

CATO RIDGE LAND RELEASE AND DEVELOPMENT

ECONOMIC STUDY

Report Prepared For:

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EXECUTIVE SUMMARY

Due to the limited availability of industrial land suitable for development in the eThekweni region, vacant and developable industrial land has become a strategic resource. Considering the limited amount of land available for industrial expansion, eThekweni's Outer West Region is identified by local and regional planning policy as a strategic region capable of facilitating future industrial and logistics growth due to its access to the N3 logistics corridor and undeveloped industrial land. The region is, according to the eThekweni Industrial Spatial Strategy, under-developed in terms of its industrial capability with and can offer an alternative industrial orientated investment opportunity that can build on the established industrial nodes already present in Durban and its immediate surrounds.

Based on an assessment of alternative locations in eThekweni, the Outer West, and Cato Ridge, it has been determined that the proposed development site is well positioned to address the strategic narrative of logistics-oriented development in Cato Ridge and there are no other locations that are immediately accessible.

Cato Ridge as a node in the Outer West Region forms part of eThekweni's development drive to unlock and develop opportunities along the SIP2 (N3 corridor between Durban and Gauteng) corridor. Cato Ridge has specifically been identified by the City as a catalyst for industrial and logistics orientated development because of the potential the location has to act as a dry port facility or as a location that can provide access to zoned industrial land. The Cato Ridge node is furthermore also considered to be an investment location that should be targeted by public and private sector actors as an economic driver. By extension, Cato Ridge and its industrial development opportunities could also act as a mechanism for development in the broader Outer West Region, specifically in the Mpumalanga and Hammarsdale areas.

Because of the strategic significance of the Outer West Region and Cato Ridge in particular, the development opportunity the area offers (manufacturing, warehousing, and logistics) has provincial and national impact potential. From a logistics perspective, national and provincial planning policy identify the significance and importance of the sector as a primary enabler of economic growth and development. The KwaZulu-Natal Growth and Development Strategy

seeks to build on the comparative advantage the province has in terms of its logistics and transport infrastructure in order to facilitate sustained long-term economic growth as a platform for socio-economic development. Cato Ridge and its immediate surrounds form part of the priority economic areas of the province. The National Development Plan also targets sustained economic growth by focussing on strategic infrastructure projects such as SIP 2 along the N3 highway.

The Industrial Policy Action Plan and South Africa Country Investment Strategy furthermore acknowledges the need and requirement of logistics as a backbone for economic growth and development whereby competitiveness of economic functions, regional growth, socio-economic development, and sustained development are supported by a logistics and transport network. The Medium-Term Expenditure Framework seeks to build upon and expand transport infrastructure and logistics operations as a means to facilitate overall economic growth, industrialisation and exports.

The strategic notions encapsulated by local, provincial, and national planning policy suggest that transport and logistics functions are a core development focus for the country's future economic and socio-economic growth. This is especially true within the context of eThekweni and its economic function as a national logistics node. The Port of Durban is facing growth constraints because of the limited expansion capability of immediate industrial and logistics nodes and as a result, economic growth fuelled by logistics and transport is subdued.

The Cato Ridge development assessed by this economic report could add to the logistics capability of the eThekweni economy and could actively address the strategic economic directives identified by local, provincial, and national planning policy (as previously discussed). The proposed development is situated on available and zoned industrial land in Cato Ridge which is identified by local strategic planning policy as a potential development opportunity for logistics and industrial activity. Overarching, the proposed development could actively engage with the desired economic growth trajectory of the city and could as a result impact on the social context within its immediate area of influence.

The socio-economic profile of residents residing within the primary market area of the proposed development identifies that between 40% and 45% of the local

economically active population are unemployed and that the Outer West local economy only absorbs approximately 445 economically active people into the local workforce per year. The data suggests that on average more than 2 000 people become unemployed in the local economy and market area per year because of the condensed economic opportunities available in the local economy. Hence, the labour absorption gap continually increases and as a result of the segment of households that fall within the low-income band continually expands. The afore mentioned aspects have wide range of socio-economic implications and the capability of households to sustain livelihoods become ever increasingly difficult.

The proposed development could have profound economic and socio-economic impacts. From an economic perspective, the proposed development's R9.8 billion capital investment during its construction phase (5- to 20-years) could in total stimulate more than 30 114 temporary employment opportunities throughout the KwaZulu-Natal provincial economy and more than R8.4 billion in additional GDP economy-wide.

During the project's operational phase, nearly 23 000 new employment opportunities could be sustained annually throughout the KwaZulu-Natal provincial economy at the project's maturity (initial data suggests that operational revenue at the project's maturity could reach R10.4 billion per annum at 2022 prices). On site jobs could represent up to 60% of jobs created. The project could also stimulate new enterprise development, increased fiscal taxation (R2.2 billion annual taxation throughout the provincial economy and more than R395 million in property taxes) and require investment into social amenities.

From a socio-economic perspective the proposed project could contribute to job creation and an increase in the livelihood of local and regional beneficiaries of direct and indirect employment opportunities. Increased livelihoods could stimulate the need for social amenities and other property market development opportunities such as retail, residential and services projects.

An economic-cost benefit analysis revealed that the proposed project could also contribute to the overall welfare of society. The CBA weighed the costs and benefits of two uses, i.e. vacant land and logistics and warehousing development, against each other. Each option/scenario provides a different perspective on the benefits and costs associated with using the development site. For instance, the visual properties of the site coupled with environmental

attributes such as ecology and carbon storing offer a benefit to the local community whereas a logistics and warehousing orientated development affords the local community employment opportunities, livelihood upgrades, decongestion of roadways, less accidents, less pollution, time cost savings, etc.

The CBA suggests that, although both scenarios have a positive effect on the local community an Between 40% and 45% d affords a net benefit in terms of localised resources, the construction and operation of a logistics and warehouse development would create the most meaningful benefit to the local community and its resources.

The aforementioned data therefore suggests that the project offers a strategic opportunity to engage with, and contribute to, forward-looking economic and socio-economic growth by actively engaging with local, provincial and national planning policy. The socio-economic context within which the proposed development will be constructed can be afforded a range of benefits as a result of increased access to job opportunities and the prospects of further sustained economic growth. External factors such as a reduction of accidents, a reduction in emissions, life expectancy increases, increased value of time and limiting congestion further contribute to the overall welfare society could enjoy as a result of the project.

Overall, the project could positively contribute to the expansion of the economy and because of the logistics orientated nature of the development could contribute to opportunities to sustain economic growth and socio-economic development.

Cato Ridge Development	
	Average Annual Local Economy Growth Rate (2011 to 2021) 1.5% (all sectors)
	Labour Absorption Rate 17.5% of new economically active people since 2011 found employment locally 83.5% of employment is formal
	Demographic Profiling 70.7% aged 34 and younger 7.5% of people moved into the area since 2011 R6 732 average monthly household income 49.3% of households can be classified as indigent
	CAPEX = R9.8 billion OPEX = R10.4 billion
	Development Type = Industry, warehousing, and logistics
	Additional Annual Business Sales R20.6 billion
	Additional Annual GDP R8.0 billion
	Created and Sustained Additional Formal Employment 17 868 jobs Skilled Formal Jobs = 4 121 jobs Semi-Skilled Formal Jobs = 9 650 jobs Low-Skilled Formal Jobs = 4 097 jobs
Quantitative Impact Analysis – Operational Phase (Total Impact – Provincial) The proposed development could create economic impacts throughout the provincial economy. Most notably, the construction phase primarily impacts the construction, trade, transport and storage and financial services sectors. The operational phase generates economic impacts throughout the provincial economy and primarily influences trade, financial services, business services and the manufacturing of textiles, beverages and tobacco and wood products. These impacts are economy-wide, i.e., distributed throughout the provincial economy.	

Cato Ridge Development

Base Case Scenario (property remains undeveloped)

R3 627 367 Net Present Value

0% Economic Rate of Return

1.387 Benefit-Cost Ratio

Project Implementation Scenario (property remains undeveloped)

R5 451 449 833 Net Present Value

20% Economic Rate of Return

1.466 Benefit-Cost Ratio



Economic Cost-Benefit Analysis

The data shows that the base case scenario offers a positive NPV and a BCR of 1.387. Comparatively, the project implementation scenario also boasts a positive NPV. The project implementation scenario has an ERR of 20%. The ERR is greater than the ECC (10%) indicating that the project offers an overall benefit to society and that the gains of the scenario are more than the benchmark expected return.

The BCR of the project implementation scenario is greater than that of the base case scenario, i.e., 1.466 compared to 1.387 respectively. Therefore, the indicator suggests a positive relationship between net present costs/benefits. The project implementation scenario has an ERR greater than the ECC and a positive NPV. The data shows that the project implementation scenario offers greater benefits to the local community than the base case scenario. Therefore, the project implementation scenario offers a social benefit and is the preferred scenario for the project site.



1 INTRODUCTION AND PROJECT OVERVIEW

1.1 INTRODUCTION

DEMACON Market Studies have been appointed by Zutari (Pty) Ltd (Environmental Assessment Practitioner) to undertake an **economic study** as part of a broader environmental impact assessment (EIA) of a land development and release project that the Cato Ridge Development Company Ltd (CRDC) and Assmang (Pty) (Assmang) proposes to initiate in the Cato Ridge area of the eThekweni Metropolitan Municipality.

The purpose of the economic study is to provide an assessment of the overarching economic opportunity that arises from the implementation of the proposed development and, assists with defining the need and desirability of the project. The economic assessment furthermore contributes to the identification of alternative development opportunities that can be considered and provides a platform through which pertinent and noteworthy economic impacts can be identified.

According to the Terms of Reference the **objectives of the economic study** are to:

- Guide the development proposal both in terms of design and phasing to maximise net societal benefit.
- Identify and quantify economic (micro and macro) impacts and benefits related to the proposed development in terms of:
 - Baseline economic analysis (demographics, employment, income, trends, labour market etc.)
 - Revenue Generation (including Employment, Government, GDP-R, Households)
 - Primary and Secondary revenue streams (incl. cumulative)
 - Value of project over the life cycle.
- Provide early identification of negative economic impacts (such as opportunity costs, distortions, and externalities) and the preliminary assessment of their likely implications i.e., potential fatal flaws and steer the project towards greater economic acceptability thus minimising the need for reactive changes later on.
- Identification of key economic issues and the determination of those that require further impact assessment in the EIA phase. This should be based on the outcomes of consultation with relevant authorities to date (included in DSR).

