • 60ft/18 m for local roads |

| | |
|---|---|
| **Landscaping** | • 75 percent building coverage is permitted, the remaining 25percent open space must be well-landscaped with features such as grass, trees, and other greenery. |
| **Open Space** | • 10% of plot reserved for open space and recreational use for residents<br>• This includes children's playgrounds, sitting areas, small parks, or communal gardens.. |
| **Fire Safety** | • Fire hydrants, adequate access routes for fire trucks, and building-integrated fire escapes are mandatory in accordance with building code. |
| **Parking** | • minimum of 1 vehicle per 1 dwelling unit |

*Table 7.4 High Rise Apartments Zone (Re C) Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

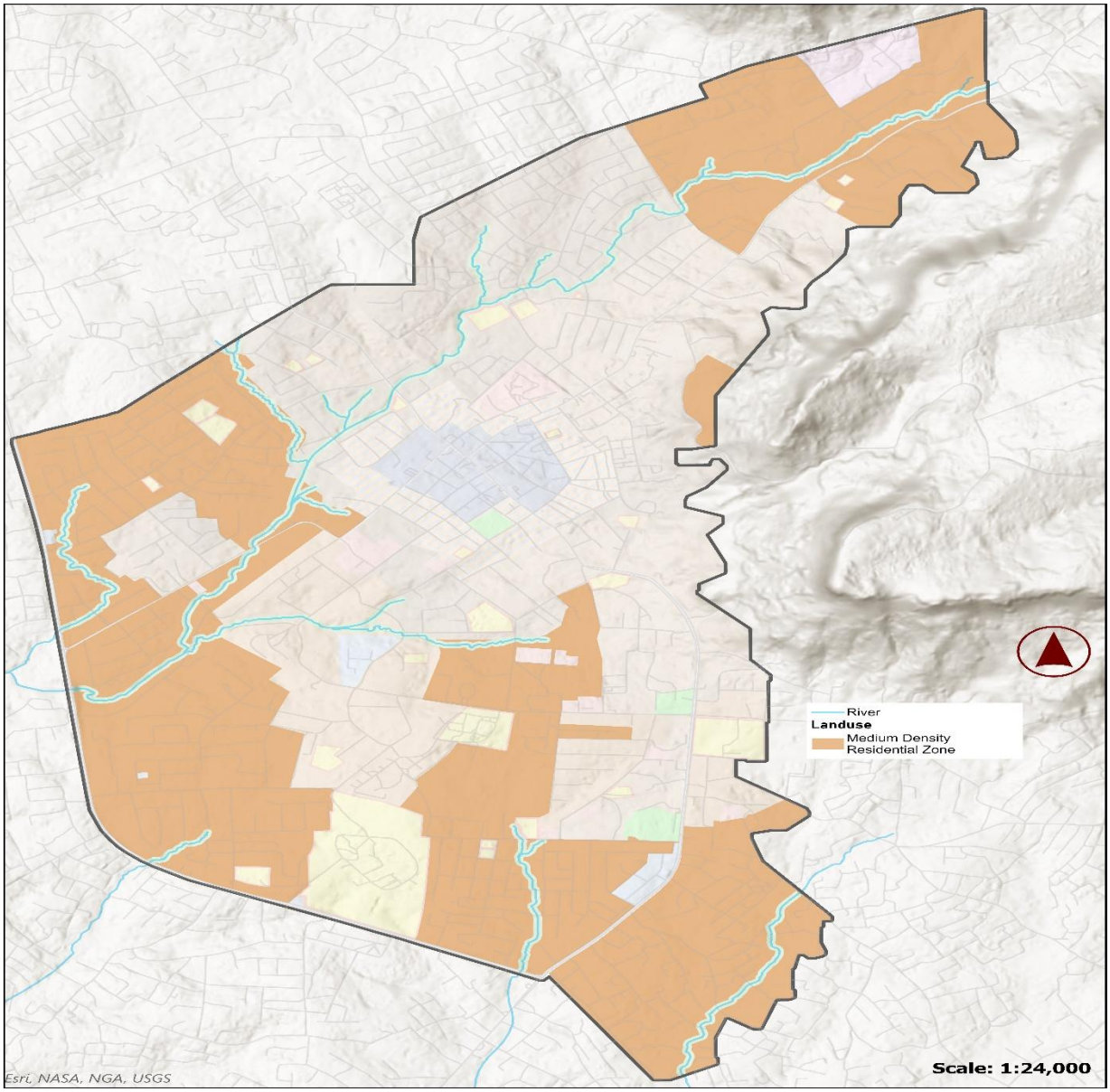



*Figure 7.4 Proposed High- Rise Apartments Zone (Re C)*

Source: GLODA, 2025

### 7.3.4 High Density Residential Low Rise (Re D)

Land in High Density Low Rise Residential Zone in the structure plan area is an existing high-density urban residential development in low-rise to mid-rise building forms as can be seen in Table 7.5 and Figure 7.5.

## Guidelines

| USES | |
|---|---|
| **Permitted Uses** | • Detached, Semi-detached, Row & compound housing<br>• Home business e.g. Small shops, tailoring, food vending, etc.,<br>• Parks & Playground<br>• Places of worship<br>• Childcare Centre<br>• Local Markets<br>• Clinic<br>• Pharmacy<br>• Outdoor/Indoor Recreational Facilities e.g. Community playgrounds, neighbourhood parks, and a community centre or youth club<br>• Day care, Primary, Junior High Schools<br>• Public transport facilities e.g. Taxi rank and lorry parks<br>• Light Industrial development e.g. small workshops (carpentry, dressmaking, metal welding, auto repair<br>• Informal Economic Activities<br>• Cylinder Exchange Points<br>• Electric Vehicle charging stations and solar integrated facilities. |
| **Prohibited Uses** | • Heavy Industrial development e.g.<br>• Factories, large manufacturing plants, or any industry emitting smoke, noise or waste<br>• Large service industries e.g. major auto service stations or processing facilities<br>• Major commercial premises<br>• Animal Husbandry<br>• Cemetery or crematorium<br>• Transportation depots<br>• Major infrastructure installations: Power plants, waste dumps<br>• Gas Filling Stations |
| **Density** | • Minimum (0.045 acre/185$m^2$).<br>• It can accommodate up to 20 plots per acre/4,047$m^2$<br>• Adequate infrastructure must be provided. |
| **Service Infrastructure** | • full infrastructure including water, power, waste management. |
| **Roads** | • Re D areas often have a densed network of narrow/closely spaced streets and footpaths.<br>• Minimum right of way should be 20-30feet/6–9 m for internal lanes.<br>• Main access roads should be 60feet/18 m. |
| **Landscaping** | • 75 percent building coverage is permitted, the remaining 25percent open space must be |

| | |
|---|---|
| | well-landscaped with features such as grass, trees, and other greenery. |
| **Open Space** | • 15% of plot reserved for open space e.g. large yards and parks. |
| **Infrastructure** | • Service infrastructure in this zone includes adequate water supply, sanitation, electricity, drainage etc. |
| **Site Services** | • Provision for open spaces and services must be given special attention. |
| **Parking** | • 1 vehicle per 2 dwelling unit |

*Table 7.5 High Rise Low Rise Residential Zone (Re D) Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

