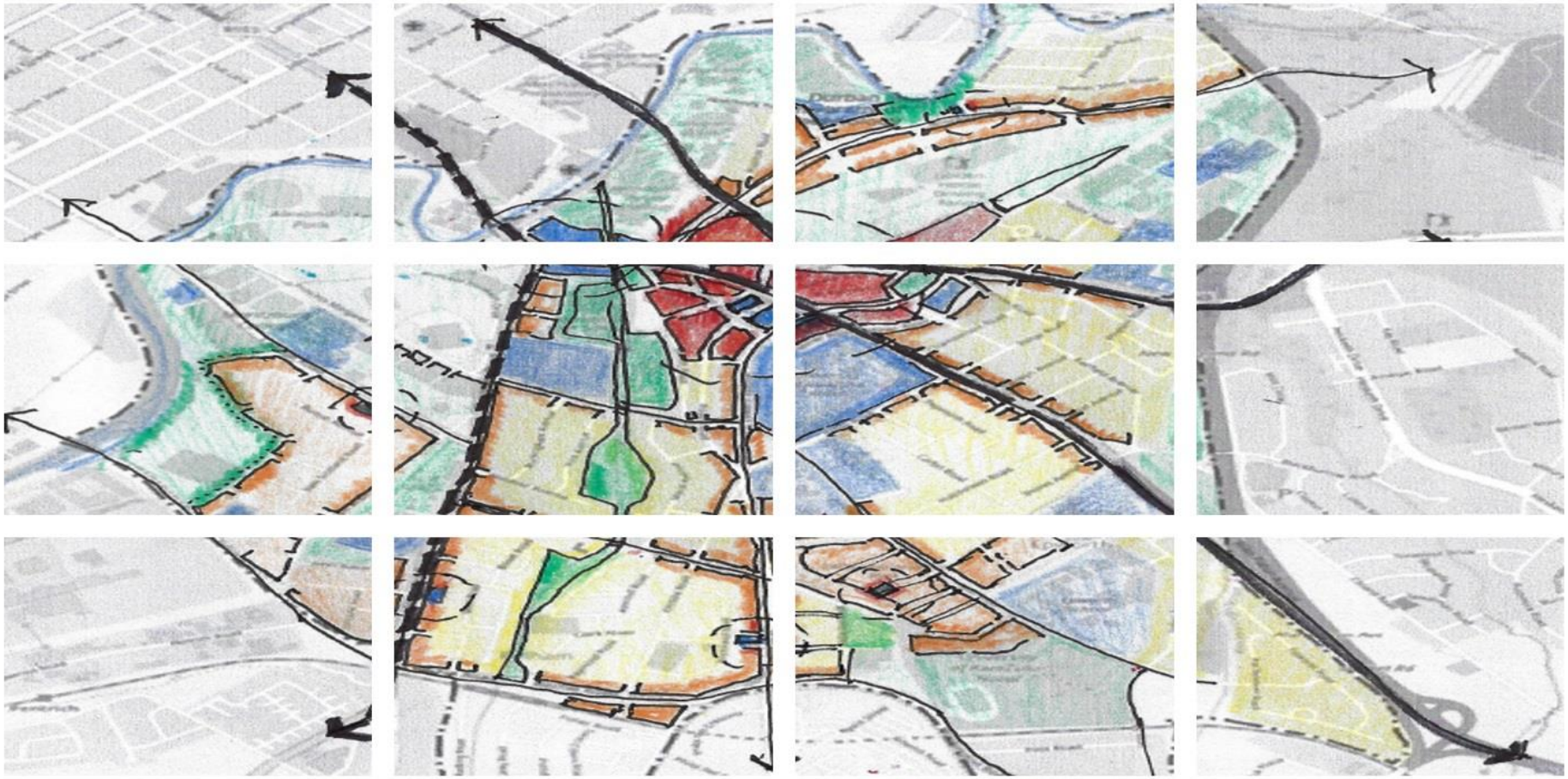

SCOTTSVILLE LOCAL AREA PLAN & ALLIED STUDIES: PHASES 3, 4 & 5

PLANNING AND DEVELOPMENT FRAMEWORK

INCLUDES THE IMPLEMENTATION FRAMEWORK

20 March 2020

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CONTRACT NO: SCM 16 OF 17/18
20 March 2020

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

The Msunduzi Municipality (TMM) has, through the appointment of the Royal HaskoningDHV Project Team in association with The Markewicz Redman Partnership, clearly indicated that it recognises that significant pressure and change has occurred in and around the Scottsville area and accordingly, it needs to **review and amend its local area planning for the area**. It has recognised in particular that due to the existence of a significant number of schools, the University of KwaZulu-Natal, the Durban University of Technology and Varsity College within the area, that there is an increasing demand for student and rental residential accommodation.

The location of the study area at the entrance to the City from the coastal region and adjacent to a major development corridor of the province and the country (i.e. the N3) affords the TMM the opportunity to break from a "business as usual" approach to urban development of an established, but changing low density suburb, and to realise some of its development goals related to City restructuring and densification.

The following are some of the potentials which the Scottsville LAP project MUST respond to:

- Review and translating the **role of Scottsville in TMM spatial economy** so as to offer regional services and boost and support the brand of the "City of Choice" through provision of additional new, attractive, sustainable and regionally competitive urban living environments.
- **Restructuring of the City**, including the establishment of a positive relationship between its urban and suburban (i.e. the study area being one) components and to break down the fragmented and inequitable spatial structure and form of previous planning.
- Enabling the establishment of a more **responsive urban structure and urban form** that will enable more integrated, mixed use and diverse "live, work (study) and play" environments which speak to current residential demands and more sustainable urban settlement.
- The **protection, management and development of significant environmental resources and assets** (e.g. Msunduzi River) which can add value to the brand of the City as a desirable urban living environment.

As such, this project is about assessing the current performance of Scottsville and identifying what interventions and investments are required in order to ensure that it **responds appropriately and innovatively to the future challenges of the Municipality as a regional "learning and knowledge centre" and "City of Choice"**. The updating, review and enhancement of existing planning policy and tools for the area is necessary so as to protect its key resources, enhance its attributes, identify new trends and opportunities, and direct future public and private investment and effort of all stakeholders so as to optimise the opportunities embodied in the changes that are occurring in the area and in the City.

The objectives of this project initiated by the Municipality are therefore to review current, and strategically explore new, planning policy and development management strategies and measures so as to accommodate the change forces that Scottsville is experiencing in an innovative, proactive and creative manner.

1.2 STUDY AREA

The study area is 825ha in extent (Figure 1-1). It is a mixed-use education, retail, sports and recreation and residential neighbourhood located 2.5km to the southeast of the Pietermaritzburg Central area. It is 3.5km ling (north to south) and 2.5km wide (east to west).

The Golden Horse Casino and Scottsville Racecourse are located in the northern section of the study area as well as a number of sports clubs and facilities located along the floodplain of the Msunduzi River on the northern boundary.

Two large retail malls, with a third planned, are located along Alan Paton Avenue together with smaller neighbourhood retail stores scattered across the study and suburban professional offices concentrated around central Scottsville.

The area is home to the Pietermaritzburg campuses of the University of KwaZulu-Natal, Durban University of Technology and Varsity College as well as home to a number of prestigious Public and Private Schools.

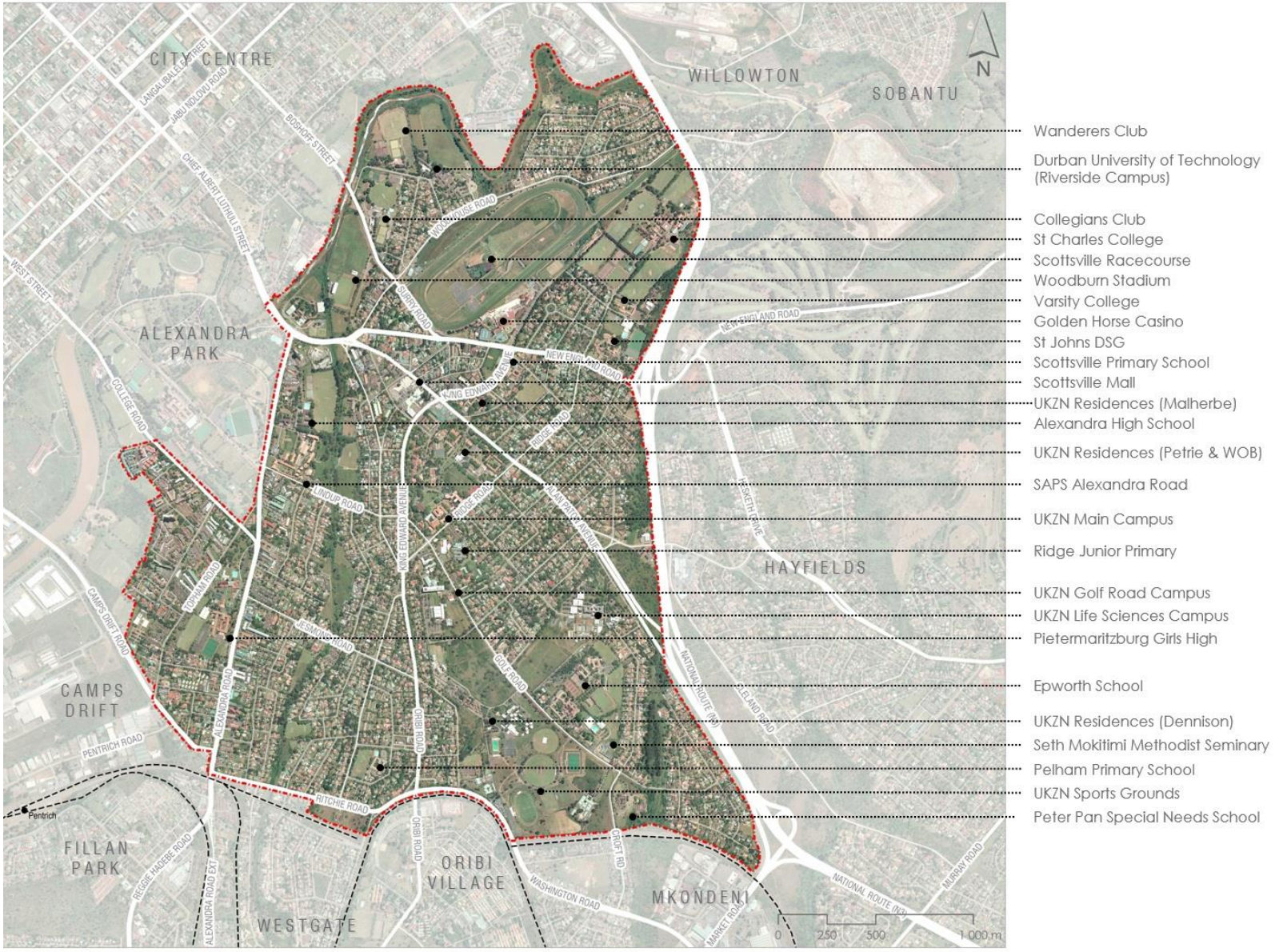


FIGURE 1-1: STUDY AREA

The residential neighbourhoods of Scottsville and a small portion of Pelham are well established and are experiencing pressure to diversify their housing typologies associated with higher density housing demand, non-residential land use changes and a growing demand to provide student accommodation.

The current population is of the order of 17,500 residents and approximately 13,500 University/College Students study in the area.

Sub-regional access to the Local Area is via Alan Paton Avenue and New England Road, both connected to the N3 national route which borders the study area's eastern boundary. Local access is via Alexandra, College Roads and Ritchie Roads.

1.3 THE PURPOSE OF THE SCOTTSVILLE LOCAL AREA PLAN (SLAP)

The purpose of the Scottsville Local Area Plan, or SLAP as it is known, is to provide clear guidance on spatial planning and development in Scottsville. The SLAP should guide the future type, mix, distribution, intensity and form of land use, development and associated activity for the Scottsville Study Area that would be generated by the spatial development policy of the TMM's SDF.

More specifically, from a spatial planning and management point of view, the SLAP translates SDF policy into more detailed spatial proposals that are illustrated at cadastral (i.e. property boundary) level and which supersede the broad policy diagrams of the SDF.

The SLAP **quantifies** the amount and type of land use that is expected to develop within a 5 to 10 year period so that other sectors of the built environment can plan the infrastructure and services that they are mandated to deliver e.g. traffic and transportation, water and sanitation, electricity, social facilities, housing, public open space etc.

The SLAP also provides a vision of the character of the area and a supporting suite of development guidelines that direct the development of the built environment **quality** e.g. built form, public space, and landscape interventions in order to realise the vision.

It also provides an implementation framework which identifies a set of key interventions required for the alignment of the SDF, LAP and Town Planning Scheme. This section also identifies projects for priority areas for development or capital investment and it programmes the delivery of supporting services and infrastructure that will be needed to support the change in land use and activity of Scottsville.

1.4 COMPOSITION OF THE SLAP

The SLAP comprises of a number of different documents which were prepared during different phases of the project. These are listed below.

As such the SLAP should be read in conjunction with the Phase 2: Credible Status Quo Report that comprises a number of independent short technical reports.

- Planning Status Quo
- Traffic and Transportation Status Quo
- Environmental Status Quo
- Bulk Infrastructure Status Quo
- Bulk Electrical and ICT Status Quo

2 CONTEXT

2.1 REGIONAL CONTEXT

Pietermaritzburg is the Capital City of province and has historically played a significant economic and social role in serving the agricultural and rural interior of KwaZulu-Natal. It is also plays an important role as an educational node for the province.

The population is 618 499, accommodated in 163 857 dwellings and in a municipal area that is 63 408 hectares i.e. 634 km^2.

Scottsville (825ha) is positioned, slightly off centre of the convergence of major provincial transport routes (N3, M70, R33 and R103) and is located on the national freight corridor between Durban and Johannesburg (Figure 2-1).

It represents only 1.3% of the municipal land area, however it is home to three of the major tertiary education institutions in Pietermaritzburg as well as a number of prestigious public and private schools and has historically been considered as a desirable suburban residential neighbourhood that serves the greater Pietermaritzburg area.

The population of Scottsville is 17 499 i.e. 2.8% of the total municipal population resident in 6 326 dwellings.

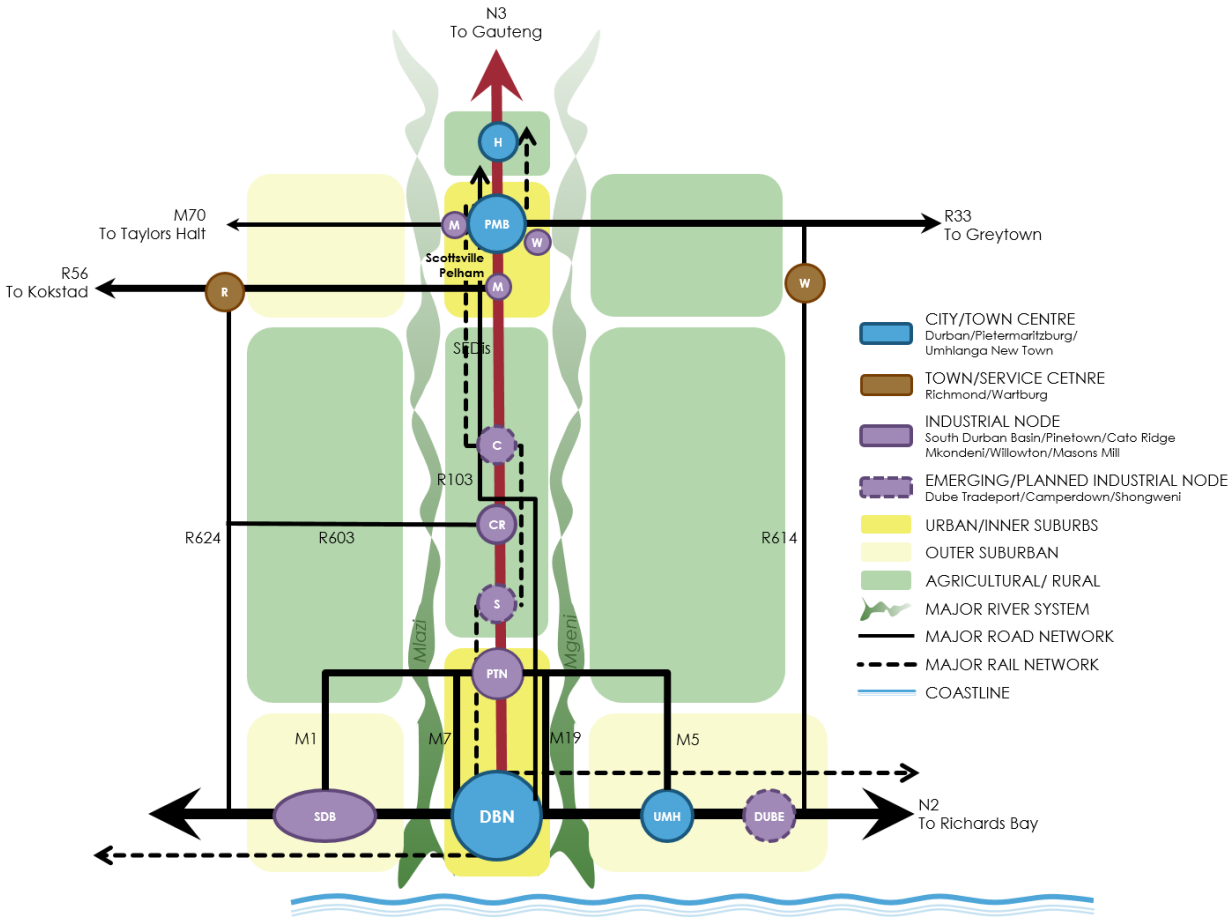


FIGURE 2-1: REGIONAL CONTEXT

2.2 POLICY & LEGISLATIVE ENVIRONMENT

One of the complexities of integrated development planning within South African cities is the plethora of the legislation, policies and strategies from national and provincial government that "aim to improve the way in which our cities function, the conditions in which people live, the way in which cities enables investment and economic growth and the protection of valuable resources from irresponsible consumption" (CoT, 2007).

The legislation that governs spatial planning in one way or another includes, inter alia:

- Constitution of the Republic of South Africa, 1996
- Spatial Planning and Land Use Management Act, 2013
- Municipal Systems Act, 2000
- National Environmental Management Act, 1998 (NEMA)
- Protected Areas Act, 2003
- Biodiversity Act, 2004
- National Water Act, 1998
- Conservation of Agricultural Resource Act

The list is not exhaustive as there are numerous other Acts that govern sectoral aspects such as transportation, service delivery, housing, education etc. that have a direct influence on the way in which a city should develop spatially (CoT, 2007).

The management of cities and development is also influenced through global, national and provincial policy and strategy frameworks such as the:-

- National Spatial Development Perspective and Development Plan
- National Strategy for Sustainable Development and Action Plan
- Integrated Urban Development Framework
- KZN Provincial Growth Development Strategy
- KZN Provincial Spatial Economic Development Strategy
- Millennium Development Goals
- Climate Change Response White Paper Focus areas
- Breaking New Ground (BNG)

Whilst, the preparation of the Local Area Plan for Scottsville needs to take cognisance of these acts, policies and strategies, not all will have direct application to the Scottsville area and need to be viewed within the context of The Msunduzi Municipality's "hierarchy of plans".

This "hierarchy of plans" is an approach that has been adopted by The Msunduzi Municipality to direct and manage development within the municipal area (TMM, 2018).

Each level of plan provides for a different scope, purpose and level of detail and in the case of a Local Area Plan, the purpose is to provide a guideline document specific to the Scottsville Area that will enable the Municipality to:

- guide public and private development through the identification of priority areas and interventions;
- make decisions regarding investment in services infrastructure and associated phasing; and
- give clarity and direction to developers and land owners in the area with respect to the type and intensity of development.

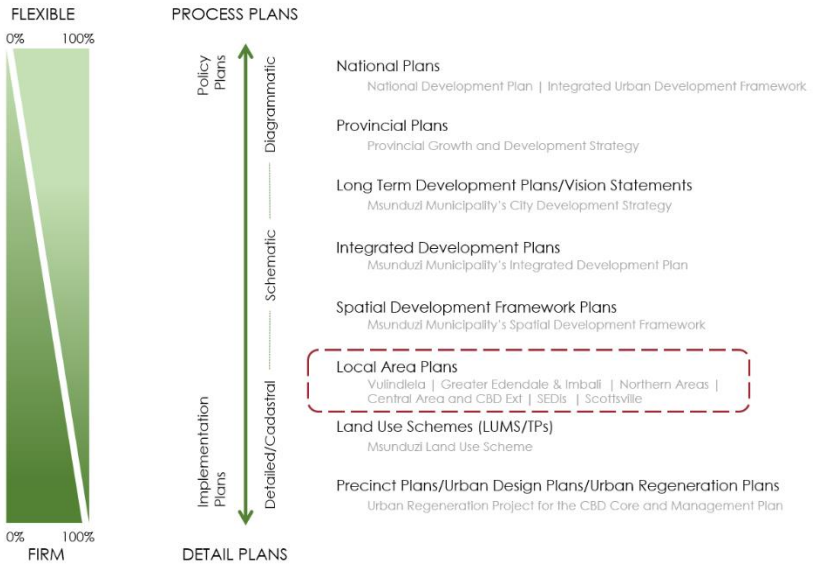


FIGURE 2-2: TMM HIERARCHY OF PLANS

In the context of the "hierarchy of plans" the following are considered as important policy statements towards the review of spatial planning in the greater Scottsville area.

2.2.1 NATIONAL AND PROVINCIAL PLANS

National Spatial Development Perspective

The National Spatial Development Perspective (TP, 2006) provides the overarching framework for post-apartheid spatial planning in South Africa.

The NSDP was formulated to provide direction and guidelines for spatial planning in order to ensure the eradication of the inherited spatially segregated growth patterns and to promote greater economic growth, sustained job creation and the eradication of poverty.

In order to contribute to the broader growth and development policy objectives of government, the NSDP puts forward a set of five normative principles:

- Principle 1: development must ensure **sustained and inclusive economic growth**
- Principle 2: local government is obligated to **provide basic services to all citizens**
- Principle 3: **fixed investment should be focused** on localities of economic growth and/or economic potential
- Principle 4: focus on **people, not places**
- Principle 5: future settlement and economic development opportunities should be channelled into **activity corridors and nodes** that are adjacent to or that link the main growth centres

It is the intent of National Government that the principles contained within the NSDP filter through provincial and local government planning initiatives and processes.

National Development Plan

The National Development Plan focuses on enabling sustainable and inclusive development.

Some directives towards achieving this include: "developing people's capabilities to be able to improve their lives through education and skill development, health care, better access to public transport, jobs, social protection, rising incomes, housing and basic services and safe communities. One of the critical actions identified in this plan is the need for "**New Spatial Norms and Standards – densifying cities, improving transport, locating jobs where people live, upgrading informal settlements and fixing housing market gaps"** (NPC, 2011:34).

The plan also advocates for move away from a "passive citizenry receiving services from the state to one that systematically includes the socially and economically excluded, where **people are active champions of their own development, and where government works effectively to develop people's capabilities to lead the lives they desire**" (NPC, 2011: 1.

A cyclical approach is proposed in which progress in one area supports and advances progress in other areas.

Through addressing South Africa's principal challenge of poverty and inequality, living standards can be raised. This will require a combination of increasing employment, higher incomes through productivity growth, a social wage and good-quality public services.

All of these challenges are interlinked and in a socially cohesive environment, strong leadership, effective government and an active citizenry can help drive development towards growing South Africa's economy.

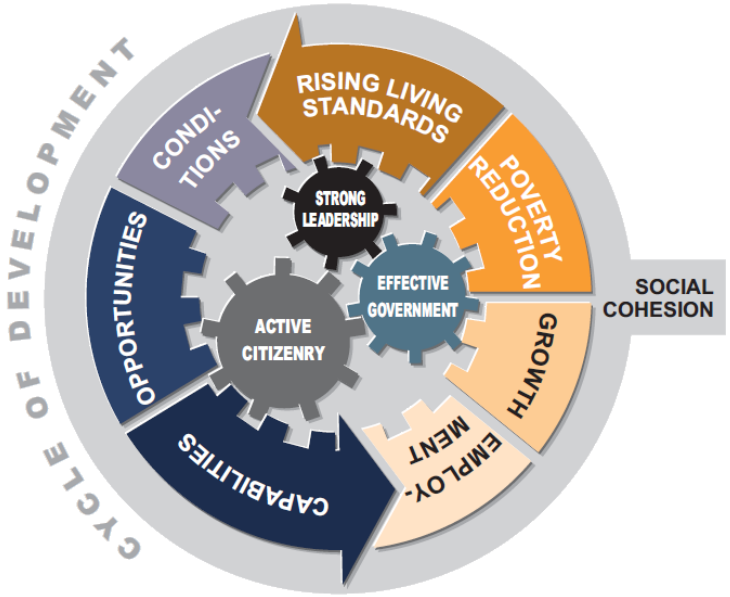


FIGURE 2-3: NDP APPROACH TO CHANGE

National Strategy for Sustainable Development and Action Plan

Cabinet's adoption of a National Strategy for Sustainable Development together with an Action Plan for Implementation (NSSD) has signalled a "new wave of thinking aimed at promoting the **effective stewardship of South Africa's natural, social and economic resources**" (Department of Environment, 2011: 5).

The strategy is premised on five strategic priorities which are: enhancing systems for integrated planning and implementation; **sustaining our ecosystems and using natural resources efficiently**; towards a Green Economy; building sustainable communities and responding effectively to climate change.

Strategic goals have been proposed for each priority with 20 headline indicators have been identified to monitor progress towards the implementation of NSSD 1.

These indicators provide a starting point for the development of a set of national sustainability indicators (Department of Environment, 2011).

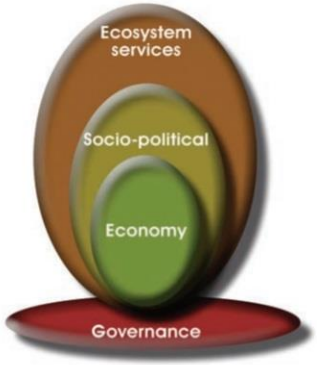


TABLE 2-1: NSSD 1 TWENTY HEADLINE INDICATORS

STRATEGIC PRIORITY	HEADLINE INDICATORS
Enhancing systems for integrated planning and implementation	• Establish an effective National Committee on Sustainable Development (NCSD) [*established by March 2012*] • Number of government entities and private sector companies that report against sustainability indicators [*King III sustainability reporting, Carbon Disclosure Project and Water Disclosure Project*] • Number of community-based capacity building projects [*begin measuring*]
Sustaining our ecosystems and using natural resources efficiently	• Curtail water losses at water distribution systems to an average percentage reduction (saving) [from 30 to 15% by 2014] • Reduction (saving) of demand as determined in the reconciliation strategies for seven large water supply systems by 15% • [assessment of water requirements and water monitoring systems implemented by 2014] • Increase the number of Blue Flag beaches [to above 29 beaches] • Rehabilitation of land affected by degradation [3.2 million ha by 2014] • Percentage of coastline with partial protection [from 12 to 14% by 2014] • Percentage of land mass protected (formal and informal) [from 6.1 to 9% by 2014]
Towards a green economy	• Progress on the implementation of the nine green economy programmes [impact on social (jobs), economic (industry development) and environmental (ecosystem) benefits by 2014] • Increase percentage (or amount) of financial resources ringfenced/streamlined and spent for green economy programmes [2010/11 amount – Industrial Development Corporation: R11.7 billion, Development Bank of South Africa: R25 billion, Private: >R100 billion, National Treasury: R800 million] • Number of patents, prototypes, and technology demonstrators added to the intellectual property (IP) portfolio annually from funded or co-funded research programmes (five additions to the IP portfolio – patents, patent applications, licences and trademarks – by March 2014) • Share of GDP of the Environmental Goods and Services (EGS) Sector [3% of GDP by 2014]
Building sustainable communities	• Percentage of households with access to water (92 to 100%), sanitation (69 to 100%), refuse removal (64 to 75%) and electricity (81 to 92%) [by 2014] • Upgrading of 400 000 households in well-located informal settlements with access to basic services and secure tenure (approximately 2 700 informal settlements are in good locations, i.e. located close to metropolitan areas and basic services, have high densities and, in 2008, housed approximately 1.2 million households) • Increase in the South African Human Development Index (HDI) [2010 HDI: 0.597] • Gini coefficient (reduce income inequality) [2008: 0.66]
Responding effectively to climate change	• Greenhouse gas emissions (metric ton CO_2 equivalent) [34% reduction below a business-as-usual baseline by 2020 and 42% by 2025] • Percentage of power generation that is renewable [10 000 GWh by 2014] • Climate change adaptation plans developed [12 sectors by 2012 (Biodiversity, Forestry, Water, Coastal Management, Agriculture, Health, Tourism, Land and Rural Development, Local Government, Fisheries, Human Settlements, Business/Insurance)]

Integrated Urban Development Framework

The National Department of Cooperative Governance and Traditional Affairs (COGTA) is a policy initiative of the Government of South Africa to foster a shred understanding across government and society on how best to manage urbanisation and achieve the **goals of economic development, job creation and improved living conditions**" for South African citizens, (COGTA, 2019).

Provincial Growth & Development Strategy

The KwaZulu-Natal Provincial Growth and Development Strategy and Plan provide a long term vision, sustainable growth and development strategy and implementation plan for the Province.

By 2035, KwaZulu-Natal, of which Pietermaritzburg is the capital, is intended to have " maximized its position as a gateway to South and Southern Africa, as well as its **human and natural resources so creating a safe, healthy and sustainable living environment**...people will have **options on where and how they opt to live, work and play, where the principle of putting people first, living together in dignity and harmony**, and where leadership, partnership and prosperity in action, has become a normal way of life" (PPC, 2018:35).

In order to realise this vision, the PGDS has identified seven strategic goals and associated Strategies to guide development in the province.

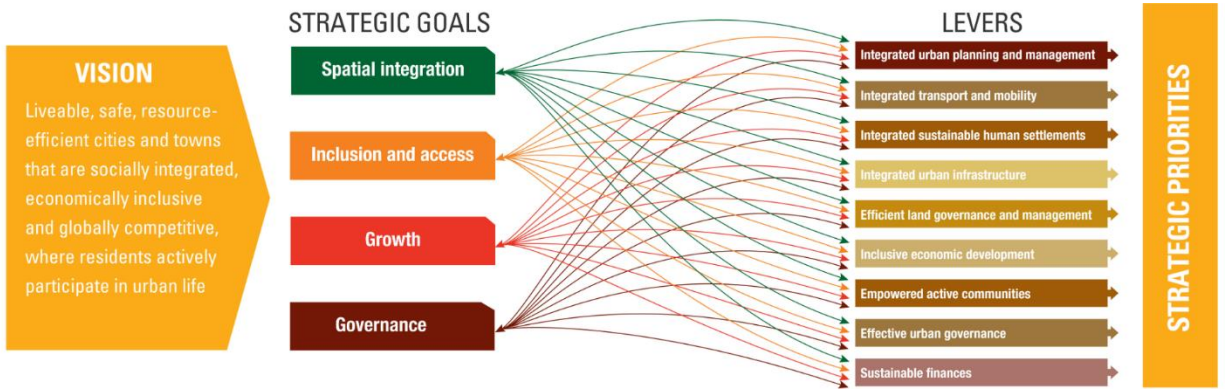


FIGURE 2-4: CORE ELEMENT OF THE URBAN DEVELOPMENT FRAMEWORK

FIGURE 2-5: PROVINCIAL GROWTH AND DEVELOPMENT FRAMEWORK (ADAPTED)

Provincial Spatial Economic Development Strategy

The Provincial Spatial Economic Development Strategy (PSEDS) has been developed within the framework of the NSDP and the Provincial Growth and Development Strategy (PGDS) and includes principles of the NSDP and KZN PGDS.

The intent of the PSEDS is to (EDTEA, 2017):

- focus where government directs its investment and development initiatives;
- capitalise on complementarities and facilitate consistent and focused decision making; and
- bring about strategic coordination, interaction and alignment.

It does this through the identification a number of nodes and corridors throughout the Province that govern where development should take place (EDTEA, 2017).

Msunduzi is identified as **Multi-Sectoral Node (Secondary City)** and is located at the confluence of a number of corridors;

- **N3 SIP 2 Corridor (eThekwini to Ladysmith)**: **A Multi-Sectoral Corridor** with a focus on industry (manufacturing, trade and logistics, agriculture, agro-processing and tourism.
- **Pietermaritzburg - Ixopo – Kokstad**: **A Strategic Corridor** with a focus on agriculture, agro-processing, forestry and poverty alleviation
- **Pietermaritzburg - eThekwini Alternative Freight Route: A Local Influence Corridor** with a focus on trade and transport and logistics
- **Pietermaritzburg - Greytown – Dundee: A Local Influence Corridor** with a focus on agriculture, mining, agro-processing, meat processing and skins production
- **Pietermaritzburg - Kranskop – Ulundi: A Local Influence Corridor** with a focus on agriculture and agro-processing.

How Scottsville, as a local area within Msunduzi, responds to these corridor focus objectives needs to be unpacked in the preparation of the Local Area Plan.

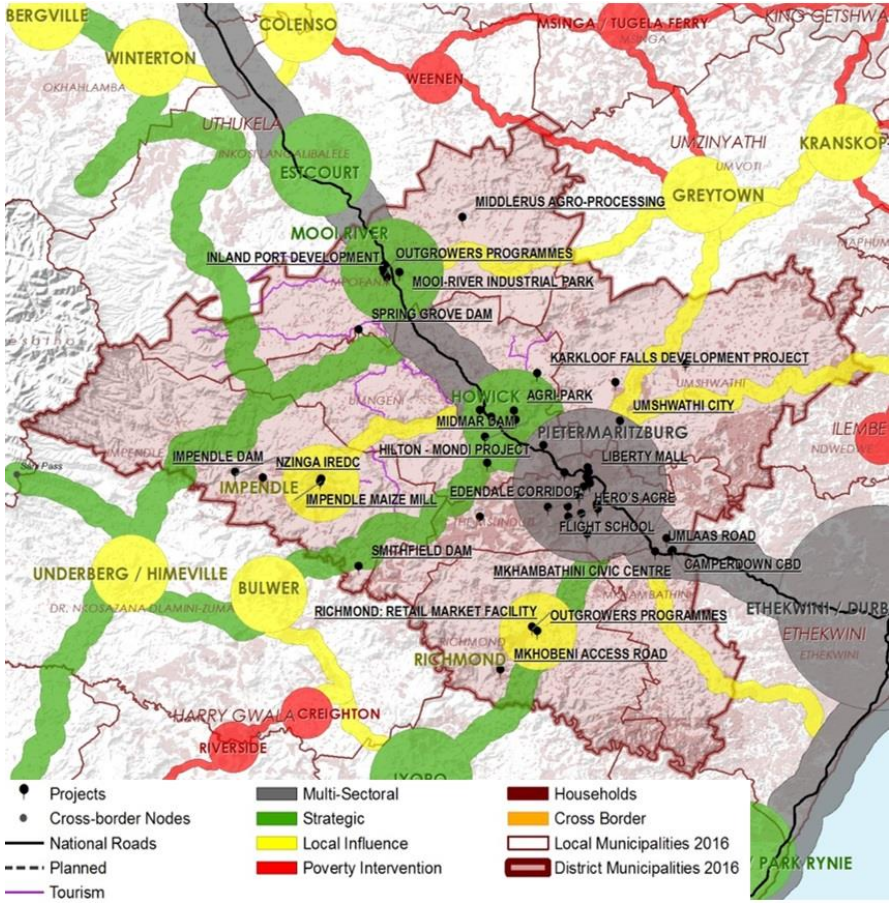


FIGURE 2-6: PSEDS - UMGUNGUNDLOVU DM

Spatial Planning and Land Use Management Act

The Spatial Planning and Land Use Management Act (SPLUMA) provides a national legislative framework for spatial planning and land use management with a uniform set of procedures for land development approvals that primarily seeks to align land use planning with the provisions of the Constitution i.e. it seeks to address historical spatial imbalances, transform settlement patterns and promote greater social and economic inclusion.

The Act reinforces the primary role of municipal government in managing land use planning and land development applications and provides for the establishment of Municipal Planning Tribunals.

The key development principles of Chapter 2 of SPLUMA that the Scottsville Local Area Plan must respond to are:

- Spatial Justice;
- Spatial Sustainability;
- Efficiency;
- Spatial Resilience; Efficiency; and
- Good administration

Under the Act, municipalities must, within five years of the commencement of the Act, adopt a single land-use scheme for its area of jurisdiction, which must be reviewed every five years (in line with the preparation of municipal Integrated Development Plans).

The Scottsville Local Area plan must assist the TMM with this review.

2.2.2 MUNICIPAL PLANS

Msunduzi City Development Strategy

The Msunduzi Municipality's City Development Strategy (CDS) is a longer-term strategic plan that identifies a few strategic, or catalytic thrusts that the municipality needs to address in order to address its unique developmental challenges.

These intervention areas have been identified as (TMMa, 2015):

- Building a capable and developmental municipality
- Back-to-basics
- Improved infrastructural efficiency
- Financial sustainability
- Growing the regional economy
- Serving as a provincial capital
- **Creating a learning city and city of learning**
- Spatial effectiveness and justice

Of particular relevance to this study is **Strategy 7: Create A Learning City and City of Learning.**

Msunduzi, and in particular Scottsville, is home to the University of KwaZulu-Natal and Durban University of Technology campuses as well as a number a prestigious public and private schools, that serve not only the residents of Msunduzi, but the wider KwaZulu-Natal hinterland.