- Provide recommendations to mitigate negative impacts and optimise or enhance economic benefits.

Furthermore, the Terms of Reference indicate that **the economic study should include** the following aspects:

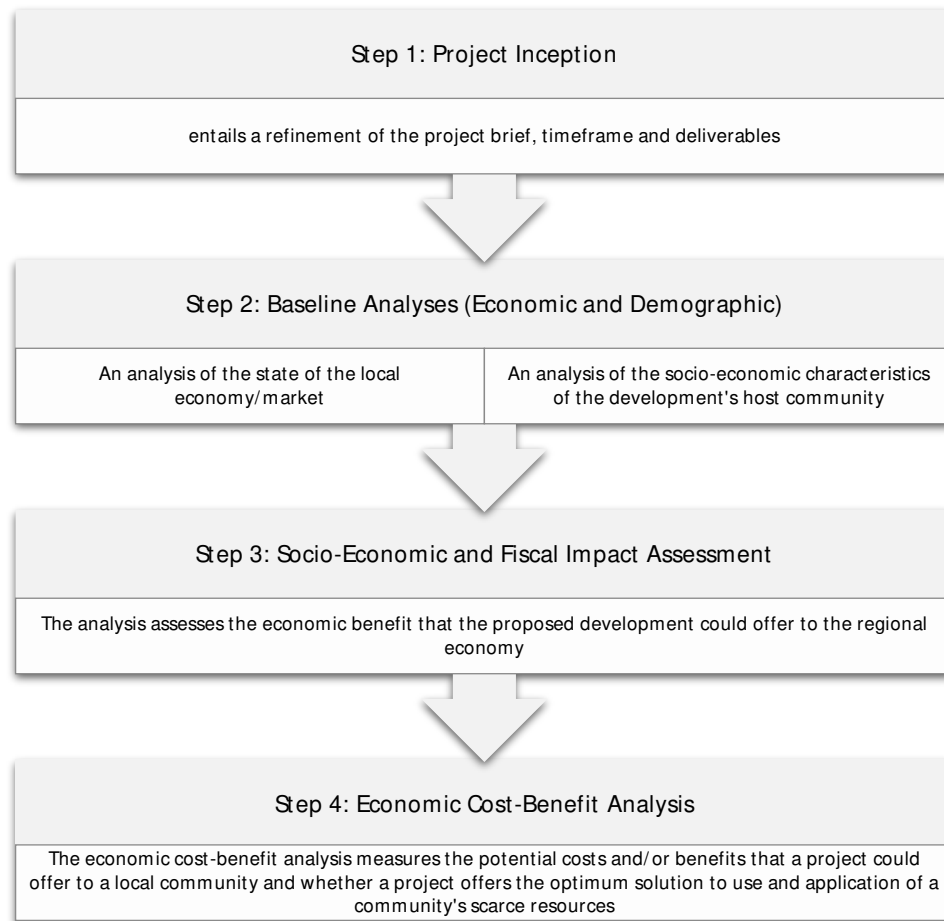
- Financial viability of the project (to be obtained from the client).
- Distortions that lead to financial viability but are not to the benefit of wider society creating a false 'viability' when seen from a broader perspective.
- Environmental externalities that are not accounted for in costs and benefits.
- Degree of fit with development planning in the Cato Ridge area i.e., does the project compliment economic and spatial plans.
- Linkage effects that allow a project to generate added benefits in the form of employment, incomes, or increased production.
- Economic risks (i.e., whether the project has the potential to change exchange rates, interest rates or local factor and product prices).
- Assessment of the proposed alternative designs and layouts as presented in the DSR, including assessment of the "no-go" alternative.
- A preliminary impact assessment based on the identified impacts in line with the Zutari impact assessment methodology (Annexure 1).
- A cost-benefit analysis (CBA) for identified alternatives.
- A statement regarding the overall socioeconomic justification for the preferred alternative i.e., the need and desirability, socio-economic gain, and whether there are viable alternatives that meet the same objective.

The economic study therefore seeks to provide a constructive overview of the economic opportunity that the proposed development offers to the economy and the socio-economic gain that the opportunity, or its alternatives, could offer to local and immediate communities.

1.2 RESEARCH METHODOLOGY

In light of the preceding contextual background and objectives of the study, a research methodology is employed to guide the overall economic assessment of the proposed development. The methodology consists of four steps that provide key analyses and outcomes that inform the economic assessment and ultimately seeks to address the objectives and outcomes of the project's Terms of Reference.

Diagram 1.1: Project Research Methodology



Step 1: Project Inception

- Entails a refinement of the project brief, timeframe, and deliverables. Relevant base data and documents will be collated, and project specific detail acquired from the client

Step 2: Baseline Analyses (Economic and Demographic)

- Includes a trade area-based analysis of economic and demographic components
- Local Economic Profile and Drivers
 - Economic indicators that will be utilised to reflect the state of the local market may include, in time series format, inter alia:
 - economic base
 - economic growth trends and drivers
 - sector profiling (including employment sectoral profile)
 - labour absorption, etc.)
- Trade Area Based Demographic Indicators
 - population size & growth (including population & residential growth mapping)
 - density mapping
 - household size distribution and weighted average
 - age profile (age pyramid)
 - level of education
 - levels of employment and unemployment
 - occupation profile
 - primary mode of transport
 - household income profile and weighted average (including affordability levels)
 - dominant dwelling type & tenure status
 - Socio-Economic Measure model (SEM) & Mapping, etc.

Step 3: Socio-Economic and Fiscal Impact Assessment

- Determining the economic multiplier effects of the construction and operation of a proposed development in order to identify the quantitative socio-economic impacts of the project on the economy and aspects of the community
- The model makes use of a scientifically acceptable fiscal and socio-economic impact assessment model developed by DEMACON

Step 4: Economic Cost-Benefit Analysis

- To assess the economic impact that the proposed development could have on society by making use of a Cost-Benefit Analysis model

developed by DEMACON in line with local and international best practice.

- The model, in essence, seeks to quantitatively measure identified economic costs and/or benefits that the proposed project could have on society and whether the project, through the computation of an Economic Net Present Value, Economic Rate of Return and Cost-Benefit Ratio actively could contribute to the strategic use and/or management of society's scarce resources.
- The assessment of a project is done comparatively to a counterfactual scenario.
- The economic cost-benefit analysis seeks to outline key risks and considerations and identifies, in accordance to all aspects measured, whether the overall impact of each social housing project will contribute to the effective and sustainable management of community's scarce resources and whether the social, economic and welfare impacts generated by the proposed project will be to such a degree that social change can be affected.

This report is a draft report which focusses on Step 1 to 3 of the afore mentioned research methodology and approach. Step 4 (the CBA of the project) will be completed subsequent to this report and included as part of the final deliverable.

1.3 PROPOSED DEVELOPMENT OVERVIEW AND KEY CONSIDERATIONS

The proposed development is located in the Cato Ridge area of the eThekweni Metropolitan Municipality of the KwaZulu-Natal Province. Cato Ridge is strategically located between the key urban and economic nodes of Durban (including the Durban Port) and Pietermaritzburg and forms part of the Outer West sub-regional economy.

The development site is situated close to the key N3 transport corridor and has access to the R103 and the Natal Corridor railway line which enhances the regional access that the proposed development site has.

The proposed development site covers an extent of approximately 1 263.48 hectares that is partially undisturbed and represents a select portion of land that offers mostly flat developable terrain (considering that the region is characterised by undulating hills). The property itself, although largely vacant, is impacted on

by informal activities such as cattle grazing by the local community, occasional illegal sand mining and select and marginal residential encroachment on the far north-eastern portions of the property.

Surrounding the proposed development site, a myriad of uses and activities are found. Rural and informal residential areas are situated to the north and east of the development area. These residential areas form part of the Ximba and Fredville Traditional Councils.

Industrial, logistics and warehousing activities are situated immediately east, south, and south-west of the development site with agricultural activities situated south of the industrial activities.

The immediate and broader areas surrounding the development location is interjected by untransformed land and natural open spaces. The open space areas are primarily protected and form part of the greater open space system of the eThekweni Metropolitan Municipality.

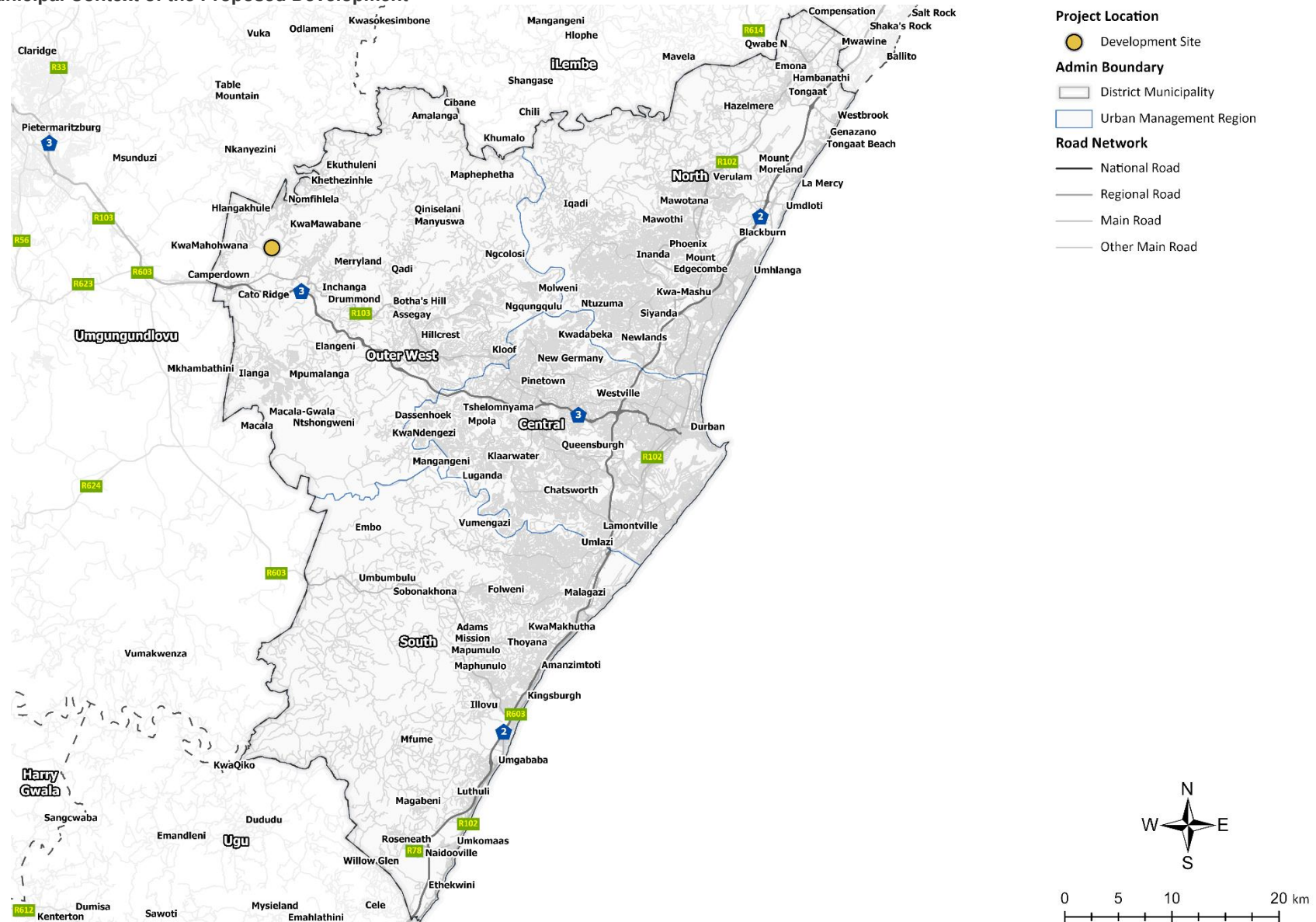
The development site consists of three proposed development areas (PDAs) that represent approximately 609 hectares of the total coverage of the development site. The final project area will consist of approximately 358 hectares of land distributed between the three PDAs. The development of the PDAs will primarily focus on warehousing and logistics orientated development supported by necessary bulk infrastructure and related services.