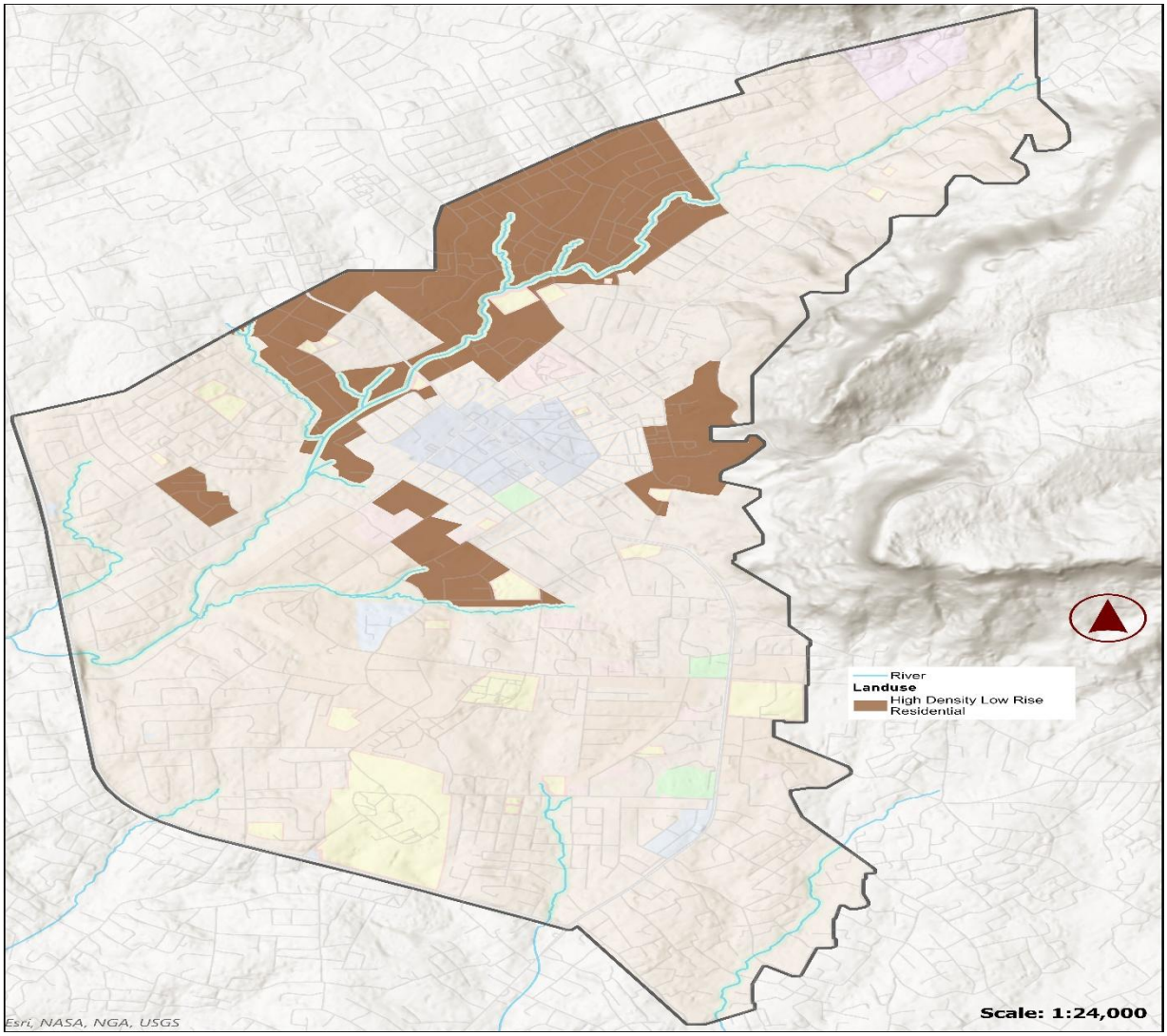



*Figure 7.5 Proposed High Density Low Rise (Re D)*

Source: GLODA, 2025

### 7.3.5 Central Business District (CBD)

The Central Business District is the economic, financial and administrative heart of a city. It is characterized by international and national corporate offices, government headquarters (ministries or civic centres), major financial institutions (banks, stock exchange), high order retail (department stores, large markets for manufactured goods), hotels, and cultural institutions. Land values in the CBD are very high due to competition for space. As a result, development in the CBD is characterized by high-rise and high-density development to maximise space. The Central Business District Zone (CBD) is established as a commercial, financial, civic and cultural hub to meet most of the retail, office and services needs for both local and international businesses, as well as government organizations as can be seen in Table 7.6 and Figure 7.6.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Business premises<br>• Commercial office development<br>• Shops and restaurants<br>• Government business<br>• Corporate Institutions<br>• Financial Institutions<br>• Public open space<br>• Sport facilities<br>• Leisure and cultural facilities<br>• High rise flats and apartments<br>• Hotel accommodation<br>• Security<br>• Car park<br>• Transport stations<br>• Pedestrian walkways<br>• Markets for finished products<br>• Clinics and hospitals<br>• Pharmacies<br>• Fire stations and hydrants<br>• Fuel service stations<br>• Childcare centres<br>• Selective residential apartments<br>• Places of worship<br>• Informal Sector space<br>• Residential Zone C |
| **Prohibited Uses** | • Single unit development<br>• Industrial development<br>• Major Warehousing |

| | |
|---|---|
| | • Animal husbandry<br>• Cemeteries/ Crematorium<br>• Animal slaughter houses<br>• Major Bulk breaking |
| **Plot Coverage** | • 70-85% |
| **Floor Area Ratio** | • A minimum of 6.0 or more |
| **Building Height** | • ≥ 5 storeys |
| **Setbacks** | • Front=3m, Side=2m and Rear = 8m |
| **Architecture & Aesthetics** | • Buildings should exhibit old and modern architectural and urban<br>• designs |
| **Traffic and Circulation** | • Pedestrian crossings and walkways. |
| **Parking** | • On-street parking is not encouraged. Parking areas and Loading bays should be designated.<br>• Terminal should be integrated with CBD<br>• Consider a traffic management plan<br>• Commercial Government offices: 1 per 200m$^2$ gross floor area |
| **Utilities** | • Electricity, water, telecommunication, waste management, fire safety, security |
| **Marketing and Signage** | • Manage signages and billboards to avoid clutter |
| **Social considerations** | • Ensure inclusivity by having designated space for informal activities. Space requirement: 2-5 percent. |