This represents a "unique opportunity for the city to position itself as a national and even continental educational hub. This stands to benefit the educational institutions, the municipality, local industry and the broader community" (TMMa, 2015:37).

In order to position Msunduzi as University town, relationships between TMM, Province and the various learning and research institutions need to be strengthened.

Another important dimension would be to improve student life, through improving the availability of suitable accommodation, pedestrian or cycle accessibility, access to arts, culture and entertainment, recreational and sporting facilities and general safety, all of which would benefit the permanent residents of Msunduzi

Integrated Development Plan

It is the intention of The Msunduzi Municipality that:'

"By 2030, Pietermaritzburg will be a safe, vibrant city in which to live, learn, raise a family, work, play and do business".

In order to realise the Vision, the Municipality has prioritised six strategic outcomes to which all municipal projects/programmes must respond:

- A Well Serviced City
- An Accessible and Connected City
- A Clean, Green City
- A Friendly, Safe City
- An Economically Prosperous City.
- A Financially Viable and Well-Governed City

The following catalytic projects aimed at "revitalising the economy and growth trajectory of The Msunduzi Municipality" (TMM, 2018: 38) have been identified, each will impact on current and future development within the Scottsville area:

TABLE 2-2: CATALYTIC PROJECTS

PROJECT	DESCRIPTION	ESTIMATED BUDGET
Integrated Rapid Public Transport System	This project is a short to medium-term project which will see the roll-out of reliable and efficient public transport between key points in the city, thereby reducing resident's commuting times	R3.2 Billion
Fibre Optic Cable Network	This is a short to medium-term project that will see the development of a leading-edge technology fibre optic telecommunications network leading to increased connectivity and usage, decreased costs, and stimulating growth and development.	R0.5 Billion
Electrical Infrastructure Upgrade	This is a short to medium-term project that will see the rehabilitation and upgrading of the Municipality's electrical infrastructure.	R0.9 Billion
City-wide CCTV System	Camera surveillance of areas within the Msunduzi Municipality so as to encourage a crime-free environment.	R0.5 Billion
Freeway Node Development	This is a medium-term project that involves the upgrade of key freeway interchanges within the Municipality so as to ensure more efficient movement of traffic, as well as unlocking strategically located adjacent land for the development of commercial, residential, and associated activities.	R1 Billion
Non-Revenue Water Reduction Project	This is a medium to long-term project that will simultaneously increase revenue and reduce water losses. The reduction of water losses will ultimately reduce the demand on our source (dams), which will have a catalytic benefit to the catchment.	R0.5 Billion
N3-Pietermaritzburg Bypass (SIP 2)	Identified on Provincial Catalytic Project List – no details provided.	tbc

Spatial Development Framework

The Spatial Development Framework (SDF) seeks to guide the overall spatial distribution of current and desirable land uses within The Msunduzi Municipality in order to give effect to the development vision, goals and objectives articulated in the CDS and IDP (TMM, 2015b).

To achieve the municipal vision the SDF proposes that a sustainable urbanism approach be adopted and that the following factors (sustainable urbanism pillars) be addressed in order to achieve a sustainable city (areas that the Scottsville LAP could directly accommodate and or respond to are emphasised in bold):

GLOBAL CONNECTIVITY

- **Enhancing connectivity to the N3**
- Improve Regional Connectivity
- Re-Envisage the Rail Routes
- Support the Airport Precinct
- **Bridge the digital divide**

PRODUCTIVE SYSTEMS

- Land release along the N3 corridor
- Consolidate and revive the CBD
- **Strengthening centres of economic activity**
- Introducing new economic zones and centres
- Incorporate productive agricultural

ECOLOGICAL INFRASTRUCTURE

- Securing the natural resource base
- **Protect and enhance open space cores**
- Creating an integrated open space system
- **Enhancing the Msunduzi river as a regional parkway**

SUSTAINABLE TRANSPORT

- Equitable movement structure
- An enhanced public transport backbone
- Review the rail network
- **Promoting NMT routes**

QUALITY URBANISM

- **Create functional residential neighbourhoods**
- **Build polycentric city**
- Create sustainable urban centres
- Promote densification
- Enhance public place making

SOCIAL INCLUSIVITY

- **Establish new housing opportunities**
- Address informal housing
- Equitable distribution of public amenities

SUSTAINABLE SERVICES

- Enhancing existing and future infrastructure
- Focussed investment on corridors and sustainable urban centres.

Spatial directives, specific to Scottsville, include:

- Planned Integrated Public Transport (Quality Bus Service) east-west routes along Washington/Ritchie/Camps Drift Roads and New England/Surrey/Boshoff Roads with. north-south routes proposed along Oribi/King Edward Roads
- Planned Integrated Public Transport (Feeder Routes) north-south along Alexandra Road and east-west routes along College and Chief Albert Luthuli Streets.
- Opportunities for strategic densification along at the routes described and at interceptory points/public transport stops (within 300m)
- Minimum gross density target within the densification zones is 26du/ha.
- New housing opportunity (residential infill) identified on Woodhouse Road
- New mixed use development site identified for the Scottsville Bowling Greens.
- Protection of riverine open space assets associated with the Msunduzi River and Foxhill and Blackborough Spruits.
- Consolidation of major recreation facility at Scottsville Race Course

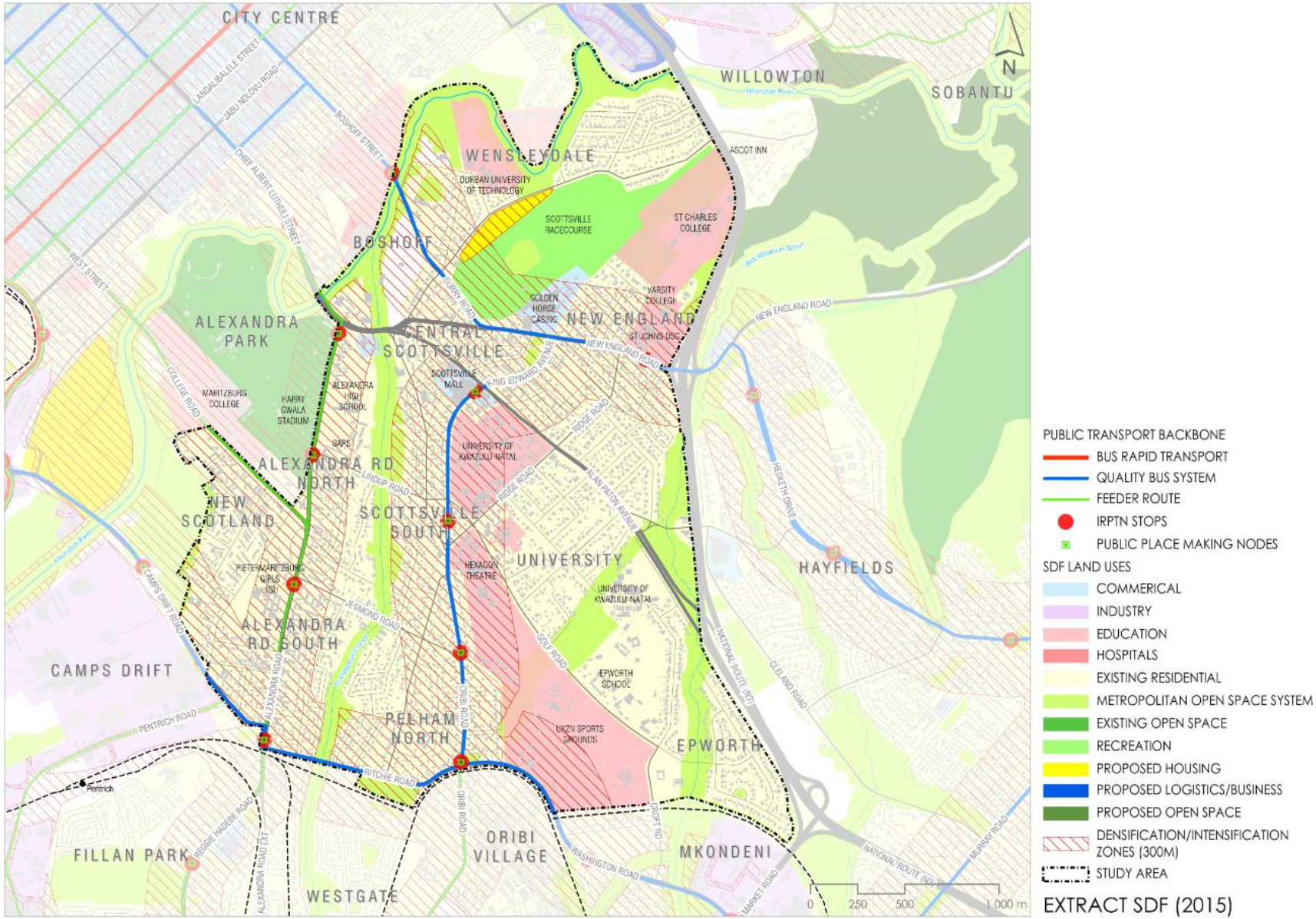


FIGURE 2-7: EXTRACT FROM 2015 SDF REVIEW

Scottsville Pelham Planning Initiative

In 1998, TMM undertook to prepare a Planning Framework for Scottsville-Pelham area or order to respond similar pressure as is being experienced in 2019.

Key concerns (in 1998) were cited as the proliferation of student "digs", the expansion of the main commercial node and the intrusion of commercial development into residential areas (Scott-Wilson, 1998:7).

Three development scenarios were workshopped with stakeholders and a scenario that promoted nodal development around the Scottsville Mall, YMCA and Alan Paton Road Interchange was adopted with the following policy guidelines proposed:

- Promote mixed use development in identified nodes
- Promote commercial development in identified nodes
- Integrate the natural environment into the open space system
- Improve residential quality; and
- Integrate the University into the surrounding areas

Further recommendations included the formalisation of a "University Precinct" and an interface zone around the primary node. Boarding Houses and other non-residential uses were to be confined to these areas.

It was concluded that the Scottsville Pelham Planning Initiative be converted into a Local Development Plan in order guide future development in the area.

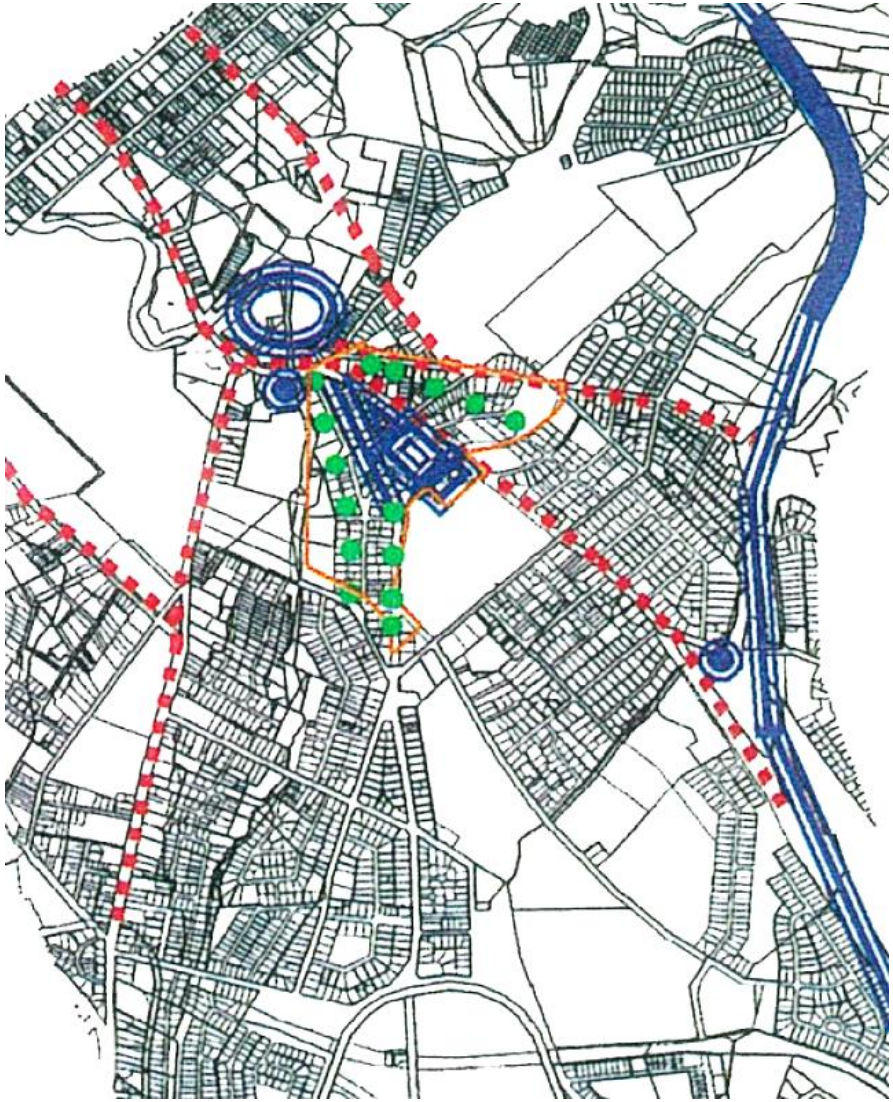


FIGURE 2-8: SCOTTSVILLE PLANNING INITIATIVE NODAL DEVELOPMENT SCEANRIO

2.3 KEY POLICY PRINCIPLES

The following policy principles are articulated across key document and legislation governing development in Scottsville which need to be addressed in the local area plan.

The local area plan must:-

- focus on the **residents (current and future)** and not just Scottsville as a place.
- **align** with the principles contained within the National SDP, SPLUMA and TMM's IDP and SDF
- promote the **clustering of economic, social and transport facilities** required in order to maximize thresholds and to ensure the maximum and efficient use of resources
- enhance Scottsville as a key **educational node** within Msunduzi
- support the development of an **active citizenry** in the development and management of Scottsville
- promote **improved living conditions** for all
- provide for **options on where and how people can live, work and play** in the Scottsville area.
- define where and how **densification can be accommodated** in the area
- promote **high quality living environments**
- promote more **mixed-use and multi-use spaces**
- plan for **climate change and urban resilience through adaptation strategies.**

3 ASSESSING THE PERFORMANCE OF THE STUDY AREA

3.1 SWOT ANALYSIS

The following section presents a strategic level investigation into the strengths and weaknesses of the study area and some of the key opportunities and threats which need to be accounted for in the future planning of the area (i.e. SWOT Analysis).

A SWOT analysis is "an analytical method which is used to identify and categorise significant internal (Strengths and Weaknesses) and external (Opportunities and Threats) factors faced either in a particular arena, such as an organisation, or a territory, such as a region, nation, or city" (Cities Alliance, 2016).

Strengths and opportunities are considered helpful aspects to build on with respect to future planning for the study area, whilst weaknesses and threats are harmful and will need be mitigated against and/or addressed in future planning.

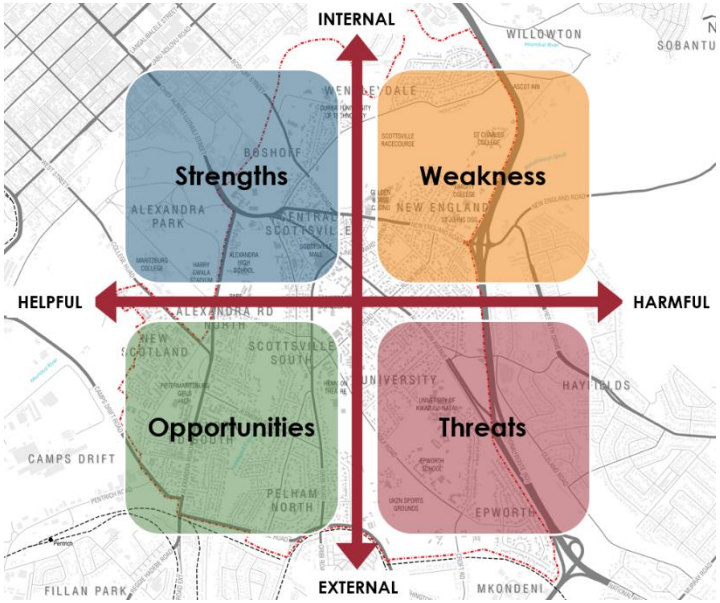


FIGURE 3-1: SWOT ANALYSIS FRAMEWORK

3.2 PERFORMANCE DIMENSIONS

The work of urban theorist and urban planner Kevin Lynch (1984) in his book "Good City Form" was used as a basis to structure the strategic assessment and evaluation of the performance of the project area. Lynch's work revolved around the identification and definition of a set of dimensions (or criterion) that could be used to measure or evaluate the performance a City or part thereof in terms of its meaning for its inhabitants and users and in terms of how it meets human needs

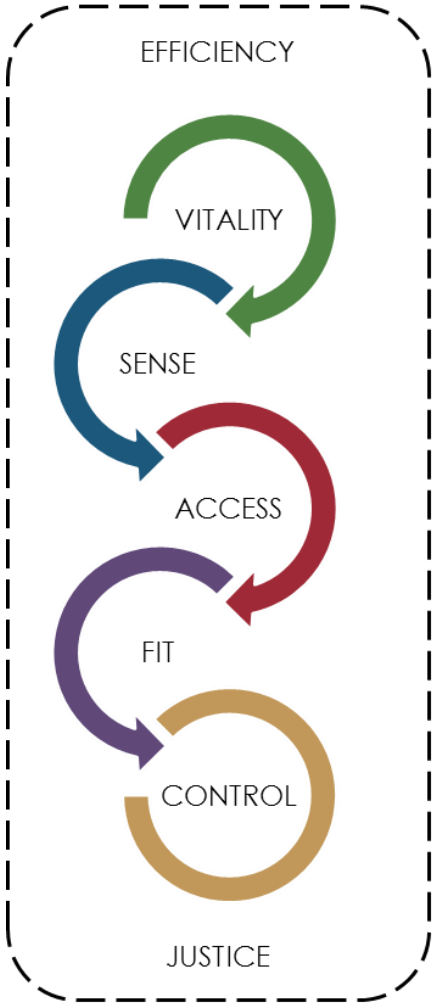
Lynch's work recognises that Cities and their neighbourhoods are unique and that they perform different roles and functions over time as they change and grow. As such the dimensions provide a tool that can be used to evaluate an urban area in any specific context.

Lynch argues that development can be defined as being a set of interventions directly related to the performance of the study area as a "platform" or "stage" that would effectively accommodate and enable the day to day activities of the existing and future residents and/or business of the study area and that would continue to provide a "platform" or "stage" for the area's continued/sustainable performance as a residential neighbourhood/educational precinct and/or environmental conservation area.

In other words development revolves around ensuring that the physical, social, economic and institutional environment within the project area adequately provides the means for residents and business to meet their daily needs and provide them with the opportunity to enjoy the amenities of the study area.

This work, by Lynch's own admission, is a contribution to the broader and on-going discourse relating to how we identify and achieve "a sense of better" with regard to the making and remaking of human settlements.

The dimensions include Access, Vitality, Sense, Fit and Control and include two "meta-criteria", justice and efficiency, which are involved in each dimension and are therefore not independent of each other.



The cost of creating and maintaining the area. Criterion balances gains among different values

The degree to which the form of the area supports the vital functions, biological requirements and capabilities of human beings i.e. this would relate to aspects such as availability of water, clean air, energy, waste removal and food. It also relates to safety of person from hazards, disease and environmental pollution and to the maintenance of the balance between urban living and access to sustainable natural areas.

The degree to which the area can be clearly perceived and to which it connects to the values of its residents i.e. the landmarks, features and character of the places and built form that provide identity, orientation and meaning for its inhabitants.

The degree to which the form and capacity of the area matches the pattern and quantity of activity of the residents i.e. the manner in which the spaces, places, buildings and infrastructure that make up the living environment accommodate the activities of the community with respect to their work, play and home life.

The ability to reach other persons, places, resources, services and information i.e. adequacy of the movement networks to link people and opportunity, the availability of, and "reachability" of, resources and services in terms of time and cost.

The degree to which the use of, creation of and management of spaces can be controlled by those who use them i.e. this refers to the community and institutional capacities and processes and the manner in which they permit and enable individuals and communities to contribute to the shaping of their living environments.

The way in which benefits and costs are distributed among persons. Criterion balances gains among different persons

FIGURE 3-2: LYNCH'S PERFORMANCE DIMENSIONS

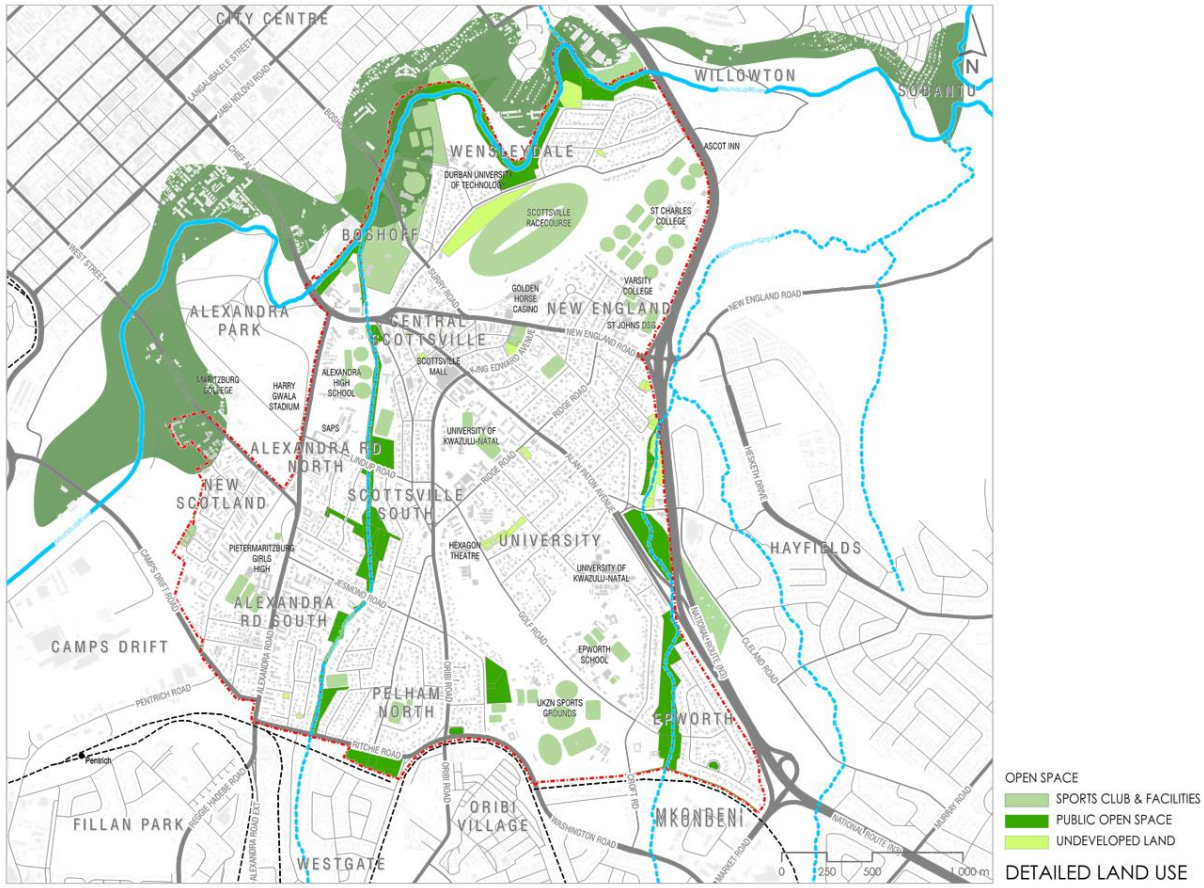
3.3 VITALITY

The degree to which the form of the area supports the vital functions and biological requirements of human beings i.e. the quality of water, air, soil etc. of the site and how it can support the wellbeing of users of Scottsville

3.3.1 STRENGTH

Inherent Attributes of the Study Area

- Environmental assets and ecosystem services associated the Msunduzi River and Foxhill and Blackborough Spruits are legally protected by the MESP
- Corridors are important connections to major assets external to the study area i.e. Bisley Nature Reserve, the Msunduzi River Corridor, Umgeni Darvill Bird Sanctuary etc.
- Eco-goods and services freely available to all Msunduzi communities.
- There are a number of sports fields and facilities located in the study area either within educational institutions and/or the floodplain of the Msunduzi River. Msunduzi River is home to the Duzi Canoe Marathon a major sports tourism event
- Msunduzi Green Corridor partnership established between DUCT and TMM to manage the Msunduzi River
- 'Arcadian 'character to streets or provides protection from the elements for pedestrians, although a number of the trees are exotic species
- Assets in private ownership are well managed

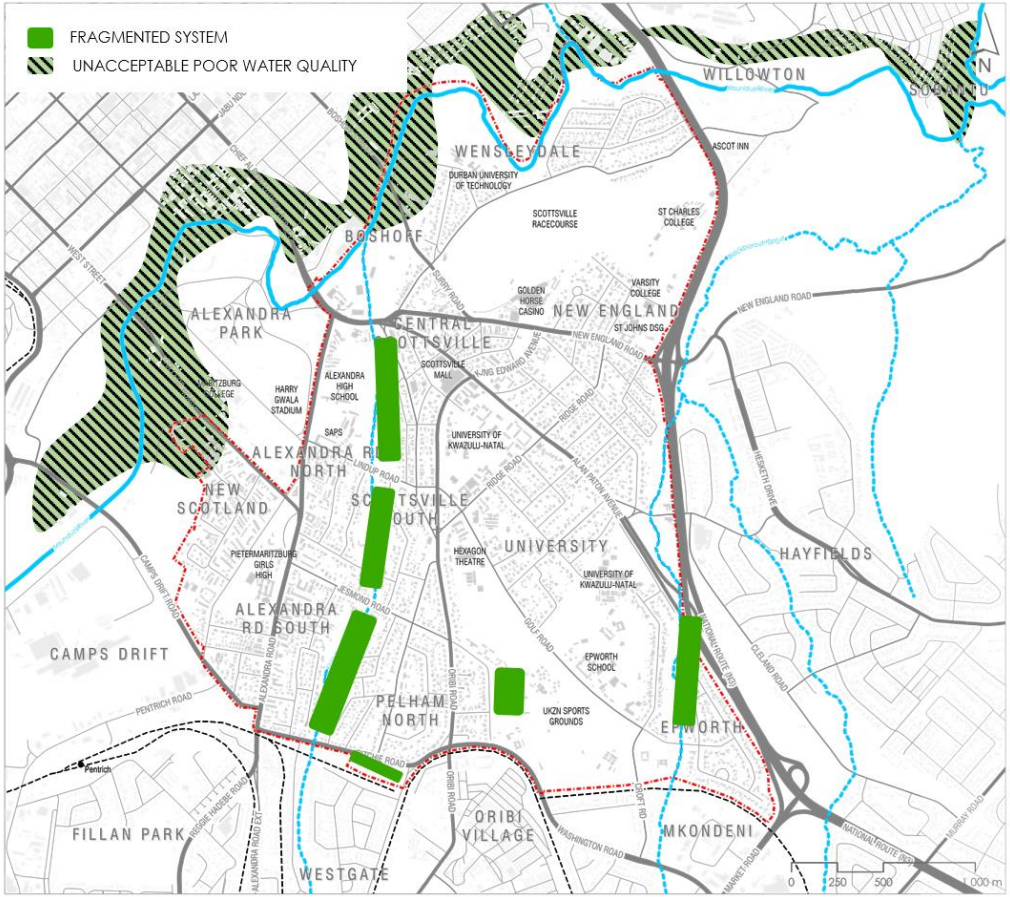


OPEN SPACE ASSESTS

3.3.2 WEAKNESS

Inherent Weaknesses of the Study Area

- The majority of the biodiversity in the study area has been transformed and/or modified as a result of suburban settlement
- System internal to the study area consists of small fragmented elements associated with watercourses
- Water quality is "unacceptably poor" (faecal contamination) in river systems, especially the Msunduzi River
- Canalisation of the Msunduzi River and Foxhill Spruits impacts on the rivers natural flow downstream and weirs impact on the migration of fish
- Inadequate removal of waste impacting on unsightliness and health risks
- Use of open fires/gas for cooking (especially in St Patricks Road) is a health and safety risk
- Air pollution linked to city topography results in smog "siting" over the City
- A large percentage of open space and recreation activities are privatised and impact on accessibility to assets in the future.
- Limited opportunities for engaging with the river i.e. riverfront within the study area



FRAGMENTED SYSTEM

3.3.3 OPPORTUNITY

Development Opportunities Externally Driven

- Extend the Msunduzi Green Corridor to include the Blackborough and Foxhill Spruits
- Strengthen linkages to open space corridors associated with the Blackborough and Foxhill Spruits and look for opportunities to integrate NMT and recreation routes in the corridors and across major educational institutions i.e. UKZN land holdings
- Make use of sustainable urban drainage systems (SUDS) to reinforce open space corridors and deal with Stormwater management.
- Promote green-building design and work with UKZN and/or DUT and schools in the area to become a centre of excellence for green design in education facilities.
- Landscape NMT Routes with indigenous trees in order to re-establish lost biodiversity linkages
- Engage with private landowners/lease holders to provide access to recreation assets under private ownership i.e. UKZN Sports Complex, Collegians Club Woodburn Stadium etc.

PARTNERSHIPS TO MANAGE ENVIRONMENT

POTENTIAL TO INTRODUCE SUDS DESIGN TO CORRIDORS AND NMT ROUTES

EXAMPLE OF POSITIVE EDGE TO MSUNDUZI RIVER

3.3.4 THREATS

Threats to Development Externally Driven

- Additional hardening of surfaces can cause increased stormwater runoff into the rivers
- Continued sewerage contamination of Rivers as a result of Stormwater infiltration into the system
- Poor management and maintenance of open space assets leads to alien species infestations
- Development has been permitted in the 1:50 and 1:100 year floodlines
- Increased flooding associated with severe storm events
- General increase in City air pollution related to climate variations and growth in number of fossil fuel driven vehicles (smog trap)
- Land invasions for informal settlement in open space asset

UNMANAGED RIVER CORRIDORS

FLOODED MSUNDUZI RIVER

RIVER POLLUTION

SMOG

MANAGEMENT OF ALIEN INVASIVE PLANT SPECIES

SEWERAGE CONTAMINATION

3.4 SENSE

The degree to which the area can be clearly perceived and to which it connects to the values of its residents i.e. the quality of the spatial structure, urban form and "sense of place" of the site

3.4.1 STRENGTH

Inherent Attributes of the Study Area

- Gateway suburb into Pietermaritzburg from Durban to the CBD
- The area has a strong association with the Pietermaritzburg Campus of the University of Kwazulu-Natal as well a number of prestigious public and private schools as is associated with being a high quality education neighbourhood
- There a number of key architectural heritage assets within the study area as well as new architectural assets such as the Seth Mokitimi Seminary and Scottsville Mosque
- Scottsville has a long horse-racing tradition and history associated with the Scottsville Racecourse
- Arcadian suburbs surround a central node/corridor of retail, commercial and education activity
- Historically has been a residential neighbourhood of choice for young families
- A collection of smaller discrete neighbourhoods/sub-precincts

ALAN PATON GATEWAY ENTRANCE TO SCOTTSVILLE

UKZN MAIN CAMPUS

ARCADIAN SUBURB

PMB GIRLS HIGH ALEXANDRA ROAD

3.4.2 WEAKNESS

Inherent Weaknesses of the Study Area

- Poor maintenance and management of public space in terms of waste removal, infrastructure etc. as a result of failing service delivery in the greater Msunduzi area.
- Sense of neglect evident in study area (both public realm and private realm) i.e. litter at University gates, overgrown road verges, potholes in and around Wensleysdale
- Hostile pedestrian environment across the study area
- Sense that area is unsafe, a perception reinforced through fencing and access control
- Suburban character – mono-functional 'bland' spaces with limited diversity in housing stocks and/or commercial enterprises outside of Scottsville Central
- Car dominates the space in public spaces i.e. the Scottsville Mall

POT HOLES RIVERTON ROAD

CAR PARKS WITH LITTLE THOUGHT FOR PEDESTRIAN MOVEMENT

"FORTRESS" UNIVERSITY

LACK OF NMT INFRASTRUCTURE

UNCOLLECTED WASTE ALAN PATON

3.4.3 OPPORTUNITY

Development Opportunities Externally Driven

- Utilise vacant, but developable land to restructure and to improve legibility and character within the sub-precincts i.e. expand on-site student housing on the UKZN Campus off Gold Road in a manner that provides access "through" the University
- Use public space and landscaping to define the different characters of each sub-precinct i.e. suburban treatments vs urban treatments in and around Central Scottsville
- Public space and streets provide opportunity to introduce brand Scottsville
- Opportunity to layer new architectural and social heritage and meaning into area through infill or areas identified for redevelopment and/or intensification
- Integrate the University with the surrounding neighbourhoods so as to create a University Town as opposed to a University in a town
- Establish pedestrian priority zones within Central Scottsville and around UKZN and DUT riverside campuses linked by a functional and high quality NMT network
- Clarify the roles of different sub-areas within the precinct

HIGH QUALITY BUILDINGS SOL PLAATJIE UNIVERSITY

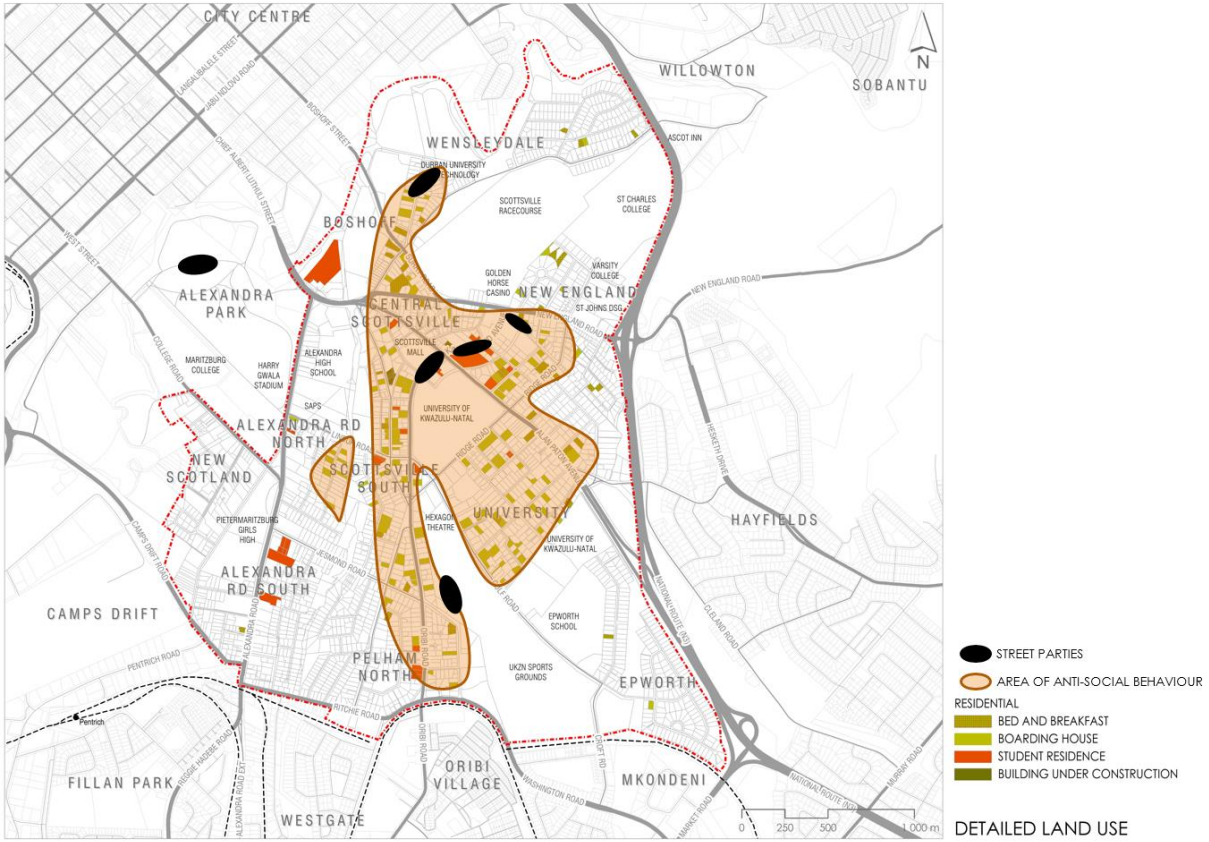
HIGH QUALITY PUBLIC SPACE SOL PLAATJIE UNIVERSITY

ESTABLISH PEDESTRIAN PRIORITY ZONES WITHIN CENTRAL SCOTTSVILLE AND AROUND UKZN AND DUT RIVERSIDE CAMPUSES

3.4.4 THREATS

Threats to Development Externally Driven

- Proliferation of student boarding houses and the 'commercialisation 'of student digs by 'entrepreneurial' landlords is changing the residential amenity of existing residential neighbourhoods (146 BH & 39 BB)
- Lack of financial resources within the private sector to maintain heritage assets
- Ad-hoc and spot zoning in and around the study area erodes the existing settlement character
- Uncoordinated planning and design of new developments by different stakeholders at site level erodes the character of the area. There is an urgent need for urban design and built form guidelines towards a common vision
- Lack of urban management on the periphery of major educational institutions and arounds the shopping malls in the Central Scottsville
- Anti-social behaviour associated with drinking and loud music in the streets outside student residences, particular within St Patricks Milner, King Edward and Jesmond Road
- Crime (students targeted for cell phones and laptops while walking to campus from their off-site accommodation.