It is estimated that the implementation of the development opportunity will be phased over a 5-to-20-year period with aspects such as market demand, investor interest and financial considerations influencing the pacing of land release and construction.

The initial high-level capital investment estimation of the project indicates that approximately **R9.8 billion** could be invested in the project during the construction phase, i.e., over a 5- to 20-year period.

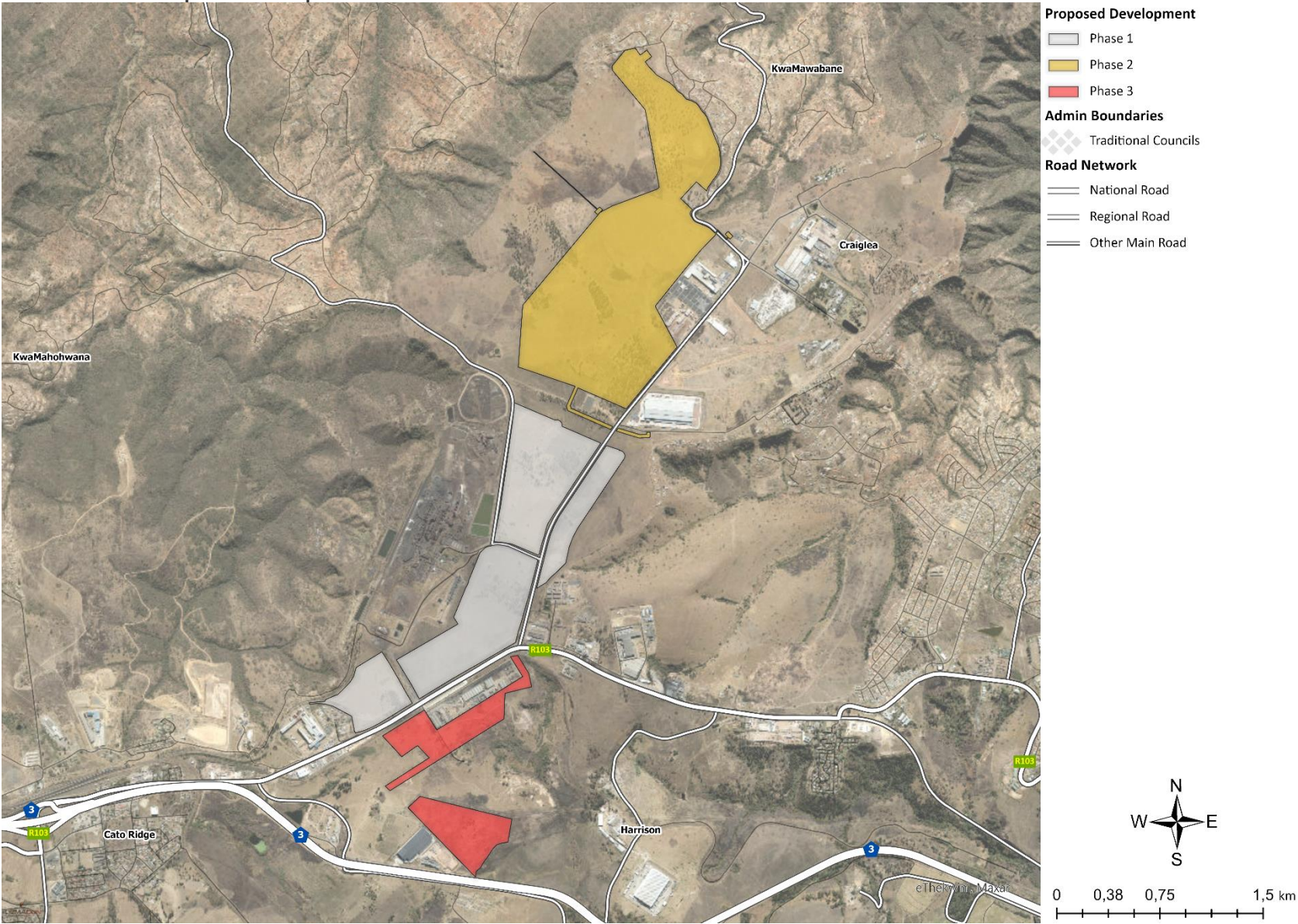
The initial high-level estimate of operational revenue that the proposed development could generate at maturity (project is fully developed and take-up and production is at an optimal level) is **R10.4 billion** per annum.

Map 1.1: Municipal Context of the Proposed Development



Source: DEMACON GIS, 2023

Map 1.2: Local Context of the Proposed Development



Source: DEMACON GIS, 2023



2 STRATEGIC OVERVIEW OF THE PROPOSED DEVELOPMENT

2.1 INTRODUCTION

The development of a local authority's space economy is guided by a framework of documents that identify not only a spatial vision for a specific geographic area but also strategic intent for factors such as economic growth, socio-economic development, resource management, environmental protection, etc.

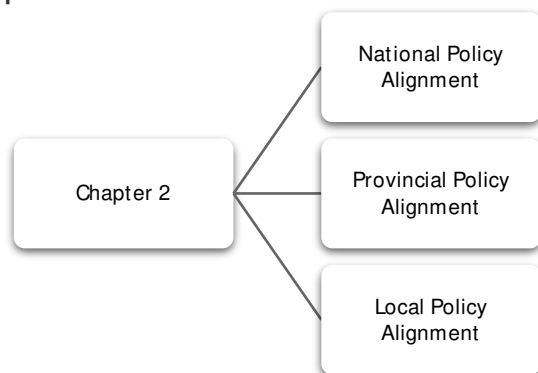
The overarching intent and objectives of a local authority's strategic initiatives are guided and informed by short- and long-term planning frameworks that offer a broad and encompassing future direction for growth and development of the space economy, the economy and demography.

It is within the context of the preceding that is important to consider the alignment that the proposed development has with the strategic intent of local and regional planning frameworks. From an economic perspective the proposed development could offer inherent opportunities to support and grow the local economy and also address strategic priorities identified by local, regional and national authorities as catalytic drivers of development.

This chapter therefore provides an overview of the strategic alignment of the proposed development with local and regional planning. The purpose of the analysis is to determine whether, from an economic perspective, the proposed project aligns with the intended strategic and spatial development initiatives of local and regional planning.

The Chapter is discussed under the following core themes:

Diagram 2.1: Chapter 2 Core Themes



2.2 NATIONAL POLICY ALIGNMENT

2.2.1 NATIONAL DEVELOPMENT PLAN (2030)

The National Development Plan is a plan for the country to eliminate poverty and reduce inequality by 2030 through uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capability of the state and leaders working together to solve complex problems.

Long-term shifts in global trade and investment are reshaping the world economy and international politics. Chief among these developments is the emergence of rapidly growing economies, particularly China, India, and Brazil. Urbanisation and industrialisation in China and India are likely to keep demand for natural resources relatively high for a decade or more. The emergence of more consumers in developing countries will broaden opportunities for all economies. In decades to come, as emerging economies increase their share of world trade and investment, the relative decline in the economic weight of the United States, Europe and Japan will have concomitant effects on their political and military influence. This could lead to a reorganisation of the international diplomatic and governance architecture, reflecting new centres of influence.

South Africa can benefit from rapid growth in developing countries that leads to increased demand for commodities and expanding consumer markets. While South Africa has maintained a reasonably sound trade balance, owing largely to high commodity prices, it is of concern that high value-added and labour-intensive exports are slowing. In the medium term, South Africa has to respond to this trend by bolstering competitiveness and investment in high value-added industries and increasing the volume of mineral exports.

Over the longer term, South Africa has to do more to enhance competitiveness in areas of comparative advantage that can draw more people into work. By improving the skills base and increasing competitiveness, the economy can diversify, offsetting the distorting effects of elevated commodity prices on the rand.

Africa will soon be the last remaining major low-wage region in the world. Per capita GDP in China is already above the global average. China is moving up the industrial ladder, shedding enough manufacturing jobs to double manufacturing employment in other low-income countries, particularly in Africa.

In addition, Africa's extensive coastline and proximity to European and North American markets puts Africa-based firms in a strong position to displace Asian competitors in labour-intensive manufacturing.

The benefits that are certain to flow from technological revolution in an increasingly connected and knowledge-intensive world will be seized by those countries and companies that are alive to the rapidly changing environment, and nimble enough to take advantage of the opportunities. Those that succeed will make substantial advances in reducing poverty and inequality. In mapping its path for the next 20 years, China draws the conclusion that countries that maintain an outward orientation – developing and high-income alike – will be among the successful ones during the coming decades, while an inward-looking policy will increasingly prove self-defeating.