*Figure 7.6 Central Business District Regulations*

Source: GLODA, 2025

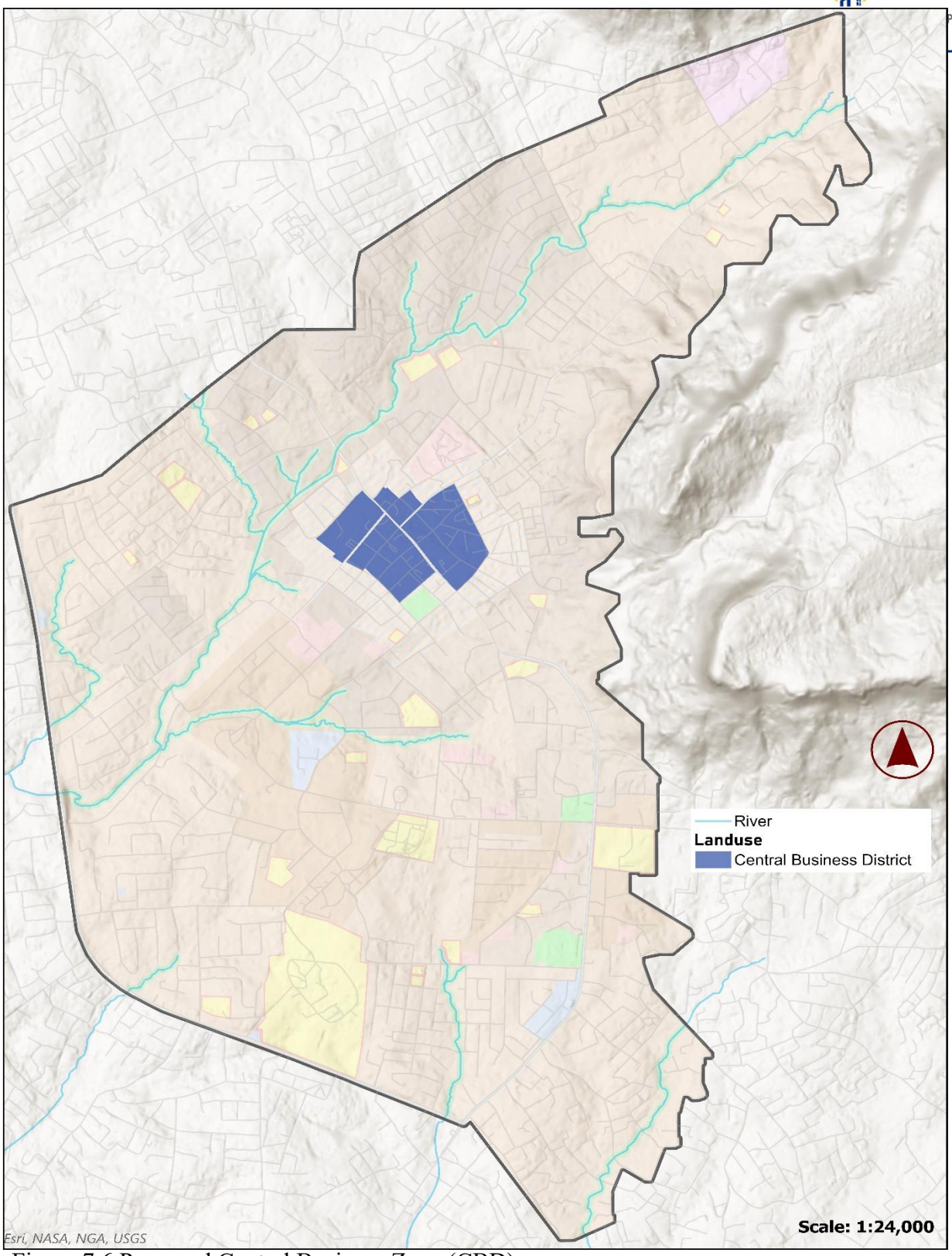



Figure 7.6 Proposed Central Business Zone (CBD)
Source: GLODA, 2025

### 7.3.6 Sub-Centre Business Zone (SBZ)

The Sub-Regional Business Zone functions as centres for dispersal of economic activities, employment generation, and traffic movement in a city or metropolitan area. Activities in the zone include sub-regional distribution outlets, markets, bulk breaking warehousing, cold storage facilities, major retail stores, corporate offices and some service industries. as can be seen in Table 7.7 and Figure 7.7.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Markets for agricultural produce and livestock<br>• Bulk breaking warehouses for Agricultural<br>• Produce<br>• Cold storage facilities<br>• Corporate Offices<br>• Warehouses<br>• Major retail stores<br>• Service industries- Mechanics, Artisans<br>• Recreational Facilities<br>• Educational facilities<br>• Community Facilities<br>• Fire stations/ Hydrants<br>• Health Facilities<br>• Police Post<br>• Parking Facilities<br>• Residential Zone C and D<br>• Loading /Unloading Bays<br>• Fuel Service Stations<br>• Place of worship<br>• Electric Vehicle charging stations and solar integrated facilities. |
| **Prohibited Uses** | • Industrial development<br>• Animal husbandry<br>• Cemeteries/ Crematorium |
| **Spatial extent and layout** | • An SBZ should be strategically located to coincide with a major road junction or town centre in a metropolitan sub-area.<br>• There should be pedestrian-friendly streets.<br>• Mid-rise buildings, and open market areas. |
| **Building Height** | • 3–8 storeys for offices/commercial |
| **Floor Area Ratio** | • A minimum of 6.0 or more |
| **Setbacks** | • Front=3m, Side=2m and Rear = 8m |
| **Architecture & Aesthetics** | • Buildings should exhibit old and modern architectural and urban designs |

| | |
|---|---|
| **Traffic and Circulation** | • Pedestrian crossings and walkways. Provide major road access, a ring road or multiple access points to disperse traffic. Designate bus stops and mini stations |
| **Parking** | • Commercial offices: 1 per 50m$^2$ gross floor area<br>• Shops: 1 per 40m$^2$ retail space<br>• Public buildings & Places of Assembly: 1per 40m$^2$ or 1 per 20 seats, or beds whichever is greater. |
| **Utilities** | • Electricity, water, telecommunication, waste management, fire safety, security |
| **Marketing and Signage** | • Manage signages and billboards to avoid clutter |
| **Social considerations** | • Ensure inclusivity by having designated space for informal activities. Space requirement: 2-5 percent. |
| **Service Industries** | • Should cluster in a designated part of zone |
| **Growth Potential** | • Reserve some land for future expansion |
| **Economic Viability** | • Encourage anchor developments (such as one big retail anchor store, or a civic centre) to draw people |

*Figure 7.7 Sub-Regional Business Zone Regulations*

Source: GLODA, 2025

### 7.3.7 Mixed Business Zone (BM)

The Mixed Business Zone is intended for lower-intensity commercial development and mixed-use areas on the fringe of major business districts or along major roads. These zones serve as a transition between core commercial areas and purely residential zones. Land in a BM zone is often used for a combination of uses: small to medium-scale businesses, retail shops, offices, and possibly residential units (often above ground-floor commercial). The BM zone caters to businesses that do not require a central location or high-rise buildings, and that may be more service-oriented to local communities can be seen in Table 7.8 and Figure 7.8.