AREAS WHERE ANTI-SOCIAL BEHAVIOUR HAVE BEEN REPORTED

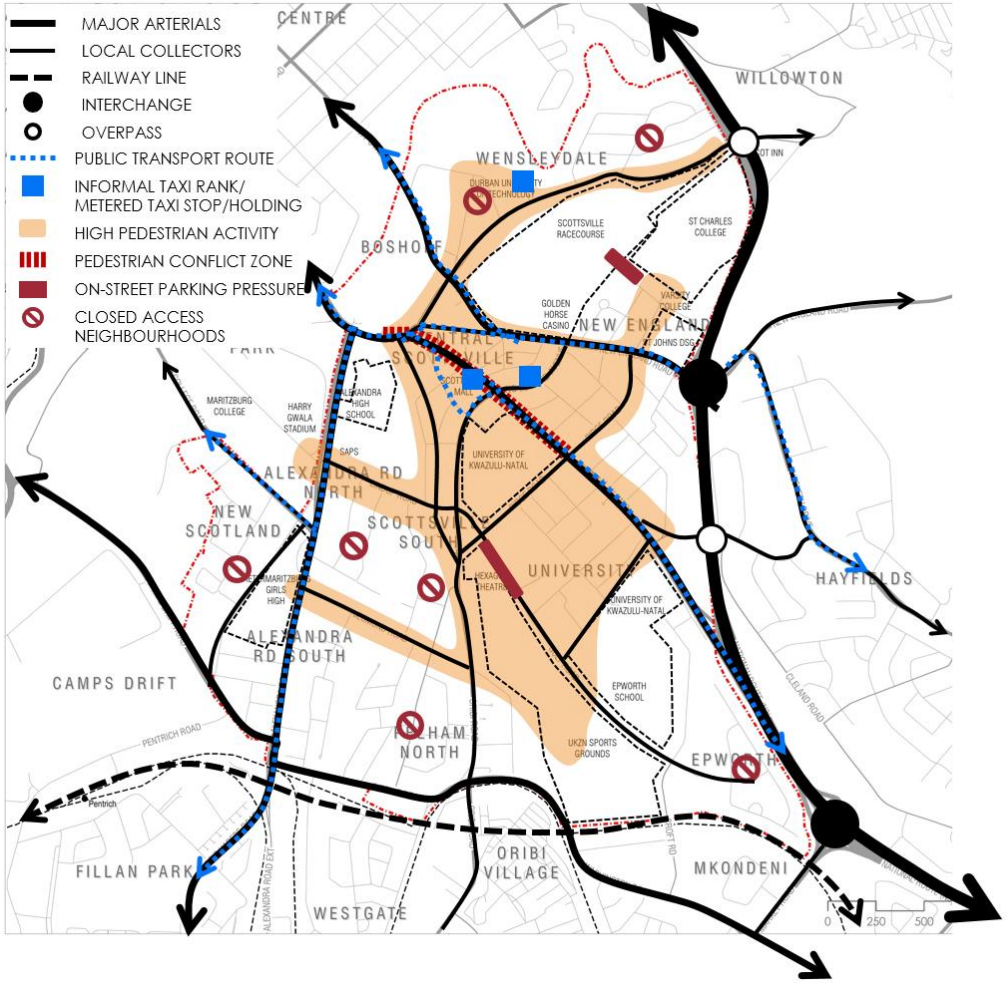
3.5 ACCESS

The ability to reach other persons, places, resources, services and information i.e. the capacity and quality of access and movement networks and systems.

3.5.1 STRENGTH

Inherent Attributes of the Study Area

- Direct regional access from N3 corridor onto Alan Paton and New England Road
- Good local access points from study area to rest of the City
- Local access roads service all functional areas/sub-precincts
- Public transport into Central Scottsville is currently available
- DUT and UKZN provide a student bus service from residences to Riverside, Main, Golf and Life Sciences Campuses
- Good grid system between Carbis and New England
- Relatively flat topography for pedestrian and cycling routes

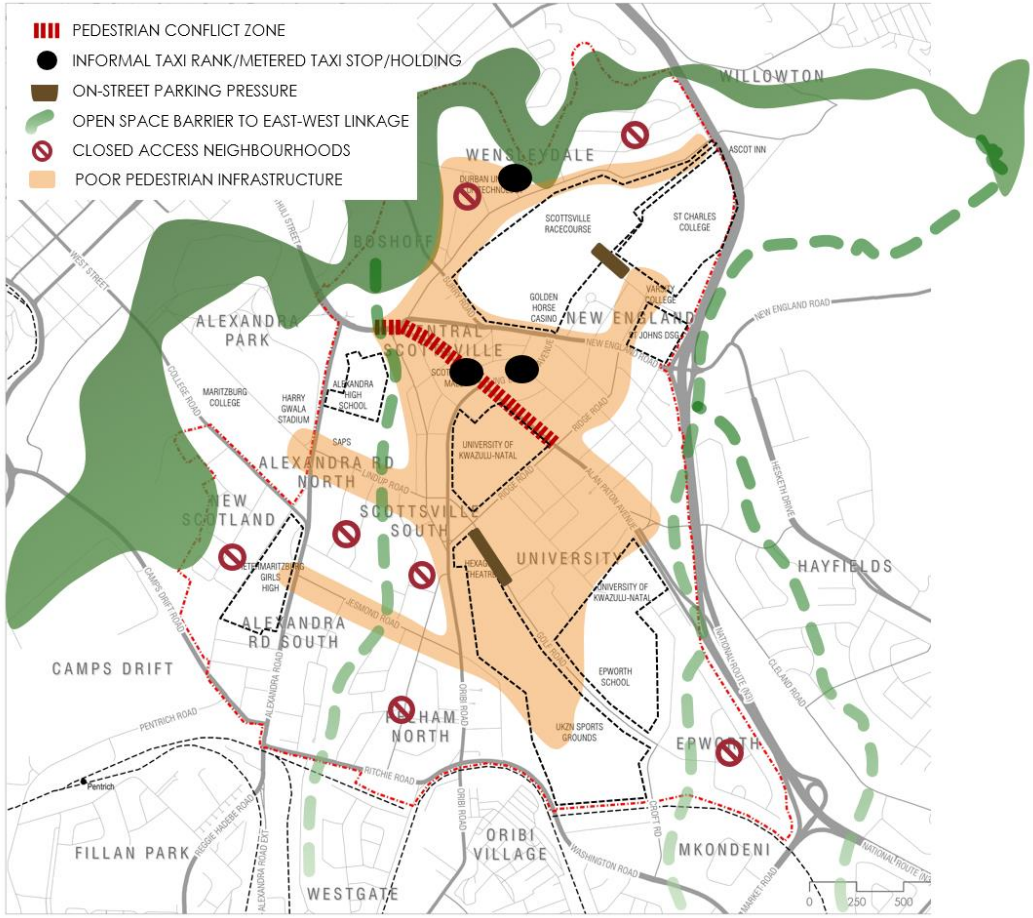


ACCESS SYSTEM

3.5.2 WEAKNESS

Inherent Weaknesses of the Study Area

- Regional traffic is directed through Central Scottsville which creates a pedestrian conflict zone in Central Scottsville
- Msunduzi, Foxhill and Blackborough Spruits impedes east-west linkage across study area
- AM and PM Peak Congestion (particularly north-south routes)
- Some neighbourhoods are "closed" i.e. few routes in and/or out
- Inadequate PT infrastructure (ranks & stops)
- Non-motorised transport infrastructure and facilities are sorely lacking in and around the study area.
- Access control at major education institutions creates impermeable barriers to movement
- On-street parking pressure outside Varsity College and the Ridge Primary School on Golf Road
- Incoherent system of directional signage

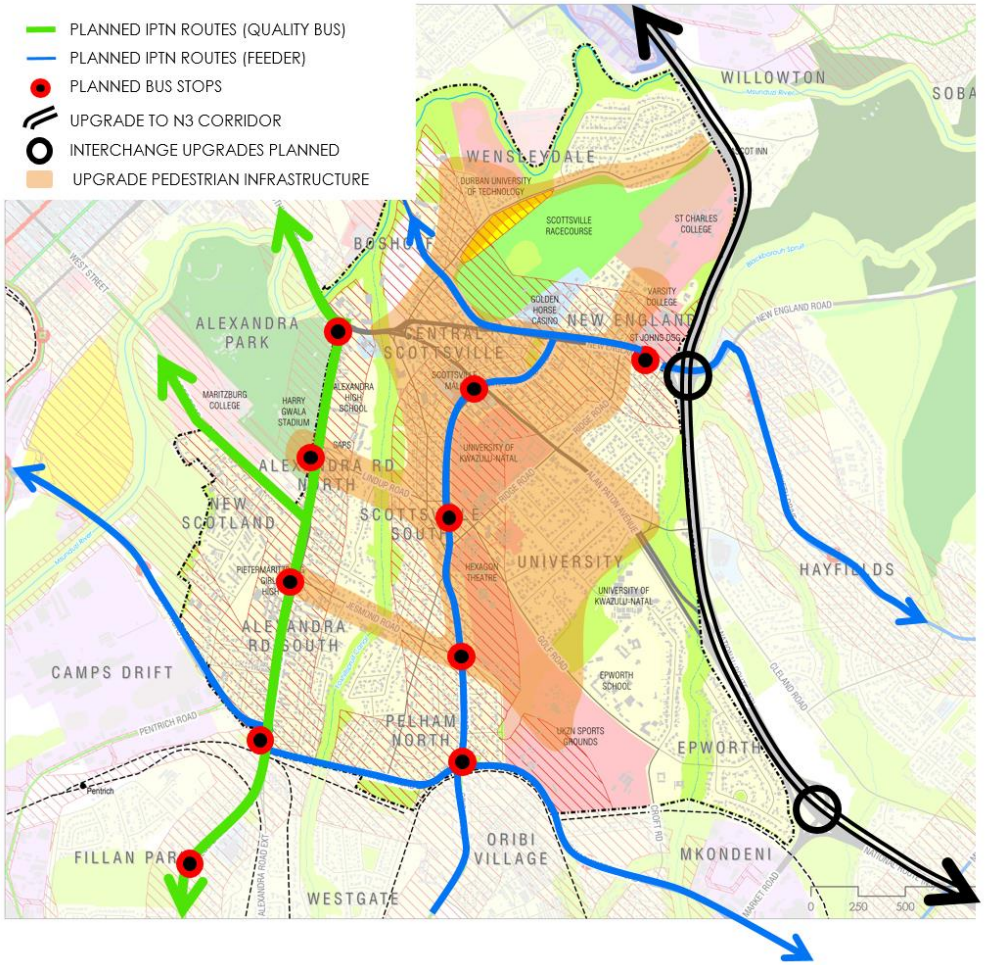


WEAKNESS IN THE ACCESS SYSTEM

3.5.3 OPPORTUNITY

Development Opportunities Externally Driven

- Implementation of IPTN is an opportunity to reorganize all modes of movement into an integrated system which has the added benefit of influencing land use and activity patterns along key routes
- Wide road reserves and flat topography lends itself to a well-designed and high quality NMT system to accommodate pedestrians and cycling activity
- The upgrading of the N3 corridor will rationalise regional mobility in and around the study area
- There is an opportunity to create a partnership between the Scottsville Mall and UKZN to provide/'design in' space for Public Transport vehicles
- Infill development at Scottsville Racecourse and/or UKZN should look to 'break-up' large impenetrable neighbourhood blocks
- Create a partnership with Campus Management Risk Services (UKZN) to manage access, parking and traffic in the area



OPPORTUNITY TO REDEFINE SCOTTSVILLE ASSOCIATED WITH NEW PUBLIC TRANSPORT INTERVENTIONS

3.5.4 THREATS

Threats to Development Externally Driven

- IPTN is not implemented
- Uncontrolled growth of informal taxi ranks and lack of facilities for metered taxis continues
- Upgrades to traffic and transportation network required to address congestion not implemented
- Inadequate law enforcement relating to traffic and driver/ pedestrian behaviour
- 'Blurred' boundaries between what is municipal and/or Varsity i.e. Ridge and Golf Road
- Safety and security concerns require fencing and access controls systems to remain in place at an inappropriate scale i.e. neighbourhood/ precinct scale as opposed to building scale

INFORMAL RANKING IN ST PATRICKS ROAD

PEDESTRIANS IN ROAD

ON-STREET PARKING PRESSURE

AM PEAK TRAFFIC CONGESTION

UKZN ACCESS CONTROL (PEDESTRIANS) – MILNER ROAD

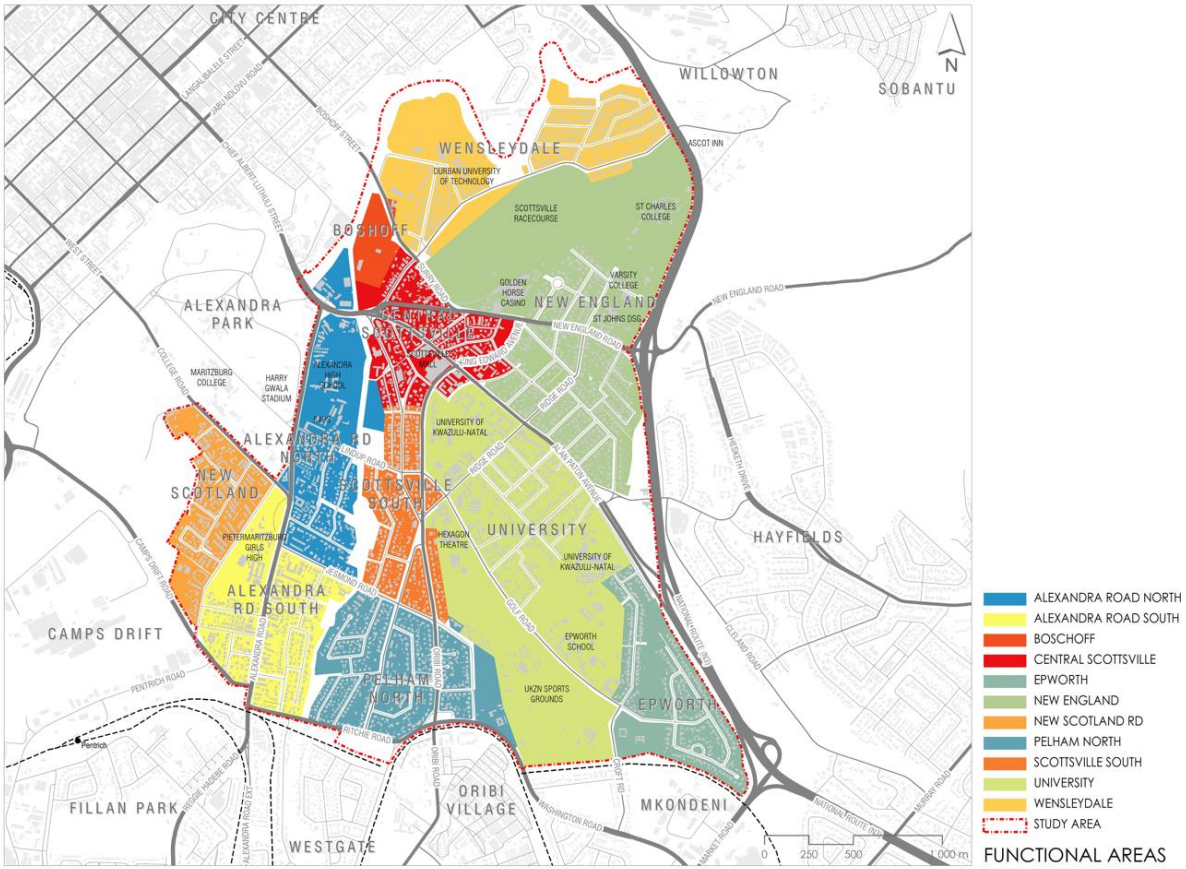
3.6 FIT

The degree to which the form and capacity of the area matches the pattern and quantity of activity of the residents i.e. the capacity and quality of commercial, social and public infrastructure, buildings and spaces to support functional and cost effective development and change.

3.6.1 STRENGTH

Inherent Attributes of the Study Area

- No constraints in terms of electrical sub transmission capacity for the area
- Fibre optic cables have been installed in the Scottsville by Dark Fibre Africa
- Water reticulation systems are in place and adequately sized to serve the area at present
- Full water-borne sewerage reticulation system in place with requisite interceptors and the WWTW
- The area is well supplied with social facilities for its 17,500 resident population
- Both the UKZN and DUT campus have land available on-site to expand both their academic and student accommodation facilities
- There are a diversity of sub-precincts within the study area



EMERGING SUB-PRECINCTS IN SCOTTSVILLE

3.6.2 WEAKNESS

Inherent Weaknesses of the Study Area

- Medium Voltage underground cables are overloaded and contribute to increased electricity losses and/or lead to breakdowns/outages especially during high peak periods
- Street lighting is in a poor condition (up to 50% not operational at any given time)
- Water & sewerage reticulation systems are >50 years and will ultimately require an AC pipe replacement upgrade
- Stormwater infiltration into sewer reticulation in King Edward, Golf, Epworth and Topham roads causes operational issues and overflows
- Severe backlog/shortage of on-site student housing for both UKZN and DUT – conservative estimates are an additional 5,000 units for UKZN and 450 for DUT Riverside are required to meet the current backlogs and estimated future growth of the institutions
- Condition of road across the study area are considered in "poor condition"
- Student housing shortage is manifesting in overcrowding of inappropriate housing stock
- The current planning system limits opportunities for non-residential land uses
- There is little 'available' land for development/ redevelopment
- No infrastructure and/or facilities for small and informal business

NEIGHBOURHOOD POWER OUTAGES

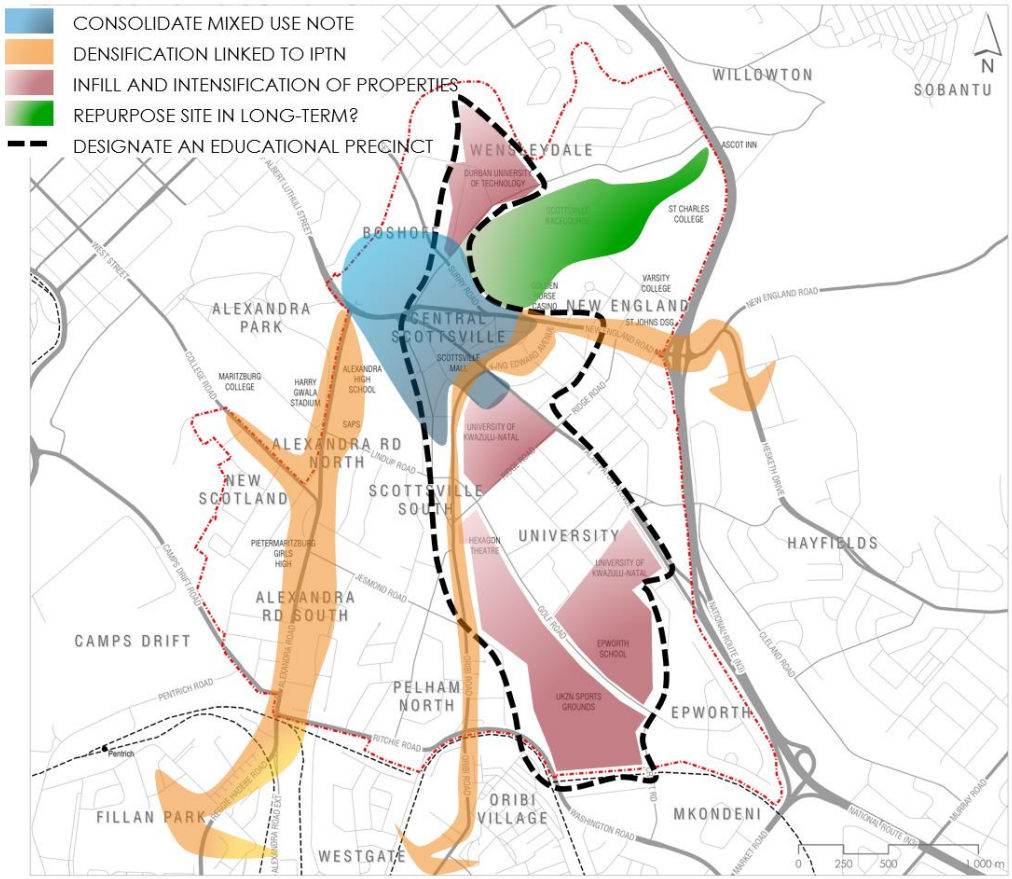
POTHOLES IN RIVERTON ROAD

SEWERAGE CONTAMINATION IN SPRUITS AS A RESULT OF STORMWATER INFILTRATION

3.6.3 OPPORTUNITY

Development Opportunities Externally Driven

- Establish an integrated and consolidated Educational Precinct around both DUT Riverside Campus and UKZN that accommodates not only the expansion of teaching and research facilities but that also makes provision for on-site student villages and PURPOSE built student residences to be developed within the designated precinct (actual spatial extent to be determined in the next phase of the project).
- Plan for an alternate land use/s for the Scottsville Racecourse in the future
- Consolidate the mixed use retail and commercial node in Central Scottsville
- Potential densification opportunities exist along Alexandra and King Edward Roads associated with the implementation of the IPTN for TMM.
- Plan for the accommodation of informal business activities



EMERGING DEVELOPMENT OPPORTUNITY AREAS

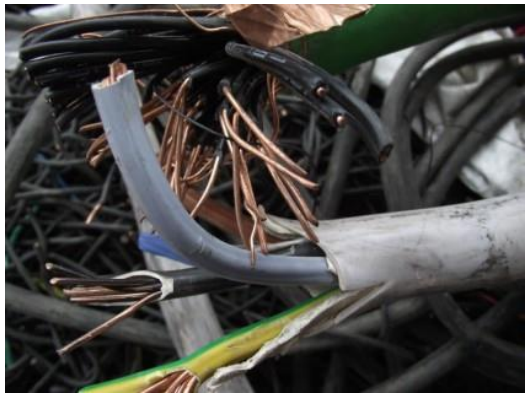
3.6.4 THREATS

Threats to Development Externally Driven

- Changes in the demographic profile of Scottsville in terms of income and affordability as well as demands on public space
- A decline in the racing industry is a threat to the sustainability of the Scottsville Racecourse
- Increasing residential densities place pressure on existing services and reticulation systems already under pressure
- Ongoing vandalism and theft of cables etc. results in street light outages (up to 50%) which is a major safety and security concern
- UKZN and DUT fail to address their student housing backlogs on-site as required by the Department of Higher Education and Training
- An reliance on the Department of Higher Education and Training for assistance with master planning for Campus growth
- UKZN PMB is one of five campuses of the institution and there is a perceived lack of focus on the needs of the PMB Campus
- Informal activity in the area, both trading and public transport related threaten the urban management of Scottsville
- Continued and sustained supply of electricity is required from Eskom

STUDENT HOUSING QUES AT DUT

INFORMAL ACITIVITY IN ST PATRICK ROAD



CONTNUED CABLE THEFT

3.7 CONTROL

The degree to which the use of, creation of and management of spaces can be influenced by those who use them i.e. the extent and quality of available institutional capacity within the private, public and community sectors to participate in and contribute positively to the shaping, operation and maintenance of the Scottsville Area.

3.7.1 STRENGTH

Inherent Attributes of the Study Area

- The Scottsville area has been identified as a priority area for planning by TMM and the Planning Department is looking to intervene in the area.
- There is an active citizenry in the area who engage via the Ward Councillors, Ward Committees, the Scottsville Ratepayers Association and the Alexandra Sector 1 Community Policing Forum
- TMM has recognised the value and role of "precinct management" approaches to managing special areas within TMM
- Large educational and retail institutions can contribute towards the management of Scottsville in terms of public space upgrades, security surveillance and in terms of negotiating with TMM through formal partnership structures.

3.7.2 WEAKNESS

Inherent Weaknesses of the Study Area

- Marginalised informal and or small business sector that cannot negotiate for improved services or contribute effectively to upgrading and management of Scottsville
- Institutions in the area are not aligned and have the power to do their own thing How well organised and influential are residential communities and students. Policy no effect without enforcement of the law.
- Major institutions do not seem to have plans for growth and their immediate impact on surrounding communities
- No formal space for small business and informal traders to operate
- Spot (Ad-hoc) zoning in neighbourhoods undermine the planning framework for the area
- Scheme very restrictive in terms on non-residential uses and the intensity at which development can occur
- Capacity of public sector to respond to issues e.g. law enforcement, urban management, traffic by-law enforcement

REVIVAL OF RATEPAYERS ASSOCIATION

ACTIVE LAW ENFORCEMENT

SPACE FOR SMALL BUSINESS TO OPERATE FROM

3.7.3 OPPORTUNITY

Development Opportunities Externally Driven

- Work with the Msunduzi Varsity Campus Forum, SAPS and TMM to address safety and security issues
- Set up a joint planning forum to develop a master plan for UZN and DUT
- Review of Local Area Plan can assist in creating the pre-conditions to unlock land for redevelopment
- Use the impacts of unplanned student facilities and housing to mobilise the alignment of education institutions and local government to manage change in the area more effectively

3.7.4 THREATS

Threats to Development Externally Driven

- Lack of common vision for the area among stakeholders leads to non-alignment between stakeholders and in-decision
- Lack of forward planning by University's to accommodate growing student numbers on-site
- Competition for limited municipal and provincial capital and operation budgets
- Inability to enforce by-laws
- Increasing student protest action against non-delivery by Tertiary Institutions
- Landlord exploitation of students
- Uncoordinated investment equals a lost opportunity to reshape and restructure Scottsville around common vision

STAKEHOLDERS WORKING TOWARDS A COMMON VISION

STUDENT HOUSING SHORTAGES

STUDENT PROSTESTS

3.8 EFFICIENCY

The degree to which resources are used to ensure that all elements of the city are performing relative to one another i.e. the extent to which trade-offs are made between the performance of different parts or elements of the City.

3.8.1 STRENGTH

Inherent Attributes of the Study Area

- A formalised planning system is in place for the study area and the updated Land Use Management Scheme (LUMS) has been adopted by TMM (2018)

3.8.2 WEAKNESS

Inherent Weaknesses of the Study Area

- There is little evidence of sufficient budget for capital maintenance and improvements in the area and alignment between planning objectives and budget allocation to the local area.
- The municipality has a poor revenue collection (rates and services charges) track record.
- The municipality has been under provincial administration due to a lack of service delivery and perceived corruption.

3.8.3 OPPORTUNITY

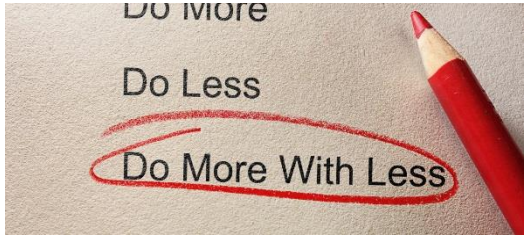
Development Opportunities Externally Driven

- Planning department has capacitated a team to investigate by-law and scheme infringements within the Scottsville area

3.8.4 THREATS

Threats to Development Externally Driven

- Poor working relationship between Council and officials and a perceived poor work ethic and morale of municipal staff.
- Under-resourced departments and under-skilled staff.
- Poor municipal service delivery and bylaw enforcement.
- Poor municipal integration and intergovernmental cooperation/communication (silos).
- Loss of institutional memory.
- Implementation of previous planning exercises is not sustained.



DEFINITION OF EFFICIENCY

ACCESS TO BUDGET RESOURCES

AMENSTY CAMPAIGN TO ENCOURAGE PAYMENT OF MUNICIPAL DEBTS

REVENUE COLLECTION

3.9 JUSTICE

The degree to which benefits and costs of any one kind are distributed between persons. It deals with all the performance dimensions of vitality, sense, fit, access and control. i.e. the capacity of the City to ensure that all stakeholder groups are provided with a reasonable opportunity to meet their socio-economic needs.

3.9.1 STRENGTH

Inherent Attributes of the Study Area

- Policy frameworks are in place for equitable planning and development for all residents of Scottsville.

3.9.2 WEAKNESS

Inherent Weaknesses of the Study Area

- Poor implementation of policy framework.
- Constraints of budget limits TMM intervention into areas of need
- Poor working relationship between City, business and civil society
- Poor students unable to find affordable housing in the area

3.9.3 OPPORTUNITY

Development Opportunities Externally Driven

- Formulation of partnerships between education institutions, business, the community and local government to tackle various issues within Scottsville.
- The municipality needs to demonstrate that it is able to offer fair and equitable service delivery to all its citizens who use the Scottsville area, strengthening its working relationship with civil society and the business sector.

3.9.4 THREATS

Threats to Development Externally Driven

- Perceived and actual corruption in City administration.
- City budget processes driven by political agendas
- Poor accountability of officials and Councillors towards the concerns of residents.
- Inability to implement by-laws and planning policy and tackle crime
- Lack of service delivery

TAKING BACK SCOTTSVILLES STREETS (CPF)

LAW ENFORCEMENT AND PROSECUTIO OF OFFENDERS

APPOINTMENT OF NEW MAYOIR

4 CONCEPTUAL FRAMEWORK

4.1 ROLE OF THE AREA

It is the intention of The Msunduzi Municipality that: "**By 2030, Pietermaritzburg will be a safe, vibrant city in which to live, learn, raise a family, work, play and do business**".

In order to achieve this, Scottsville as a study area has a role to play, as do the various precincts that comprise the area in order to achieve this.

Scottsville is not a homogenous area with a one size fits all role in terms of delivering against the municipal vision.

Each precincts has their own unique character and role that contribute towards the overarching role.

These roles change as they respond to changes and trends in the economy and society that influence them at any given point in time.

- Scottsville is a gateway neighbourhood to the central Pietermaritzburg area.
- An international centre of excellence for education at all levels i.e. tertiary, secondary and primary.
- And is supported by a strong residential role of providing housing stock to not only students and employees of the various educational institutions located in Scottsville, but to also providing housing and accommodation to the greater Msunduzi workforce employed elsewhere in the Municipality.
- Locally the area provides an important sports and recreation role to residents via its various sports clubs and facilities as well as a local retail and business services role for the southern suburbs of Pietermaritzburg.

The following table unpacks this role in more detail.

TABLE 4-1: ROLE OF THE STUDY AREA

ROLE	ENVIRONMENT	SOCIAL	ECONOMIC
PROVICINAL *(What role does the area play for National communities and business)*	-	High quality education hub associated with Universities and Public and Private Schools located in the study area	Provincial Horse Racing Industry Hub associated with Scottsville Racecourse
MUNICIPAL *(What role does the area play for the Municipality and surrounding communities and business)*	The Msunduzi River on the periphery of the study area contributes towards flood management, landscape quality and is a regional biodiversity and catchment management corridor.	Gateway node to central Pietermaritzburg Provides middle income and student housing stock to students and employees of the greater Msunduzi area	Regional retail node associated with central shopping malls providing retail services to the broader Msunduzi community Tourism Facility (Casino).
LOCAL STUDY AREA *(What role does the area play for local people and communities)*	Blackborough and Foxhill Spruits are biodiversity corridors and function as catchment management infrastructure	High quality primary and secondary school neighbourhoods Provides middle income and student housing stock to students and employees of Scottsville Recreational sports and leisure node associated with various sports clubs and facilities	Local level retail, office and business support services, including the informal sector, provide a range of services to the surrounding community

4.2 VISION

Scottsville will be a, safe and secure, "live work, learn and play" environment that supports the role of the City as capital of the province of KZN and complements the "City of Choice" brand of the Municipality.

Scottsville will be a mixed income, mixed density and diverse residential district providing a variety of housing options from student accommodation, family housing and retirement accommodation supported by public infrastructure, facilities and space that fosters community cohesion, community learning and community integration.

It will continue to be a "district of learning" featuring education institutions of excellence across tertiary, secondary and primary levels.

The area is a national, regional and local sports, recreation and entertainment hub with a diverse range of sports facilities and will contain a local level retail and business services hub for the southern suburbs of Msunduzi.

A Transit Oriented Development (TOD) focus will ensure that the district is linked to the surrounding City by the Msunduzi IRPTN and associated NMT systems.

Scottsville will continue to be the primary southern gateway neighbourhood to the central Pietermaritzburg area and it will show the City's emphasis on high quality, diverse, pedestrian friendly and productive living environments.

The concentration and mix of local and regional education, sport and recreation, commercial, residential and public space makes Scottsville a district where diverse communities can engage and integrate freely and grow together in a positive spirit.

4.3 DEVELOPMENT PRINCIPLES

The following development principles emanated from the sectoral investigations and the integrated assessment. They reflect the Lynchian Performance Dimensions used to assess Scottsville and provide a framework for future planning objectives and the articulation of the vision into a spatial development concept.

The future concept must promote efficient and just development that not only protects the interests of the current residents and/or users of the area but that also makes space to accommodate new residents, business owners, students/scholars and visitors to the area as well as recognise that the area is experiencing significant demographic change.

VITALITY

- Provide for adequate open space to "buffer" potential impacts related to climate change hazards i.e. flooding along the Blackborough and Foxhill Spruits
- Rehabilitate and enhance the Foxhill and Blackborough biodiversity linkages and corridors in the area
- Make use of sustainable urban drainage systems (SUDS) to reinforce open space corridors and deal with stormwater management.
- Upgrade and/or provide additional stormwater infrastructure to manage environmental impacts of densification and an increase in the intensity of urban activities in the central area
- Promote the introduction of green building and alternate infrastructure technologies, specifically in new public and educational facilities
- Build on existing community partnerships with DUCT to manage open space assets in the study area
- Ensure that the river corridors in the study area contribute to the management of the water resources within the Msunduzi river catchment in which they are located

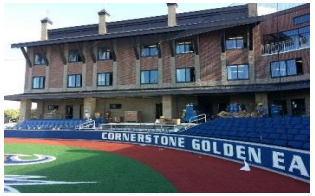
SENSE

- Reimagine and reinforce the educational role of the Central area
- Use interventions in the public space realm to layer new social meaning and heritage i.e. new urban parks that accommodate outdoor entertainment areas
- Use public space and landscaping treatments to reflect the unique character of each of the study area's sub-precincts.
- Utilise existing natural features and built form to provide landmarks, imageability, legibility and meaning for residents and to differentiate between the various neighbourhoods in the study area
- Utilise vacant, but developable land to restructure and to improve legibility within the area
- Encourage built form that contributes to street and neighbourhood identity and territoriality in the mixed use and central area neighbourhoods
- Protect the residential character of Scottsville for more than just student life

ACCESS

- Prioritise pedestrian movement within and between precincts in the study area
- Establish a clear hierarchy of pedestrian, cycling and public and private transport routes and Transit Orientated Development (ToD) Corridors through the area
- Support the introduction of an integrated public transport system and associated infrastructure that provides for a range of public transport providers to service the study area i.e. University Buses, Quality Bus Services, Metered-Taxi Drivers, Mini-Bus Taxi Drivers etc.
- Discourage regional traffic from entering the central core of the study area.
- Ensure that the type, mix and distribution of land uses and activities capitalises on the accessibility and centrality of the Study Area within Msunduzi through the application of transit orientated development concepts

FIT



- Upgrade and rehabilitate reticulation infrastructure for water, waste-water and electricity in order to support the densification and intensification of the Central area.
- Promote mixed use development and purpose built student accommodation within Central Scottsville and designated areas around educational institutions
- Make space for new residential development that accommodate a mix of affordability and income levels as well as provide for a range of housing typologies and residential lifestyle options
- Promote the redevelopment of appropriately designated areas for purpose built student housing and/or higher density residential development
- Ensure that pedestrians are afforded the highest priority with respect to existing and new connections, facilities and infrastructure
- Improve the capacity of, public open space to cater for needs of all residents and users of the area

CONTROL

- Strengthen the existing partnerships between stakeholder groups and association i.e. the Scottsville Ratepayers Association, Varsity Management Forum, Ward Committees, CPF etc.
- Establish a Joint Governmental/University Planning and Management Forum to coordinate and manage growth and the associated impact of the University on neighbouring communities
- Design public spaces and buildings so as to maximise surveillance of the public environment
- Promote inclusive planning within the area
- Coordinate urban management in the area

4.4 SPATIAL DEVELOPMENT CONCEPTS

MAINTAIN DIVERSITY AND CHOICE

Scottsville is a City district demarcated by the N3, the Msunduzi River and the main rail line connecting the City to Durban and inland. It will continue to plays an important role in the City and region as a diverse education services node, a mixed sports and recreation node and a mixed density residential area of the City

The Scottsville Study Area will have twelve (12) identifiable and diverse precincts which provide a range of urban and suburban residential lifestyle options.

CREATE A CENTRAL PUBLIC PLACE OF QUALITY

Central Scottsville Precinct is the primary business and social node of the area and plays the role of "town centre". It will be a high quality and discernible "place" with a safe and secure public realm that supports the diverse business and social needs of the surrounding communities.

The node will continue to provide an attractive and functional primary gateway to the City Centre from the south.

ENHANCE CONNECTIVITY AND LINKAGE

Whilst Scottsville is bounded by relatively impermeable boundaries of the N3, the Msunduzi River and the rail line it is traversed by high quality high order mobility routes which connect it efficiently to its surroundings.

The twelve precincts will be interconnected through the IRPTN system and a high quality grid of local roads and streets which will be designed to enable safe, easy and convenient internal circulation and connectivity for pedestrians and vehicles without compromising higher order city linkage and connectivity.

EMBRACE TOD + PRIORITISE THE PEDESTRIAN

The Scottsville Central Precinct is to be integrated with the proposed IRPTN system and will be designed to complement the concept of Transit Oriented Development (TOD).