South Africa needs to adjust its focus in light of the changing global economic landscape. This is particularly urgent in trade and industrial policy. South Africa should redirect its attention to pursuing niche export opportunities in the economic powerhouses of the future, many of them emerging economies. These opportunities can only be exploited if industrial policy supports sectors and industries that can best produce the goods and services required of the new markets South Africa wishes to serve.

South Africa must tackle the diversification of the economy from a range of angles. It needs to build on state capacity to identify sectors that will improve export opportunities. In addition, development finance can play a crucial role in promoting industrial policy. The government, in partnership with the private sector, must identify areas to nurture and support; develop sensible instruments to support those areas; and implement them competently. Support and protection should be focused on industries, not firms.

The proposals in the plan take cognisance of the fact that South Africa is a middle-income country. On the one hand, it cannot compete in low-skilled industries because cost structures are already too high. On the other hand, the country lacks the skills to compete with advanced manufacturing countries such as Germany. South Africa therefore needs to compete in the mid-skill manufacturing and service areas, and niche markets that do not require large economies of scale. To stay competitive and to move up the value chain labour-market reforms aimed at promoting employment, particularly of young people; and action to promote productivity gains and new entry by firms are necessary.

The NDP proposes choices for a path that would lead to more substantial investments in strengthening municipal infrastructure and services and in generating access to capital for new and expanding firms. The Department of Trade and Industry develops partnerships with the private sector in positioning commercial representation in key export markets. With the substantial commitment to reducing the costs of production, South Africa becomes a more attractive investment destination. Improved efficiencies and oversight help to get the rapid increases in administered price inflation under control.

These actions improve wellbeing, so that, although the majority of jobs created are still in low-skills services, families are able to achieve a decent standard of living. The fall in production and living costs stimulates local production. As these industries expand, and value-added exports become a larger share of sales, so the rand becomes less subject to global swings.

South Africa's manufacturing strength lies in capital-intensive industries. In the context of high unemployment, growth would ideally be sourced through expanded contribution of labour. However, to compete, the country's cost structure requires an emphasis on productivity, products, and logistics. The most important contributions to manufacturing expansion will be in relation to the business environment.

A volatile and sometimes overvalued currency adversely affects both imported inputs and exports. Half of South Africa's manufacturing exports lie in capital-intensive processed minerals, metals, and chemicals. Intensive support to the motor industry has had a substantial effect on expanding both imports and exports of vehicles, the stimulation of assembly, and some backward linkages, but vehicle retail sales generate most employment. Other major opportunities for manufacturing should be considered in relation to clusters of activity - such as supplier industries to construction, the energy sector, waste reutilisation, mining inputs, downstream processing of metals, and others.

Regional trade is best facilitated by a framework that includes physical transportation networks and standardised procedures and process of warehousing, customs and clearing processes and safety of transportation. Functionally integrating South Africa into regional and global production and supply chains necessarily includes creating adequate warehousing and logistic facilities. The corridor of logistics hubs, road, rail, fuel, and other infrastructure, including and connecting Gauteng and Durban, is vital to the future of the

national economy, and should be designated as a national competitiveness corridor. It accounts for about 46 percent of gross domestic product (GDP) and would build on the Department of Transport's 2050 Vision for the Durban-Gauteng freight corridor.

2.2.2 DRAFT SPATIAL DEVELOPMENT FRAMEWORK (2018)

This National Spatial Development Framework (NSDF) seeks to make a bold and decisive contribution to bringing about the peaceful, prosperous, and truly transformed South Africa, as articulated in the Freedom Charter, the Reconstruction and Development Programme and the National Development Plan. It does so in full recognition of:

- The stranglehold that the unjust national spatial development paradigms, logics, and patterns of the past have placed on our many attempts at breaking the back of poverty, unemployment and inequality;
- The valuable, and often hard lessons we have learnt over the last twenty-four years in our pursuit of national reconstruction, inclusive economic growth, and spatial transformation; and
- The necessity for decisive, collaborative, and targeted state action in national space, to drive our country towards the shared, inclusive, and sustainable future we desire and require.

Transport and logistics infrastructure has been identified as key to creating an enabling environment to achieving the goal of sustainable regional socio-economic development; and closing the widening gap in the provision of high-quality, efficient infrastructure, especially when considering road and rail infrastructure. Transport and logistic links serve natural resource-based economies in areas focused on the export of raw materials, and processing-activities related to mining, agriculture, forestry, and manufacturing. eThekweni is identified in the NSDF as a national urban regional, earmarked to prioritise infrastructure (ports, harbours, and logistics infrastructure) and efficient operations of nationally significant trade and movement networks.

2.2.3 SOUTH AFRICA COUNTRY INVESTMENT STRATEGY (2022)

South Africa's inaugural Country Investment Strategy (CIS) aims to position South Africa as a key preferred African investment destination by attracting and facilitating quality Foreign and Domestic Direct Investment into the country, in a

well-co-ordinated manner, anchored by quality institutions and robust economic infrastructure networks. The CIS aims to achieve this through:

- catalysing a new investment model to address current under-investment;
- attracting quality greenfield investments into South Africa;
- identifying high-impact and high-growth industries which will accelerate contributions to GDP;
- supporting existing industries and developing new industries;
- consolidating and strengthening existing capacity in identified priority sectors through enhancing policy certainty; and
- targeting areas of intervention, accompanied by the mobilisation of resources, and improved institutional co-ordination.

The stability and future development of the African continent compels South Africa to review and assess its economic prowess and its importance as Africa's gateway. South Africa must consider the economic priorities and interests of key economies, and its trading partners, in the international arena, and forge new partnerships in a post-Covid world, whilst ensuring that the country's interests are advanced through effectively promoting new investment and efficiently retaining existing investment.

Home to a youthful population of more than 60 million, and the third largest on the African continent; providing market access to almost 400 million middle class consumers on the continent, South Africa is the investment destination of choice for a sizeable number of global corporates; many of whom have reaped the benefits of doing business in the country. This is represented by the fact that more than 180 Fortune 500 companies are present in South Africa, with the country aptly positioned as Africa's most industrialised economy. In this regard, South Africa is the continent's principal manufacturing hub and a leading services destination, representing a highly diversified economic structure from a sectoral composition perspective. The country is also one of the most open economies in the world boasting a ratio of exports and imports to GDP of more than 58 percent with preferential access to numerous global markets and is endowed with an abundance of natural resources, complemented by its extensive and modern infrastructure network.

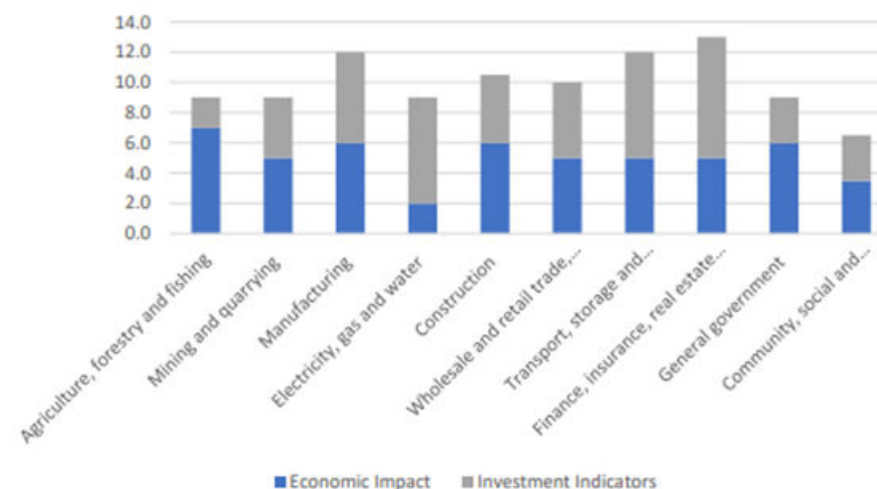
In the fourth quarter of 2020, the primary, secondary and tertiary sectors experienced positive growth rates in comparison to the same quarter in 2019.

Growth in the primary sector was driven by increases in agricultural production while growth in the secondary sector was driven by manufacturing, construction, and energy. Within manufacturing, growth can be accounted for by increases in food and beverages, motor vehicles and metal and steel products. South Africa's tertiary sector growth was largely driven by increases in trade, transport, and personal services.

Transport and logistics infrastructure is identified as a key contributor to competitiveness in global markets and is regarded as a crucial engine for economic growth and social development. South Africa's infrastructure is considered advanced in many aspects, when compared with other countries in the region. The World Bank Logistics Performance Index ranks South Africa as first in Africa in transport and logistics (World Bank, 2018). The country has one of the largest road and rail transport networks in Africa and its ports provide a convenient stopover for shipping to international markets and also boasts the largest air and seaports. The country's interconnected transport network is considered as an opportunity for further investment, with South Africa committed to continuously improving its roads, railways, airports, and ports through the National Infrastructure Plan (NIP2050).

It is important to conduct a sensitivity analysis by considering the impact of job creation in South Africa. The weighted performance index reflects the results of changes to the two main criteria, that is the (i) economic impact; and (ii) investment indicators. In addition, this is based on the argument that the economic impact criteria consider the potential of increased Gross Fixed Capital Formation (GFCF) investment, and is thus forward looking, whilst investment indicators reflect historic data.

Figure 2.1: Sector Prioritisation Policy Performance Index



Source: DEMACON ex South Africa Country Investment Strategy (2022), 2023

The following sectors achieved the highest policy priority scores: (i) finance, insurance, real estate, and business services; (ii) manufacturing; (iii) transport, storage, and communication; and (iv) construction.