| **Regulations** | |
|---|---|
| **USES** | |
| **Permitted Uses** | • Commercial offices<br>• Local government offices<br>• Corporate offices<br>• Markets<br>• Child Care Centre<br>• Car Park<br>• Medical Clinics<br>• Motor Sales and Services |

| | |
|---|---|
| | • Fuel Service Station<br>• Retail shops<br>• Workshops and artisan studios<br>• Show rooms and lower intensity commercials<br>• Storage and distribution<br>• Fire stations/hydrants |
| **Prohibited Uses** | • Industrial development<br>• Dwelling at ground level/intensive residential use only<br>• Animal husbandry<br>• Market over 1 ha (2.5 acres)<br>• Noxious uses<br>• Major warehousing clusters |
| **Spatial extent and layout** | • Built up coverage should be 60-70% of the entire land<br>• The BM Zone should be strategically located to coincide with a major road junction or town centre in a metropolitan sub-area. |
| **Building Height** | • 1-3 storeys for offices/commercial |
| **Floor Area Ratio** | • A minimum of 4.0 |
| **Setbacks** | • Front= 5m, Rear= 3 m, Side= 3m |
| **Architecture & Aesthetics** | • Buildings should exhibit old and modern architectural and urban designs |
| **Traffic and Circulation** | • Pedestrian crossings and walkways.<br>• Provide service roads and limit direct access to major roads<br>• Designate central bus stops or a mini station.<br>• Ensure connectivity with other small business clusters. |
| **Parking** | • Provide off street parking<br>• Common parking lots<br>• Controlled/regulated on street parking<br>• 1 space per 50m$^2$ for retail and offices<br>• 1 space per 100m$^2$ for workshops including loading bays |
| **Utilities** | • Electricity, water, telecommunication, waste management, fire safety, security |
| **Marketing and Signage** | • Manage signages and billboards to avoid clutter |
| **Social considerations** | • Ensure inclusivity by having designated space for informal activities. Space requirement: 2-5 percent. |

*Figure 7.8 Mixed -Business Zone Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

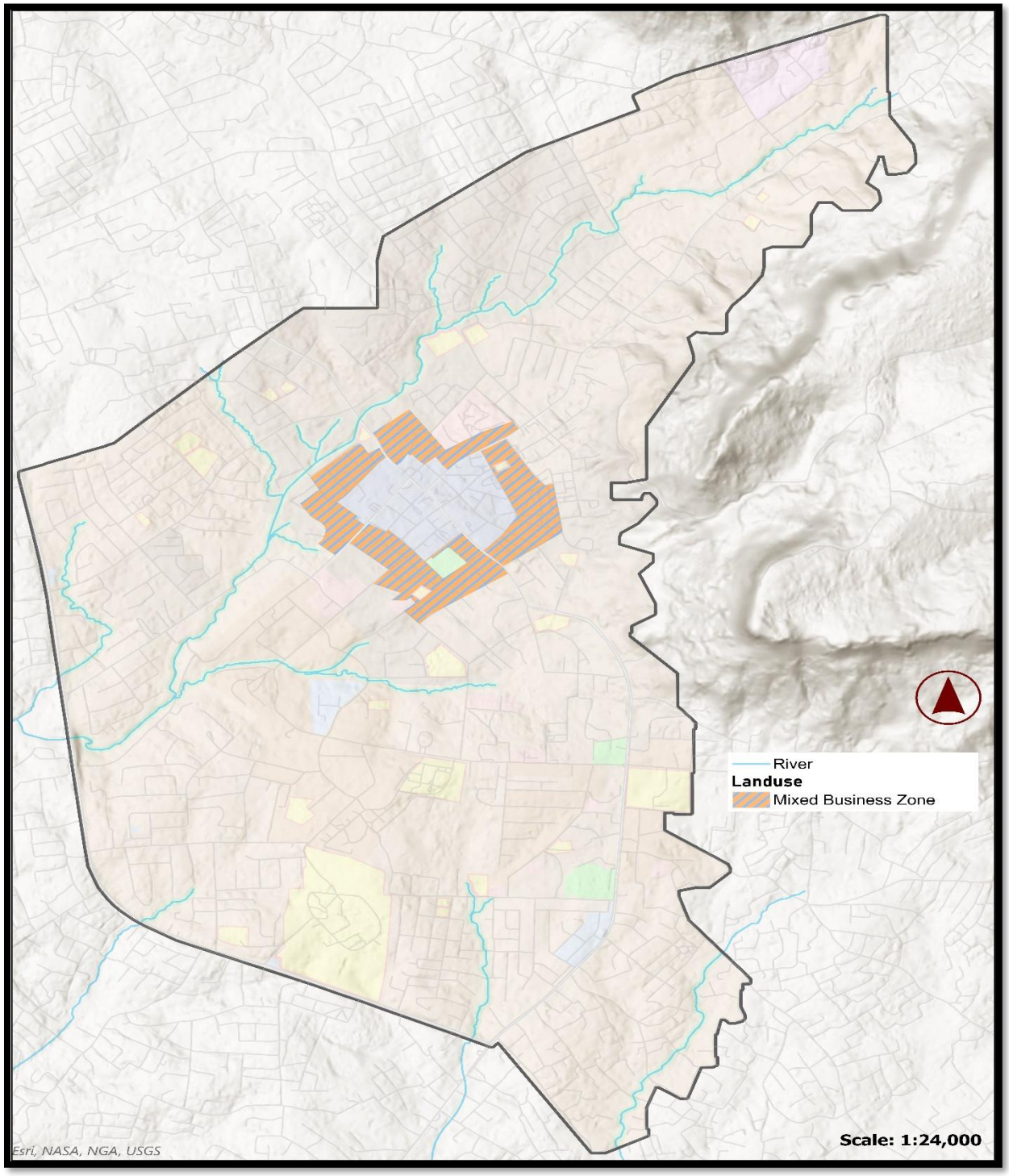



Figure 7.8 Proposed Mixed Business Zone (BM)

Source: GLODA, 2025

### 7.3.8 Light Industry Zone (IL)

The Light Industry Zone (IL) are specialised land areas intended for light industrial activities, particularly those using clean and low technologies to restrict air and noise offence, with easy vehicular access and that could blend with the surrounding residential area as can be seen in Table 7.9 and Figure 7.9.

**Regulations**

| USES | |
|---|---|
| **Permitted Uses** | • Low polluting industries, including service industries where appropriate<br>• Clinics<br>• Ancillary shop or office to service industry provided it does not exceed 500 $m^2$ or 70% of<br>• built floor area, whichever is smaller<br>• Childcare centre<br>• Offices of Government Agencies<br>• Parking<br>• Limited transportation<br>• Small scale commercial outlets<br>• Canteens<br>• Mini Parks and small recreation areas where this form less than 20% of the developed area.<br>• Complimentary mixed-uses<br>• Gas Filling Station |
| **Prohibited Uses** | • All industry not classified as a light industry, except where stated.<br>• Terminals<br>• Institutions not related to the zone<br>• Animal husbandry<br>• Major commercial Activities |
| **Minimum Land Requirement** | • 10 acres |
| **Minimum Plot Size for Light Industrial Zone** | • 1 acre |
| **Minimum Plot size for Cottage Industry** | • 0.5 acre |
| **Setbacks** | • Frontage= 6m, Side & Rear=3m |
| **Basic Site Facilities** | • Availability of water<br>• Electricity supply<br>• Firefighting facilities at convenient location<br>• Medical facilities on site for minor injuries<br>• Adequate access to site for easy transportation of goods.<br>• Location of industrial site must ensure protection of nearby residents from industrial pollution<br>• Site must be adequately provided with waste disposal and collection facilities. |

| | |
|---|---|
| | • Security<br>• Telecommunication |

*Figure 7.9 Light Industrial Zone Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