The "Town Centre" will be a High Priority Pedestrian Zone and high density residential area and form a focus for the TOD system. High quality pedestrian routes will link the various business, education and sports nodes to the residential areas and public transport systems.

RESTRUCTURE AND DENSIFY THE CITY

Higher densities need to be spread across the area to make more efficient use of infrastructure and promote more effective use of public transport.

New mixed use higher density will be used along the TOD corridors to deliver new quality living environments and simultaneously restructure the area so as to align with SDF objectives of making the City more efficient and sustainable with respect to the use of its resources and infrastructure.

Higher densities, mixed use and medium rise attached forms of building will be located along designated TOD public transportation and high traffic through route corridors.

CREATE LIVABLE URBAN ENVIRONMENTS

All urban areas are to be mixed use to one degree or another in order to ensure diverse, vital and liveable urban neighbourhoods. Use mix can occur horizontally on one site or over many sites and it can occur vertically within a single building. The type and intensity of mix is important for the performance of a neighbourhood in terms of its role and character.

In principle non-residential uses which contain services for residential communities will be on ground and / or lower floors and will accommodate appropriate commercial and social facilities with residential above. Non-residential uses should preferably be located within high TOD corridors to minimise impact to residential neighbourhoods.

Residential area behind the corridors (i.e. inside of urban blocks formed by higher order roads) will include low to medium density and low rise (two storey) housing and very low impact non-residential uses.

CREATE A RIVERFRONT

The Msunduzi River, the Foxhill Stream and the Blackborough streams will form the backbone of an environmental and open space system which is multifunctional and which will protect ecological functionality and provide useable urban open space

The Msunduzi River edge provides Riverfront opportunities for nodes of recreation and associated limited commercial development opportunities that will enhance access to the riverfront and provide a more useable edge to the residential areas fronting the river.

These major assets will be linked to the secondary assets contained within properties of the many educational and sporting properties in the area by streets and roads

5 SPATIAL FRAMEWORKS

The conceptual development framework described above has formed the basis for generating spatial development frameworks that are geared towards accommodating anticipated growth and development in Scottsville, as well as, provide guidelines to direct, control and manage development and investment in a sustainable manner.

This section includes the following:

- Environmental Framework
- Movement and Circulation Framework
- Land Use and Activity Framework
- Public Space, Landscaping and Built Form Framework
- Infrastructure and Services Framework

5.1 ENVIRONMENTAL FRAMEWORK

5.1.1 OBJECTIVES

The overall objective is to protect, rehabilitate, enhance and expand the existing environmental asset base and network of assets within Scottsville to establish a more robust and integrated open space system that will directly meet the needs of the local communities, as well as respond to wider city and regional environmental planning and management needs and climate change imperatives.

Critical to the success of the above is to establish a functional and integrated "urban ecosystem" that will play a multi-functional role in terms of biodiversity and conservation, recreation and tourism, stormwater and flood risk management, landscape and visual amenity.

5.1.2 THE "URBAN ECOSYSTEM" CONCEPT

The environmental (or ecological) asset base that delivers ecological services and benefits to human communities (i.e. vital services of clean air, water, etc.) and the buffer to environmental "shocks" (i.e. flooding, droughts etc.) is normally contained within the natural open space system of an area.

However, the network of all open spaces in Scottsville which is made up of open space typologies including natural untransformed habitats, public spaces and private spaces all function as the open space system. These are invariably under either public or private ownership but if managed as ecological assets they form a more integrated and robust "Urban Ecosystem".

The quality and benefits of the "urban ecosystem" is directly dependent on the functionality of the network assets and accordingly each element of the system needs to be planned, designed and managed to operate efficiently and effectively as a part of the bigger environmental system.

TABLE 5-1: URBAN ECOSYTEM" ELEMENTS

TYPOLOGY	ELEMENTS	
	Cores	Linkages
NATURAL HABITATS	Large Untransformed Habitats i.e. grasslands, wetlands, woodlands, forests, water bodies, etc.	Rivers, Streams, Linear assets such as protected ridgelines
PUBLIC SPACE	Sports Fields and Large Urban Parks, Large portions of undeveloped land	Public Roads, Streets, Lanes, Pedestrian Ways, Rail Lines
	Squares and small urban parks	
	Large Utility Installations	Linear Utility Servitudes
PRIVATE SPACE	Institutions, Schools, Undeveloped Land,	Private Roads and Streets
	Individual erven although transformed land and not classified as either environmental asset or open space do have either gardens and/or small open spaces which can function as part of the ecological habitat. If they can be managed in terms of planting, storm water and alien control they will support the other major public and private assets.	

The Msunduzi River, the Foxhill Stream and the Blackborough streams will form the backbone of an environmental and open space system which is multifunctional and which will protect ecological functionality and provide useable urban open space.

The Msunduzi River edge provides Riverfront opportunities for nodes of recreation and associated limited commercial development opportunities that will enhance access to the riverfront and provide a more useable edge to the residential areas fronting the river.

These major assets will be linked to the secondary assets contained within properties of the many educational and sporting properties in the area by streets and roads.

The major open space system will be supported by the secondary systems made up of the various institutional properties and the streets which when planted appropriately act as a network of environmental corridors.

TABLE 5-2: URBAN ECOSYSTEM INTERVENTIONS

ELEMENT	CORES	INTERVENTIONS	LINKAGES	INTERVENTIONS
NATURAL HABITATS	**Camps Drift**	• No development must be permitted in the 1:50 and 1:100 yr flood line of the river. • Projects aimed at improving water quality and conservation of the areas around the river must be prioritised. • Implementation of an Invasive Alien Plant (IAP) Eradication Programme. • Implement educational programmes and awareness campaigns in schools and the local community about waste, water and sanitation. • Improve safety to facilitate tourism opportunities. • Consider an Environmental Awareness Centre. • Improve pedestrian walkways and accessibility to minimise disturbances to ecological habitat.	**Msunduzi River**	• No development must be permitted in the 1:50 and 1:100 yr flood line of the river. • Monitor and ensure effective wastewater treatment and water pollution control, including the collection, treatment and disposal of sewage and other waterborne waste. • The drafting and enforcement of by-laws and implementation of a penalty system for offenders that release industrial effluent and poorly treated sewage into watercourses must be prioritised. • Maintain a sewer line, pollution and water leak monitoring system aligned with the Msunduzi Municipal Water and Sanitation Division to provide timely reporting and facilitate rapid responses to water leakages, sewage line leakages, blockages and surcharges. • River banks must be stabilised to prevent scour and erosion. • Implementation of an IAP Eradication Programme. • Implement educational programmes and awareness campaigns in schools and the local community about waste, water and sanitation. • Improve pedestrian walkways and accessibility to minimise disturbances to ecological habitat. • Explore opportunities for linkages with through green corridors to other environmental assets (e.g. Alexandra Park and other streams) to reduce habitat fragmentation and improve ecological connectivity.
	Msunduzi Weir	• Upgrade, repair and maintenance of infrastructure (e.g. clearing of debris and sediment) to ensure optimal functioning. • Implementation of an IAP Eradication Programme.	**Foxhill Stream**	• No development must be permitted in the 1:50 and 1:100 yr flood line. • Stream banks must be stabilised to prevent scour and erosion. • Projects aimed at improving water quality must be prioritised. • Implementation of an IAP Eradication Programme. • Implement educational programmes and awareness campaigns in schools and the local community about waste, water and sanitation. • Work with NGOs to implement river clean-up and community outreach initiatives. • Improve pedestrian walkways and accessibility to minimise disturbances to ecological habitat. • Explore opportunities for linkages with through green corridors to other environmental assets to reduce habitat fragmentation and improve ecological connectivity.
			Blackborough Stream	• No development should be permitted in the 1:50 and 1:100 yr flood line. • Stream banks must be stabilised to prevent scour and erosion. • Projects aimed at improving water quality must be prioritised. • Implementation of an IAP Eradication Programme. • Implement educational programmes and awareness campaigns in schools and the local community about waste, water and sanitation. • Work with NGOs to implement river clean-up and community outreach initiatives. • Improve pedestrian walkways and accessibility to minimise disturbances to ecological habitat. • Explore opportunities for linkages with through green corridors to other environmental assets to reduce habitat fragmentation and improve ecological connectivity.

ELEMENT	CORES	INTERVENTIONS	LINKAGES	INTERVENTIONS
PUBLIC SPACE	**Alexandra Park**	• No development must be permitted in the 1:50 and 1:100 yr flood line or allowed to encroach into the open space / wetland areas. • Maintenance of parks and open spaces. • Consider the formalisation of linear green corridors for cyclists and pedestrians. • Provision of adequate waste receptacles. • Implementation of the MLM urban greening and indigenous planting programme. • Implement initiatives to improve safety. • Explore opportunities for linkages with through green corridors to other environmental assets to reduce habitat fragmentation and improve ecological connectivity.	**Major Roads**	• Road verges must be cleared of IAP species. • Implementation of re-vegetation programmes to create minor ecological corridors and to mitigate pollution and built form heat build-up. • Stormwater infrastructure (drains, channels, pipes, culverts, bridges) must be repaired and maintained. • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Implementation of the NMT Plan promoting walking and cycling as viable, complementary and alternative modes of transport.
			Neighbourhood Streets	• Road verges must be cleared of IAP species. All weeds must be removed. • Implementation of re-vegetation programmes to create minor ecological corridors and to mitigate pollution and built form heat build-up. • Maintenance of roads and stormwater infrastructure (manholes, drains, pipes and channels). • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Implementation of the NMT Plan by promoting walking and cycling as viable, complementary and alternative modes of transport.
PRIVATE SPACE	**Race Course**	• Implement IAP Eradication Programmes. • Consider the formalisation of linear green corridors for cyclists and pedestrians. • Explore opportunities for linkages with through green corridors to other environmental assets to reduce habitat fragmentation and improve ecological connectivity. • Waste minimisation and prevention programme. • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles.	**Institutional Campus Roads and Streets**	• Road verges must be cleared of IAP species. All weeds must be removed. • Implementation of re-vegetation programmes to create minor ecological corridors and to mitigate pollution and built form heat build-up. • Maintenance of roads and stormwater infrastructure (manholes, drains, channels). • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles.
	UKZN Campus	• Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Consider the formalisation of green spaces for students and pedestrians. • Green spaces to be maintained and free of IAPs. • Waste receptacles to be provided. •	**Residential Estate Roads and Streets**	• Road verges must be cleared of IAP species. All weeds must be removed. • Implementation of re-vegetation programmes to create minor ecological corridors and to mitigate pollution and built form heat build-up. • Maintenance of roads and stormwater infrastructure (manholes, drains, channels). • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles.
	DUT Campus	• Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Consider the formalisation of green spaces for students and pedestrians. • Green spaces to be maintained and free of IAPs. • Waste receptacles to be provided. • •	**Sports Club Roads and Streets**	• Road verges must be cleared of IAP species. All weeds must be removed. • Implementation of re-vegetation programmes to create minor ecological corridors and to mitigate pollution and built form heat build-up. • Maintenance of roads and stormwater infrastructure (manholes, drains, channels). • Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles.

ELEMENT	CORES	INTERVENTIONS	LINKAGES	INTERVENTIONS
	Schools	• Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Consider the formalisation of green spaces for students and pedestrians. • Green spaces to be maintained and free of IAPs. • Waste receptacles to be provided.		
	Sports Clubs	• Stormwater Management must be done in accordance with a Stormwater Management Plan utilising SUDS principles. • Consider the formalisation of green spaces for students and pedestrians. • Green spaces to be maintained and free of IAPs. • Waste receptacles to be provided.		

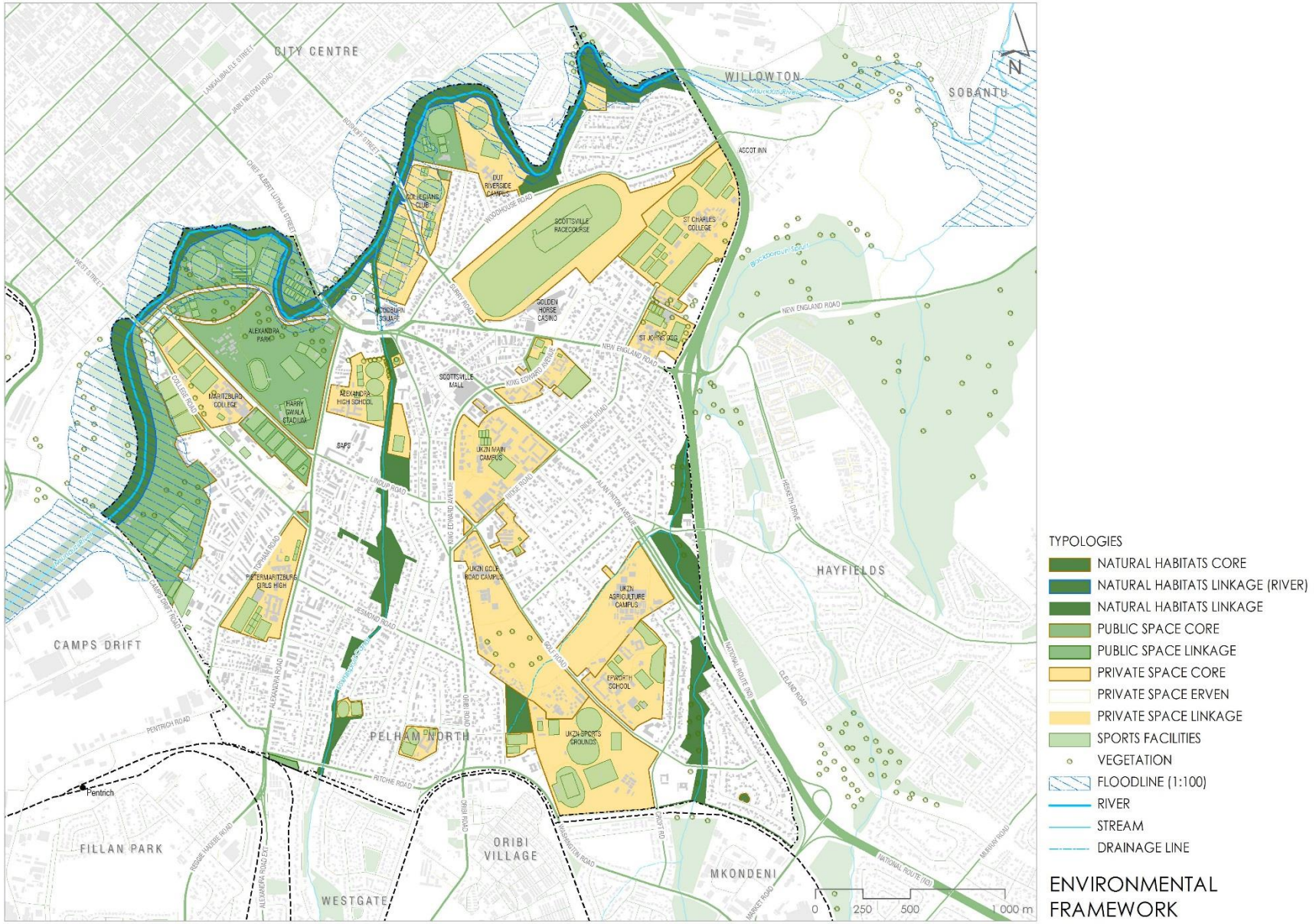


FIGURE 5-1: ENVIRONMENTAL FRAMEWORK

5.2 LAND USE FRAMEWORK

5.2.1 OBJECTIVES

- Translate SDF policy into detailed land use proposals
- Provide guidance for private sector development opportunities
- Provide guidance to public sector service providers in their planning of bulk and reticulation services
- Accommodate socio-economic changes in the area as a result of city growth
- Provide for development of balanced communities including a mix of lifestyles and family life cycles
- Increase the diversity and vitality of the area through an increase in, and spatial distribution of, the mix of land uses
- Ensuring more efficient and sustainable use of infrastructure and higher returns on public capital infrastructure investment through increasing gross densities of Scottsville (i.e. more efficient use of developable land and infrastructure)
- Enhance property values and rates returns for TMM through increased mix of uses and increased net densities (i.e. permissible individual site densities)

5.2.2 PRECINCTS AND LAND USE CHARACTERS

Scottsville is a City district demarcated by the N3, the Msunduzi River and the main rail line connecting the City to Durban and inland.

The Scottsville Area has twelve (12) identifiable, diverse and mixed use precincts which are connected by a grid of higher order through to lower order roads and streets.

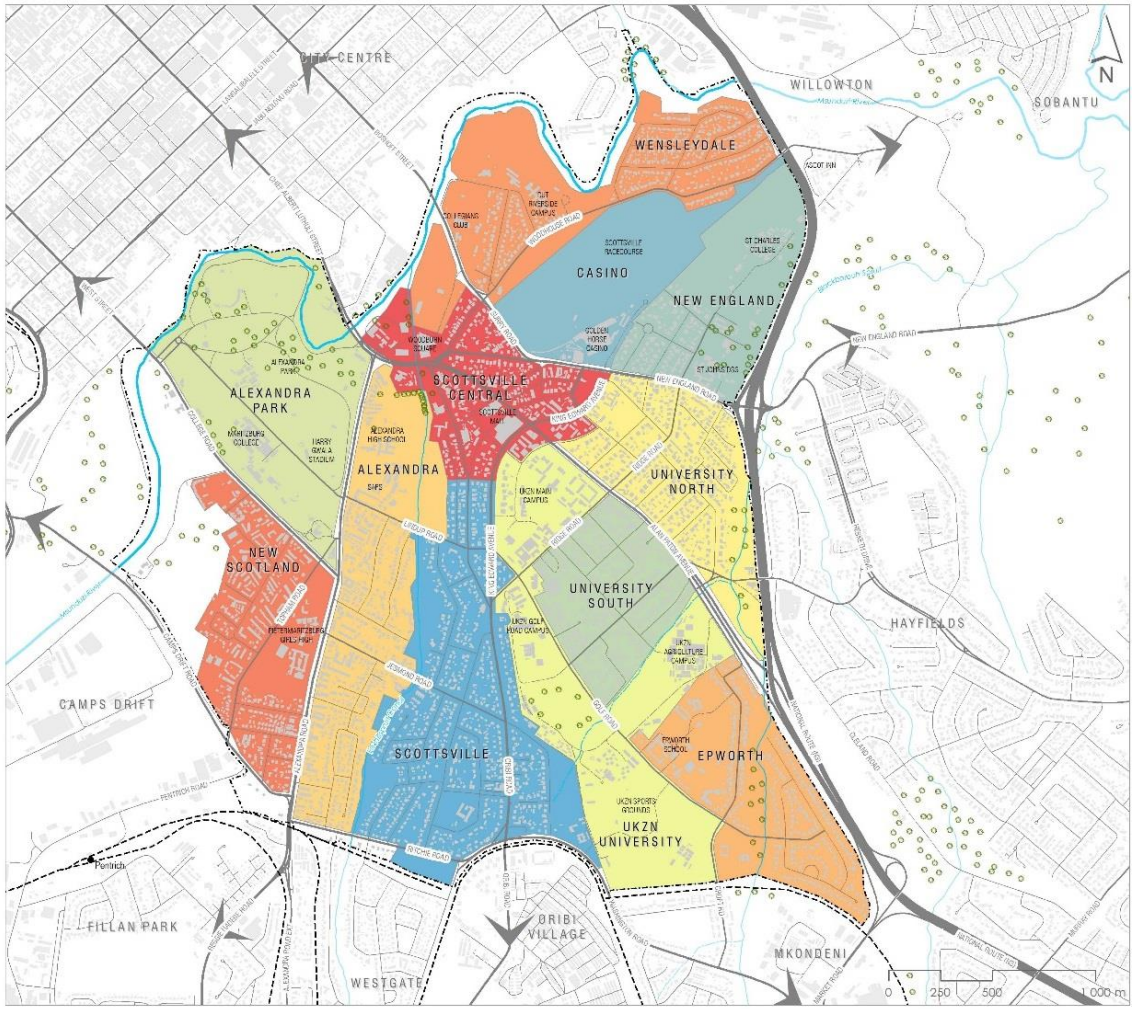


FIGURE 5-2: PRECINCTS

Scottsville Central Precinct

Mixed Use Commercial, Social Facilities and Residential.

This precinct will be expanded and enhanced as the "town centre" of Scottsville and will accommodate high and medium impact commercial and high impact residential development.

An urban built form is to be encouraged with an active mixed use street level supported by residential and or offices above and it will be serviced by high levels of public transport and pedestrian prioritisation and public space.

It will also be landscaped to reflect its role as an important gateway to the City from the N3 along New England and Alan Paton Drives and from the southern parts of the City via Alexandra Road and King David Avenue.

Wensleydale Precinct

Mixed Use Education node and mixed low and medium density residential.

This is a precinct that has been impacted on by the DUT and the need for student accommodation and facilities. Densities of residential areas along Woodhouse Road is to be increased to medium impact to allow for changing accommodation needs whist remaining residential areas are to be retained as low impact residential areas. The vacant land in the area is to be developed for medium density residential to accommodate a range of housing opportunities with supporting commercial and social facilities.

New Scotland Precinct

Medium and high residential density residential and Riverfront Park.

This area is to be maintained as a high density residential area supported by local level commercial and social facilities located along College Road and Alexandra Road TOD routes. Interfaces with the schools in the precinct are to be kept residential.

Improved accessibility to the adjacent public open space via internal residential access road is to be promoted and the public open space component of the area is to be upgraded with improved access and circulation infrastructure to enhance the riverfront role of the precinct as well as its ecological role.

Alexandra Precinct

Mixed low and Medium Density Residential Neighbourhoods fronting onto Alexandra Road TOD Route.

This area is to be maintained as a high impact residential area supported by commercial and social facilities located along Alexandra Road TOD route. Interfaces with the schools in the precinct are to be kept residential whilst interfaces with the Police Station can be medium impact commercial to form a buffer to residential areas.

Accessibility to the adjacent Fox Hill open space system via local access routes and pedestrian routes is to be improved and the open space system is to be upgraded to improve recreational functionality as well as ecological functioning.

Scottsville Precinct

Mixed low and Medium Density Residential Neighbourhoods fronting onto the King David TOD Route.

This area is to be maintained as a low and medium impact residential area supported by commercial and social facilities located along Alexandra Road TOD route. Interfaces with the schools and commercial areas are to be kept residential.

Residential area fronting the TOD route are to be upgraded to a mix of medium impact commercial or residential whilst remaining residential areas are to be low impact residential. Commercial areas to be located at major intersections and adjacent to the University.

Accessibility to the adjacent Fox Hill open space system via local access routes and pedestrian routes is to be improved and the open space system is to be upgraded to improve recreational functionality as well as ecological functioning.

New England Precinct

Education node and mixed low and medium density residential fronting onto New England TOD Route.

This precinct is a well-established education precinct with tertiary, secondary and primary education facilities.

Medium impact residential is proposed on the New England Road frontage whilst remaining residential areas will be low impact residential.

University North Precinct

Mixed Use with low and medium density residential fronting onto New England TOD Route.

Medium Impact residential will front onto New England Road whilst remaining residential areas will be low impact residential.

Accessibility to the adjacent Blackborough open space system via local access routes and pedestrian routes is to be improved and the open space system is to be upgraded to improve recreational functionality as well as ecological functioning.

University South Precinct

Mixed low and medium density residential fronting onto Alan Paton TOD Route.

Medium Impact residential fronts onto Alan Paton Drive with remaining residential areas low impact residential.

The precinct is immediately adjacent to the UKZN and its planning should tie into future planning of the campus in terms vehicular and pedestrian access points and circulation routes as well as the provision of some services.

Epworth Precinct

Special residential low density neighbourhood to remain as low impact residential neighbourhood.

Accessibility to the adjacent Blackborough open space system via local access routes and pedestrian routes is to be improved and the open space system is to be upgraded to improve recreational functionality as well as ecological functioning.

Casino and Race Course Precinct

Mixed Entertainment and environmental asset fronting the New England Road TOD Route and which contains the Casino and Scottsville Race Course.

This precinct is to remain as a mixed entertainment precinct.

UKZN Precinct

Mixed Use Education Campus.

This precinct contains the UKZN and will be subject to UKZN campus planning. However, it is recommended that in order for the University and surrounding precincts and neighbourhoods to be integrated that consideration be given to the following in future campus planning:

- provision of increased on-site student housing to meet national university student accommodation policy
- review of University access points to tie in with future NMT and public transport planning in surrounding precincts and neighbourhoods
- New University buildings be designed to give consideration to their impacts on adjacent streets and adjacent neighbourhood character
- University sports and recreation facilities and vacant or unused land be managed in terms of the City's open space management frameworks

Alexandra Park

Mixed Sport, Recreation, Environmental Education and Cultural Hub located along Alexandra Road TOD Corridor

This precinct is a key economic asset of the City in that it includes national and regional sports and recreation facilities and is host to numerous sporting events which attract people to the City.

Its upgrade should explore the introduction of uses allied to sports, recreation, environmental awareness and culture i.e. sports medical research, conferencing, administration, competitor residences, recycling centres, education centres, art and culture museum so as to increase use of, and movement through, the park to contribute to more efficient use of the infrastructure and improved safety and security. The park could also accommodate an open air market facility that could operate independently or be linked to the other activities.

It is proposed that as part of the environmental education role that the recycling centre located in Richie Road be relocated to the Park and be supported by an education awareness centre that will accentuate the role of the park as an important environmental asset of the City.

5.2.3 LAND USE CATERGORIES

The Land Use Framework required to accommodate the Spatial Development Concept described earlier, includes a set of core mixed use land use categories (i.e. Commercial, Residential, Social, Open Space and Utilities). The categories have been differentiated into high, medium or low impact categories which attempt to reflect the level of impacts on environmental quality, services and infrastructure determined by various combinations of density, public space activity, noise levels, traffic generation, sunlight levels, visual impacts, olfactory impacts, waste generation, storm water runoff levels and property values.

These core uses have been allocated spatially within Scottsville based on existing development patterns and commitments, locational attributes of the area, market demands and most importantly in terms of the development objectives and principles of the TMM as contained within the TMM SDF (i.e. TOD development, mixed use, densification, diversity, sustainability).

It is important to note that the categories are not town planning zones, but rather descriptions of the land use type, mix and intensities that are preferred for specific spatial locations. Appropriate Town planning zonings contained within the TMM Town Planning Scheme, or new zonings which may be introduced as part of the Scheme review, can be used to give effect to the framework proposals.

Residential

HIGH IMPACT RESIDENTIAL - To accommodate high density residential in central locations or along high priority public transport / arterial routes within Scottsville in mixed use developments to promote City wide residential corridors and nodal areas with active and vibrant ground floor uses and adjacent public space (i.e. streets and squares) and to cater for local commercial and service needs within Scottsville and along TOD corridors.

MEDIUM IMPACT RESIDENTIAL - To accommodate medium density residential located along public transport feeder / local collector routes in mixed use developments to promote local activity streets or local nodes with active and vibrant ground floor uses and adjacent public space (i.e. streets and squares) and to cater for local commercial and social facilities within the corridor and precinct neighbourhoods.

LOW IMPACT RESIDENTIAL - To accommodate low to medium density residential areas in limited mixed use developments to promote active and safe streets and to cater for local level commercial and social facilities to serve a precinct or residential neighbourhood.

Commercial

HIGH IMPACT COMMERCIAL – To accommodate high intensity retail, offices and services for Scottsville and the City in a centrally located mixed use developments to promote urban vibrant ground floor uses and activated adjacent public space (i.e. streets and squares) and to promote employment opportunities close to residential areas.

MEDIUM IMPACT COMMERCIAL – to accommodate retail and offices and services in the Scottsville "town centre" or along high priority public transport / arterial routes in mixed use developments and to promote urban vibrant ground floor uses and activated adjacent public space (i.e. streets and squares) with higher density residential above to promote "24/7" living environment.

LOW IMPACT COMMERCIAL – to accommodate limited retail and services in a mixed use nodes within residential precincts or neighbourhoods to promote urban, active and vibrant ground floor uses and adjacent public space (i.e. streets and squares) to promote "24/7" living environment.

Social

HIGH IMPACT SOCIAL – To accommodate the large Regional or City scale education institutions (i.e. universities and colleges) located in the area which are mixed use by nature in that they accommodate academic, residential, sport and recreation facilities.

MEDIUM IMPACT SOCIAL – to accommodate social facilities required to serve Scottsville or a precinct or the city located centrally or along public transport corridors / arterials (e.g. police stations, hospitals, worship sites etc.).

LOW IMPACT SOCIAL - to accommodate social facilities required to serve a precinct or neighbourhood and located within a precinct or neighbourhood.

Open Space

NATURAL OPEN SPACE – to accommodate the natural (i.e. not transformed) habitats of the City including flood zones and other undevelopable zones.

PUBLIC OPEN SPACE – to accommodate the transformed public spaces of the City including squares, parks, sports fields and streets and roads.

PRIVATE OPEN SPACE – to accommodate the transformed private open spaces of the City including private natural areas, parklands, sports fields

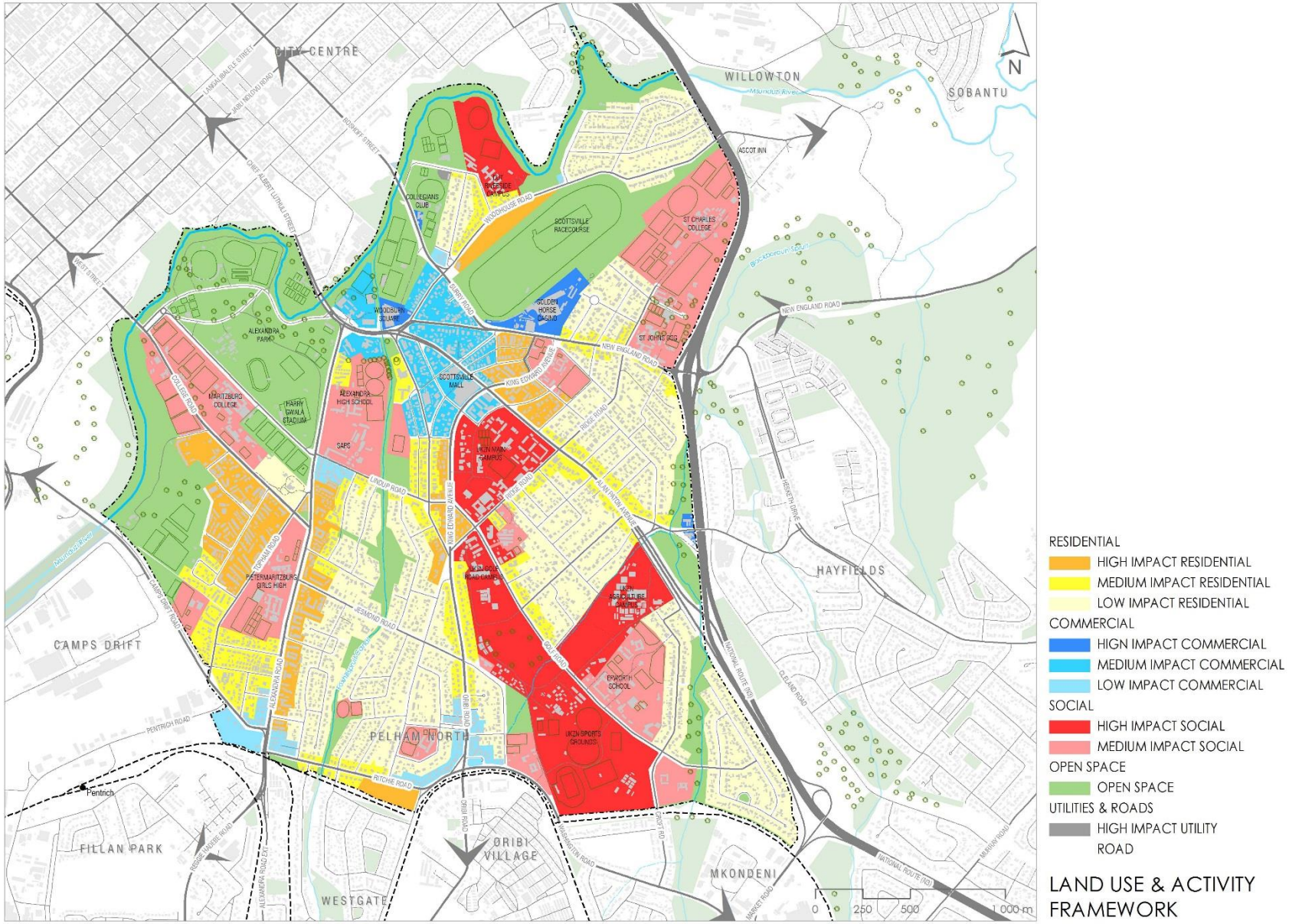


FIGURE 5-3: LAND USE AND ACTIVITY FRAMEWORK

5.2.4 PROPOSALS FOR DENSIFICATION

Densification Approach

NOTE: The density proposals contained in this section translate the densification policy of the TMM SDF into more spatially specific proposals within the SLAP Study Area and they should be used in preference to the broad diagrammatic spatial illustrations contained in the SDF when evaluating development applications.

The TMM SDF provides for the densification of the City in order to make the City more efficient and cost effective with respect to the utilisation of existing and future infrastructure and in order to support proposed public transportation proposals. It promotes densification as a strategy which, along with an increase in mixed use, will deliver more sustainable and equitable urban development (as opposed to inefficient and costly suburban sprawl).

Scottsville has a number of the TMM's planned IRPTN quality bus routes and feeder bus routes running through its precincts and neighbourhoods which will make it a highly accessible part of the City in the future. In addition it has significant latent capacity in its water, sanitation, electricity and storm water infrastructure systems which can accommodate much higher development densities. It is therefore a district which could be planned to take advantage of its locality in the City, its infrastructure capacity and future transportation planning.

Table 5-4: Land Use Yields indicates that Scottsville currently has a very low residential density. Its planned density (i.e. current zoning) is much higher and is more compatible with the TMM SDF policy. However, the planned high density is spatially concentrated and is a density which is unlikely to be achieved with the current site sizes and configuration prevalent in the areas currently zoned for higher density.

It is proposed that the existing overall target density be retained, but that it be spatially distributed more strategically across the study area. This will promote more realistic implementation of the City's SDF and TOD policy, as well as, enable more land owners to participate in and benefit from increased density and increased mixed use.

Densification Opportunities

Densification can occur in a number of ways within Scottsville:

- INFILL – development of private, municipal, UKZN or DUT owned vacant land
- COMPACTION – appropriate development of underutilised FAR on developed sites
- REDEVELOPMENT – demotion of existing low density development and redevelopment at higher density in appropriate locations

These densification interventions will increase net densities (i.e. individual site densities) and thereby also increase gross densities (i.e. overall development densities of Scottsville as a whole).

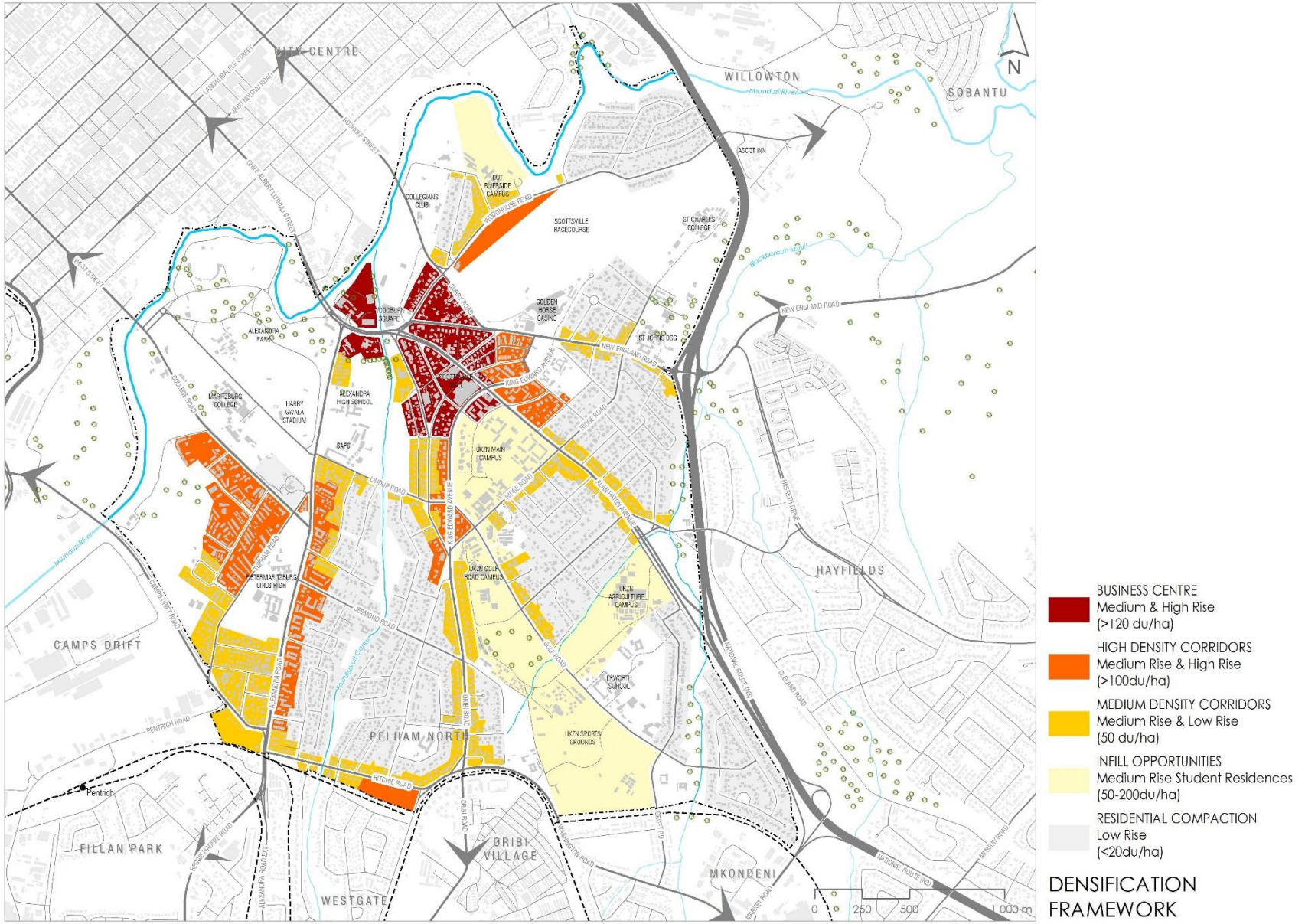


FIGURE 5-4 : DENSIFICATION FRAMEWORK

INFILL OPPORTUNITIES

Development of vacant or large underdeveloped sites should be such that they integrate with their surrounding precinct or neighbourhood through matching scale and "grain" of surrounding urban fabric (see cameo sketch).