Table 2.1: Sector Prioritisation Results, Based on Policy Priorities

Sector	Priority
Finance, insurance, real estate, and business services	High
Transport, storage, and communication	High
Manufacturing	High
Construction	High
Agriculture, forestry, and fishing (including agro-processing)	Medium
Mining and quarrying	Medium
Electricity, gas, and water	Medium
Wholesale and retail trade, catering, and accommodation	Medium
General government (investment not consumption driven)	Medium
Community, social and personal services (includes education, waste economy & health)	Medium

Source: DEMACON ex South Africa Country Investment Strategy (2022), 2023

Time series data is used to calculate economic indices that reflect the relative strengths and weaknesses of South Africa's provincial economies. Three indices are used in the analysis, namely:

- The Tress Index (TI): The TI indicates the level of diversification or concentration in a region's economy. A TI close to zero represents a diversified economy, whilst an index closer to 100 represents a highly concentrated economy. The higher the index, the more concentrated the economy or more vulnerable it is to exogenous shocks.
- Location Quotient (LQ): The LQ is an indication of the comparative advantage of a specific sector when compared to the aggregate economy. An LQ greater than one implies an economy produces that product more efficiently when compared to the same sector in the aggregate economy. An LQ smaller than 1 reflects a comparative disadvantage of that sector.
- The Growth Performance Index (GPI): The GPI provides an indication of the growth in a certain sector in a regional economy relative to the growth attained in the same sector in the national economy. An index larger than 100 indicates a leading sector, whilst an index of less than 100 reflects a lagging sector

Analysis of the KwaZulu-Natal Province

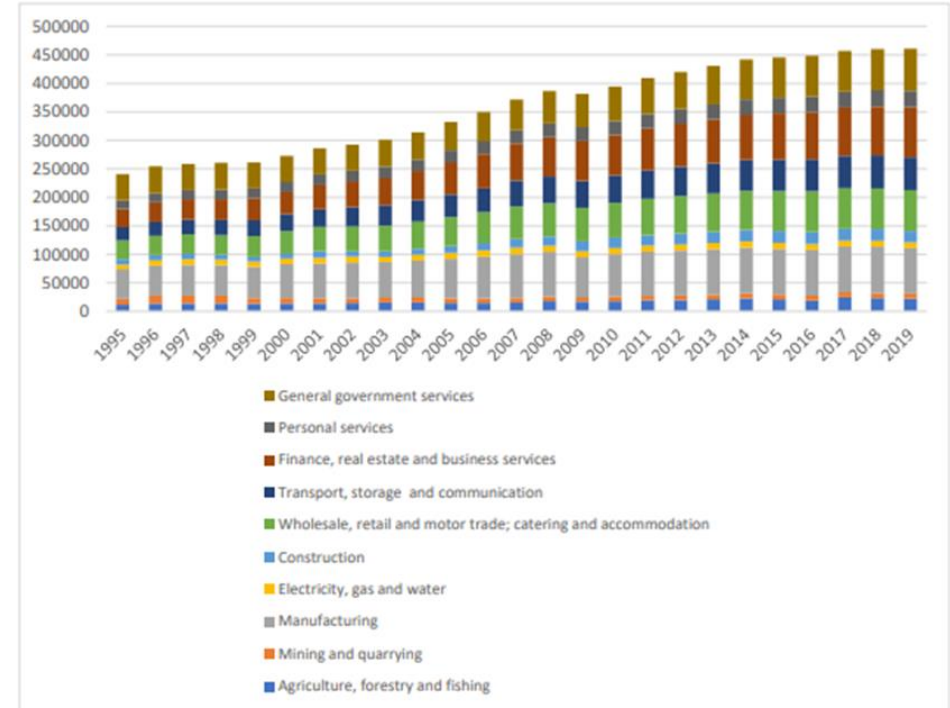
Figure 4 below provides an overview of the sectorial composition of the Province of KwaZulu Natal. The Province's three largest sectors, on average over time, by GVA are (i) finance, real estate, and business services, (ii) manufacturing, and (iii) general government services.

The **tress index** for the KwaZulu-Natal Province was **40.1** in 2020. It is evident that the KwaZulu-Natal province is still a diversified economy and holds several comparative advantages to other provinces.

Table 2.2: Gross Performance Index for KwaZulu-Natal (2009 to 2019) based on Gross Value Added (GVA) at Basic Prices

Agriculture, forestry, and fishing	123.37
Mining and quarrying	113.51
Manufacturing	100.40
Electricity, gas, and water	98.96
Construction	100.97

Figure 2.2: KwaZulu-Natal Province Sectorial GVA Composition: GVA - Constant Prices (R/million)



Source: DEMACON ex South Africa Country Investment Strategy (2022), 2023

Wholesale, retail, and motor trade; catering and accommodation	100.85
Transport, storage, and communication	101.48
Finance, real estate, and business services	99.10
Personal services	101.86
General government services	102.39

Source: DEMACON ex South Africa Country Investment Strategy (2022), 2023

The following sectors are considered good investment opportunities due to their respective LQ and GPI scores:

- Agriculture, forestry, and fishing;
- Transport, storage, and communication;
- Manufacturing;
- Construction; and
- Personal services

In addition, the wholesale, retail, and motor trade; catering and accommodation sectors have a degree of potential.

Key sectors for job creation (and including the production value chain) articulated by the Province are:

- Manufacturing;
- Agriculture;
- Tourism;
- Transport and logistics; and
- Maritime activities;

Accelerating Foreign Direct Investment (FDI) and Domestic Direct Investment (DDI) for Job-Rich Growth - Special Economic Zones (SEZs) Anchoring Advanced Manufacturing and Logistics Networks

The new African single market is deliberately designed to liberalise trade in goods and services, facilitated by the reduction and elimination of tariff barriers for goods and enabling cross-continental trade in services; the latter creating the wider pool of export potential.

South Africa's preferential export market access to Africa Continental Free Trade Area (AFCFTA), the UK, European and US markets represents global demand that can and should be harnessed to drive massive new investment into productive capabilities, particularly where South Africa has structural advantages continentally. These include automotive and associated advanced manufacturing, agro-processing and the manufacturing of finished goods that will now compete on a tariff-advantaged basis with imports from large-scale manufacturing regions such as China and India.

This approach of anchoring export-led production capability with SEZs leading wider industrial clusters integrated with blended financing linked to critical logistics upgrades is key to positioning foreign and domestic investors into the South African manufacturing sector to benefit from the African single market for

finished and intermediate goods, as well as the wider markets available under our various trade regimes with other regions.

The cost of doing business in South Africa is a critical factor in implementing and scaling the interventions promulgated under the Economic Reconstruction and Recovery Plan (ERRP) and is significantly impacted by the cost of freight, particularly with respect to investment attraction and retention in addition to maximising multiplier effects that justify investments made and revenue foregone on key incentives, such as that of the special economic zones.

Similarly, it is also important to emphasise that rail freight networks are directly integrated with Port Networks. These initiatives imply expanding not only the Port of Durban, but capabilities across the full port system, which is a clear target for co-investment with the various private sector constituencies targeting export markets. For the purposes of accessing the African single market, expanded, modernised port capabilities are critical and further emphasise the importance of the development of a coherent and well-co-ordinated national port strategy and implementation plan

2.2.4 MEDIUM TERM STRATEGIC FRAMEWORK (2019 TO 2024)

The current Medium-Term Strategic Framework (MTSF) 2019-2024 is the country's second 5-year implementation plan for the NDP. The MTSF 2019-2024 also sets out the package of interventions and programmes that will advance seven priorities adopted by government:

- Building a capable, ethical, and developmental state
- Economic transformation and job creation
- Education, skills, and health
- Consolidating the social wage through reliable and quality basic services
- Spatial integration, human settlements, and local government
- Social cohesion and safe communities
- A better Africa and world

The MTSF 2019-2024 is built on three foundational pillars: a strong and inclusive economy, capable South Africans, and a capable developmental state. The Government aim to rebuild and restore public confidence in South Africa in these areas through catalysing development opportunities and removing structural impediments to equality, opportunity, and freedom.

Economic Transformation and Job Creation

There will be a focus on industrialisation which enables economic growth and development. This is due to the multiplier effects of these industries and their ability to create jobs, develop skills and support the development of new technologies.

Table 2.3: Monitoring Framework: Re-Industrialisation of the Economy

2024 Impact: Unemployment reduced to 20-24% with 2 million new jobs especially for youth; economic growth of 2-3% and growth in levels of investment to 23% of GDP							
Outcome	Indicator	Baseline	Target	Interventions	Indicators	Baseline	Targets
Industrialisation, localisation, and exports	Percentage growth for exports in national priority sectors (automotive, agriculture & agroprocessing CTLF, chemicals, gas, steel and metal fabrication, tourism, ICT, defence, health, mining, renewables, green economy, oceans economy, creative industries)	New	4%	Create a conducive environment that enables national priority sectors to support industrialisation and localisation, leading to increased exports, employment, and youth and women owned SMME participation	Masterplans developed	Automotive and CTLF Masterplans	All master plans developed by end of 2021
				Support localisation and industrialisation through government procurement	National priority sectors grow contribution to GDP growth of 3% and exports increase by 4%	New indicator	Exports for national priority sectors increased by 4%
					Complete the revitalisation of industrialisation parks	15 Industrial parks	All industrial parks revitalised
					Percentage compliance of government spend on designated products and services	New indicator	100% compliance
2024 Impact: investment to reach 23% of GDP by 2024 with the public sector contributing 8% of GDP and the private sector contributing 15% of GDP							
Outcome	Indicator	Baseline	Target	Interventions	Indicators	Baseline	Targets
Increase access to affordable and reliable transport systems.	Increase access to affordable and reliable transport systems.	18.2% (2018)	8% public sector contribution	Increase competitiveness and access to transport modal networks through effective regulation	Single Transport Economic Regulator established and operationalised	Single Transport Economic Regulator Bill	Single Transport Economic Regulator established and operationalised by 2020
			15% private sector contribution				

				Expansion and maintenance of transport infrastructure as part the Road Stimulus Package	Km of roads upgraded, refurbished, and maintained	New target	Upgrading, refurbishing and maintenance of +- 20 000km of road network
				Implement comprehensive rail modernisation and upgrade programme	Rolling stock expansion and upgrade	PRASA rail modernisation	Roll out new rolling stock to various priority corridors
				Finalise Road Freight Strategy Integrated Implementation Plan to facilitate transition from road freight to rail and the participation of private sector	Percentage moved from road freight to rail	6.1 million tons 3 concessions	10% of road freight transferred to rail by 2024.
				Develop strategy for the implementation of the "user pay principle"	Private Sector Participation Framework	New target	Private Sector Participation framework implemented by 2020
				Reduce costs for priority sectors by increasing the efficiency of ports	Compliance to user pay principle	100% compliance with user pay principle by 2024	
					Corporatisation of Transnet National Ports Authority	New indicator	Transnet National Ports Authority Corporatisation completed by 2020

Source: DEMACON ex Medium Term Strategic Framework (2019 to 2024), 2023

Spatial Integration, Human Settlements and Local Government

South Africa has a rich endowment of natural resources and mineral deposits, which, if responsibly used, can fund the transition to a more diverse and inclusive economy. Developmental challenges must be addressed in a manner that ensures environmental sustainability and builds resilience to the effects of climate change, particularly in poorer communities. Many of South Africa's poorer communities live in rural areas. South Africa's rural communities must

have better opportunities to participate fully in the economic, social, and political life of the country. Rural economies will be supported by agriculture and, where possible, by mining, tourism, green economy, agro-processing, and fisheries.