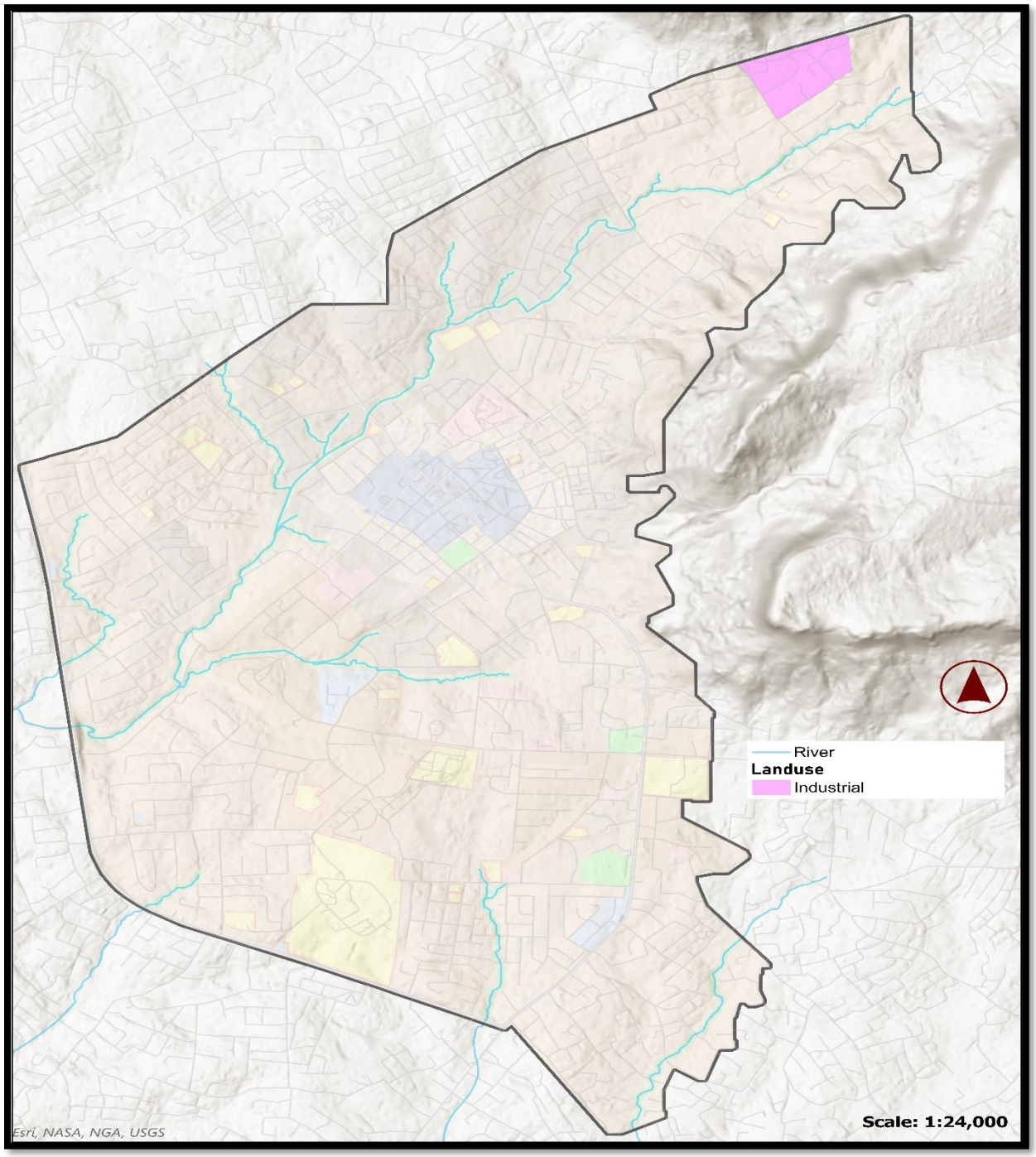



Figure 7.9 Proposed Light Industrial Zone (LI)
Source: GLODA, 2025

### 7.3.9 Public Space Zone (PS)

Public Space is a generally open area accessible to and used by the public. Public Spaces include natural parks, gardens, recreational/amusement parks, cemeteries, cultural and historical parks as can be seen in as can be seen in Table 7.10 and Figure 7.10.

Public Space Zone can be categorized as follows:

a. Active Public Space such as sports facilities for Indoor game and field sports, durbar ground etc.

b. Passive Public Space such as public spaces for parks and gardens; children's playground etc.

**Guidelines**

| USES | |
|---|---|
| **Permitted Uses** | • Parks and gardens<br>• Ancillary uses eg. restaurant,<br>• changing rooms, minor commercial<br>• activities<br>• Cultivated areas where approved<br>• Sports Ground<br>• Sports Club buildings<br>• Parks and gardens<br>• Emergency facilities<br>• Exhibition areas<br>• Parking<br>• Public transport facilities<br>• Landscaping |
| **Prohibited Uses** | • Industrial<br>• Major Commercial activity<br>• Warehousing<br>• Any development that obstructs natural<br>• drainage and slopes<br>• Abattoir |

*Figure 7.10 Public Space Zone Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