Possible infill sites include:

A. DUT RIVERSIDE
   Potential Student Village-to be negotiated with the DUT
B. WOODHOUSE ROAD
   Potential Residential Infill
C. RITCHIE ROAD
   Potential Residential Infill
D. UKZN CAMPUS
   Potential Student Village –to be negotiated with the UKZN)
E. UKZN AGRICULTURAL CAMPUS
   Potential Student Village –to be negotiated with the UKZN
F. UKZN SPORTS COMPLEX
   Potential Student Residential-to be negotiated with the UKZN
G. COMPACTION OF EXISTING LOW DENSITY AREAS
   Includes the infill and intensification of on-campus student housing

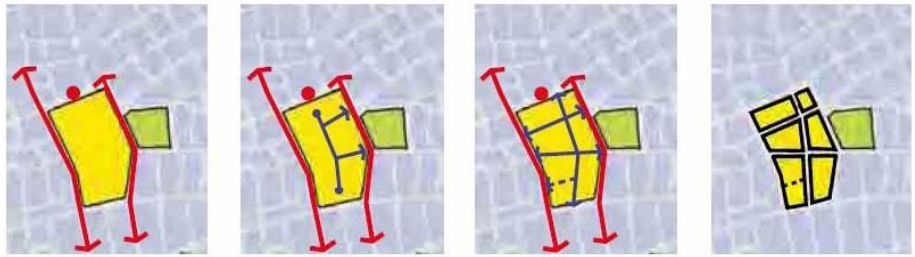


FIGURE 5-5: INFILL PRINCIPLE

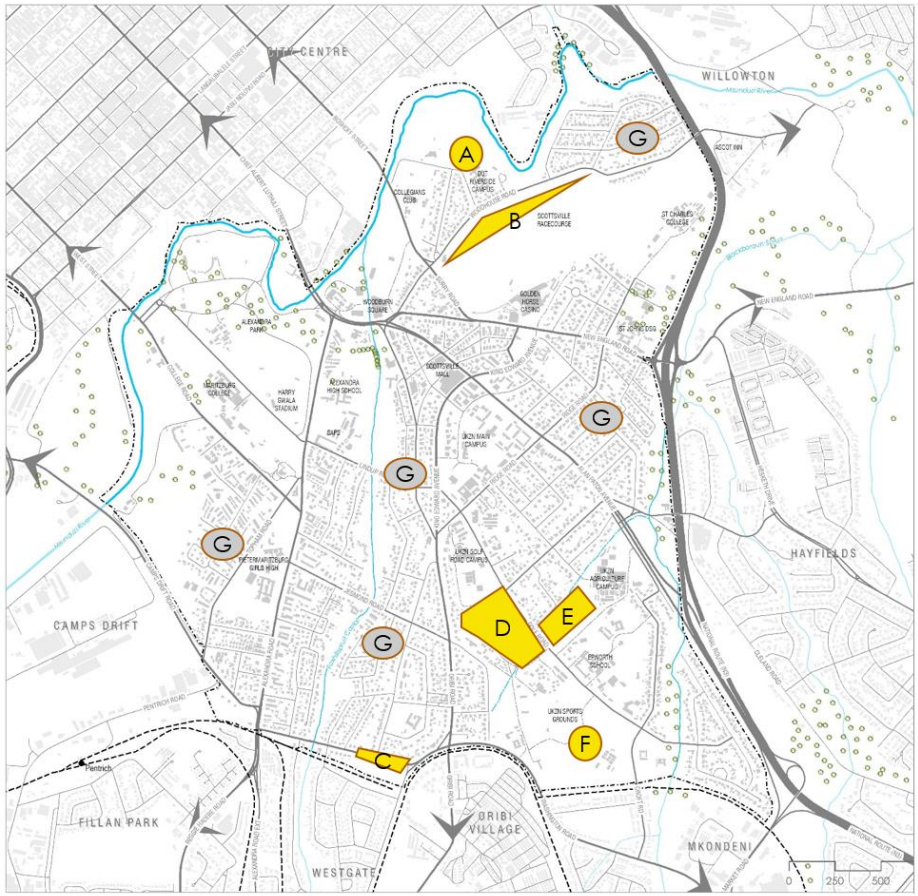


FIGURE 5-6: INFILL OPPORTUNITIES

5.2.5 LAND USE YIELDS

The land use definitions, development parameters and assumptions applicable to the various land use categories are summarised in the tables below.

TABLE 5-3: DEVELOPMENT PARAMETERS (LUF

LAND USE CATEGORY			PROPOSED DEVELOPMENT CONTROLS					SPATIAL APPLICATION						CURRENT APPLICABLE ZONES THAT CAN BE APPLIED FOR FROM TMM LUMSM
			USE MIX (%)		TARGET NETT DENSITY									
Category	Definition	Land Use Activities	Residential	Non Residential	Floor Area Ration (FAR)	Units per ha	Coverage	Primary Node	Local Node	TOD Corridor	City Arterial	Precinct Transit Route / Collector	Precinct	
RESIDENTIAL														
High Impact	To accommodate high density residential in central locations or along high priority public transport / arterial routes within Scottsville in mixed use developments to promote City wide residential corridors and nodal areas with active and vibrant ground floor uses and adjacent public space (i.e. streets and squares) and to cater for local commercial and service needs within Scottsville and along TOD corridors.	Residential Limited Retail Social Facilities	90%	10%	1.25	135 du/ha	0.3	●		●	●			General Residential 1 General Residential 2 General Residential 3 General Residential 4 (Hotel) Public Housing Student Village[2]
Medium Impact	To accommodate medium density residential located along public transport feeder / local collector routes in mixed use developments to promote local activity streets or local nodes with active and vibrant ground floor uses and adjacent public space (i.e. streets and squares) and to cater for local commercial and social facilities within the corridor and precinct neighbourhoods.	Residential Limited Retail Social Facilities	90%	10%	0.5	90 du/ha	0.2		●	●	●			Intermediate Residential
Low Impact	To accommodate low to medium density residential areas in limited mixed use developments to promote active and safe streets and to cater for local level commercial and social facilities to serve a precinct or residential neighbourhood.	Residential Social Facilities	90%	10%	0.2	36 du/ha	0.4					●	●	Special Residential 2 Special Residential 3 Special Residential 4
COMMERCIAL														
High Impact	To accommodate high intensity retail, offices and services for Scottsville and the City in a centrally located mixed use developments to promote urban vibrant ground floor uses and activated adjacent public space (i.e. streets and squares) and to promote employment opportunities close to residential areas.	Retail Offices Services	0%	100%	2.0	n/a	0.6	●		●	●			Core Mixed Use 1[3] Garage & Petrol Filing Station

LAND USE CATEGORY				PROPOSED DEVELOPMENT CONTROLS					SPATIAL APPLICATION						CURRENT APPLICABLE ZONES THAT CAN BE APPLIED FOR IN INTERIM
				USE MIX (%)		TARGET NETT DENSITY									
Category		Definition	Land Use Activities	Residential	Non Residential	Floor Area Ration (FAR)	Units per ha	Coverage	Primary Node	Local Node	TOD Corridor	City Arterial	Precinct Transit Route / Collector	Precinct	
	Medium Impact	to accommodate retail and offices and services in the Scottsville "town centre" or along high priority public transport / arterial routes in mixed use developments and to promote urban vibrant ground floor uses and activated adjacent public space (i.e. streets and squares) with higher density residential above to promote "24/7" living environment.	Retail Offices Services Residential	80%	20%	1.5	120 du/ha	0.4		●	●	●		●	General[3] Medium Impact Mixed Use[3] Mixed Use[4] Multi-Purpose Retail & Office Office
	Low Impact		Limited Retail Services Residential	90%	10%	0.5	45 du/ha	0.4	●	●	●	●	●	●	Low Impact Mixed Use[3] Transitional Zone 1 Transitional Office
SOCIAL															
	High Impact	To accommodate the large Regional or City scale education institutions (i.e. universities and colleges) located in the area which are mixed use by nature in that they accommodate academic, residential, sport and recreation facilities.	Universities Colleges	35%	35%	0.5[1]	100 du/ha	0.4	●		●	●			Institutional Educational
	Medium Impact	To accommodate social facilities required to serve Scottsville or a precinct or the city located centrally or along public transport corridors / arterials (e.g. police stations, hospitals, worship sites etc.).	Schools Places of Worship Clinics Government Offices Hospitals	35%	35%	0.5[1]	n/a	0.4	●	●	●	●	●		Cemetery Educational Health & Welfare Institutional Municipal & Government Worship
	Low Impact	To accommodate social facilities required to serve a precinct or neighbourhood and located within a precinct or neighbourhood.	Crèche Preschool,	n/a	100%	0.3[1]	n/a	0.4	●	●	●	●	●	●	Educational Worship
UTILITY															
	High Impact	Provides for the designation and management of land set aside for uses such as substations, waterworks, sewerage works and public utilities; sewerage pump stations.	Rail Lines Electricity Servitudes & Sub stations	Development controls related to utilities will be determined by the respective norms and standards relating to the respective utility i.e. Roads, Rail, electricity, telecommunications, pipelines,											Utilities & Services 1
	Medium Impact		Sub Station Local Servitudes												
	Low Impact		Local Sub Stations												

LAND USE CATEGORY				PROPOSED DEVELOPMENT CONTROLS					SPATIAL APPLICATION						CURRENT APPLICABLE ZONES THAT CAN BE APPLIED FOR IN INTERIM
				USE MIX (%)		TARGET NETT DENSITY									
Category	Definition		Land Use Activities	Residential	Non Residential	Floor Area Ration (FAR)	Units per ha	Coverage	Primary Node	Local Node	TOD Corridor	City Arterial	Precinct Transit Route / Collector	Precinct	
OPEN SPACE (as per environmental framework)															
	Natural	To accommodate the natural (i.e. not transformed) habitats of the City including flood zones and other undevelopable zones.	Untransformed Habitats i.e. grasslands, wetlands, woodlands, forests, water bodies, etc., Rivers, Streams Utility servitudes Undevelopable land	0%	100%	0.15	0	n/a						●	Environmental Reservation Protected Area 1
	Public	To accommodate the transformed public spaces of the City including squares, parks, sports fields and streets and roads.	Sports Fields Parks Public Squares	0%	100%	0.15	0	n/a	●	●	●	●	●	●	Active Public Open Space Passive Public Open Space
	Private	To accommodate the transformed private open spaces of the City including private natural areas, parklands, sports fields.	Sports Clubs	0%	100%	0.15	0	n/a	●	●	●	●	●	●	Private Open Space

Notes:

1. The portion of site used for calculating FAR in High and Medium Impact Social area is 35% academic, 35% residential and 30% open space (i.e. sportsfields). Therefore only 70% of a site area is deemed developable.
2. May only be applied for in terms of the guidelines provided in Section 5.2.6: Student Housing
3. No motor car show rooms to be permitted
4. No light industry/warehouses to be permitted

TABLE 5-4: LAND USE YIELDS

LAND USE PROPOSED ZONE	Area (m²)	Area (ha)	Existing Units	Existing Non-Residential FA (m2)	Zoned Non-Residential FA (m2)	Zoned Dwellings	Proposed Units	Proposed Non-Residential FA (m2)
Residential	**3 119 765**	**312.0**	**4 632**	**31 050**	**139 141**	**10 226**	**12 396**	**137 447**
High Impact Residential	546 981	54.7	2 466	6 700	85 120	5 864	6 181	68 375
Medium Impact Residential	586 606	58.7	720	15 600	34 524	1 447	2 640	29 335
Low Impact Residential	1 986 178	198.6	1 446	8 750	19 497	2 914	3 575	39 737
Commercial	**563 364**	**56.3**	**806**	**101 300**	**341 494**	**2 561**	**4 426**	**307 445**
High Impact Commercial	102 824	10.3	1	61 200	66 136	13	-	205 648
Medium Impact Commercial	313 792	31.4	638	36 800	260 198	2 067	3 765	94 140
Low Impact Commercial	146 748	14.7	167	3 300	15 160	481	660	7 657
Open Space	**2 346 487**	**234.6**	**1**	**49 900**	**310 292**	**315**	**-**	**232 425**
Open Space	2 346 487	234.6	1	49 900	310 292	315	-	232 425
Social	**2 373 134**	**237.3**	**673**	**195 885**	**2 265 037**	**5 695**	**3 672**	**647 001**
High Impact Social	1 049 119	104.9	649	65 285	552 396	5 485	3 672	183 595
Medium Impact Social	1 324 015	132.4	25	130 600	1 712 641	209	-	463 406
Utilities & Roads	**1 854 412**	**185.4**	**-**	**-**	**3 896**	**17**	**-**	**-**
High Impact Utility	3 088	0.3	-	-	206	-	-	-
Road	1 851 324	185.1	-	-	3 690	17	-	-
Grand Total	**10 257 162**	**1 025.7**	**6 112**	**378 135**	**3 059 860**	**18 814**	**20 493**	**1 324 318**

Notes:

1. Existing units from status quo, existing non-residential floor area based on existing building footprints.
2. Zoned floor area and units based on the development parameters contained within the Msunduzi Land Use Scheme and based on existing zone classification for all erven.
3. Proposed units generated using the development parameters table and land area allocated to each impact zone.
4. Current gross density for the study area is 7du/ha. Planned gross density is 24du/ha.

5.2.6 STUDENT ACCOMMODATION

The Challenge

The investment that is being made by the private sector in student housing through national student accommodation policy represents an opportunity to achieve TMM's SDF spatial restructuring goals by increasing densities and improving thresholds for services, transportation and business.

However, the development of **off-campus** student accommodation (i.e. private new builds and / or conversions of flats or houses for student purposes) needs to be approved and controlled by TMM before, during and after construction or conversion to ensure that the character of existing neighbourhoods is adequately protected or enhanced. If not appropriately controlled it is a threat to existing residential neighbourhood stability, individual property values and the municipal rates base.

Student accommodation growth will be tied to the future of the UKZN, the DUT and other tertiary education institutions and the role that they will play in the national strategy for the provision of tertiary education in KZN and the country. For example, UKZN currently caters for 12 500 students and in terms of government student accommodation policy UKZN should accommodate 50% of its students on campus (i.e. 6000). Currently +/- 2000 students are accommodated on campus in student residences. The remaining balance of students (i.e. 10 500) are accommodated in the City in a variety of accommodation options off campus or travel in from outside the City. The impacts of this are documented earlier in this document and manifest in impacts such as changing neighbourhood characters, public nuisance, traffic impacts from buses serving students, declining environmental quality and depreciating residential property values.

Proposed Student Accommodation Policy Recommendations

In light of the above it is proposed that future new student accommodation be provided in the following manner:

- ON CAMPUS STUDENT RESIDENCES OR VILLAGES developed on UKZN, DUT or Tertiary Institution owned land by the institution itself or by private developers in partnership with the institution.
- OFF CAMPUS STUDENT RESIDENCES DEVELOPED ON PRIVATELY OWNED LAND either by UKZN, DUT or tertiary education institution, by Private Developer or by private developer in partnership with the relevant institution in the form of either purpose built flats or conversion of flats within medium to high density zones only.
- OFF CAMPUS EXISTING DWELLING CONVERSIONS either by UKZN, DUT or other tertiary education institution, the Private Sector or private developers in partnership with a tertiary education institution within medium or high density zones only.
- OFF CAMPUSBOARDING HOUSE, guest lodge, bed and breakfast, student "digs" or "granny" flat in medium or high density zones or in special residential zones by special consent and in terms of the existing Municipality Boarding House Policy.
- All existing Student Accommodation existing at the time of adoption of the proposed Student Accommodation Policy may only be retained in a form that is consistent with the proposed policy.

It is proposed that any new off-campus student specific accommodation that requires new buildings, redevelopment or conversion of existing residential buildings be approved by UKZN, DUT, or other tertiary education institution and the TMM in the proposed TOD Corridors or in Scottsville Town Centre Precinct only. This is to protect the residential character of existing residential areas and to use student accommodation investment to attain the densification and restructuring objectives of the SDF.

In addition, it is proposed that **all tertiary education institutions should be urgently encouraged to prepare student accommodation plans for their land holdings that indicate how they will be meeting their targets as per national policy objectives related to student accommodation provision**.

Any private and independent off campus student specific accommodation type development must be approved by a tertiary education institution and the TMM in terms of the Student Accommodation Policy and through **all relevant town planning legislation and building by law procedures**.

5.2.7 SMALL BUSINESS AND INFORMAL TRADING STRATEGY

Context

A key objectives of the Scottsville LAP is to promote and or enable economic development, job creation and wealth creation within the area. This requires that SMME's and informal trading be recognised, acknowledged and accepted as a legitimate sector of the overall economy and accordingly, that it be planned for spatially in the same manner as any other land use or economic activity and that related infrastructure be integrated with the existing and future urban fabric.

SMME and informal trading opportunities in the Scottsville area will be linked to a number of specific activities, facilities and / or locations.

- Pedestrian routes of commuters moving into the City through Scottsville
- Pedestrian routes of students moving from residential areas to education institutions or moving between different parts of their campus
- Sporting and recreation events
- Scottsville Town Centre and Neighbourhood nodes along TOD Corridors

Strategy

The Municipality is to intervene in the **land and space market** to enable informal and small businesses to access the wealth generation opportunities located within Scottsville in an integrated and controlled manner and which will not impact adversely on formal businesses or functionality of Scottsville, but rather will contribute to its overall attractiveness, character and service levels.

The development of the various facilities and infrastructure proposed in this strategy should be linked to the work which the TMM is doing in ensuring easier accessibility to various product supply chains by small businesses and the informal sector.

The aim of the strategy is to provide the TMM departments, responsible for Local Economic Development, Business Support and management of Informal Trading and SMME's, with a spatial and infrastructure framework to support the implementation of their respective business space and associated infrastructure delivery policies and programmes for informal and small business.

The objectives of such a strategy include:

- Provide secure tenure options for small businesses and informal sector in the area
- Provide appropriately located space and infrastructure mixes for a variety of small business types / sectors
- Spatially and functionally integrate the informal sector and SMME sectors into the area
- Enable the informal and SMME sector to add value to the experience of the landowners, users and visitors of the Precinct

Principles for the provision of small business and informal trading space include:

- SMME and informal space, buildings and infrastructure are public assets and should set the tone with regards to building and infrastructure design standards and should contribute to the sense of place, character and functionality of the area
- Locate informal sector and SMME's in locations that are appropriate to their needs, their affordability and to their client base
- Distribute trading and business space in a variety of viable locations and with a variety of infrastructure options and costs
- Prevent conflicts between formal and informal business and activities
- Ensure that Public Transport and NMT functionality is not compromised.
- Ensure that Public Space is enhanced and not compromised through the introduction of Informal / SMME activities.

Small Business Classifications

For the purposes of this framework the types of small business that will be accommodated and the business categories that will be catered for are as escribed below.

- INFORMAL BUSINESS - defined as commercial trading, personal or technical service delivery activities which are coping or survival strategies for individuals operating on their own or employing one or two helpers. These businesses are low profit enterprises which can vary in permanence and which require either short term or medium term tenure with supporting infrastructure for trading, storage, ablutions and cleaning. Some of these businesses are location sensitive (i.e. related to pedestrian traffic) whilst others require serviced space in locations reasonably accessible to their customers and or to public transportation.
- SMALL FORMAL BUSINESS – defined as commercial trading, personal, technical or professional services delivery which are sole proprietors, small scale employers which are registered in terms of municipal and government regulations. These businesses are more sustainable enterprises which are more permanent and which require medium or longer term tenure with supporting infrastructure for trading, production, storage, ablutions, parking and security. Some of these businesses are highly location sensitive whilst others require serviced space in locations reasonably accessible to their customer or client base and or to public transportation.

Business Activity Categories

The following categories are broad classifications of use that could be permitted in the study area, but can be further refined and classified in terms of the Municipality's Policies governing small business and informal trading.

INFORMAL USES AND ACTIVITIES

- Non-Perishable Goods & Services e.g. Technical, Personal, Food, Clothing,
- Perishable Goods and Services e.g. Fresh Fruit, Vegetables,

SMALL BUSINESS USES AND ACTIVITIES

- Professional Services e.g. Financial, Medical, Legal, Accountancy, Built Environment,
- Non-Perishable Goods & Services e.g. Technical, Personal, Food, Clothing, Hardware
- Perishable Goods and Services – e.g. Fresh Fruit, Vegetables, Meat, Poultry and Fish

Trading Space Infrastructure

The following types of trading and working space infrastructure have been identified as outlets for the abovementioned business activities.

- PUBLIC TRADING SPACE – Serviced trading space and infrastructure in public spaces and provided, controlled and managed on daily basis by the Municipality. Allocation and rentals in terms of Municipal policy and requires business registration to participate / occupy.
- PUBLIC MARKET BUILDING – Fully Serviced Public Destination Market Building or Structure provided and controlled by Municipality. Space has infrastructure for facility administration, business support, trading, storage, cleaning and ablutions. Allocation and rentals in terms of Municipal policy and requires business registration to participate / occupy.
- PUBLIC BUSINESS BUILDING - Serviced trading or office space within dedicated building provided by and controlled the Municipality or a registered not for profit institution. Space has infrastructure for building administration, business support, trading, storage, cleaning and ablutions. Allocation and rentals in terms of Municipal policy and requires business registration to participate / occupy.
- PRIVATE BUILDING – Serviced space for trading, or office space within a building owned by private company or by business owner themselves for small businesses. Access to space on normal property letting basis in the case of rented building space or in terms of municipal building use regulations in the case of individuals using their own home / building for business purposes. Consideration should be given to investigating rates or tax rebates to companies owning buildings and who provide a percentage of building space particularly for small businesses requiring small amounts of space.

5.3 PUBLIC SPACE, LANDSCAPE & BUILT FORM FRAMEWORK

5.3.1 OBJECTIVES

- Re-establish a high quality and distinctive identity, "sense of place" and imageability for Scottsville, and for each of the precincts, nodes and neighbourhoods within it. To this end the notion of Scottsville including an urban riverfront serving the City should be promoted.
- Expand, enhance and integrate the network of "hard" and "soft" public open spaces and including the street network, into a cohesive system of safe and secure spaces and places that re-structure urban space and that add value to, and improve the sustainability of the living, working, playing and learning environment.
- Establish an environment with a human scale and urban "feel" that prioritises the pedestrian and supports community activity and life.
- Reinforce and enhance the primary gateway experience to Pietermaritzburg /Msunduzi along Alan Paton Drive

5.3.2 PUBLIC SPACE AND LANDSCAPE

Landscape Character

The landscape and townscape character of Scottsville is a mix of urban and suburban townscapes with natural landscape. The mix plays out in each precinct in varying ways depending on the role, land use mix and features of each precinct and the quality of the landscape / townscape character varies and is determined by how each of the features have been managed in each precinct.

In principle the mix in each precinct should, as a minimum intervention, be consolidated and its quality improved. New "townscape" interventions that reflect the transformation of Scottsville from a "suburban" to more "urban" character should be derived from the land use category proposed for each precinct and should be concentrated in the TOD Corridors, the town centre and mixed use nodes and in the development of un-developed and under developed land.

The Riverfront and Green Lungs

The Msunduzi River, the large well vegetated education institutions and public open spaces provides a robust and highly visual green landscape character and should be reinforced through ensuring that association with the river and the large open spaces is maintained and enhanced wherever possible through retention or creation of views and vistas of, and linkage to, these features from adjacent districts and precincts.

The Town Centre

Given that the town centre will play an important community role in Scottsville and gateway role for the City in the future it is imperative that a rigorous public realm upgrading programme be established to combat urban heating and other climatic effects, complement built form and imageability and humanise pedestrian and public spaces. The programme should also contribute to reinforcing the landscape identity and legibility of the town centre as a "people first" place and which will reinforce the City gateway role of Alan Paton Drive.

Gateway Zones

Scottsville is a gateway zone to the CBD form the south and the west including four river crossings.

Alan Paton Drive is the primary gateway zone between the UKZN entrance and its crossing of the Msunduzi River provides the first impression of the City. This zone also forms the primary public space of Scottsville and it should be upgraded to reflect these roles. Improved pedestrian infrastructure, landscaping, lighting and planting is required. The area should also include high quality infrastructure to accommodate informal trading and small businesses.

The access points off the N3 into Alan Paton and New England should be landscaped to signal the entrance into the City.

Other gateway zones which are important are the river crossings at Boshoff, College Road and Camps Drift.

Boulevards, Avenues and Streets

The roads and streets in Scottsville are generally well planted and display recognisable characters as either boulevards, avenues or town streets. These attributes should be maintained and enhanced as and when possible through the addition of improved sidewalks, additional planting, lighting, signage and street furniture.

It is proposed that the following roads and streets be designated as follows:

- Boulevards
  - Alan Paton – Exit Off The N3 And Within The Town Centre Precinct
- Major Avenues
  - King Edward
  - New England
  - Alexandra
  - College
  - Woodhouse
  - Washington
  - Camps Drift
- Minor Avenues
  - Golf Road / Lindup Road / Princess Margaret
  - Ridge Road
  - Jesmond Road
- Planted Streets
  - All other roads and streets contained in each precinct.
- Transit Orientated Development Corridors
  - In addition to the above all TOD routes should receive priority attention with respect landscaping improvements to cater for increased pedestrian activity, safety and security and to complement the proposed higher density development along these routes.

Precincts

The study area consists of a diverse range of precincts and neighbourhoods and there should not be an attempt to coordinate all the landscaping between each of the areas. An attempt should be made, rather, to coordinate landscaping on key integrating corridors which run through or connect different precincts and neighbourhoods e.g. boulevards, avenues, key gateways, major pedestrian spines, whilst establishing local landscape character on precinct or neighbourhood level based on local inherent characteristics, features and history.

Public Spaces and Landscape Zones

The public realm will be made up of a variety of "soft" and "hard" public spaces which will each have their own identity and character, i.e. commercial, recreational and residential, and they will each play a role in the area, i.e. civic, regional, and local, etc.

"HARD" PUBLIC SPACES

These include the primary pedestrian prioritised streets, bus stops and other incidental spaces located along them and it includes the entrance spaces/precincts to large public facilities such as sports stadia, education institutions, police stations, hospitals.

"SOFT" PUBLIC SPACES

These include the public and private sport and recreation oriented open spaces prevalent in the area.

Landscaping in the form of paving, planting, street furniture, signage and lighting in these "hard" and "soft" spaces should be coordinated per public space element to reflect the role and character of each.

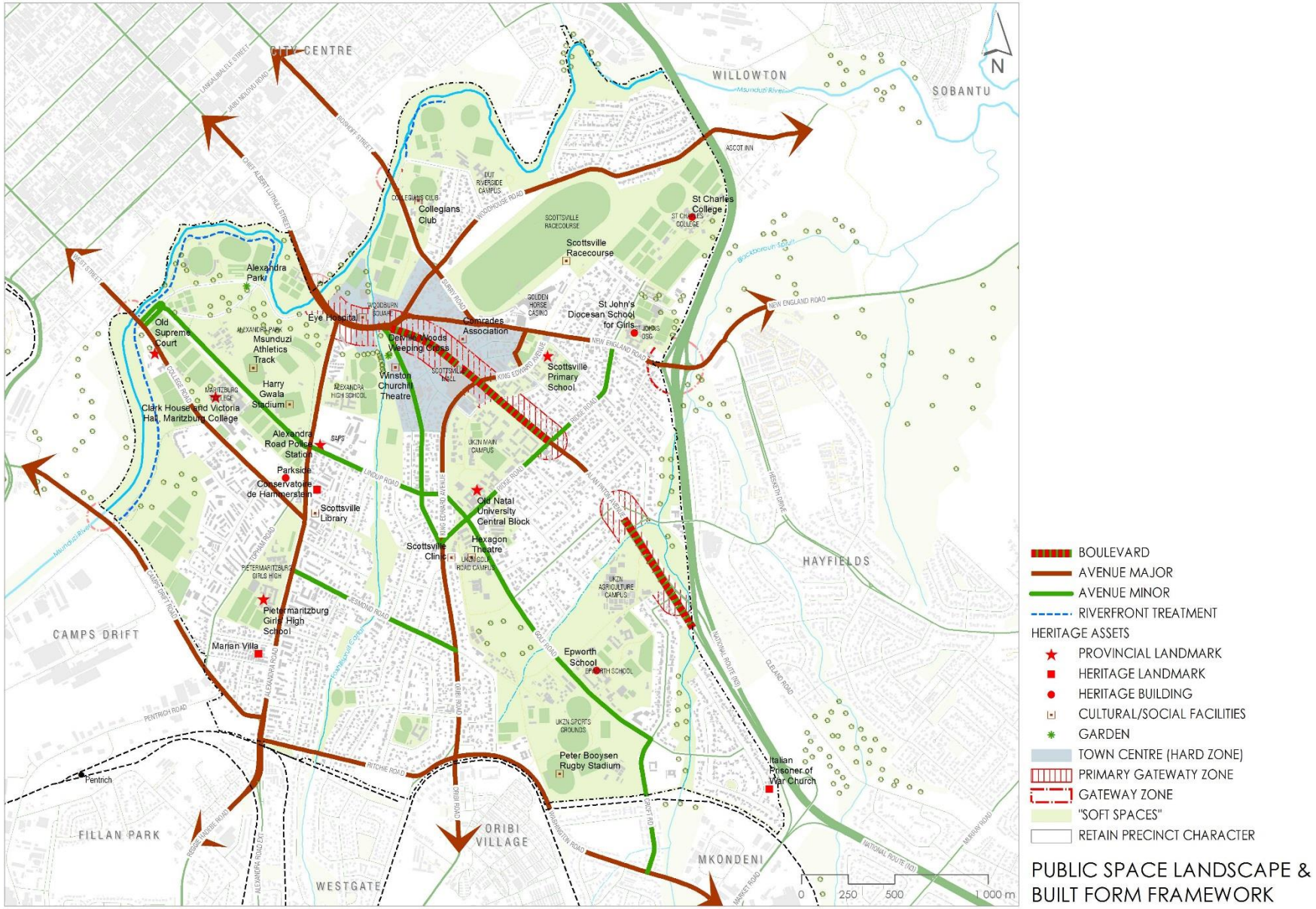


FIGURE 5-7: PUBLIC SPACE LANDSCAPE & BUILT FORM FRAMEWORK

5.3.3 BUILT FORM STRATEGY

The Built Form strategy seeks to transform Scottsville's "suburban" quality to a more urban orientated structure and form in line with SDF policies. Whilst the majority of the area is developed there are several precincts and or sites which are either under developed or undeveloped and which, if re-developed using the principles detailed below, could significantly contribute to the restructuring of the area, its "sense of place" and improvement of the overall quality and performance of the public environment of area.

Opportunities for the application of the strategy will be on undeveloped land, in the redevelopment of low density areas, along the TOD corridors and in the "town centre" of Scottsville.

Perimeter Block Development

The diagrams below indicate the principle of concentrating built form on the outside perimeter and / or "edge" of urban blocks or sites so that public outward facing building edges define public spaces and streets and the internal courtyards generated become semi private spaces for residents and communities to use for less public activities such as parking, recreation and services thus creating a continuum of public to private space.

This principle is important for integrating established residential neighbourhoods with the planned TOD routes and for providing appropriate interfaces between residential areas and higher impact land uses and building such as shopping centres, education institutions and large social facilities.

Building Scale and Massing

Massing relates to the shape and size of a building on a building envelope, it is the scale of buildings in relation to height and floor area. The massing of a proposed development is important for achieving viable development but it should always display a human scale, particularly at ground / street level and interfaces with the pedestrian environment. Massing is also critical to spatial quality and creating the sense of "openness" or "enclosure" that helps define streets and public spaces.

Key principles include:

- Place massing along street edges to help define the street "wall" that defines public space
- Step backs can also be used on taller buildings to create human scale at the ground level where buildings are greater than four storeys. This approach is recommended for Scottsville's' commercial core and immediate surroundings.
- In infill situations, where a desirable urban character already exists, the massing should be consistent with the surrounding built form to retain and enhance local existing character.

Landmarks and Architectural Accents

Buildings provide important landmarks and / or character in urban areas and assist in making memorable places. They provide anchors to key paths/ routes and help emphasise public spaces. Landmarks should be unique and memorable and are important at a range of scales, from "global" through to local levels. A global landmark is one which can be seen in the broader urban landscape and which provides orientation to the viewer from afar, whereas local landmarks perform orientation roles at the local scale in precincts or neighbourhoods.

Key principles:

- Large scale commercial and or residential buildings in the Scottsville "town centre" and large institutional buildings (i.e. educational or social services buildings) or should acknowledge their potential as "global" landmarks and reference points in Scottsville and the City
- Buildings and or structures at key intersections, non-residential buildings and river crossings within the precincts should acknowledge their roles as orienting features in the precincts.

Building Height

Building height is key to place making and legibility since it contributes to a diversity of built form and provides opportunity for creating landmarks and building accents in the built landscape.

However, building height needs to be managed in order to ensure that human scale of the environment is maintained. Accordingly, it is proposed that building height be distributed across the area in a manner that reinforces the urban structure and scale of the various precincts.

Key principles for height distribution are as follows:

- Two storey height limit in low impact areas
- Four storey height limit in medium impact areas and particularly along TOD corridors
- Four + height limit in high impact areas, but heights in excess of for storeys to be determined in accordance with an analysis of the existing neighbourhood character and heights of adjacent buildings and structures.

Building Edges and Frontages

The interface between buildings and the public spaces (i.e. streets, squares, lanes, parks etc.) that they front onto is important for the quality of the public space in terms of its attractiveness, activity levels and safety and security.

The following principles for the treatment of edges and frontages of buildings are important for ensuring a positive public interface:

- Buildings in nodes and along TOD Corridors should stand on their front boundary lines and collectively form a continuous human scaled street frontage along a street (i.e. street "wall").
- Buildings should acknowledge and define street corners (i.e. building shape, features and entrances) so as to assist with definition and legibility of the streetscape.
- Ground floors should have active frontages, i.e. entrances, coffee shops, retail shops, windows with transparent glass providing views to the interior, porches, awnings, lighting and high quality materials.
- Canopies or Colonnades at ground level should be used to provide a protected pedestrian environment, mitigate impact of tall buildings and bring visual continuity to the public realm.
- Maximise pedestrian entrances and minimise vehicular entrances off pedestrian priority streets.

Mixed Use Buildings

Mixed use buildings ensure high levels of neighbourhood and street activity, urban diversity and vibrancy and contribute to overall safety and security in the public environment. Mixed use spreads activity over time and increases and improves efficiency thresholds for services and infrastructure.

Key principles include:

- Ensure the mix of activity supports the predominant character of the neighbourhood, i.e. do not allow excessive commercial in predominantly residential neighbourhoods
- Encourage a mix of uses that complement one another i.e. local shops and services for residential
- Public uses such as shops, offices, social services etc. should interface with the public realm at street level

Heritage

The existing heritage of Scottsville contained in the architectural, cultural, educational and natural assets of the area should be preserved and conserved to reinforce the memory, history, character and experience of Scottsville and also to contribute to the tourism and economic assets base of the Municipality.

The sensitive, innovative and creative design of new buildings, places and landscape should be promoted and encouraged to reflect the socio-cultural, socio-political, socio-economic and technological context and dynamics of the Scottsville area so as to add to the heritage assets of the area.

5.4 TRANSPORTATION

5.4.1 BACKGROUND

The Transportation Status Quo technical note identified the following key issues:

- Congestion at major roads and intersections
- Lack of non – motorised transport network connectivity and poor infrastructure
- Parking issues
- Road Conditions
- Lack of adequate scheduled public transport

This framework aims to address these issues and investigates the relevant interventions necessary to achieve this.

The following transportation objectives were then formulated to be used as direction when implementing these strategic interventions and provides a basis for recommended interventions.

Transportation Objectives

- **Encourage and facilitate** the shift from a car dominated environment to one based on Transit Oriented Development.
- **Improve regional accessibility off the N3** in a manner that will assist in spreading traffic loads across the road and street grid within the area thus providing greater choice of route to and from the area.
- **Increase and improve the accessibility, safety and security** across all modes of transportation including public transport and NMT.
- **Establish an integrated vehicular, PT and NMT network** with capacity that will improve local access and circulation and accommodate existing and longer-term development expectations.
- **Establish a significantly enhanced level of pedestrian prioritisation** via a network throughout the area that effectively and safely links education nodes, sport nodes and business nodes to residential areas.
- **Rationalise the various public transport systems running through or converging in the area** so as to optimise public transportation accessibility, services and infrastructure.
- **Introduce a private vehicle parking system** that supports existing and increased development activity, but that encourages and supports the transition to public transport and pedestrian prioritisation.