The legacy of exclusion for large parts of the population in land, labour, capital, and formal markets hamper growth. Rural areas also face high rates of unemployment, inequality, and stagnant growth. This has contributed to migration to urban areas, exacerbating spatial inequalities within cities and

towns. High inequality leads to contestation over resources, increasing policy uncertainty and deterred investment.

The rural economy holds significant potential for creating decent and productive jobs, contributing to sustainable development and economic growth, and mitigating rural urban migration. The promotion of decent work in the rural economy is key to eradicating poverty and ensuring that the nutritional needs of a growing global population are met. Although the proposed development site is not entirely within a rural area, it is located far from established urban areas. Therefore, the development of an industrial and logistics hub would ensure an increase in the surrounding rural areas that is situated far from urban employment opportunities. The development could also serve as a pull-linkage to encourage other developments in the area.

2.2.5 INDUSTRIAL POLICY ACTION PLAN (2018/19 – 2020/21)

The Industrial Policy Action Plan (IPAP) provides an economic analysis of prevailing global and domestic economic conditions relevant to industrial policy as well as time bound action plans and programmes across a range of sectors and listing the key constraints to an optimal industrial strategy. Industrial policy has the over-arching objective of enhancing the productive capabilities of the economy. In other words, industrial policy aims to increase the economy's ability to produce more and more complex and high value-added products with greater efficiency. In simple terms, this means to produce more value using less resources.

The South African economy is exhibiting welcome signs of recovery after experiencing relatively subdued and declining growth for a number of years. Over the period 2010 to 2017, real GDP growth averaged 2.0% per year, well short of the desired rate of around 5% deemed necessary on a sustained basis in order to meaningfully address the triple challenge of poverty, unemployment and inequality.

Firstly, basic economic service delivery needs to be in place for there to be effective industrial policy: As is now very widely accepted, the institutional failure that derives from pervasive corruption and rent-seeking in key SOCs must be rooted out from top to bottom. On the supply-side, State-Owned Companies (SOCs) must play a key enabling role in support of the general economic and industrial effort by providing competitive and efficient electricity, rail, and port logistics. On the demand side, they must support localisation, supplier

development and black economic empowerment. Urgent attention must be given to the institutional renewal of public-sector monopolies which have been responsible for significant import leakages, debilitating and unsustainable increases in electricity, rail and port costs and attendant inefficiencies.

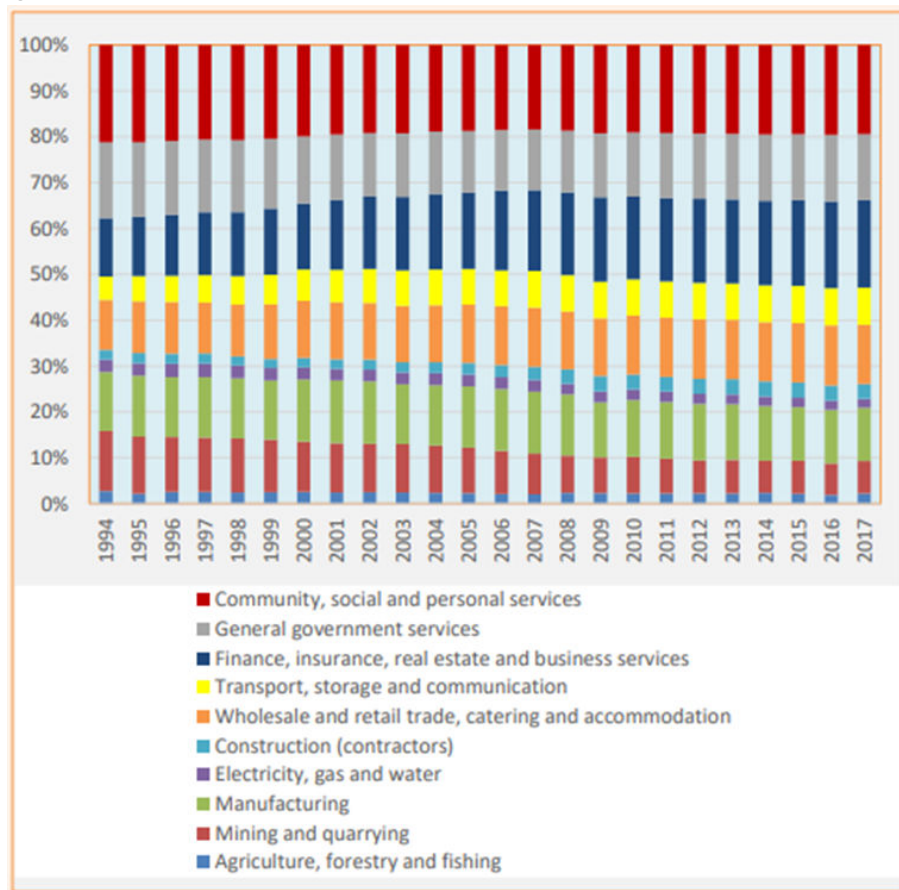
From a beneficiation point of view, the comparative advantage of mining product in South Africa is ultimately determined by the logistical costs of getting the product to a beneficiation centre. For example, the cost of logistics for precious metals is extremely low compared to the value of the metal itself; whereas for iron ore the logistics costs are much more significant.

The performance of the logistics system has a major impact on the economy - especially in the primary and secondary sectors, which are heavily reliant on a sound transport infrastructure. (The manufacturing sector is a secondary sector in the sense that it involves the movement of manufactured goods). High logistics costs therefore affect manufacturing cost structures and revenues, as well as value-addition in manufactured goods and services. Producers are also negatively affected with respect to delivery times, product quality and customer responsiveness capabilities.

At 0.6%, GDP growth in 2016 was the lowest since the 2009 recession. Besides the global economic slowdown, which affected South Africa's export performance and foreign direct investment, several domestic factors and developments affected the economy's performance. Chief amongst these was the worst drought on record, which not only affected agricultural output, employment, and investment, but, through important linkages with many other sectors of the economy, impacted on production activity across many supplying industries.

From 2003 to 2008, Gross Fixed Capital Formation (GFCF) grew strongly as the commodity super-cycle led to investments in South Africa's core manufacturing sectors, which registered a combined Compound Annual Growth Rate (CAGR) of over 13% for the period. Although almost all sectors have grown since 1994 (in real terms), the productive sectors which are crucial for long-term growth and job creation have grown significantly more slowly than services sectors.

The following chart illustrates the growth of different sectors in the South African economy.

Figure 2.3: Growth of Sectors

Source: DEMACON ex Industrial Policy Action Plan (2018/19 to 2020/21), 2023

The motor vehicles, parts, and accessories sub-sector, which has benefitted from sustained industrial policy support over the decade, is reaping the benefits of increased integration into global supply chains and is providing opportunities for domestic production (and exports) of parts and accessories for motor vehicles. This sub-sector has been the leading exporter within manufacturing since 2012. Its value-added (GDP) measured R31.6 billion in 2016, equivalent to 5.9% of total manufacturing GDP, and it employed 94,181 people, or 6.8% of manufacturing employment.

In September 2015, the Department of Trade and Industry (dti) launched a structured programme for the revitalisation of industrial parks in a number of old industrial areas across the country. The main objective is to accelerate economic development in the lagging regions by attracting investment, supporting job creation in the manufacturing sector, and assisting regions to build, strengthen and develop strategic industrial capabilities.

This programme is currently focused on 11 industrial parks countrywide and is implemented through national government partnerships with the provinces, their agencies, and municipalities. A budget of R415 million has been allocated, of which R231 million has already been spent. To date 55,000 people have found employment through the programme. This, again, illustrates the result that industrial development and investment would have on the economy.

The metal fabrication, capital & rail transport equipment as a cluster of industries forms a very important component of local manufacturing. Over the years South Africa has developed niche capabilities in areas such as capital and rail transport equipment and structural steel, but recent years have seen stagnation and/or decline in key sub-sectors like casting, tooling, and foundries.

In an effort to turn this trajectory around, government and industry players came together to develop the National Tooling Initiative (NTI) and the National Foundry Technology Network (NFTN) – initiatives targeted at increasing the competitiveness of these sectors through critical skills development and job creation programmes, technology development and adoption, enterprise development and export promotion.

This led to the development of a skills pipeline comprising more than 1,800 students over 4 cycles - with 98% of students from previously disadvantaged communities, 30% females, and above average learner-retention rates. All programme participants received on-the-job training, resulting in more than 80% of toolmaker students finding permanent jobs.

The other major area of IPAP intervention in the sector has been the leveraging of procurement for both freight and passenger rolling stock through designation of systems and products under the PPPFA. Locomotives, wagons and coaches for freight and commuter rail were amongst the top ten identified large and strategic procurement fleets.

2.2.6 NATIONAL TRANSPORT MASTER PLAN (2050)

The government identified the need to develop a transport master plan for South Africa that is comprehensive, multi modal, integrated, and dynamic, and provides a sustainable framework not only for implementing transport but also for providing infrastructure and service. Most importantly, such a plan must seek to develop continuously and improve the efficiency and effectiveness of a multimodal transport system – a transport system that is well regulated and well managed within a multisectoral sphere of effective coordination within and cooperation between various government spheres, relevant private sectors, civil society partners and stakeholders up to 2050.

Importance of Transportation Infrastructure Investment to Facilitate Economic Development

The National Transport Master Plan (NATMAP) 2050 vision is that transport is the heartbeat of the economy and the fabric of our country's socio-economic development as well as its alignment with key policy, legislation and planning frameworks recently developed. The NATMAP 2050, therefore, aims to achieve: An integrated, smart, and efficient transport system supporting a thriving economy that promotes sustainable economic growth, supports a healthier lifestyle, provides safe and accessible mobility options, socially includes all communities, and preserves the environment.

Transport infrastructure investments facilitate economic development through:

- Improving reliability
- Providing intermodal connectivity
- Expanding access to markets
- Reducing the costs of doing business (travel time, operating costs, and accident costs)
- Empowering people
- Supporting a developmental approach.