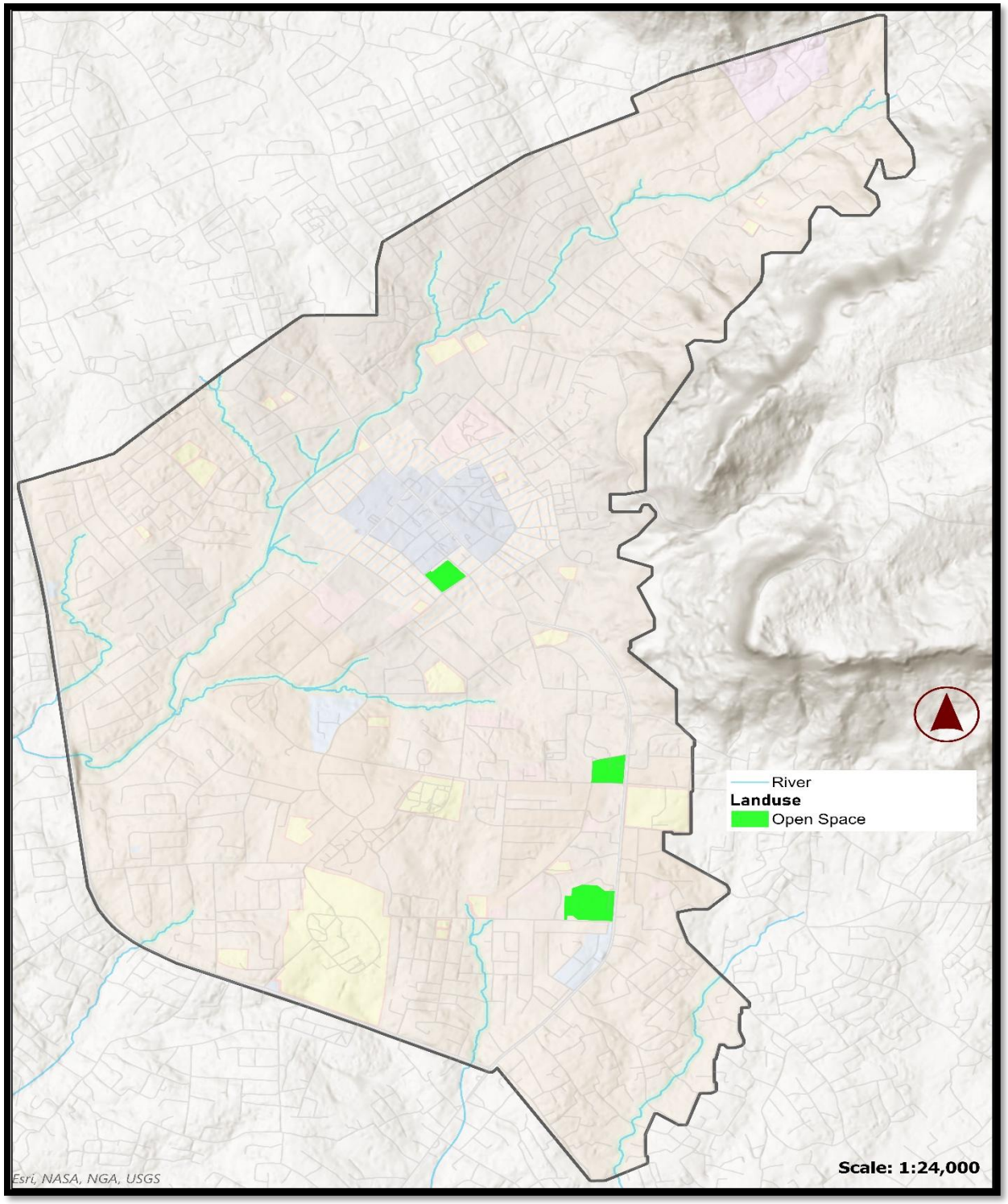



*Figure 7.10 Proposed Public Space Zone*
*Source: GLODA, 2025*

### 7.3.10 Conservation Zone (PS)

Land in a conservation zone is intended to be retained in its natural or modified state for conservation purposes as can be seen in Table 7.10 and Figure 7.10. A conservation zone may include areas of outstanding natural beauty, areas of religious, cultural or archaeological importance, forest reserves, wildlife and estuarine habitats, land in water supply catchments area, endangered hills, slopes, fault line, etc. Activities which are incompatible with the intent of the zone will be prohibited. Access to conservation zone will be restricted to selective areas where the intensity of use can be more effectively managed.

**Regulations**

| **USES** | |
|---|---|
| **Permitted Uses** | • Eco-Tourism and recreation<br>• Ecosystem services<br>• Ancillary facilities: wash rooms, local<br>• craft industries, accommodation for staff<br>• Educational and Scientific research centres<br>• Limited local transportation<br>• Afforestation |
| **Prohibited Uses** | • Residential development<br>• Industrial development<br>• Terminals and bus stops<br>• Intensive agriculture<br>• Animal husbandry<br>• Open dumping and discharge of solid or<br>• liquid waste |

*Figure 7.11 Conservation Zone Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

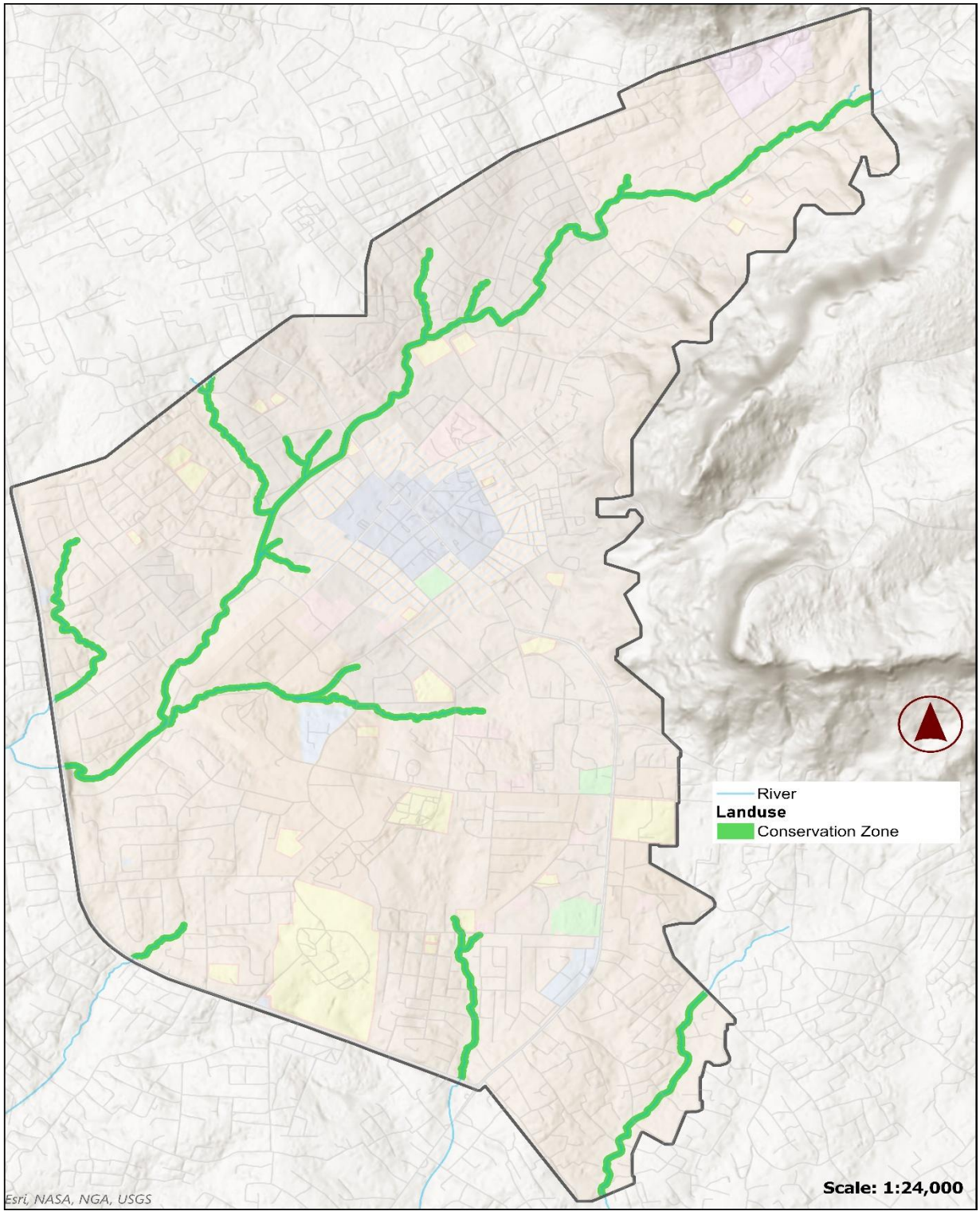



*Figure 7.11 Proposed Conservation Zone*

*Source: GLODA, 2025*

### 7.3.11 Educational Zone A (Pre-Schools and Basic Schools)

Land in Education Zone A is intended to be used for the establishment of Pre-Schools (Nursery, Kindergarten), Basic Schools (Primary and Junior High Schools) as can be seen Table 7.12 and Figure 7.12. It should be located into residential areas and community facilities.

It is important that Nursery and Primary schools are located within a neighbourhood with easy vehicular and pedestrian access system. Facilities to be provided shall include playgrounds, classroom blocks, hostels (where necessary), offices, canteens, places of convenience, libraries among others.