The following sections identify implementation plans for the Scottsville Precinct, in terms of the local road network, PT as well as NMT.

5.4.2 THE TRANSPORTATION NETWORK

Whilst Scottsville is bounded by relatively impermeable boundaries of the N3, the Msunduzi River and the rail line, it is traversed by high quality high order mobility routes which connect it to its surroundings.

Precincts will be interconnected through a high-quality grid of local roads and streets which will be designed to enable safe, easy and convenient internal circulation and connectivity for pedestrians and vehicles without compromising higher order city linkage and connectivity.

The following describes the Transportation Network in the study area and identifies the proposed roles with regard to private vehicular traffic, Public Transport and Non-Motorised Transport.

The Local Road Network

With many major activity nodes within the area (schools, places of work etc.), the main roads (and thereby intersections) experience a fair amount of congestion, particularly in the morning and afternoon peaks. The following intersections experience particularly significant congestion within the peak periods:

- Chief Albert Luthuli/ Alexandra Road intersection
- Alan Paton Avenue/ New England Road/ Chief Albert Luthuli Street intersection

The following roads also experience congestion at various times:

- New England Road (and Interchange)
- Alan Paton Avenue
- Harwin Road
- Alexandra Road

The proposed SANRAL N3 upgrade includes the upgrade of New England Interchange, as well as adjacent sections of New England Road. As discussed previously, another transport objective of this study was to improve regional accessibility off the N3 in a manner that will assist in spreading traffic loads across the road and street grid within the area thus providing greater choice of route to and from the area. The N3 interchange and associated

upgrades will alleviate some of the traffic congestion built up at the New England Interchange during the commuter peaks.

Capacity upgrades are required at the intersections listed above. During the morning and afternoon commuter peaks, these intersections become gridlocked leading to decreased levels of service. Chief Albert Luthuli Street provides an important link between the CBD and periphery residential areas, hence the attractiveness of this link to commuters. Boshoff Street is also another important link between the CBD and the Scottsville Precinct. Recommendations include options such as signal optimisation, introduction of more lanes / longer right turning lanes etc.

School traffic has a significant impact on the Scottsville Precinct, due to the number of schools present within the area. Alexandra Road experiences congestion, particularly due to the presence of PMB Girls High, Maritzburg College as well as Alexandra High School. Similarly, Harwin Road experiences similar congestion problems, due to the presence of St Charles College, St Johns Girls School and Varsity College. Traffic calming measures should be implemented where necessary and proper enforcement relating to these measures are key.

The proposed road classification is in Figure 5-8: Transportation Network (Road Classification)

This classification provides a hierarchy on which road improvements / interventions can be based on, depending on the role a specific roadway plays in the greater local road network scheme. Roads providing regional connectivity (such as the N3) are classified as Class 1, with a high mobility status. Other roads are classified progressively lower depending on mobility and functionality.

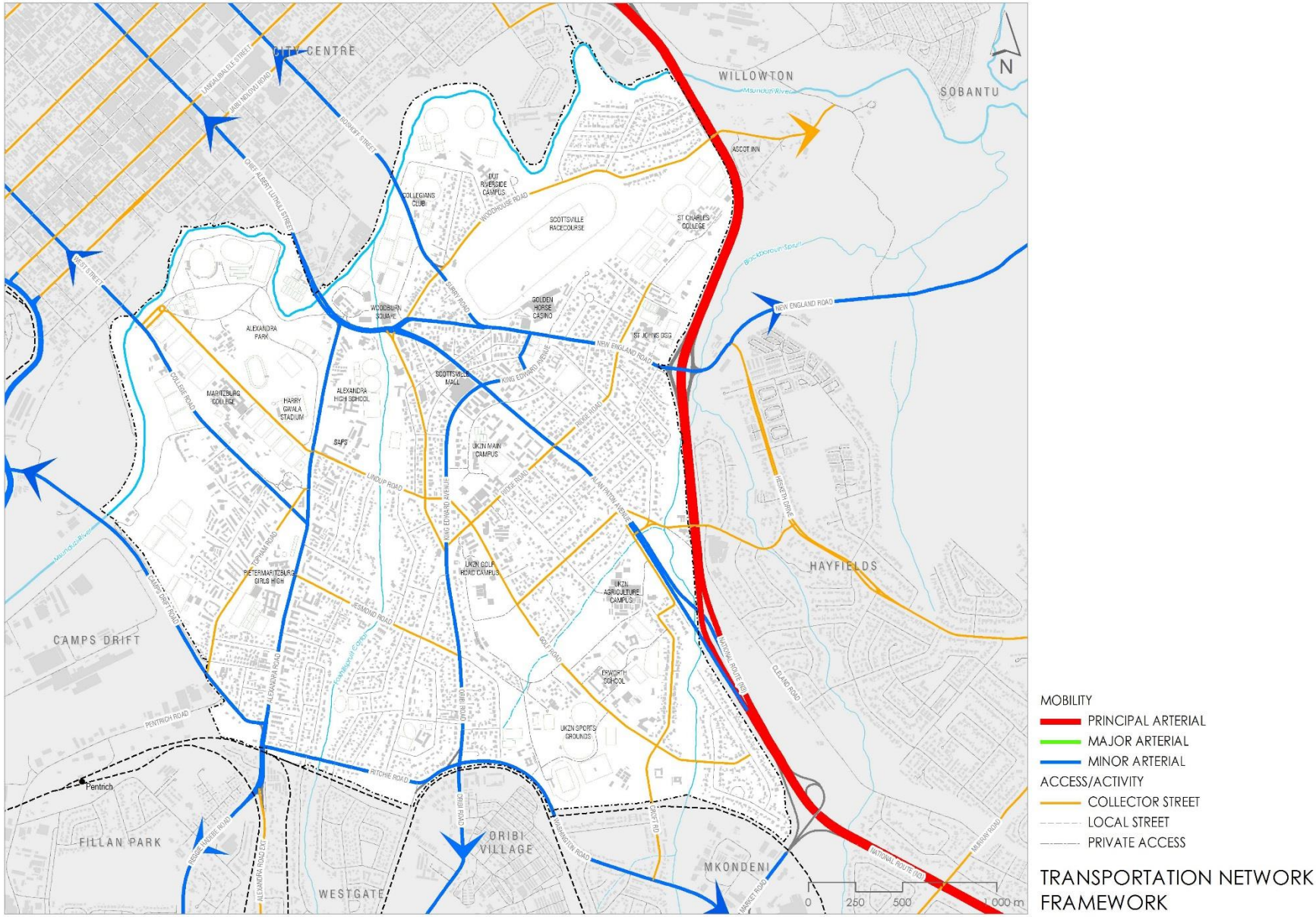


FIGURE 5-8: TRANSPORTATION NETWORK (ROAD CLASSIFICATION)

Non–Motorised Transport (NMT)

In general, there are only limited facilities for NMT users within the Scottsville area, and these are not often integrated or continuous. There is a lack of sidewalks within residential areas, and lack of sidewalk maintenance in areas where they do exist.

As discussed in the introduction section, one of the desired transport objectives was to increase and improve the accessibility, safety and security across all modes of transportation including public transport and NMT. It also serves to establish a significantly enhanced level of pedestrian prioritisation via a network throughout the area that effectively and safely links education nodes, sport nodes and business nodes to residential areas.

The following map identifies areas within the Scottsville Precinct that require non–motorised transport infrastructure, infrastructure upgrades as well as areas that require NMT infrastructure maintenance.

The main areas that should have a strong focus on NMT are those in which there are high amounts of pedestrian movement. These include areas such as schools and universities, shopping malls, places of commercial activity etc.

For the Scottsville Precinct, the areas that would best require NMT provision are:

TABLE 5-5: NMT PROVISIONS FOR THE SCOTTSVILLE PRECINCT

Within the Vicinity of :		Sections of :
Universities	University of KwaZulu Natal	Woodhouse Road Alan Paton Avenue Alexandra Road King Edward Avenue Oribi Road College Road Jesmond Road Ritchie Road Lindup Road Golf Road Ridge Road Harwin Road
	Durban University of Technology	
	University of KwaZulu Natal – Sport Grounds	
Schools	Maritzburg College	
	Pietermaritzburg Girls High	
	Alexandra High School	
	Epworth High School	
	St Johns DSG	
	Varsity College	
	St Charles College	
Shopping Malls	Scottsville Shopping Mall	
Places of Entertainment	Harry Gwala Stadium	
	Hexagon Theatre	
	Golden Horse Casino	
Governmental Institutions	Alexandra Police Station	

Network connectivity plays an important role when considering NMT infrastructure.

There appears to be adequate NMT provision on Alan Paton in the vicinity of the UKZN campus and Scottsville Mall. However, NMT provisions on the outskirts of the campus and Scottsville Mall are lacking. Integrated and connected sidewalks on roads such as King Edward Avenue, Coronation Road and Birkett Avenue and pedestrian crossings at main intersections are recommended in order to provide a continuous pathway for users of these activity centres from their various points of origin.

Ridge Road and Golf Road are also roads linking the different UKZN campuses which therefore leads to increased pedestrian movement within this area. Students are commonly observed traversing between campuses. Pedestrian crossings and sidewalks should be improved, and implemented, along with traffic calming measures (such as speed humps), to facilitate lower driving speeds within these areas.

Harwin Road services both Varsity and St Charles College, leading to active pedestrian movement within the area. However, sidewalks along Harwin Road are poorly maintained, and adequate pedestrian signage is almost non–existent. Wider clearly defined sidewalks and pedestrian signage is recommended.

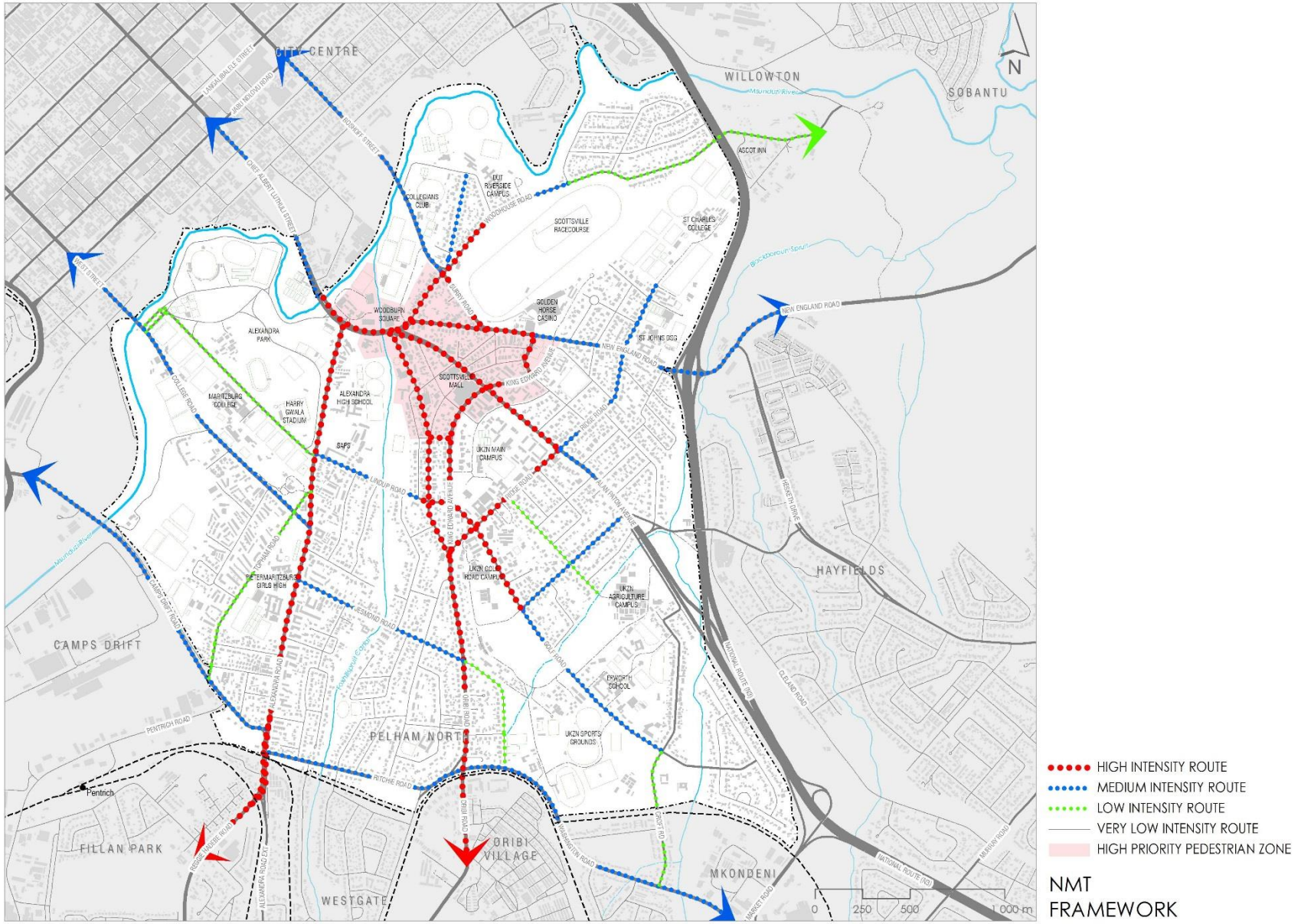


FIGURE 5-9: NMT FRAMEWORK

As mentioned in the section above, Alexandra and Harwin Roads experience a fair amount of congestion due to the presence of schools. NMT provision is good in the vicinity of the schools, however vehicle speeds on Alexandra Road are a concern. Lower speed limits should be enforced on this road, allowing for safer pedestrian movement. Harwin Road requires greater NMT infrastructure provision and regular maintenance of existing services. Similarly, College Road also requires NMT infrastructure upgrades and maintenance.

Cycling has in recent years become widely popular in Pietermaritzburg and surrounds, necessitating the need for cycle paths for the area. There is an existing cycle path on Alexandra Road, however it is not maintained and poorly signed. There are also complaints about the safety of this pathway. Improving safety will greatly improve the attractiveness.

Network Proposals

A summary of the network characteristics is provided below. This table serves to address the transport objective of establishing an integrated vehicular, PT and NMT network with capacity that will improve local access, circulation and also accommodate both existing and longer-term development expectations.

TABLE 5-6: TRANSPORTATION NETWORK PROPOSALS

Name	Class	Traffic Role	Public Transport Role	NMT Priority
N3	1 / 2	National Highway	Inter City	Low
Alan Paton	3	City Arterial	IRPTN – Quality Bus	High
New England /Surrey / Boshoff	3	City Arterial	IRPTN -Feeder	High
Alexandra	3	City Arterial	IRPTN – Quality Bus	High
King Edward	3	City Arterial	IRPTN - Feeder	High
Ritchie / French / Camps Drift	3	City Arterial	IRPTN - Feeder	Medium
College	3	City Arterial	IRPTN – Quality Bus	High
Woodhouse	4	Neighbourhood Collector	Private Bus / Taxi	Medium
Golf / Lindup / Princess Margaret	4	Neighbourhood Collector	Taxi	High
Jesmond	4	Neighbourhood Collector	Taxi	Medium
St Patricks	4	Neighbourhood Collector	Taxi	High
Leinster	4	Neighbourhood Collector	Taxi	High
Ridge / Harwin	4	Neighbourhood Collector	Taxi	High
Topham	4	Neighbourhood Collector	Taxi	Medium
Christie	4	Neighbourhood Collector	Taxi	Low
Epworth / Isabel Beardsmore	4	Neighbourhood Collector	Taxi	Low
Hutchinson	4	Neighbourhood Collector	Taxi	Low
All other Neighbourhood Roads	5	Residential Access	n/a	Low

The following table describes the interventions required to address backlogs and / or anticipated growth in the network in terms of facilities, infrastructure and or management.

TABLE 5-7: TRANSPORTATION NETWORK INTERVENTIONS

INTERVENTIONS				
Name	**Priority**	**Roads**	**Public Transport**	**NMT**
N3	1	Widening, Intersections,	Lane demarcation, ranks, stops, etc.	Sidewalks, crossings, bridges, underpasses, signage etc.
Alan Paton Avenue	1	Improved traffic calming methods, especially near centres of activity, access management	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals, adequate pedestrian signage
New England /Surrey / Boshoff	1	Intersection Upgrades, signalisation optimisation for current traffic volumes	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals, traffic calming measures, adequate pedestrian signage
Alexandra	1	Intersection Upgrades, signalisation optimisation for current traffic volumes	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals, traffic calming measures, adequate pedestrian signage
King Edward	1	Intersection Upgrades	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals
Ritchie / French / Camps Drift	3	-	Proposed PT stops	-
College	1	Intersection Upgrades	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, adequate pedestrian signage
Woodhouse	1	Intersection Upgrades	-	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals, adequate pedestrian signage
Golf / Lindup / Princess Margaret	1	Intersection Upgrades	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals
Jesmond	2	-	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals
Ridge / Harwin	2	-	Proposed PT stops	Regular sidewalk and NMT infrastructure maintenance, pedestrian crossings at main intersections, pedestrian signals, adequate pedestrian signage
Hutchinson	2			
All other Neighbourhood Roads	3	-		

5.4.3 PUBLIC TRANSPORT FACILITIES

IRPTN

The IRPTN is set to form the backbone of the PT system within the Msunduzi area. as a city–wide, integrated, robust public transport solution. The IRPTN serves to address mobility and accessibility concerns in Msunduzi, as well as link communities to areas of opportunity. The IRPTN system aims to address the transport objective of encouraging and facilitating the shift from a car dominated environment to one based on Transit Oriented Development.

The following figure shows the overall envisioned IRPTN system:

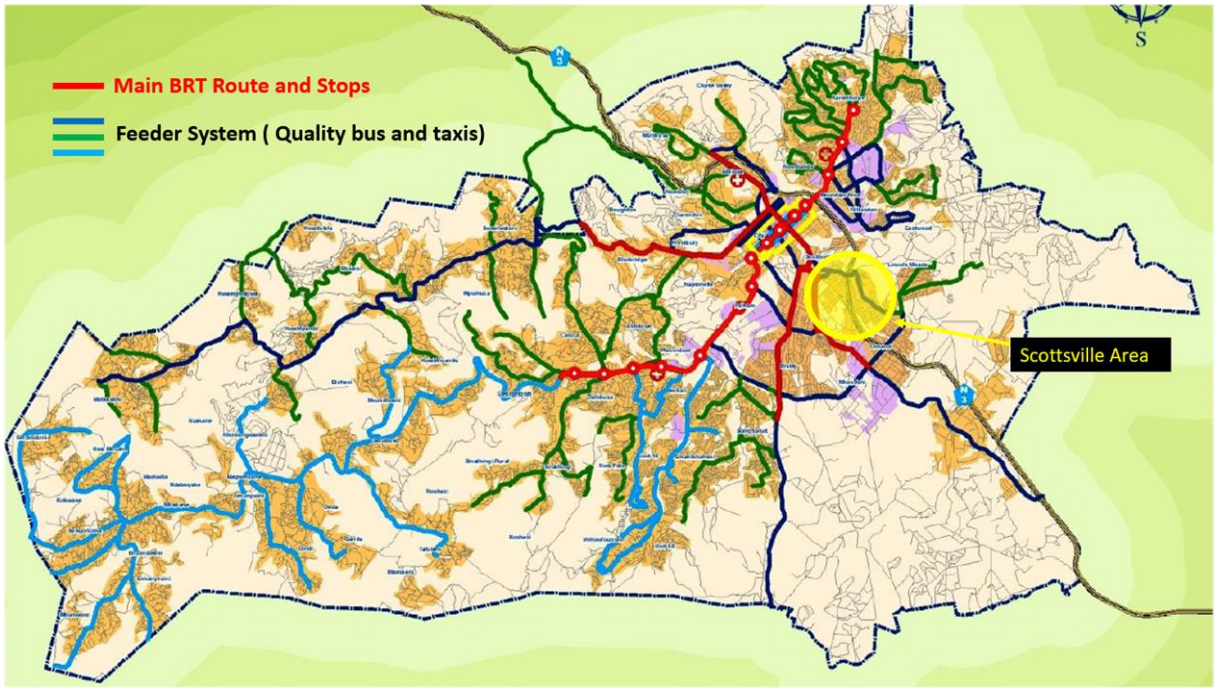


FIGURE 5-10: OVERALL ENVISIONED IRPTN SYSTEM FOR THE MSUNDUZI AREA

The focus of the BRT network is the PMB CBD, with major stops along selected intersections. The proposal also includes for the provision of a Quality Bus System and a CBD PT distribution system along parallel routes. Cross linkages are provided to create an integrated system providing accessibility, mobility and urban opportunity.

In particular, the following diagram shows the proposed stops for the Scottsville area.

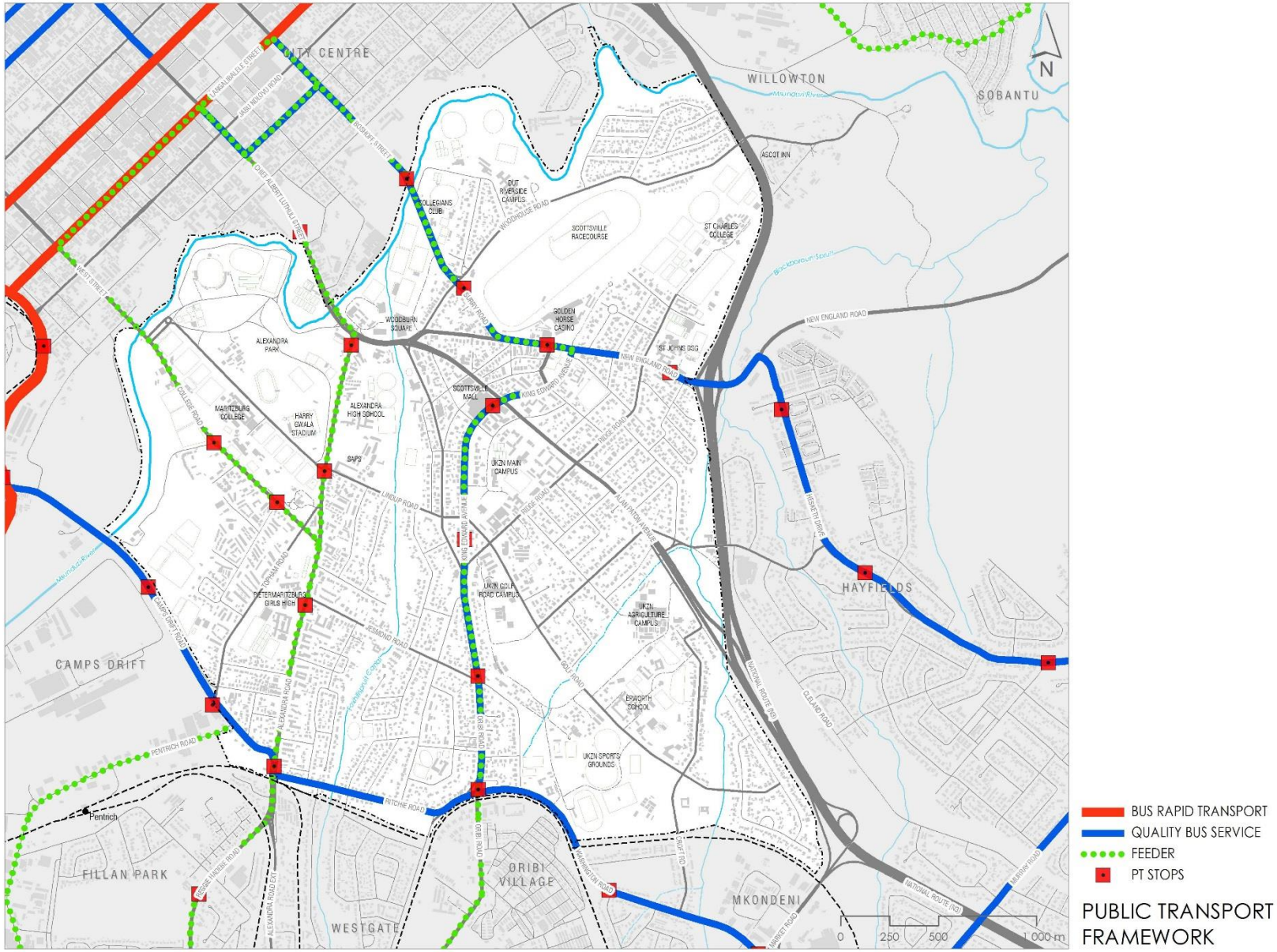


FIGURE 5-11: PUBLIC TRANSPORT NETWORK

Institutional

The tertiary institutions in the area are serviced by several operations utilising various routes and various size busses. These operations are demand driven and routes can change from term to term although the end destinations are generally the same.

Taxis

The taxi industry plays an important role currently in the functioning of the PT system throughout the Msunduzi area and Scottsville in particular.

SCHOLAR TRANSPORT:

- Taxis are regularly used for scholar transport to the various schools in the Scottsville area.

COMMUTER TRANSPORT:

- Taxis are the predominant vehicles of Public Transport servicing the Scottsville area at present.

PARKING:

- Taxis parking in illegal parking spaces or on the roadway is prevalent within the Scottsville Area. This leads to unsafe parking manoeuvres, and in some instance's vehicle conflicts. This is of concern with the vicinity of the Scottsville Mall, where taxis are observed to park on the on – street parking or on the roadside. It is recommended that lay bys for PT be provided in areas where taxis and pedestrian movement is prevalent.

IRPTN:

- Mini-bus taxis will in future act as a feeder system to the greater IRPTN scheme.

5.4.4 TRANSPORTATION MANAGEMENT PROPOSALS

Peaks and Demand Management

As discussed in previous sections, the morning and afternoon commuter traffic has a big impact on the Scottsville local road network and surrounds. This is primarily due to Scottsville being an area of residential, commercial and scholarly land uses. Capacity upgrades at major intersections are recommended. However,

However, Travel Demand Management (TDM) measures have become increasingly popular method to reduce traffic congestion. Some of these measures relevant to the study include:

COMMUTE TRIP REDUCTION PROGRAMMES:

- These measures encourage commuters to use alternative modes of transport for work trips, thereby reducing congestion in the peak periods. Once the IRPTN has reached the overall network plan, it is envisioned that there will be a large shift of private vehicles to PT. Some trip reduction are particularly feasible when introduced with company based financial incentives, as an example.
- Transit improvements also form part of TDM measures.

ACCESS MANAGEMENT:

- This measure involves using both land use and transportation aspects to improve roadway design and the overall transportation network. Based on the road network classification, the number of driveways / accesses are limited, in terms of arterials and higher order mobility roads. Creating more pedestrian orientated streets also form part of this.
- An example of good access management practices would be to create cul – de- sacs for minor roads intersecting with Alan Paton Avenue. This would aid in decreasing the number of accesses onto this main road and improve mobility and traffic movement on Alan Paton Avenue. Alan Paton Avenue can also be upgraded to include painted/ curbed islands, and enhanced pedestrian infrastructure for this heavily pedestrianised environment. Pedestrians also benefit from these proposals as pedestrian mobility increases. This is described in the figure hereafter:

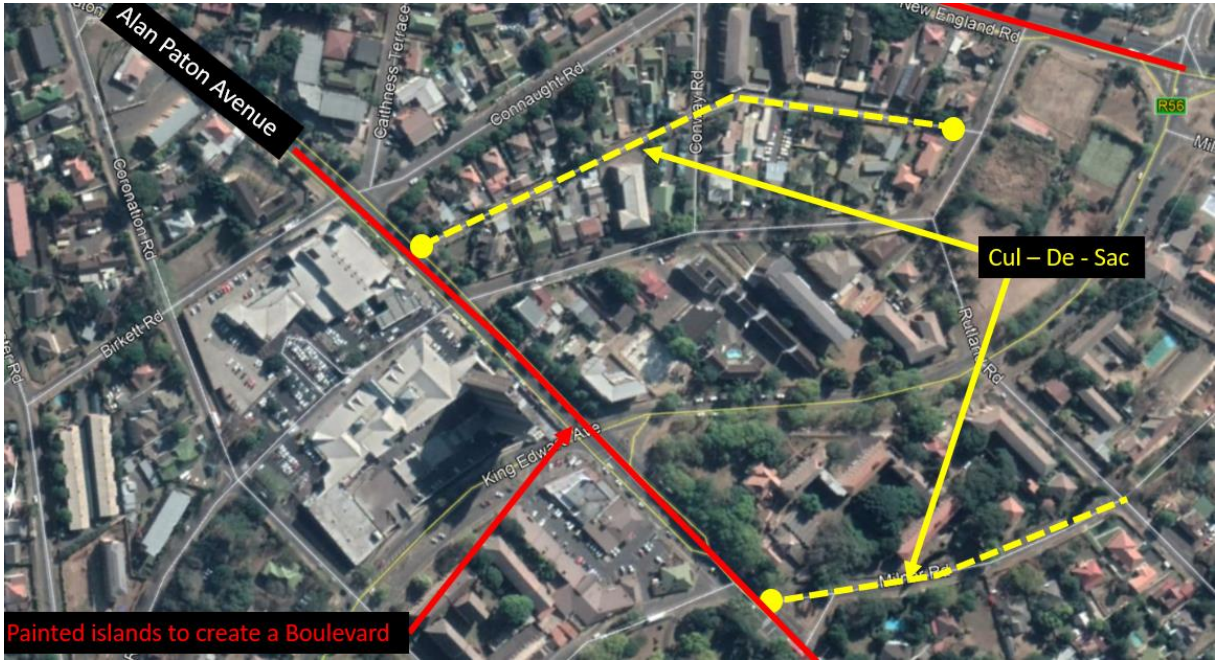


FIGURE 5-12: EXAMPLE OF GOOD ACCESS MANAGEMENT PRACTICES FOR ALAN PATON AVENUE

PARKING MANAGEMENT AND PRICING:

- Parking management is a key TDM measure that will be further discussed in Chapter 5.
- An interesting point of concern is the bus depot for DUT subsidised busses, which is located adjacent to the campus. This isn't a formalised parking zone, but rather a portion of vacant land that was used as parking. According to current observation, this portion of land is to be rezoned, to accommodate new lecture venues. The phasing and exact details of this expansion is currently unknown at this stage. It is recommended that these busses be relocated to another suitable location.

TRAFFIC CALMING AND ROUNDABOUTS:

- Traffic calming involves a range of roadway design features that reduce traffic speeds and volumes. Signal optimisation and upgrading of intersections to roundabouts increase the capacity of intersections, thereby allowing for greater vehicle movement.

CCTV

The 'Safe City' initiative is in operation in of the CBD and this should be expanded to include other areas incorporating Scottsville to enhance overall safety including pedestrian and NMT movements.

Interaction with Institutions

A forum involving the numerous and varied institutions within Scottsville is necessary to optimise traffic management and operations in the area.

5.4.5 PARKING

This chapter serves to address the transport objective of introducing a private vehicle parking system that supports existing and increased development activity, but that encourages and supports the transition to public transport and pedestrian prioritisation.

Generally parking facilities in the area under review come under pressure at specific peak periods for the various regular (e.g. school arrivals) and occasional (e.g. Comrades Marathon) events. Typically, these events are of limited duration and should if appropriately managed cause relatively minor disruptions. However, lack of integrated planning and appropriate enforcement have resulted in unnecessary inconvenience and in some instances volatile situations.

Parking Strategy

Historically, parking strategies have been handled per development, generally in isolation with little cognisance of adjacent / interacting facilities. In order to efficiently cater for parking demands, an area-wide parking strategy needs to be developed and continually maintained.

Parking Standards

Parking requirements and facilities at the major retail and institutional centres generally comply with the local standards and regulations.

However, enforcement of illegal parking is intermittent at best or at some locations non-existent. This is especially evident on Alan Paton Avenue in the vicinity of 50 Durban Road / Nedbank Plaza retail developments. Double parking at this location often leads to frustration and tensions.

Multi-use of private parking areas

The Scottsville area has numerous and varied developments ranging from large shopping malls and educational institutions through to large recreational facilities at Alexandra Park and the Scottsville Racecourse. The parking operations at these and other facilities operate largely in isolation with little or no crossover or connectivity arrangements. A strategy of sharing or combining private parking areas should be encouraged. Travel Demand Management measures can be assessed for suitability.

Parking areas adjacent to IRPTN

The implementation of the IRPTN in the area may result in additional parking facilities being required at the various transfer points. This will necessitate an assessment of requirements, subsequent to implementation of the system, based on empirical studies.

Enforcement of parking regulations

Lack of enforcement relating to parking by-laws / regulations is resulting in problematic situations. Any future plans for revisions / improvement to parking in the area are to a large extent dependant on appropriate enforcement for their success.

5.4.6 CONCLUSIONS

The Transportation Network and associated infrastructure within the Scottsville area is well established but has several shortcomings which can be addressed. This report has identified several aspects that require attention and suggests measures that can be implemented to alleviate the situation.

5.5 INFRASTRUCTURE AND SERVICES FRAMEWORK

5.5.1 OBJECTIVES

- Ensure bulk capacity for future growth in students and densification of lower density residential areas (i.e. associated with proposed public transportation routes through the area)
- Eliminate existing backlogs in ageing and problematic reticulation infrastructure
- Promote the transition to sustainable services

5.5.2 WATER SUPPLY

Existing situation

The Scottsville area has potable water supply infrastructure and receives potable water from the Msunduzi Municipality. All areas of Scottsville have access to potable water supply and, most likely, all have individual house/erf connections.

The water Infrastructure comprises of reticulations of various diameters mainly 90 to 225 mm which receive gravity supplied water from the Bisley Reservoir via the Oribi Reservoir. Various bulk supply pipelines from the reservoirs, supply the Scottsville reticulation. The reticulation pipelines are made of various materials with the much older pipes being asbestos cement (AC), cast Iron (CI) and the later pipes being uPVC or PVC or steel.

Figure 5-13 shows the Scottsville water supply network.

Adequacy of existing water supply system

The water supply reticulations are adequately sized to provide a fully developed Scottsville i.e. with all erfs exerting a water demand of at least 750 ℓ/day, with a properly functioning water supply system.

Umgeni Water treats and supplies bulk water from various sources/dams. There are no reasons to indicate that bulk water supply to Scottsville will be curtailed in the long-term.

Scottsville has an adequate and reliable potable water supply infrastructure if enough bulk water is supplied by Umgeni Water.

Challenges

The Scottsville area has a large portion of its reticulation comprising of aged clay and asbestos cement (AC) pipes. These clay and AC pipes, were laid more than 50 years ago and are susceptible to operational failures due to:

- root intrusions and;
- ease of damage either due to pressure or tensile forces.

Occasional cases of bursts/damages to these pipes are experienced in the entire area. Some of these aged pipes will eventually require replacement with more robust pipes made of materials like uPVC, HDPE, etc.

Bulk Water Infrastructure Proposal

The supply of bulk water by Umgeni Water is sufficient in the long term and any new developments in Scottsville will have access to a reliable bulk water supply. The Umgeni bulk water supply pipelines to the service reservoirs are made of more robust materials like steel, uPVC as compared to the reticulation pipelines. There are no envisaged remedial proposals for the bulk water supply.

Water Reticulation Upgrade Proposals

The clay and AC reticulation pipes will eventually need replacement. The Municipality has an ongoing pipe replacement programme for the entire Msunduzi Municipality, it has however not been established how far this programme will extend in Scottsville. The Municipality should consider having a specific pipe replacement programme for the area.

Services Alternatives

There are no envisaged better alternative bulk supply services to the current Umgeni bulk supply. The reticulation services alternatives will eventually entail clay/AC pipelines replacements, whose proposals are explained under item Water Reticulation Upgrade Proposals.