It promotes sustainability and capacity expansion-strategies for long-term planning and infrastructure investment that address:

- Assets and investments that focus on the scope of the transport system. Assets and investments must be concentrated on consolidating high volume routes and nodes on national and various urban and rural strategic networks. The strategic networks forming the backbone of the

transport system, will be underpinned by supporting national, provincial, metropolitan, and rural access networks, serving all land uses of national significance

- Economies of scale for deploying transport modes in the strategic and supporting networks and their component routes, thereby capitalising on the ability of modes to meet customer needs
- Efficiency, productivity, and competitiveness that facilitate an environment that enables service providers to empower customers through improved transport infrastructure and operations.

Therefore, the investment into logistic and transportation infrastructure can grow the economy by:

- Enabling economic growth and development by connecting current and new economic or growth nodes and by making better use of and maintaining transportation networks
- Facilitating development through increasing GDP and wealth creation and promoting cost savings by reducing the cost of production and distribution of raw materials
- Maximising economic return on investment through minimising transport cost and delays (time), eliminating bottlenecks on transport infrastructure and operations and meeting user demands
- Supporting regional economic competitiveness
- Charging the traveller a fair reflection of the costs of making a journey
- Providing inexpensive transportation options that make it easier for households to go car-lite or car-free, resulting in more money that can be spent elsewhere in the economy.

Both the NDP 2030 and the NATMAP 2050 recognise the need for South Africa to maintain and expand its transport infrastructure to continue supporting its economic growth and social development goals (National Planning Commission, 2012). The World Bank emphasises the centrality of transport to social and economic development. Without physical access to jobs, health, education and other amenities, quality of life suffers; and without physical access to resources and markets, growth stagnates, and poverty reduction cannot be sustained.

Efficient transport is a critical component of national and global economic development. Transport availability affects development patterns and can be a boost or a barrier to economic growth. Transportation investments link factors of

production together in a web of relationships between producers and consumers to create a more efficient division of production, leverage geographical comparative advantage, and provide the means to expand economies of scale and scope.

Transportation projects can lead directly to benefits beyond the traditional measures of traveller or freight impact, as based on average travel time and cost. The wider benefits are mainly the effects on business productivity, the factors that enable businesses to gain efficiency by reorganising their operations or by changing the mix of inputs used to generate products and services.

Transport's direct contribution/benefits to economic development include the following:

- **Network effects:** Linking more locations exponentially increases the value and effectiveness of transport. Some transport projects have the effect of enhancing the frequency of services and reducing total run time between origin and destination by taking advantage of the economies of scale benefits introduced by intermodal terminals such as airports, marine ports, rail terminals and intermodal facilities.
- **Intermodal connectivity:** Projects may enhance the frequency of air, marine, or rail services, or breadth of origins and destinations directly accessible from those terminals. The result is faster intermodal travel between origin and destination. In bringing about the benefits associated with intermodal connectivity, it is possible to reduce travel cost for existing movements and to enable new movements between origin and destination that were previously not practical or economically feasible.
- **Performance improvements:** Reducing cost and time for existing passenger and freight movement's increases transport's contribution to economic growth.
- **Reliability:** Reliability improves time performance and reduces loss and damage, reduces inventories, centralises warehousing and delivery processes, leading to a gain in supply chain benefits, thus reducing economic drag and contributing to improvement in overall system resilience.
- **Market size:** Access to wider markets adds to economies of scale in production, distribution, and consumption, thereby increasing economic growth. Some transportation projects have the effect of expanding the reach of destinations that can be served by same-day deliveries from a

business location, or the breadth or reach of areas from which a business could reasonably expect to draw customers and workers. These effects are often represented as changes in the effective size or density of the customer market and labour market available to the firm. Expansion of the customer delivery market can enable scale economies in production and delivery processes. Similarly, expansion of the labour market can enable scale economies through better matching of specialised business needs and worker skills.

- **Productivity:** Transport increases productivity gained from access to a larger and more diverse base of inputs such as raw materials, parts, energy, and labour, and broader markets for more diverse output.

SIP 2: Durban – Free State – Gauteng Logistics and Industrial Corridor

The Presidential Infrastructure Coordinating Commission (PICC) identified infrastructure gaps through their analysis of future population growth, projected economic growth and areas of the country that are not served with water, electricity, roads, sanitation, and communication. Based on this work, 18 SIPs have been developed and approved to support economic development and address service delivery in the poorest provinces.

The Strategic Integrated Projects (SIPs) cover social and economic infrastructure across all 9 provinces (with an emphasis on lagging and distressed regions). The SIPs cover catalytic projects to fast-track development and growth and support developmentally led transformation.

SIP 2 includes the Durban–Free State–Gauteng logistics corridor, which is expected to create 135 000 jobs, strengthen the logistics and transport corridors between the major industrial hubs in the country, improve access to the port, raise the efficiency of and integrate the proposed intermodal terminal in Harrismith, in the Free State, into the corridor, and make sure that we can provide better services to the agricultural sector.

The corridor programme includes the construction of a new railway line between Gauteng and Durban, a new R75 billion dugout port in Durban, and the planned development of an aerotropolis at the OR Tambo International Airport.

The Durban–Gauteng corridor, by far the most important economic corridor in the country, is expecting massive increases in freight volumes. In 2013, Transnet indicated an estimated 152% increase in freight along the corridor, from 762

million tonnes a year in 2011 to 1.93 billion tonnes a year in 2014, at a compound annual growth rate of 3.1%. According to freight forecasts, it is expected that, during the next 25 to 30 years, containers moved from the Port of Durban to Gauteng will grow almost eightfold, from about 1.75 million to 13 million a year. Without a new rail line, these expected increases in freight will see a disastrous mushrooming in the number of freight trucks travelling between the port and South Africa's economic hub. The existing rail line is in a poor condition and has speed limits in some places of as low as 50km/h. The new line will be built to have a maximum speed of 120km/h and will largely be dedicated to carrying freight

SIP 2 is aligned with the proposed development in Cato Ridge, as the proposed development is situated near the N3. SIP 2 aims to:

- Strengthening of the logistics and transport corridor between SA's main industrial hubs, Gauteng, and Durban
- Improvement of local and regional access to Durban's export and import facilities
- Integration of Free State industrial strategy activities into the corridor
- Development of new port in Durban
- Aerotropolis development around OR Tambo International Airport.

Reducing transport costs and cross-border challenges, improving corridor efficiencies and, therefore, addressing general efficiencies and logistics are central pillars to regional integration. From a regional integration perspective, transport provides three very important things: accessibility and mobility as well as an inducer for development. Cato Ridge dry port is identified in NATMAP 2050 as a freight project. The dry port is in its final planning stages and one proposal is to establish the dry port in Cato Ridge on the northern side of the N3.

For the Cato Ridge dry port project, container and bulk cargo will be railed from the port to reduce road traffic congestion in both the port and the CBD. The port will be situated on the outskirts of the metro and will be adjacent to the N3 and Cato Ridge shunting yards for trans-shipment purposes. Import containers for destinations other than Durban will be shuttled by rail from the port to Cato Ridge, from where they will be hauled by either rail or road to their final destination. Similarly, all export containers from outside of the Durban area will first have to go to Cato Ridge, where they will be assembled ahead of the relevant ship arrival.

A shuttle train operation will then deliver the containers to the container terminals on a just-in-time basis, eliminating much of the road congestion now being experienced in Durban and many of the stack capacity problems at the Durban container terminal. The Cato Ridge project will include not only containers but also break-bulk, liquid, and bulk cargo, with the facility acting as a truck stop for road-hauled bulk cargo destined for the port. The inland terminal will provide truck stop facilities for road hauliers, including the repair and maintenance of trucks (much of which now takes place on Durban's roads). The terminal will also have container stuffing and unloading facilities (groupage) for less than container load (LCL) boxes, as well as customs offices for inspection, scanning, etc.

2.3 KWAZULU-NATAL PROVINCIAL POLICIES

2.3.1 KWAZULU-NATAL ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS FIVE YEAR STRATEGIC PLAN (2020 TO 2025)

The KwaZulu-Natal Economic Development, Tourism and Environmental Affairs (EDTEA) Five Year Strategic Plan proposes the attainment of a radically transformed, growing, inclusive, innovative, and sustainable economy, thereby optimizing employment in the Province.

One of the challenges facing the KwaZulu-Natal Province is spatial inequality in the levels of economic development where much of the attention is directed to places in which there is already a high agglomeration of economic activities. The agglomeration of economic activities in megacities, such as Durban (eThekweni), Richards Bay (uMhlathuze) and Pietermaritzburg (uMsunduzi) vis-à-vis rural development, this creates unbalanced migration patterns within the province from rural areas to areas of economic opportunities. Therefore, it is expected that high levels of poverty also exist within the more urbanised town and cities, such as Durban, Pietermaritzburg, and Richards Bay.

The low economic growth environment is placing strain on all sectors of the economy including government, and this is negatively affecting service delivery and job creation. Employment growth is limited by the lacklustre economic activity and difficult operating conditions in the local business environment. The KwaZulu-Natal economy is unequal in levels of development and investment with high urban density areas such as eThekweni, uMhlathuze and uMsunduzi receiving the bulk of the attention. Therefore, investment is encouraged in areas outside of the economic nodes (for instance the eThekweni CBD), within more rural areas (for instance Cato Ridge).

KwaZulu-Natal does have one of the most diversified economies, making it more resilient to major fluctuations or disruptions in a particular sector. This also encourages investment, due to the stability of the economy. Cato Ridge Multi-Modal Freight and Logistics Hub is identified as an Industrial Economic Hub within the EDTEA Catalytic Projects.

2.3.2 KWAZULU-NATAL PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (2022 TO 2027)

The document includes an overview of the policy and legislative directives, and a summary of the spatial challenges and opportunities of the province. It further presents the spatial proposals and includes the refinement of a long-term spatial development vision indicating the desired spatial pattern in line with the development vision contained in the Provincial Growth and Development Strategy (PGDS). It concludes with an implementation framework, which outlines the measures, approach and actions required to realise the provincial spatial development vision in a coherent and systematic way.