**Regulations**

| USES | |
|---|---|
| **Permitted Uses** | • Teachers<br>• Accommodation<br>• Office Blocks<br>• Canteens<br>• Convenience shop<br>• Stationary shops<br>• library<br>• Laboratories<br>• Workshops for Teaching<br>• Classroom Blocks<br>• Playgrounds<br>Sick bay<br>• Parking lots/space |
| **Prohibited Uses** | • Transportation and Warehouses<br>• Animal Husbandry<br>• Slaughterhouses<br>• Industries<br>• Crematorium/Cemeteries |
| **Office/ Staff Room** | • 21m2 |
| **Library** | • ~9–15 m² |
| **Water Supply** | • Potable Water on Site |
| **Store Room** | • 1 acre |
| **Toilets** | • Adequate sanitation segregated by gender and for staff. Standards often call for e.g. 1 toilet per 30-40 pupils. |
| **Setbacks** | • Frontage= 6m, Side & Rear=3m |
| **Playground** | • Mandatory |
| **Laboratory/Workshop** | • 8m x 10m |

*Figure 7.12 Educational Zone Regulations*

Source: Zoning Guidelines and Planning Standards, 2025

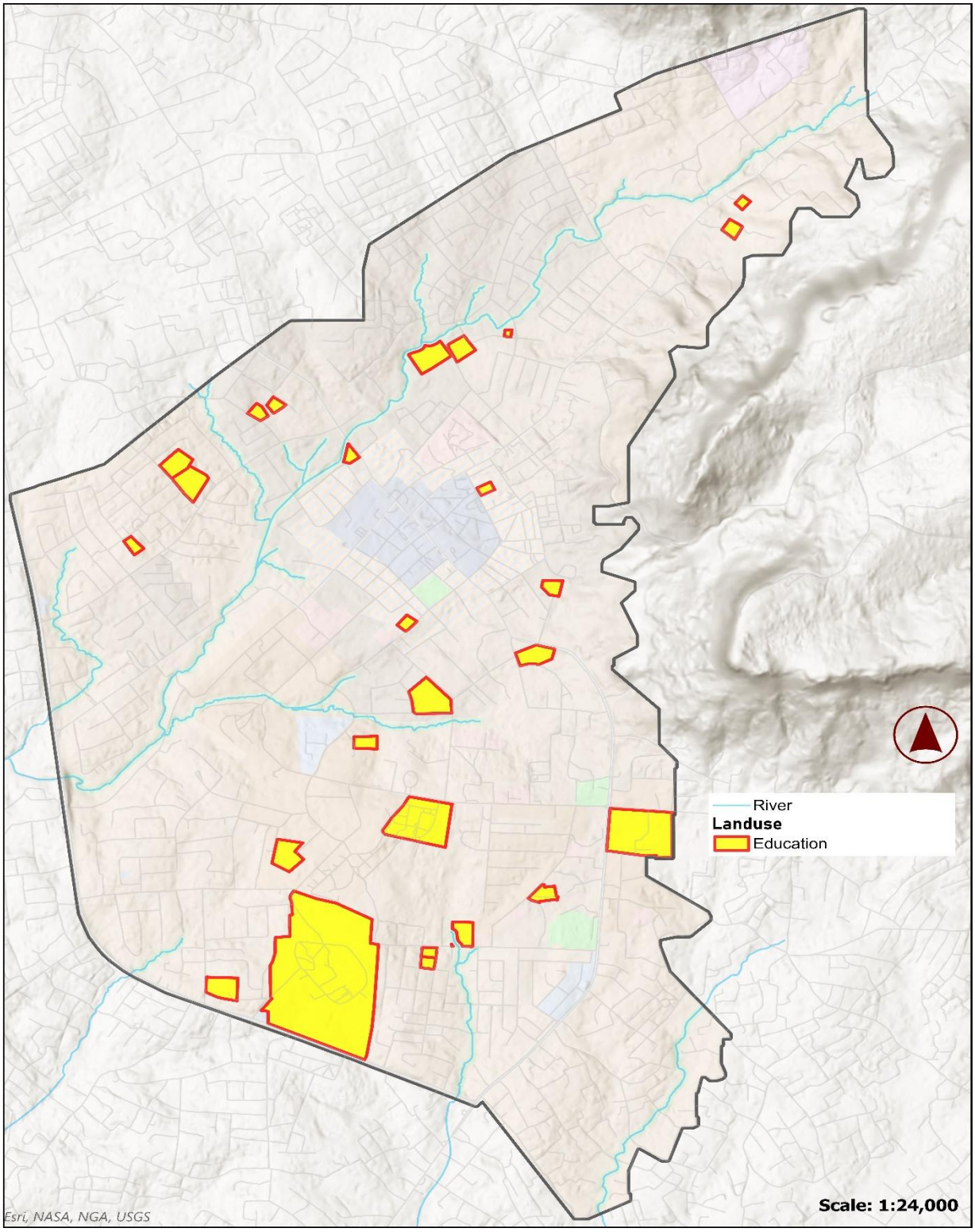



*Figure 7.12 Proposed Educational Zone*

*Source: GLODA, 2025*

### 7.3.12 Places of Worship Zone (PW)

Land in the Places of Worship Zone is intended to be used for activities of religious bodies to avoid situations where warehouses, open spaces, residential blocks and even classrooms and school compounds are turned to worship centres. These include activities of Muslims, Christians, African Traditional Religions and other religious beliefs. Places of Worship shall be located within communities to serve religious interests of residents. They should be easily accessible by both motor vehicles and pedestrians. Table 7.13 and Figure 7.13 shows details of Place of Worship Zone in the Structure Plan Area.

**Regulations**

| USES | |
|---|---|
| **Permitted Uses** | • Offices<br>• Worship centres (mosques, churches, shrines, etc)<br>• Social Centres<br>• Accommodation for religious leaders and Teachers<br>• Conference facilities<br>• Bookshops<br>• Open Spaces<br>• Sanitary Facilities<br>• Basic Schools<br>• Hostel/Guest houses<br>• Canteens<br>• Libraries<br>• Playgrounds<br>• Car Parks<br>• Sick bay<br>• Police post |
| **Prohibited Uses** | • Transportation<br>• Warehouses<br>• Animal Husbandry<br>• Industries |
| **Site Area** | • ≥0.5 acre/1000m$^2$ |
| **Noise Control** | • Refer to EPA Standards |
| **Parking** | • 1 parking lot per 40m$^2$/1 parking lot per 10 seats |
| **Accessibility** | • Disability Friendly |
| **Open Space** | • Open Space should be landscaped |
| **Setbacks** | • Min. Front:32.8ft/10m; Side& Rear:16.4ft/5m |