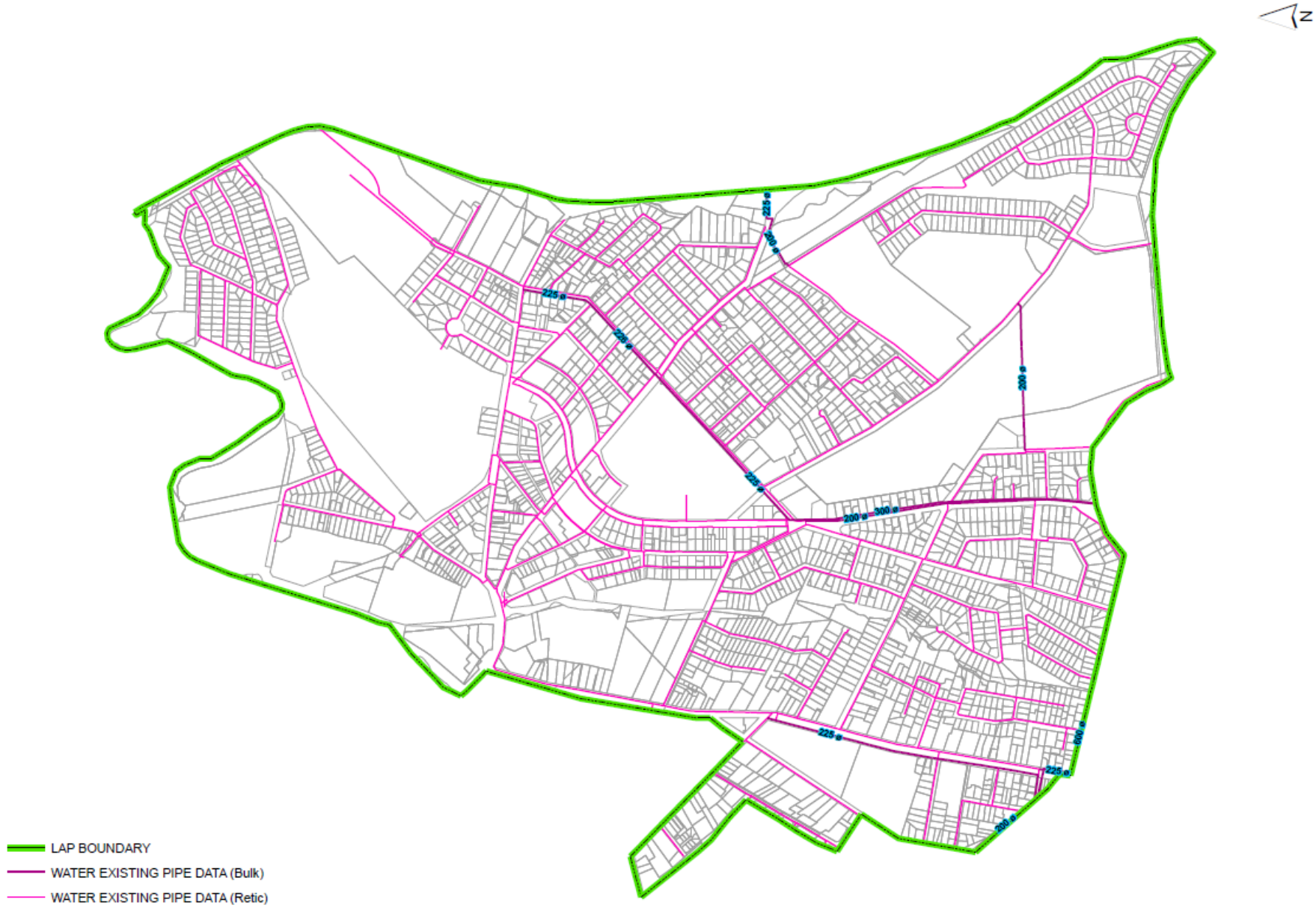


FIGURE 5-13: SCOTTSVILLE WATER INFRASTRUCTURE

5.5.3 SANITATION

Existing Sanitation System

GENERAL

The Msunduzi Municipality, through its Water and Sanitation Section provides and maintains the wastewater collection infrastructure in Scottsville. The sanitation system in Scottsville is entirely waterborne sanitation where waste is conveyed from site through a network of gravity sewers.

The reticulation sewers then discharge into a bulk Interceptor sewer, hereafter called the FoxHill Interceptor, for onward treatment at the Darvill wastewater treatment works (WWTW). (Refer to Figure 5-14). Whilst the operation of the City's Darvill Wastewater Treatment Works (WWTW) is contracted to Umgeni Water.

RETICULATION SEWERS

The existing reticulation sewers have generally been in existence for over 50 years and comprise of mostly clay/earthenware and asbestos cement pipes of various sizes from 150mm diameter to 250mm.

Most reticulation sewers are reported to be generally in good working condition. In theory, the reticulation sewers have adequate capacities to handle:

- the estimated current wastewater flows and;
- flows from a fully developed Scottsville as indicated on Figure 5-15 and Table 5-8.

Results of a detailed survey of Scottsville sewers using closed circuit TV showed that approximately 6% of the sewers have severe defects like blockages, misalignment, broken pipes, root intrusions, water infiltration, etc. and would require replacement or repairing.

Hindrances encountered on the Scottsville sewer reticulations include:

- frequent operational problems, in some few areas, in the form of sewer blockages, breakages, overflows, etc. on the following sewers:
    - 150mm diameter clay and AC sewers located on King Edward, Golf, Epworth and Topham roads;
    - Oribi Village outfall sewer. Overflow from this sewer flows into the stormwater infrastructure at the northern end of the Oribi Village;
    - 200mm sewer behind the Alexandra High School and;
    - 200/250 mm sewer on Pentrich Road. This sewer is located at the south western end just outside the study area but any overflows from it flow into the study area.
    - 250mm sewer on Rudling Road, just south of the study area. Overflow from this sewer ends downstream into the Scottsville area.
- Inadequate maintenance that has resulted in substantial silt accumulation greatly reducing the capacity of some sewers. It is estimated that the sewers have reserve capacities averaging more than 45% if they are relatively silt free.
- Illegal removal of sewer manhole covers and frames.
- The clay/earthenware pipes have the disadvantage of being prone to root intrusion making them more susceptible to breakages. These pipes will eventually require replacement over the years with more robust modern pipes made of materials like uPVC, HDPE, etc.

FOX HILL INTERCEPTOR

The Fox Hill Interceptor receives wastewater from the Scottsville reticulation sewers for onward conveyance to the Darvill WWTW. The head of the Interceptor is at Oribi Heights, just south of the Msunduzi Airport. The Interceptor sewer was commissioned in 1983 and comprises of two diameters, 450 and 750mm. (Refer to Figure 5-14: Scottsville Sewer Interceptors).

The Fox Hill Interceptor receives wastewater from the following areas: i) Bisley, ii) Msunduzi Airport, iii) Pelham Area, iv) UKZN v) Scottsville and (vi) Ridge road catchment before discharging its flows into the Edendale/Darvill Interceptor just upstream of the Ascot Inn lodge. The Edendale/ Darvill Interceptor is a 1500mm diameter sewer that finally conveys flows to the Darvill WWTW. It is the main interceptor sewer of the Msunduzi Municipality running from the western part of the Municipality in Edendale through the centre of the Municipality to the eastern side outfalling into the Darvill WWTW.

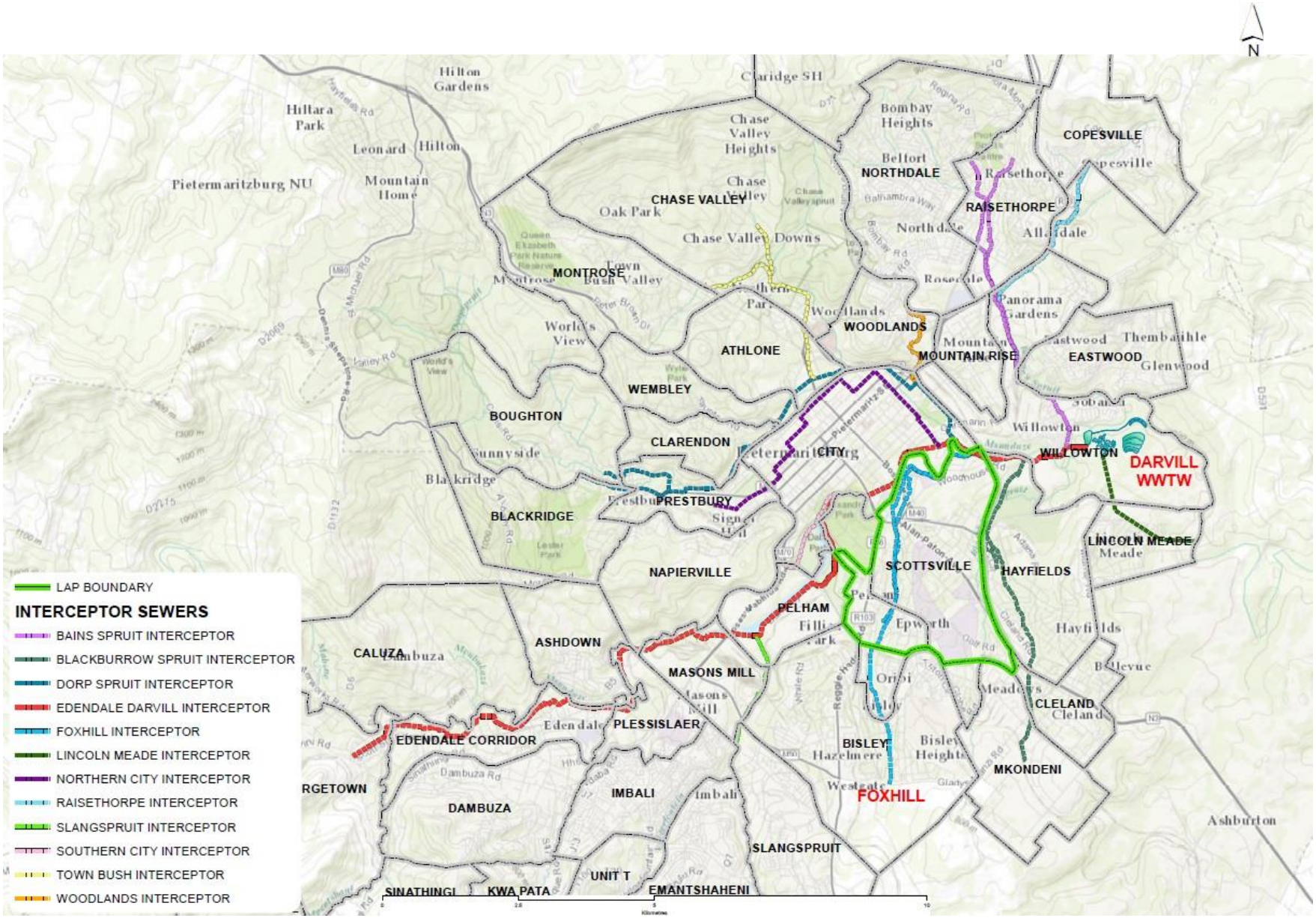


FIGURE 5-14: SCOTTSVILLE SEWER INTERCEPTORS

Estimating wastewater flows

METHODOLOGY

To assess the adequacy of the sewers, wastewater generation was estimated and compared with the theoretical hydraulic capacity of the sewers.

Estimated wastewater generation was determined using guidelines contained in:

- Human Settlement Planning and Design Book for residential areas (Red Book) and:
- eThekwini Metro's Design of foul water sewers, for Industrial and Commercial land.

The following assumptions are made in the estimation process:

- The Scottsville study area is fully developed and entirely comprises of middle-income housing, i.e. all erfs are assumed to be occupied and thus contributing to wastewater generation.
- The average household occupancy is **6** people per household/residential site. The 2012 census results show that most households are occupied by not more than two people. The adopted household occupancy rate takes into account that an increasing number of residential houses in the area are being converted into student accommodation units and the "Red Book" guidelines recommend a household occupancy rate of 6 for a fully developed area.

The flow parameters adopted in accordance with the above guidelines are:

Land use description	Estimated wastewater generation rate
Residential	750 ℓ/day
Commercial Institutions	15 000 ℓ/ha/day
Light Industrial	20 000 ℓ/ha/day

It is assumed that 75% of potable water used will end up as wastewater flow into the sewers.

The Scottville area is developed and generally it has a medium density occupation. In accordance with guidelines stated in the "Red Book" a peak factor of 4,0 is used to estimate the wastewater peak flow estimates.

WASTEWATER FLOWS

Calculated average sewage flows are listed in Table 5-8. Estimated wastewater generation for Scottsville (Refer to Figure 5-14 for sub regions) are:

TABLE 5-8: ESTIMATED WASTEWATER FLOWS

Sub Region	Development(s) (Type)	Quantities (No/ ha)	Estimated wastewater per day (ℓ/day)	Peak Flow estimates(ℓ/s)
1	Commercial	16 ha	240 000	
	Residential	100 N°	75 000	
	Sub Total (1)		**315 m³**	**14.6 ℓ/s**
2	Commercial	28 ha	420 000	
	Resident students	834 N°	125 100	
	Residential	483 N°	362 250	
	Sub Total 2		**907.35 m³**	**42.0 ℓ/s**
3	Commercial	1 ha	15 000	
	Resident students	834 N°	125 100	
	Residential	215 N°	161 250	
	Sub Total 3		**301.4 m³**	**14.0 ℓ/s**
4	Commercial	0	0,00	
	Resident students	834 N°	125 100	
	Residential	0	0,00	
	Sub Total 4		**125.1 m³**	**5.8 ℓ/s**
5	Commercial	0	0,00	
	Residential	154 N°	115 500	
	Sub Total 5		**116 m³**	**5.4 ℓ/s**
6	Commercial	0	0,00	
	Residential	278 N°	208 500	
	Sub Total		**209 m³**	**9.7 ℓ/s**
7	Commercial	2 ha	30 000	
	Residential	566 N°	424 500	
	Sub Total		**454.5 m³**	**21.0 ℓ/s**
8	Commercial	46 ha	690 000	
	Residential	164 N°	123 000	
	Sub Total		**813 m³**	**37.6 ℓ/s**
9	Commercial	0	0,00	
	Residential	128 N°	96 000	
	Sub Total		**96 m³**	**4.4 ℓ/s**

From the above estimates, the total estimated average daily wastewater generation in the Scottsville area is 3,340 m³/day (39 ℓ/s). The estimated peak flow estimate is **156 ℓ/**s.

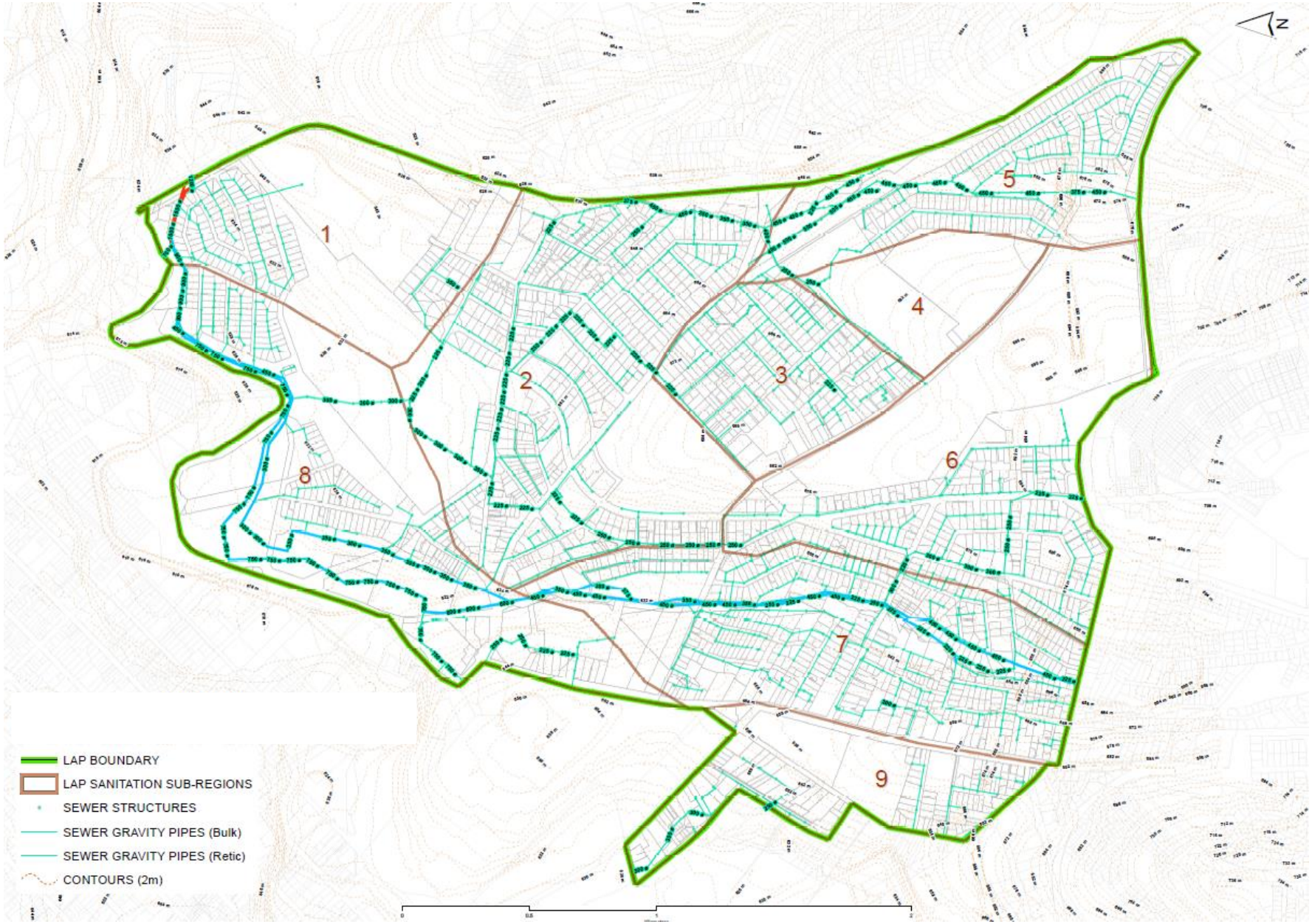


FIGURE 5-15: SCOTTSVILLE SEWER INFRASTRUCTURE

Adequacy of Existing System

TREATMENT WORKS AND DARVILL INTERCEPTOR

Sewage flows from the Municipality including the city and Scottsville reaches Darvill WWTW via the 1500mm diameter Edendale/Darvill Interceptor running along the Msunduzi river valley. This Interceptor is estimated to have a capacity of 2 000 ℓ/s. It is estimated that the current wastewater generation (AADF) for the entire Msunduzi area is approximately 83 Mℓ/d (960 ℓ/s). The Darvill Interceptor therefore appears to have sufficient capacity to handle envisaged increases of wastewater flows from Municipality areas including Scottsville.

The WWTW plant has recently undergone upgrading works to treat a design flow of 100 Mℓ/day. The estimated wastewater generation, based on a fully developed Municipality as per land use plans, of the entire Msunduzi Municipality is 83 Mℓ/d. The upgraded plant has therefore an estimated reserve capacity of approximately 20 Mℓ/d. It is assumed that any additional flow from the Scottsville area will sufficiently be accommodated by the recently upgraded WWTW.

THE FOX HILL INTERCEPTOR SEWER

The Fox Hill's interceptor's catchment comprises of approximately 3 690 low and middle-income households and 67.5 hectares of commercial land. The estimated total daily sewage generation is 3.8 Mℓ/day (44 ℓ/s) and the Interceptor comprises of 450mm and 750mm diameter sewers.

Wastewater estimates through the Interceptor are as follows:

Estimated wastewater flow (AADF)	-	3,8 Mℓ/d (44 ℓ/s) (Refer to Figure 1)
Estimated Peak flow	-	176 ℓ/s
Capacity of the Interceptor	-	more than 200 ℓ/s for moderate gradients
Reserve capacity of Interceptor (based on AADF)	-	approximately 160 ℓ/s
Reserve capacity based on a peak factor of 4.0	-	more than 25 ℓ/s

The FoxHill bulk sewer has adequate capacity to suitably convey waste flow from a fully developed Scottsville.

5.5.4 STORMWATER/ FLOOD ANALYSIS

Introduction

The Scottsville area has two rivers. These are the Fox Hill Spruit that flows through Scottsville and the Blackborough that flows along the eastern borders of Scottsville. Any stormwater flows occurring in the area would be routed through these rivers thus any possible natural flooding of the area would most likely be due to these rivers overflowing their banks. The risk of Scottsville flooding depends on the river channels accommodating and retaining the flood waters thus the ability of the river channels to contain runoff water for a given rainfall event was modelled.

Flood Modelling

Since Scottsville is a fully developed area with a number of high value properties, the 1:100-year flood event was selected as the critical food. i.e. if Scottsville rivers do not spill flood waters onto the area in a 1:100-year flood event, the flood risk is acceptable. ("Red Book" recommends a Flood RI occurrence of 50 to 100 years for high value properties).

The hydraulic behaviours of the rivers were modelled using the HEC-RAS Version 4.10 Computer programme. River geometry was obtained from GIS Models. The rivers were not physically surveyed.

As the hydraulic condition of the rivers is subject to seasonal changes, the worst expected condition i.e. when there is lush vegetation growth along the rivers is assumed for Computer Modelling. The Manning's coefficients used are:

PEAK FLOOD FLOW (FOX HILL SPRUIT

TABLE 5-9: CALCULATION FOR THE FOXHILL RIVER PEAK FLOOD FLOW

Item No	Design Parameter	Value
1	Catchment Drainage Basin as indicated on to Figure 3.25 contained in the SANRA Drainage Manual 6th Edition)	25
2	Area of the Fox Hill river Catchment (Km^2)	10.30 Km^2
3	Length of the Main Channel (L)	7.79 Km
4	Time of Concentration (T_C) $\left[\frac{0.87L^2}{1000S_v}\right]^{0.385}$	1.1341 hrs. (68.05 mins)
5	**Flood Peak Q**	**153.72 (say 154 m^3/s)**

PEAK FLOOD FLOWS (BLACKBOROUGH SPRUIT)

TABLE 5-10: CALCULATION FOR THE BLACKBOROUGH SPRUIT PEAK FLOOD FLOW

Item No	Design Parameter	Value
1	Catchment Drainage Basin as indicated on to Figure 3.25 contained in the SANRA Drainage Manual 6th Edition)	25
2	Area of the Blackborough Spruit catchment (Km^2)	7.14 Km^2
3	Length of the Main Channel (L)	4.83 Km
4	Time of Concentration (T_C) $\left[\frac{0.87L^2}{1000S_v}\right]^{0.385}$	0.924 hrs. (55.5 mins)
5	**Flood Peak Q**	**123.59 (say 124 m^3/s)**

Results of River channel analysis to accommodate floods

The Modelled peak flood flows were 154 m3/s for the Fox Hill Spruit and 124 m3/s for the Blackborough Spruit and the results show that the 1:100-year peak flood flows would be contained within the river channels.

Findings

Computer Modelling shows that Scottsville is not within the 1:100-year flood plain and does not have a significant flood risk. There is a very low risk of developments/properties in the Scottsville area to flood naturally.

The existing stormwater facilities are reported to be in acceptably good working conditions except for the facilities along the western side of Jesmond Road. This part of Scottsville experiences frequent flooding and overflows from the sewer system after/during storm events. It is apparent that there is excessive stormwater infiltration into the sewers in this area.

Stormwater Upgrade Proposals

The following remedial measures are proposed:

- Determine sources of excessive stormwater infiltration into the sewers. This should include house inspections to establish if there are properties that discharge stormwater runoff into municipal sewers.
- Carry out detailed investigations and implement recommended remedial measures to stop sewer overflows in the Jesmond Road area due to rainfall events.

5.5.5 ELECTRICITY

Msunduzi Electricity Background

The Msunduzi Electricity unit is licenced by the National Electricity Regulator of South Africa (NERSA) to supply electricity to approximately 50% of the total customer in the Municipality' area of jurisdiction and the balance which is comprised of the Greater Edendale, Imbali and Vulindlela areas is supplied by Eskom who holds the electricity distribution licence in those areas. Msunduzi Municipality purchases electricity in bulk on Megaflex Tariff from 132 000 Volts from 2 Eskom intake points with a total maximum demand of 350MVA (Msunduzi Substation = 190MVA and Mersey Substation = 160MVA).

Bulk Installation Proposals

The Scottsville area is currently supplied by the following four primary substations:

- Woodburn;
- Mkondeni;
- Hesketh;
- Riverside.

The new Eastwood Primary Substation will also service the area once it is fully operational. A portion of the load from Riverside Substation will be moved onto the Eastwood Substation.

As per the feedback from the Msunduzi Municipality Electrical Department there are no constraints in terms of electrical capacity for the area, and once the new substation is operational there will be increased flexibility for the distribution as well.

At this time there is no need for any upgrades on the bulk infrastructure supplies for the Scottsville Area as there is enough capacity and flexibility on the municipality networks

Reticulation Upgrade Proposals

The majority of the MV distribution network is made of underground cables. A high number of these cables are overloaded, which will contribute to increased electricity losses. The overloading on the cables may also lead to breakdowns/outages especially during high peak periods

The other equipment in the network such as the mini subs and the ring main units appear to be in a fair condition, however a more detailed investigation would be required to ascertain the full extent of the conditions.

The extent of the reticulation upgrades must be treated on an individual basis.

Each new development is to apply for electricity via the municipality application process. The reticulation upgrade required for that development will be quoted and defined by the municipality at that time.

There are three new developments planned for within the Scottsville area at this time. These are made up of student accommodation and a shopping centre. The possible total energy requirement will be approximately 4.5MVA,

which will be available as there are no capacity constraints, however reticulation upgrades will be required.

The typical upgrades will consist of change of cables, mini substations, distribution kiosks and protection equipment.

Depending on the on how the proposed new facilities and customers are integrated into the Scottsville area, the municipality will have to decide on an upgrade path for the electrical infrastructure in the entire area.

The sections which are critical and should be considered for upgrade, especially with regards to the medium voltage reticulation are the Alexandra, Alexandra Park, Epworth and Wensleydale sections. The proposed increase in consumers will greatly increase the electricity usage and will put further strain on infrastructure that could be old that is already being run at its maximum level.

In these areas there is also a mixture of cable types and sizes which needs to be standardised. The Woodburn Primary Substation feeds parts of Alexandra via the mini substations such as Lindup/SAP Barracks MS598, Alexandra/Lindup M61, Alexandra Topham MS1193, College/Maxims Flats MS196 and Topham/Dairy MS1179. The cable size and type fluctuates between 95mm2 Aluminium, 25mm2 Copper and 70mm2 Copper. There are various other areas with this type of concern within Scottsville. With the proposed increase in demand for electricity in the area, these scenarios need to be eradicated so as to ensure a continuous electricity supply of good quality.

Sustainable Infrastructure and Services Alternatives

The street lights in the entire Scottsville area are in an extremely poor condition. A retro fit to Solar LED street lights could be considered or alternatively a retro fit to LED street lights which will also result in savings for the municipality.

The demand for accommodation in Scottsville by students is on the increase. This has resulted in homes being converted to cater for more occupants for this student type accommodation. Solar water heating should be considered as an alternative to the traditional electric geysers.

6 PRIORITY ACTION AREAS

6.1 PRIORITY AREAS

6.1.1 SCOTTSVILLE TOWN CENTRE

This precinct will be expanded and enhanced as the "village centre" of Scottsville and will accommodate high and medium impact commercial and high impact residential development.

An urban built form is to be encouraged with an active mixed use street level supported by residential and or offices above and it will be serviced by high levels of public transport and pedestrian prioritisation and public space.

The Area will also be landscaped to reflect its role as an important gateway to the City from the N3 along New England and Alan Paton Drives and from the southern parts of the City via Alexandra Road and King David Avenue. Public Realm Upgrades to include:

- the provision of improved capacity at key traffic intersections
- redesign of Gallway and Chamberlain Road to restrict access onto Alan Paton Drive from surrounding minor roads
- improved and safe pedestrian sidewalks and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations.
- Boulevard and Avenue Planting along main routes running through the area.

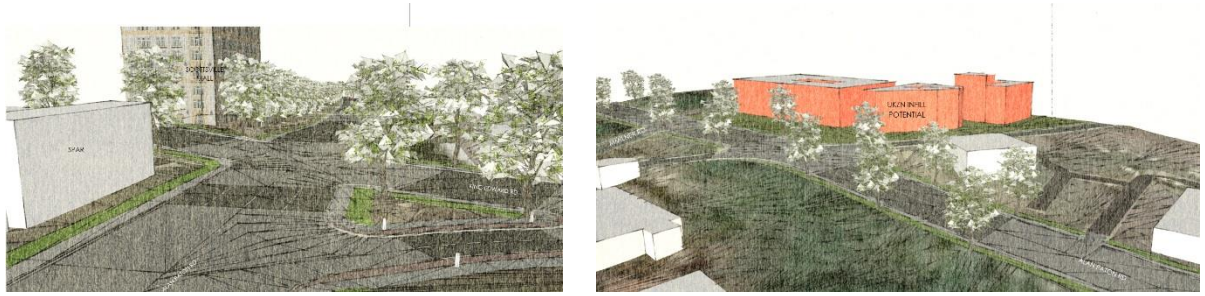


FIGURE 6-1: ARTIST'S IMPRESSION - PEDESTRIAN PRIORITISED INTERSECTION & UZN INFILL OPPORTUNITY

FIGURE 6-2: ARTIST'S IMPRESSION - SCOTTSVILLE TOWN CENTRE

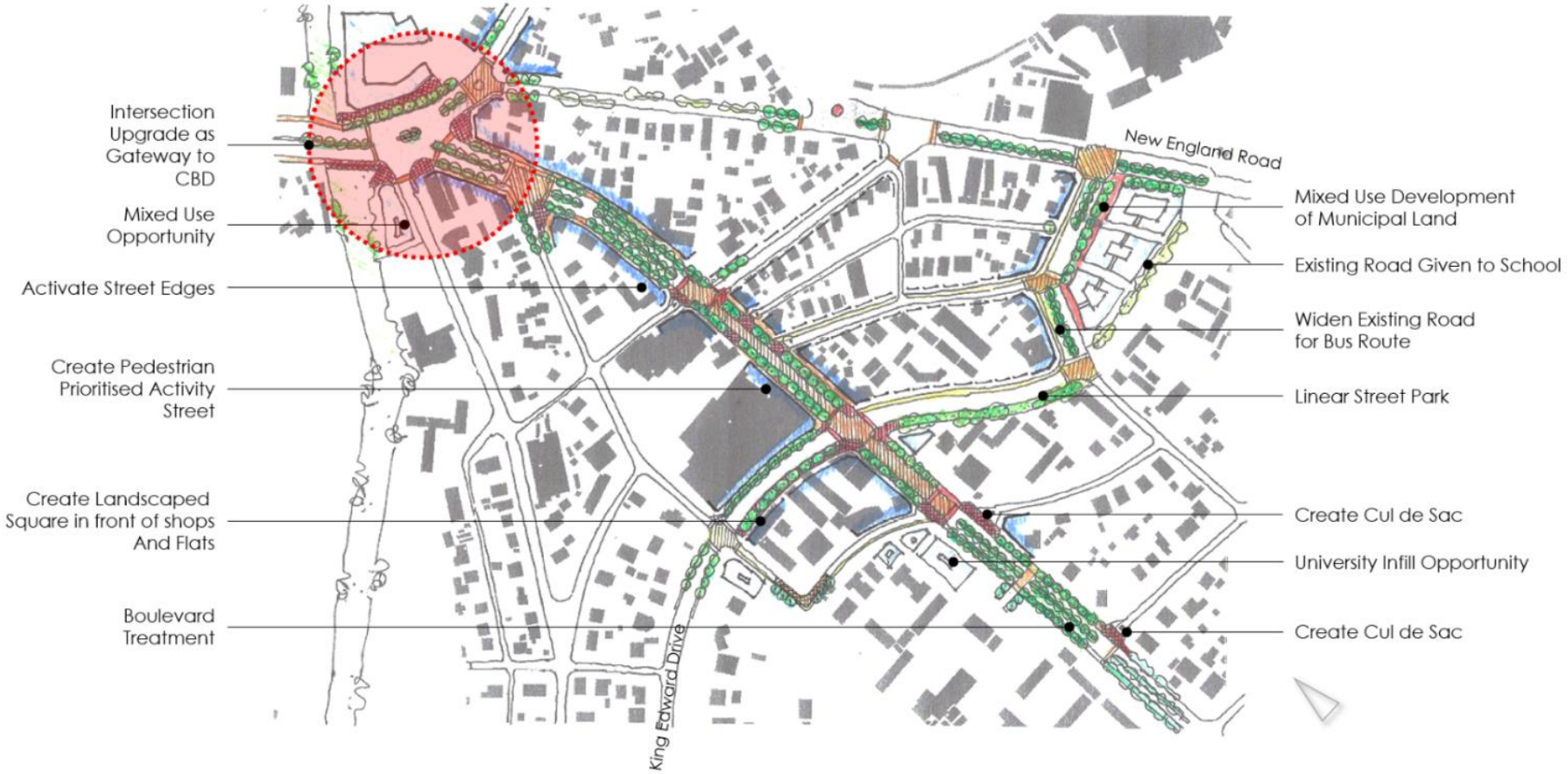


FIGURE 6-3: SCOTTSILLE TOWN CENTRE

6.1.2 KING EDWARD TOD CORRIDOR

New mixed use higher density will be used along this TOD corridor and major gateway to the City from the Pietermaritzburg Airport to deliver new accommodation and simultaneously restructure the area so as to align with SDF objectives.

Higher densities, mixed use and medium rise attached forms of building will be located along the route.

Public Realm upgrades to include:

- the provision of improved capacity at key traffic intersections
- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations along key pedestrian routes.
- Avenue Planting to determine character and identity of the route.

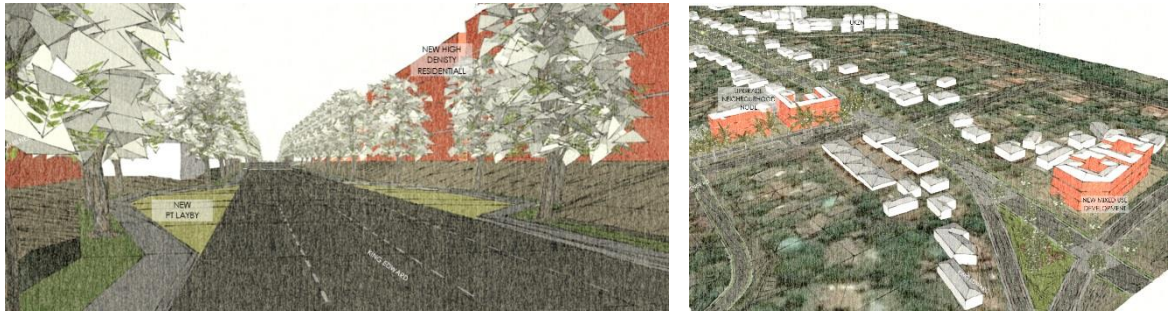


FIGURE 6-4: ARTIST'S IMPRESSION - KING EDWARD NODE & MIXED USE NODES (CNR WASHINGTON RD)

FIGURE 6-5: ARTIST'S IMPRESSION - KING EDWARD TRANSIT CORRIDOR

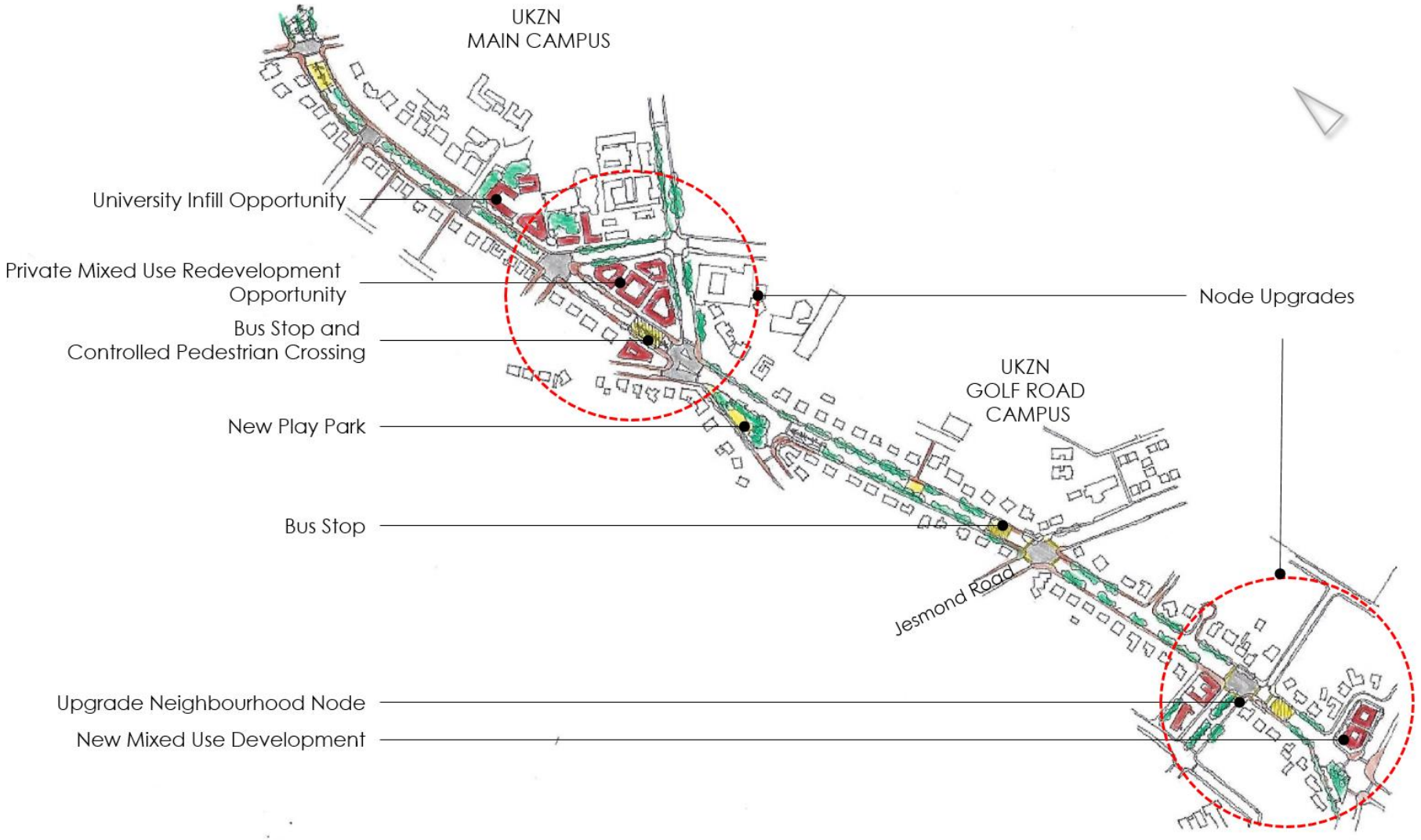


FIGURE 6-6: KING EDWARD TRANSIT CORRIDOR

6.1.3 WOODHOUSE ROAD DEVELOPMENT SITE

The vacant site along Woodhouse Road is an ideal site for a mix of local commercial, community facilities and mixed density residential. Ideally the site should accommodate a mix of permanent residential accommodation options and could accommodate student residential accommodation in line with the proposed student accommodation policy.