| | |
|---|---|
| **Utilities** | • Electricity, water supply, sanitation |

*Figure 7.13 Educational Zone Regulations*

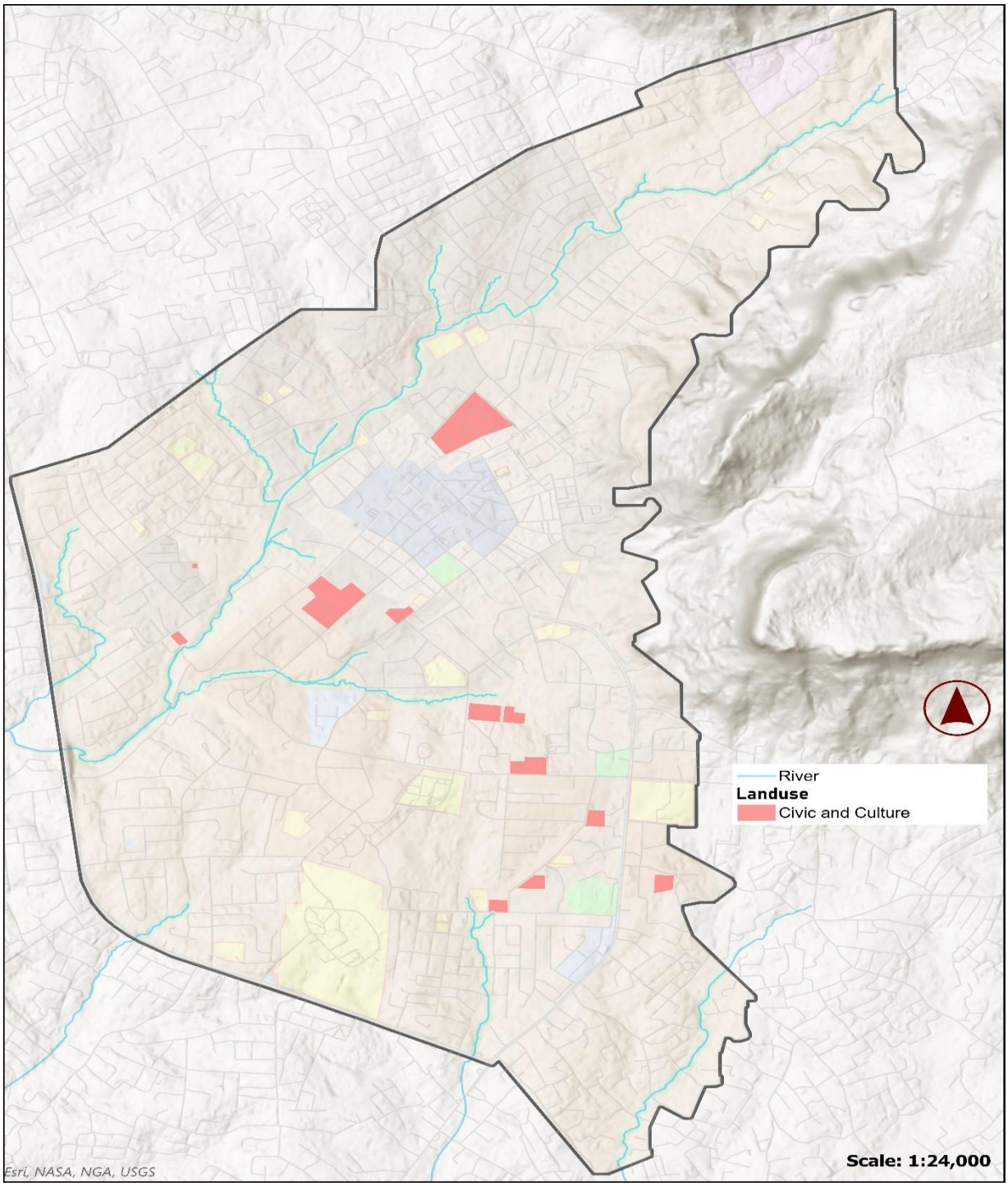



*Figure 7.13 Proposed Places of Worship Zone*

*Source: GLODA, 2025*

# IMPLEMENTATION PLAN (REALISING THE VISION OF NSUKWAO-ADWESO-ADA)

## 8.1 Introduction

This section explains the key urban development projects proposed for the implementation in Nsukwao-Adweso-Ada Structure Plan and the recommended guidelines for them to become a reality. Along with these projects, the recommended set up for a Structure Plan Implementation Unit and the insights provided for phasing the key projects, comprise the Implementation Plan. This plan seeks to guide the inception efforts and the investments needed, from both public and private sectors, to shape urban development efforts in this city. Then, afterwards in this chapter a phasing strategy is outlined, covering up to 2046.

## 8.2 Project Phasing

To meet these strategic roles a phasing strategy is proposed for Nsukwao-Adweso-Ada Structure Plan Area. The Phasing is divided in three periods: Short Term (2026-2031); Medium Term (2032-2037); and Long Term (2038-2041). The next section will introduce the Short-Term strategy, which will set the foundations for the entire implementation plan. Subsequently, the entire phasing will be explained, providing insights into the key projects proposed.

### 8.2.1 Short Term (2026-2031): Setting the Foundations

The short term will be a critical stage for the entire Implementation Plan to succeed. The actions taken at this phase will pave the way for all sets of projects proposed.

The implementation at this phase will comprise of a series of actions to be undertaken immediately after the approval of the Structure and Zoning Plans. The Structure Plan shall guide urban growth in a sustainable fashion; and the Zoning Plan, as the regulatory component of the plan, will guide authorities in the granting of building permits among other substantial roles. Given the importance of these two roles, an appropriate and dedicated management of the plans will be a major component for implementation success. In the short term, the Nsukwao-Adweso-Ada enclave shall accelerate growth in various development sectors. Its focus should be set on activating local economy and prioritize investments in key industries, service sector, and infrastructure projects.

These actions will unleash growth at this critical stage and activate job creation through the formal sector.

*Key Projects*

- Create spaces for emerging business opportunities.
- Initiate projects to promote urban agriculture.
- Allocate 146 ha for commercial and mixed-use development.
- Establish parks and sports facility standards in Nsukwao-Adweso-Ada enclave.

### 8.2.2 Medium Term (2032-2037)

The Medium Term will consolidate the network's growth which needs to be accelerated by expanding logistics, industrial sectors and kick start development of service sector especially channelling investments into knowledge sub sectors. Urban upgrading efforts of peripheral areas of the structure plan area needs to be consolidated in this phase. By the end of this phase all projects related public interest, employment centres and tourism need to be completed and shall be fully operational to boost commercial and service sectors and accelerate redevelopment of most deprived areas.

*Key Projects*

- Strengthen the CBD with upscale of offices and commercial developments.
- Establish parks and sports facility standards in Nsukwao-Adweso-Ada enclave.
- Phased rehabilitation of the existing sewerage network.
- Construct new electricity transmission lines in collaboration with the electricity company limited.

### 8.2.3 Long Term (2038-2041)

In the Long Term, the focus shall be to sustain urban development but not at the expense of expanding inexorably. Urban development in Nsukwao-Adweso-Ada enclave should respect a compact growth around strategic arteries. If growth is not sustainably understood today, it will become a burden to local/national authorities tomorrow. Therefore, a long-term vision will need urban sprawl-counteracting policies and a sensible use of land. Urban fringe zones between centres shall be improved by developing infrastructure and utilities.

*Key Projects*

- Establish the development boundary to prevent sprawl and unplanned growth.

- Develop new hotels and establish tourism promotion and information centre.
- Develop new destinations for active recreations such as theme parks, golf course, indoor entertainment areas.
- Upgrade existing residential areas in the city with adequate facility and infrastructure provision.