Net development densities of 135 units per hectare should be targeted for this site in order to accommodate changes and growth in population and to create more viable thresholds for infrastructure and public transport in line with the SDF policies of restructuring the City.

Building heights should be graduated from two stories along Woodhouse Road to four stories adjacent to the Race Course

6.1.4 IDEAS FOR KEY EDUCATION INSTITUTIONS

Additional sites that need to be explored by their respective owners include vacant land on the UKZN and DUT campuses.

FIGURE 6-7: ARTIST'S IMPRESSION - ENTRANCE TO WOODHOUSE ROAD DEVELOPMENT & INTERNAL PLAY PARK

FIGURE 6-8: ARTIST'S IMPRESSION - WOODHOUSE ROAD DEVELOPMENT SITE

FIGURE 6-9: WOODHOUSE ROAD

7 THE IMPLEMENTATION APPROACH

7.1 IMPLEMENTATION FOCUS OF THE SLAP

The SLAP's primary focus is on future spatial planning and infrastructure requirements that will ensure that the Scottsville area has both the physical capacity to accommodate change and growth, and that the relevant and adequate development management tools are in place to manage change and growth.

However, the preparation process of the SLAP has also revealed shortcomings in the day to day operation and maintenance of the area which need attention in order to accommodate change and growth.

The process has also revealed a significant lack of communication and coordination between stakeholders with respect to the management and operation of activities in the area.

Accordingly, the overall approach for implementing the proposals contained in the SLAP has two thrusts:

1) **INTEGRATED SPATIAL AND INFRASTRUCTURE PLANNING AND ENHANCED DEVELOPMENT CONTROL**
2) **INTEGRATED AND IMPROVED URBAN MANAGEMENT**

7.2 IMPLEMENTATION STRATEGIES

Four strategies have been identified.

- Strategies 1 and 2 support Integrated Spatial and Infrastructure Planning and Enhanced Development Control.
- Strategies 3 and 4 support Integrated and Improved Urban Management

7.2.1 STRATEGY 1: ALIGNING TMM SPATIAL PLANNING TOOLS

SPLUMA requires that municipal planning is regularly reviewed to ensure that it is aligned with circumstances on the ground.

In the case of Scottsville there is a need to align the planning tools available so that they are sending the same message and that they are reinforcing the overarching policy of the Long Term Development Plan of the City.

It is therefore necessary to put in place a process whereby the SDF, LAP, Town Planning Scheme and associated policies of overlays are reviewed and aligned.

Intervention S1.1 TMM SPLUMA Regulations Update

The Spatial Planning Department of the TMM should review and update the TMM SPLUMA regulations to support the concept of a package of plans and more specifically that the links between each of the various planning tools is explicit and forms an integrated set of spatial planning and development management tools.

Intervention S1.2: Align SDF Review with SLAP

The Spatial Planning Department of the TMM should ensure that the current review of the Municipality SDF takes into consideration the more detailed research and findings of the Scottsville LAP and includes them into the revised SDF.

Intervention S1.3: LAP Approval and Adoption

The Spatial Planning Department of the TMM should expedite the approval by all relevant stakeholders and Council of the Scottsville LAP so that an updated planning tool is available for evaluation of development applications as well as for interactions with other key stakeholders in the area.

Intervention S1.4: Student Accommodation Policy

The Spatial Planning Department of the TMM should prepare as a matter of urgency a Student Accommodation Policy along the lines of the recommendations contained in the Scottsville LAP.

Intervention S1.5: Town Planning Scheme Review

The Spatial Planning Department of the TMM should make immediate provision for the review of the density overlay of the TMM Town Planning Scheme to reflect the proposals of the approved LAP. It should also include an overlay which reflects the proposed policy on the development of Student Accommodation in Scottsville (and possibly in the remainder of the City). The Urban Design overlay should also be updated to include proposals form the LAP.

Intervention S1.6: Design Review Committee

Given the City's high level objective to change the structure of the City through densification, increased use of public transportation and the prioritisation of the pedestrian, it is recommended that a new management mechanism to assist in the implementation of this process be established.

The introduction of a Design Review Committee is recommended that would ensure that development applications for both private and public land adhere to the land use development and building control policies, proposals and regulations of the SDF, the LAP, Town Planning Scheme and building by laws. This will assist in ensuring that buildings and public environments are planned, designed and developed in a manner that accommodates and responds appropriately to densification and public transportation imperatives.

It is anticipated that such a Review Committee would not only serve Scottsville but the City as a whole.

The design review committee will specifically be useful for facilitating and directing:

- key catalytic investment projects
- development of proposed mixed use higher density TOD areas
- development of multi-functional spaces;
- development of quality public buildings
- development of active building edges; and
- Improvement in the integration between public and private spaces.

The members of such a capacity should include:

- TMM planning advisory committee
- Representative from Strategic Planning
- An AMAFA representative
- A practising and registered town planner
- A practising and registered urban designer
- A practising and registered architect
- A practising and registered civil engineer

7.2.2 STRATEGY 2: BUILDING THE INFRASTRUCTURE PLATFORM FOR GROWTH AND CHANGE

Basic urban infrastructure in the area is either run down and / or in some instances non-existent. Increases in population, development densities and related activity require that these deficiencies are attended to. However, in order to optimise the new investment new infrastructure should also be designed to meet changing needs and activity patterns, as well as, anticipated growth and intensification of activity levels.

Capital investment into the "capital web" (i.e. all public infrastructure, services and facilities which enhances the area's operational efficiency, safety and security, capacity and environmental quality) should be the focus.

PRECINCT UPGRADES

Intervention S2P1: Scottsville Central Public Space Upgrade

This precinct will be expanded and enhanced as the "village centre" of Scottsville and will accommodate high and medium impact commercial and high impact residential development.

An urban built form is to be encouraged with an active mixed use street level supported by residential and or offices above and it will be serviced by high levels of public transport and pedestrian prioritisation and public space.

The Area will also be landscaped to reflect its role as an important gateway to the City from the N3 along New England and Alan Paton Drives and from the southern parts of the City via Alexandra Road and King David Avenue.

A detailed design plan should be prepared for Public Realm Upgrades to include:

- the provision of improved capacity at key traffic intersections
- redesign of Gallway and Chamberlain Road to restrict access onto Alan Paton Drive from surrounding minor roads
- improved and safe pedestrian sidewalks and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations.
- Boulevard and Avenue Planting along main routes running through the area.

Intervention S2P2: Engineering Infrastructure Upgrade

The intended densification and intensification of land use and activity within the LAP area will require the upgrading of the capacity of the water, sanitation and electrical reticulation system to replace old infrastructure as well as increase capacity.

As such each of these service providers should prepare a programme of upgrades and the required infrastructural investment requirements for budgeting purposes.

- Water – undertake detailed investigation related to the upgrade of old reticulation infrastructure as per proposals in the Infrastructure and Engineering Services Framework
- Sewage Disposal – undertake detailed investigation related to the upgrade of old reticulation infrastructure as per proposals in the Infrastructure and Engineering Services Framework
- Electricity – undertake detailed investigation related to the upgrade of old reticulation infrastructure as per proposals in the Infrastructure and Engineering Services Framework
- Storm Water – undertake detailed investigation related to specific findings related to the reticulation as per proposals in the Infrastructure and Engineering Services Framework

CORRIDOR UPGRADES

Intervention S2C1: New England Road

New mixed use higher density will be used along this TOD corridor and major entrance to the City off the N3 to deliver new quality living environments and simultaneously restructure the area so as to align with SDF objectives.

Higher densities, mixed use and medium rise attached forms of building will be located along the route and a detailed design plan should be prepared for Public Realm upgrades to include:

- the provision of improved capacity at key traffic intersections
- improved and safe pedestrian sidewalks, Public transport stops and road crossings.

- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations along key pedestrian routes.
- Avenue planting to determine character and identity of the route.

Intervention S2C2: King Edward Avenue

New mixed use higher density will be used along this TOD corridor and major gateway to the City from the Pietermaritzburg Airport to deliver new quality living environments and student accommodation and simultaneously restructure the area so as to align with SDF objectives.

Higher densities, mixed use and medium rise attached forms of building will be located along the route and a detailed design plan should be prepared for Public Realm upgrades to include:

- the provision of improved capacity at key traffic intersections
- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations along key pedestrian routes.
- Avenue planting to determine character and identity of the route.

Intervention S2C3: Alexandra Road

New mixed use higher density will be used along this TOD corridor and important entrance to the City from the Greater Edendale Area to deliver new quality living environments and simultaneously restructure the area so as to align with SDF objectives.

Higher densities, mixed use and medium rise attached forms of building will be located along the route and a detailed design plan should be prepared for Public Realm upgrades to include:

- the provision of improved capacity at key traffic intersections
- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage.
- Provision of Informal Trading Kiosks with services and facilities for storage, cleaning and operation at centralised locations along key pedestrian routes.
- Avenue planting to determine character and identity of the route.

NMT UPGRADES

Intervention S2N1: Woodhouse Road

Important pedestrian link between DUT and Scottsville Centre particularly for students. A detailed design plan should be prepared for NMT upgrades to include:

- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage

Intervention S2N2: Golf Road / Lindup Road

- Important pedestrian link between UKZN Campus elements and surrounding student accommodation. A detailed design plan should be prepared for NMT upgrades to include:
- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage

Intervention S2N3: Ridge Road

Important pedestrian link connecting UKZN entrances to surrounding residential areas and public transport routes. A detailed design plan should be prepared for NMT upgrades to include:

- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage

Intervention S2N4: Surrey Road

Important pedestrian link connecting DUT to surrounding residential areas, public transport routes and Scottsville Central area. A detailed design plan should be prepared for NMT upgrades to include:

- improved and safe pedestrian sidewalks, public transport stops and road crossings.
- upgraded landscaping infrastructure, including planting, seating, paving, litter bins, lighting and signage

ENVIRONMENTAL / OPEN SPACE UPGRADES

Densification of the City will require an increasingly functional open space system to maintain the delivery of important ecosystem services and more specifically in the case of Scottsville useable recreational spaces. The following interventions go some way to supporting the City's sustainability objectives.

Intervention S2E1: Camps Drift Park

Upgrade as a City park (including the waste recycling and environmental education centre for the City see Intervention S4E6 below).

Intervention S2E2: Woodhouse Park

Establish a new park for existing residents and new residents to include seating braai facilities and ablutions.

Intervention S2E3: Fox Hill Stream Park

Establish a new park for residents to provide entrances and exits to the park, trails for cycling and jogging.

Intervention S2E4: Blackborough Steam Park

Establish a new park for residents to provide entrances and exits to the park, trails for cycling and jogging.

Intervention S2E5: Private Open Space Asset Management Guidelines

Prepare a set of guidelines that guide private and public property owners with respect to the management of their properties so that they protect and or enhance the delivery of ecosystem services

Intervention S2E6: Relocation of Waste Recycling Site

The existing waste recycling site is located on valuable land which could more efficiently be used for densification purposes. It could be relocated to a site that is within the open space system along the Msunduzi River and which could be combined with a City level Environmental Education Centre related to environmental education and waste recycling.

A feasibility study for the Education Centre and Waste Recycling Centre should be undertaken to identify the site and provide cost estimates for the set up and operation of the site.

DEVELOPMENT OPPORTUNITIES

The following projects are geared towards the utilisation of vacant or underutilised municipal owned land for projects that would accommodate changes and growth in population and to create more viable thresholds for infrastructure and public transport in line with the SDF policies of restructuring the City.

Intervention S2D1: Woodhouse Road Mixed Use Development

Development of the vacant site along Woodhouse Road for a mix of local commercial, community facilities and mixed density residential.

Intervention S2D2: Ritchie Road Mixed Use Development

Development of the existing waste recycling site along Ritchie Road for a mix of local commercial, community facilities and mixed density residential.

Intervention S2D3: King Edward Avenue Mixed Use Development

Development of the open space site along King Edward Avenue. This site would be redeveloped as part of the realignment of King Edward Avenue so as to make some land available for the Scottsville Primary School, but also for a mix of limited commercial and mixed density residential.

7.2.3 STRATEGY 3: INTEGRATED STAKEHOLDER ENGAGEMENT AND COMMUNICATION

Scottsville is a unique neighbourhood in that it is a medium density mixed use urban neighbourhood which contains an unusually high number of, and complex mix of, primary, secondary and tertiary education institutions. These institutions are key stakeholders that the TMM needs to bring into the process of managing change in Scottsville. It cannot meet all the challenges and impacts of the area on its own.

Accordingly, partnerships of value and trust must be re-established, particularly with key stakeholders, so that planning and investment and energy can be more effectively and efficiently integrated and focused. This should occur through specific targeted consultations and engagements with stakeholder groupings to resolve immediate issues and to take advantage of any "low hanging fruit". The engagements must however, become longer term vehicles for ongoing deliberations and actions and decision making to manage change in the area.

In the first instance, it will be necessary for the Municipality to take the lead through playing an active coordinating and directing role in the area. In this regard, four interventions of co-ordination should be initiated.

Intervention S3.1: Engagement with UKZN and DUT

Engagements with the UKZN and DUT should be treated as high priority and meetings between the Mayor of the City, the UKZN Vice Chancellor and the DUT Vice Chancellor as well as heads of other tertiary education institutions should take place as soon as possible.

Specific items for the agenda should include the following:

- And or which are being impacted on by the changes occurring in the institutions
- The preparation of campus plans that indicate the UKZN and DUT intentions for their land holdings and specifically their plans with regard to on campus student housing.
- Ongoing management of relevant development projects, student behaviour in the public environment

Intervention S3.2: Alignment of Municipal Stakeholders

The objective is to ensure that all municipal sectors are made fully aware of the Scottsville Local Area Plan initiative and that their respective planning and budgets reflect the intentions of the initiative.

A key focus area will be on the alignment of the IDP budgeting processes of the various sector departments with the implementation priorities and capital funding requirements outlined in the Local area Plan.

Intervention S3.3: Alignment of Other Key Public Stakeholders

All provincial and national spheres of government and parastatals should made fully aware of the Scottsville Local Area Plan and urged to align their respective planning and budgets to reflect the intentions of the initiative.

A key focus area will be the integration of housing, public facilities, transport and infrastructure improvements and alignment of budgets between relevant local and national/provincial agencies

Intervention S3.4: Coordination of Private and Community Stakeholders

A development forum consisting of key community and business sector stakeholders in the area should be established in order to confirm and communicate a common action within the Scottsville Local Area.

7.2.4 STRATEGY 4: TAKING BACK CONTROL OF THE PUBLIC ENVIRONMENT

Deteriorating public infrastructure coupled with poor citizen behaviour and inadequate law enforcement has led to the manifestation of poor quality, unsafe and unusable public spaces.

Three Interventions for taking control of the Public Environment are recommended.

- Improved Municipal Service Delivery Improvement
- Increased By Law Enforcement
- Establish a City Improvement District for Scottsville Central Precinct

Intervention S4.1: Municipal Basic Service Delivery Improvement

Basic Services delivery in the area is under pressure and in areas of high intensity activity manifests in an unkempt physical environmental character i.e. excessive litter, potholes, broken sidewalks, broken signage, unmown verges etc.

TMM needs to lead the way in improving the delivery of the services that it is responsible for in the area and it should also coordinate service delivery by other public service providers, as well as, encourage the maintenance and repair of both private and public properties e.g. fence mending, building maintenance etc.

Intervention S4.2: Improved Law Enforcement

There is inadequate enforcement of land use, traffic, informal trading and public nuisance by laws in the Scottsville area.

The TMM should initiate the coordination of all law enforcement agencies operation in the area with the objective of improving basic law enforcement as quickly as possible.

A firm commitment, followed by quick action, to improve enforcement of the Town Planning Scheme, building, traffic, business trading, littering, public nuisance and other by-laws is required from all relevant authorities in order to stamp out illegal land uses, illegal activity and traffic control issues and re-instil stakeholder confidence in the area and to ensure that the roles of the area as education hub, commercial centre and residential precinct is protected. This will also protect the TMM rates revenue form the area through the protection and or increasing of property values in the area.

Intervention S4.2: Scottsville Central City Improvement District

A City Improvement District (CID) is an ideal vehicle for ensuring that the successful urban management and maintenance of an area is achieved. It provides the Council with a single forum representing a number of stakeholders that can collectively decide on key issues that can then be actioned by the relevant Municipal Department and or CID member.

It is recommended that a City Improvement District be established in the Scottsville Central Precinct. The model is appropriate in areas where there is an active property market. The focus of the CID would be ensure increased levels of urban management and by-law enforcement in the precinct with a focus on issues of traffic management, environmental improvement and cleanliness and safety.

Under section 22 of the Municipal Property Rates Act a Special Rating Area would need to be declared, with 50% of the property owners agreeing to establish and fund the CID.

7.3 CAPITAL INVESTMENT PROGRAMME

TABLE 7-1 SCOTTSVILLE STRATEGIES AND INTERVENTIONS

PROJECT NO.	INTERVENTION	SUMMARY DESCRIPTION OF INTERVENTION	MUNICIPAL ROLE L	F	P	FUNDING SOURCE	BUDGET PHASE ONE 0-3 yrs (2020-2023)	PHASE TWO 3-9 yrs (2023-2029)	PHASE THREE 9+ yrs (2029+)	TOTAL
STRATEGY 1: ALIGNMENT OF TMM SPATIAL PLANNING TOOLS							**1 500 000**	**1 500 000**	**1 500 000**	**4 500 000**
S1.1	TMM SPLUMA Regulations Update	Update TMM SDF regulations to articulate link between SDF, LAP and Scheme	X			TMM	-	-	-	-
S1.2	Align SDF Review with SLAP	Review SDF to include outcomes of the SLAP	X			TMM	500 000	500 000	500 000	**1 500 000**
S1.3	LAP Approval and Adoption	Obtain approval of SLAP by all stakeholders and resolution of Council	X			TMM	-	-	-	-
S1.4	Student Accommodation Policy	Prepare Student Accommodation Policy	X			TMM	-	-	-	-
S1.5	T.P. Scheme Review	Review / Update relevant Scheme Overlays and clauses to reflect SLAP	X			TMM	1 000 000	1 000 000	1 000 000	**3 000 000**
S1.6	Design Review Committee	Establish Design Review Committee	X			TMM				-
STRATEGY 2: BUILDING THE INFRASTRUCTURE PLATFORM FOR CHANGE							**20 500 000**	**223 000 000**	**237 500 000**	**481 000 000**
S2P.1	Scottsville Central Public Space Upgrade	Prepare detailed design for Public Realm Upgrade	X			TMM	2 000 000	50 000 000	50 000 000	**102 000 000**
S2P.2	Engineering Infrastructure Upgrade		X				-	-	-	-
S2P.2 A	*Water*	Undertake detailed studies of reticulation infrastructure	X			TMM	1 000 000	25 000 000	25 000 000	**51 000 000**
S2P.2 B	*Sewerage*	Undertake detailed studies of reticulation infrastructure	X			TMM	1 000 000	25 000 000	25 000 000	**51 000 000**
S2P.2 C	*Electricity*	Undertake detailed studies of reticulation infrastructure	X			TMM	500 000	25 000 000	25 000 000	**50 500 000**
S2P.2 D	*Storm Water*	Undertake detailed studies of reticulation infrastructure	X			TMM	500 000	10 000 000	10 000 000	**20 500 000**
S2C.1	King Edward Corridor Upgrade	Prepare detailed design for Road Alignment and Public Realm Upgrade	X			TMM	4 000 000	20 000 000	20 000 000	**44 000 000**
S2C.2	New England Road	Prepare detailed design for Public Realm Upgrade	X			TMM	2 000 000	10 000 000	10 000 000	**22 000 000**
S2C.3	Alexandra Road	Prepare detailed design for Public Realm Upgrade	X			TMM	2 000 000	10 000 000	10 000 000	**22 000 000**
S2N.1	Woodhouse Road	Prepare detailed design for NMT Upgrade	X			TMM	1 500 000	10 000 000	10 000 000	**21 500 000**
S2N.2	Golf Road / Lindup Road	Prepare detailed design for NMT Upgrade	X			TMM	1 500 000	10 000 000	10 000 000	**21 500 000**
S2N.3	Ridge Road	Prepare detailed design for NMT Upgrade	X			TMM	1 500 000	10 000 000	10 000 000	**21 500 000**
S2N.4	Surrey Road	Prepare detailed design for NMT Upgrade	X			TMM	1 500 000	10 000 000	10 000 000	**21 500 000**
S2E.1	Camps Drift	Prepare detailed design for Park Design	X			TMM	-	750 000	7 500 000	**8 250 000**
S2E.2	Woodhouse Road	Prepare detailed design for Park Design	X			TMM	-	350 000	3 500 000	**3 850 000**
S2E.3	FoxHill Stream Park	Prepare detailed design for Park Design	X			TMM	-	350 000	3 500 000	**3 850 000**

PROJECT NO.	INTERVENTION	SUMMARY DESCRIPTION OF INTERVENTION	MUNICIPAL ROLE L	F	P	FUNDING SOURCE	BUDGET PHASE ONE 0-3 yrs (2020-2023)	PHASE TWO 3-9 yrs (2023-2029)	PHASE THREE 9+ yrs (2029+)	TOTAL
S2E.4	Blackborough Stream Park	Prepare detailed design for Park Design	X			TMM	-	200 000	2 000 000	**2 200 000**
S2E.5	Private Open Space Asset Management Guidelines	Prepare Open Space Management Guideline Document	X			TMM	-	350 000	-	**350 000**
S2E.6	Relocation of Waste Recycling Site	Prepare Feasibility Study for relocation and Education Centre	X			TMM	500 000	5 000 000	5 000 000	**10 500 000**
S2D.1	Woodhouse Road Site	Prepare feasibility Study for Mixed Use Development	X			TMM	1 000 000	-	-	**1 000 000**
S2D.2	Ritchie Road Site	Prepare feasibility Study for Mixed Use Development	X			TMM	-	1 000 000	-	**1 000 000**
S2D.3	King Edward Avenue Site	Prepare feasibility Study for Road Alignment and Mixed Use Development	X			TMM	-	-	1 000 000	**1 000 000**
STRATEGY 3: INTEGRATED ENGAGEMENT AND COMMUNICATION							**-**	**-**	**-**	**-**
S3.1	Engagement with UKZN and DUT	Set up Forum to coordinate physical and student accommodation planning	X			Mixed	-	-	-	**-**
S3.2	Alignment of Municipal Stakeholders	Internal meetings to align TMM Budgets	X			TMM	-	-	-	**-**
S3.3	Alignment of Other Key Public Stakeholders	Alignment of Intergovernmental Budgets		X		Mixed	-	-	-	**-**
S3.4	Coordination of Private and Community Stakeholders	Alignment and Briefing of non-governmental Stakeholders		X		Mixed	-	-	-	**-**
STRATEGY 4: TAKING BACK CONTROL OF THE PUBLIC ENVIRONMENT							**1 000 000**	**1 000 000**	**1 000 000**	**3 000 000**
S4.1	Municipal Basic Service Delivery Improvement	Initiate programme to improve and coordinate service delivery across all service providers	X			TMM	-	-	-	**-**
S4.2	Improved Law Enforcement	Initiate TMM programme to improve and coordinate law enforcement	X	X		Mixed	-	-	-	**-**
S4.3	Scottsville Central City Improvement Precinct (SCUIP)	Establish SCUIP to augment management of the precinct		X		Mixed	1 000 000	1 000 000	1 000 000	**3 000 000**
							23 000 000	**225 500 000**	**240 000 000**	**488 500 000**

L: Lead
F: Facilitate
P: Promote

STRATEGY 1:
ALIGNMNET OF SPATIAL PLANNING TOOLS

- S1.1 TMM SPLUMA Regulations Update
- S1.2 Align SDF Review with SLAP
- S1.3 LAP Approval and Adoption
- S1.4 Student Accommodation Policy
- S1.5 T.P. Scheme Review
- S1.6 Design Review Committee

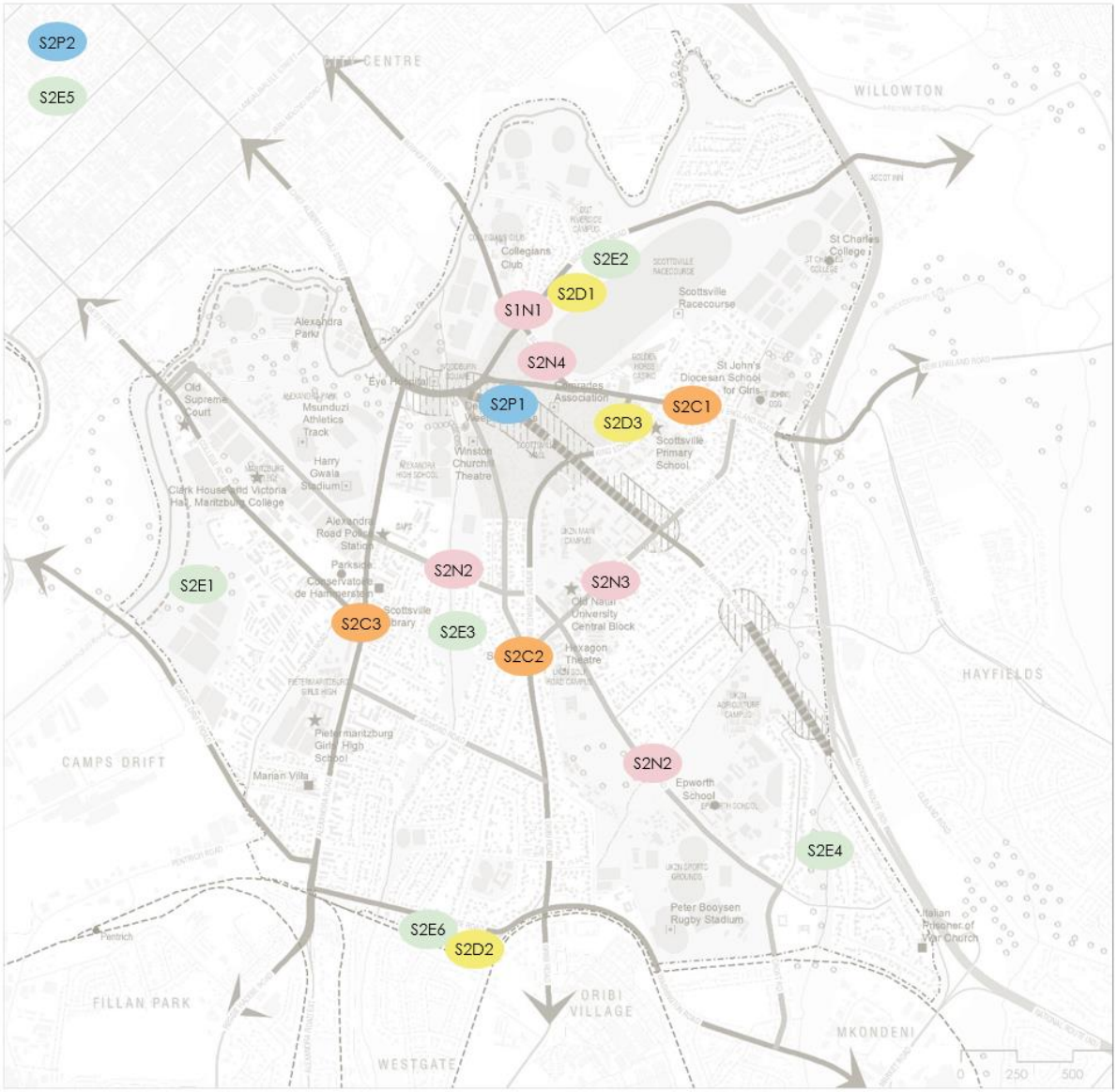
STRATEGY 3:
INTEGRATED ENGAGEMENT AND COMMUNICATION

- S3.1 Engagement with UKZN and DUT
- S3.2 Alignment of Municipal Stakeholders
- S3.3 Alignment of Other Key Public Stakeholders
- S3.4 Coordination of Private and Community Stakeholders

STRATEGY 4: TAKING BACK CONTROL
OF THE PUBLIC ENVIRONMENT

- S4.1 Municipal Basic Service Delivery Improvement
- S4.2 Improved Law Enforcement
- S4.3 Scottsville City Improvement Precinct (SCUIP)

FIGURE 7-1: STRATEGIES 1 - 4 APPLICABLE TO STUDY AREA & TMM



PRECINCT UPGRADES

- S2P1 Scottsville Central Public Space Upgrade
- S2P2 Engineering Infrastructure Upgrade

CORRIDOR UPGRADES

- S2C1 New England Road
- S2C2 King Edward Avenue
- S2C3 Alexandra Road

NMT UPGRADES

- S1N1 Woodhouse Road
- S2N2 Golf / Lindup Road
- S2N3 Ridge Rad
- S2N4 Surrey Road

ENVIRONMENTAL / OPEN SPACE UPGRADES

- S2E1 Camps Drift Park
- S2E2 Woodhouse Park
- S2E3 Fox Hill Stream Park
- S2E4 Blackborough Steam Park
- S2E5 Private Open Space Asset Management Guidelines
- S2E6 Relocation of Waste Recycling Site

DEVELOPMENT OPPORTUNITIES

- S2D1 Woodhouse Road Mixed Use Development
- S2D2 Ritchie Road Mixed Use Development
- S2D3 King Edward Avenue Mixed Use Development

FIGURE 7-2: STRATEGY 2: SPATIAL LOCATION OF PROJECTS

8 MONITORING & EVALUATION

8.1 WHY MONITORING & REVIEW IS REQUIRED

The SLAP is not a blueprint for development and the implementation thereof, must be able to respond to changing circumstances in order to remain responsive and relevant.

Changing dynamics will be related, in the short term to outcomes of the administration process that TMM is currently under, and in the longer term, to changes within the policy environment, development pressures and/or changing political priorities and indeed to responses to outcomes of the Local Area Plan itself.

These changes and their impacts will need to be managed through a coherent monitoring and review system. Monitoring and Review is a process by which the success of a strategy or plan is assessed, evaluated and adapted using key performance indicators (KPI's) that measure planning and development objectives. Review is the process that adapts, where necessary the strategies, plans and programmes to respond to the changing circumstances.

8.1.1 MONITORING

The monitoring system proposed for SLAP focuses on:

- ensuring the adoption of the Local Area Plan by the Municipality
- the implementation of the Local Area Plan and its strategies and policies by both the public and private sectors
- the impact of the plan on achieving its desired effects in terms of the type, form, rate and impact of growth
- achieving the strategic priorities set by Msunduzi Municipality Policy Framework to deliver against its vision

The key performance areas, objectives and targets for the implementation of the CBD Core Plan are outlined in. These provide high level indicators for monitoring the initialisation of the various programmes of the CBD Core Plan.

TABLE 8-1: KEY PERFORMANCE INDICATORS

NO	PROPOSED INTERENTION	KEY PERFORMANCE INDICATOR
STRATEGY 1: ALIGNMENT OF TMM SPATIAL PLANNING TOOLS		
S1.1	TMM SPLUMA Regulations Update	Adoption of an updated TMM SPLUMA By Law and Regulations that articulate the link between the SDF, LAPs and the Land Management System of the Municipality
S1.2	Align SDF Review with SLAP	Adoption of a revised SDF that takes cognisance of local area level planning in the refinement of various SDF spatial policy directives i.e. the Densification corridors
S1.3	LAP Approval and Adoption	Adoption of SLAP by all stakeholders and resolution of Council
S1.4	Student Accommodation Policy	Adoption of a Student Accommodation Policy for TMM
S1.5	T.P. Scheme Review	Adoption of Reviewed / Updated Scheme Overlays and clauses to reflect SLAP directives
S1.6	Design Review Committee	Establishment of Design Review Committee
STRATEGY 2: BUILDING THE INFRASTRUCTURE PLATFORM FOR CHANGE		
S2P.1	Scottsville Central Public Space Upgrade	Appointment of consultants to prepare detailed design for Public Realm Upgrade
S2P.2	Engineering Infrastructure Upgrade	Appointment of consultants to undertake various detailed studies of reticulation infrastructure

N0	PROPOSED INTERENTION	KEY PERFORMANCE INDICATOR
S2C.1	King Edward Corridor Upgrade	Appointment of consultants to prepare detailed design for Road Alignment and Public Realm Upgrade
S2C.2	New England Road	Appointment of consultants to prepare detailed design for Public Realm Upgrade
S2C.3	Alexandra Road	Appointment of consultants to prepare detailed design for Public Realm Upgrade
S2N.1	Woodhouse Road	Appointment of consultants to prepare detailed design for NMT Upgrade
S2N.2	Golf Road / Lindup Road	Appointment of consultants to prepare detailed design for Public Realm Upgrade
S2N.3	Ridge Road	Appointment of consultants to prepare detailed design for NMT Upgrade
S2N.4	Surrey Road	Appointment of consultants to prepare detailed design for Public Realm Upgrade
S2E.1	Camps Drift	Appointment of consultants to prepare detailed design for Park Design
S2E.2	Woodhouse Road	Appointment of consultants to prepare detailed design for Park Design
S2E.3	FoxHill Stream Park	Appointment of consultants to prepare detailed design for Park Design
S2E.4	Blackborough Stream Park	Appointment of consultants to prepare detailed design for Park Design
S2E.5	Private Open Space Asset Management Guidelines	Adoption of Open Space Management Guideline Document
S2E.6	Relocation of Waste Recycling Site	Appointment of consultants to prepare Feasibility Study for relocation and Education Centre
S2D.1	Woodhouse Road Site	Appointment of consultants to prepare feasibility Study for Mixed Use Development
S2D.2	Ritchie Road Site	Appointment of consultants to prepare feasibility Study for Mixed Use Development
S2D.3	King Edward Avenue Site	Prepare feasibility Study for Road Alignment and Mixed Use Development

N0	PROPOSED INTERENTION	KEY PERFORMANCE INDICATOR
STRATEGY 3: INTEGRATED ENGAGEMENT AND COMMUNICATION		
S3.1	Engagement with UKZN and DUT	Establishment of up Forum to coordinate physical and student accommodation planning
S3.2	Alignment of Municipal Stakeholders	Adoption of proposed projects in SLAP in the SDBIP and MTEF of TMM
S3.3	Alignment of Other Key Public Stakeholders	A Adoption of proposed projects in relevant Intergovernmental Budgets
S3.4	Coordination of Private and Community Stakeholders	Record of meetings between TMM and Private and Community Stakeholders
STRATEGY 4: TAKING BACK CONTROL OF THE PUBLIC ENVIRONMENT		
S4.1	Municipal Basic Service Delivery Improvement	Benchmark current service levels in the area Implementation Basic Service Delivery monitoring against benchmark
S4.2	Improved Law Enforcement	Establish a TMM programme to improve and coordinate law enforcement
S4.3	Scottsville Central City Improvement Precinct (SCUIP)	Establish SCUIP to augment management of the precinct

8.1.2 REVIEW

The review of the Local Area Plan is the responsibility of the Msunduzi Municipality's Planning Department in conjunction with other municipal departments and in consultation with public and private stakeholders.

Whilst monitoring is ongoing, the review of the plan should occur every five (5) years. Any form of review must be based on the assessment of the plan according to the KPAs adopted to monitor the LAP.

During the review process for the LAP, it may be necessary to review the need for the proposed projects or to consider additional projects that address changing requirements in the area.

The review of existing projects or the introduction of additional projects will need to be assessed against their ability to address the strategic objectives, KPAs and targets outlined in Table 8-1: Key Performance Indicators.

9 REFERENCES

9.1 REFERENCE MATERIAL

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Cooperative Governance and Traditional Affairs (2019) **The Integrated Urban Development Framework (IUDF),** www.cogta.gov.za/?programmes=the-integrated-urban-development-framework-iudf

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University of KwaZulu-Natal (2017) **Strategic Plan: 2017-2021**

University of KwaZulu-Natal (2019**) Pietermaritzburg Campus Management Forum Minutes,** 13 May 2019

9.2 PERSONAL COMMUNICATION

Meeting with TMM LUMS Department (17 May 2019)

Meeting with Dr Peter Green - Scottsville Ratepayers Association (4 June 2019)

Meeting with Cllr Mkhize - Ward 33 Councillor (4 June 2019

Meeting with Cllr Winterbach - Ward 36 Councillor (4 June 2019)

Meeting with Mr Chagi - UKZN Student Residence Affairs (4 June 2019)

Meeting with Mr Khanyile - UKZN Campus Management Services (4 June 2019)

Email from Mr Werner Swart – Varsity College Business Development Manager (7 June 2019)

Email from Ms Maureen Kivits - Director of Operations & Complex GM - Golden Horse (13 June 2019)

Email from Ms Kusthuri Chetty – UKZN Sports Administration (10 June 2019)

Email from Mr Simon Moore – Principal St Johns DSG (18 June 2019)

Telephone Conversation with Mr Michel Nairac – CEO of Gold Circle

Workshop with Stakeholders Forum (1 August 2019)

9.3 DATASETS

Scottsville Ratepayers Association **20190606_Boarding House List March 2019.xlsx**

Scottsville Ratepayers Association **20190606_Boarding Houses List.xlsx**

Scottsville Ratepayers Association **20190606_ Digs Data Base.xlsx**

Scottsville Ratepayers Association **20190606_List of Digs in Scottsville.xlsx**

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The Msunduzi Municipality **20180226_Consents Register.doc**

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