The KZN economy in terms of Gross Value Added (GVA) grew at a compound annual growth rate¹ of about 2.78% per annum over the past 20 years. The GVA of KZN increased from R 389.4 billion in 2011 to R 422.9 billion in 2016. In 2018, KZN generated a regional GVA amounting to R505.586 billion, which is equivalent to a 0.7% year-on-year growth. This suggests the fact that the provincial economy continued on the downside in 2018 when compared to 2017 where it recorded an average growth rate of 1.4%. Nevertheless, KZN remained the second economic hub with 16.1% contribution to the national GDP. The future growth of KZN's economy is dependent on several factors but at current growth rates, the GVA of KZN is estimated to reach about R billion 712.1 at current prices by 2035. This indicates the immense contribution of the KZN Province to the National economy, indicating the economic viability for investment in the province, as there is not an immense economic risk factor at play.

Many small towns have entered a phase of long-term economic decline, disinvestment and the collapse of services which has sparked protests and unrest in KZN. This has been partly due to the concentration of skills and resources in larger towns and cities coupled with a lack of effective initiatives to support development in small towns that enable them to cope with economic and social change. However, small towns represent a significant existing investment

and serve the needs of a significant proportion of the population. Therefore, investment in smaller town is encouraged. Cato Ridge is surrounded by smaller towns and rural areas. With the investment of a logistics hub in Cato Ridge, it will again act as a pull-factor to drive more investments in the area and provide employment for the population in the surrounding rural areas and smaller towns. Therefore, ensuring economic growth in the area.

The PSDF only identify two special economic zones in the KZN province:

- Dube Trade Port: an industrial estate, linked to the international seaport of Richards Bay.
- Richards Bay Industrial Development Zone (RBIDZ): includes an international airport, a cargo terminal, warehousing, offices, a retail sector, hotels, and an agricultural area.

This indicates the immense pressure that is on these two areas for the economic growth of the province. The proposed logistics hub will therefore relieve this economic pressure, especially on the ports, as it will serve as a linking point/transshipment point in logistics networks for the flow of goods.

The main strategic roads in the province in terms of connectivity and movement, include the N3, N2 and N11. The terrain, elevation and slopes in the Province influence the road network, resulting in most regional roads routing mainly in an east-west direction between the high-lying areas to the low-lying coastal areas. There is very little north-south crossroad connectivity in the province, mainly because of high construction costs and natural settlement patterns.

The main strategic roads in the province, contributing to connectivity and movement include the N3, N2 and N11. The N3 is one of the main national routes, running in an east-west direction linking KZN and Gauteng Provinces and the busiest road freight corridor in South Africa. The Durban–Gauteng corridor, by far, is the most important economic corridor in the country and is expecting massive increases in freight volumes. According to freight forecasts, it is expected that, during the next 30 years, containers moved from the Port of Durban to Gauteng will grow to 13 million a year. Without a new rail line, these expected increases in freight will see a disastrous increase in the number of freight trucks travelling between the port and Gauteng.

Harbours and ports form an integral part of infrastructure in KZN, as the Provincial ports are the main entry and exit points for importing and exporting of

goods. The Port of Durban (including proposed Durban dig-out port) and the Port of Richards Bay are the two most significant ports in the province. They are supported by the Dube Trade Port as an air logistics platform to promote access to global trade and tourist nodes between these two seaports.

Port of Durban: This is the main container port that handles approximately 60% of South Africa's container traffic. It serves KwaZulu-Natal, the Gauteng region, and a large portion of the Southern African hinterland. The port also accommodates dry bulk, liquid bulk, automotive and break bulk, as well as other activities such as facilities for local fishing industry, ship-repair industries, visiting cruise liner vessels and recreational boating. The significance of this port is underscored by the fact that it is the leading port in the SADC region and the premiere trade gateway between South-South trade, Far East trade, Europe and USA, and East & West Africa regional trade.

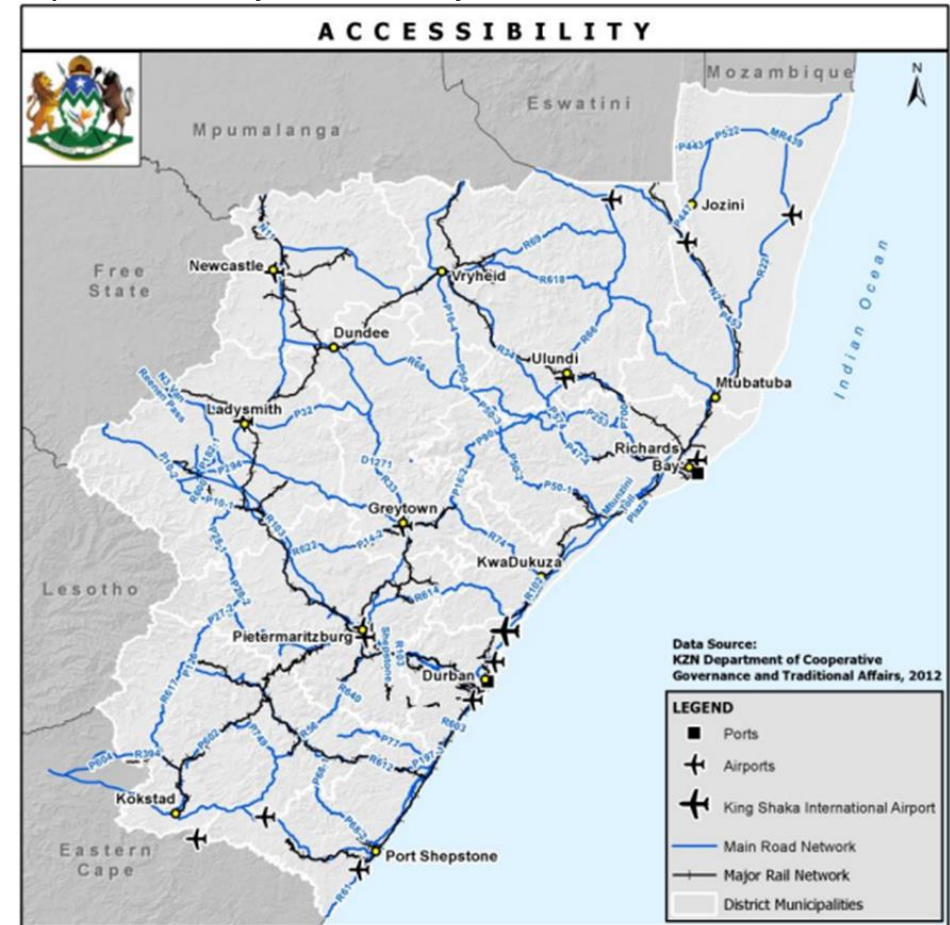
This indicates the severe pressure on the road networks, especially to the ports. Therefore, the proposed logistics hub will also relieve the pressure on the road networks, as most of the freight make use of the N3 to the ports. With the logistics hub situated in Cato Ridge between Pietermaritzburg and Durban, the logistics hub will relieve pressure on the transportation networks as it will again serve as a linking point/transshipment point in logistics networks for the flow of goods.

The importance of transport and logistics infrastructure are noted as some of the building blocks of social and economic development. As such, sustained and focussed investment in national and international routes and railway lines (freight and passenger), international and national airports, border posts and harbours are critical. The upgrading and investment strategies and plans pertaining to the following cross border transport and logistics infrastructure are noted and the reinforcement and strengthening of transport corridors are proposed.

The network of provincial linkage routes and development corridors are aimed at establishing a network of economic growth areas and regional economic opportunities at both a provincial and regional scale. The various priority development corridors proposed within the PSDF contribute to connect communities and lower order economic regions to higher order economic nodes and regions through these corridors which are in some cases mainly linkages and in other instances, activity corridors where investment will be intensified. Corridors are those linkages where it does serves as a linkage between nodes,

but could also, potentially, accommodate increased activities and settlements along the route itself.

Map 2.1: Accessibility and Connectivity in the KwaZulu-Natal Province



Source: DEMACON ex Provincial Spatial Development Framework (2022 to 2027), 2023

ACCESSIBILITY AND CORRIDORS

The map illustrates the accessibility and corridors of South Africa, showing major roads, rail lines, and airports. The map includes the following features:

- Legend:**
 - Airports: Black square with a white cross.
 - Ports: Black square.
 - Major Rail Network: Thick black line.
 - Function:
 - Development: Yellow line.
 - Growth: Blue line.
 - Agricultural: Green line.
 - Tourism: Red line.
 - National Corridor: Thick black line.
 - Provincial Corridor: Thin black line.
 - Regional Corridor: Dashed black line.
 - Route: Thin black line.
 - Main Road Network: Dashed black line.
 - Marine Protected Areas: Blue shaded areas.
 - Water Bodies: Blue areas.
- Geographical Features:**
 - Neighboring Countries:** Mozambique, Eswatini, Lesotho, and Eastern Cape.
 - Major Cities:** Durban, Johannesburg, Cape Town, Port Elizabeth, and others.
 - Marine Protected Areas:** iSimangaliso MPA, uThukela MPA, and others.

The purpose of this sub-frame is to identify key regional linkages to improve accessibility to all areas and economic regions within the province. It also proposes to identify national and international linkages and development corridors which impact on the provincial economic anchors, infrastructure, and growth opportunities.

In the PSDF Cato Ridge is identified as a provincial node, being a small service centre. Key strategic interventions specifically targeted at these nodes and their directly surrounding areas might include:

- The application of the concept of integration zones has led to the identification of different areas within the KZN provincial landscape where spatial integration zones are required. These integration zones are aimed at integrating marginalised areas such as townships, informal settlements, or rural settlements to economic nodes and areas of potential growth. Thus, these zones generally include a provincial development node connected via transportation routes.

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include Amanzimtoti (Town) up to Umkomaas. Along the N3 corridor, it must include Cato Ridge up the boundary with Msunduzi.

Budgeting and implementation processes by government departments, state entities and municipalities must consider and align their investments and projects to the PSDF. Where previous provincial spatial prioritisation strategies such as the Provincial Spatial Economic Development Strategy has focussed on the identification of both areas of Social Need and Economic Potential and especially also the areas where these two variables intersect, the PSDF incorporates a third vital component by considering Environmental Vulnerability or Sensitivity. This approach to spatial variables is illustrated below and considers that the Physical / Environmental Geography of any area impacts on and is impacted on by the Human / Economic Geography and it is the interaction between these variables which is essential to understand and plan for growth and development.

Spatially, it is further vital to consider general accessibility as a cross-cutting variable which impacts all three pillars of sustainable development and as a result the main spatial variables informing the provincial spatial development framework include:

- Environmental Sensitivity / Vulnerability
- Water Sensitivity
- Agricultural Potential
- Poverty
- Housing Need
- Access to Services
- Economic Potential
- Economic Growth
- Population Growth

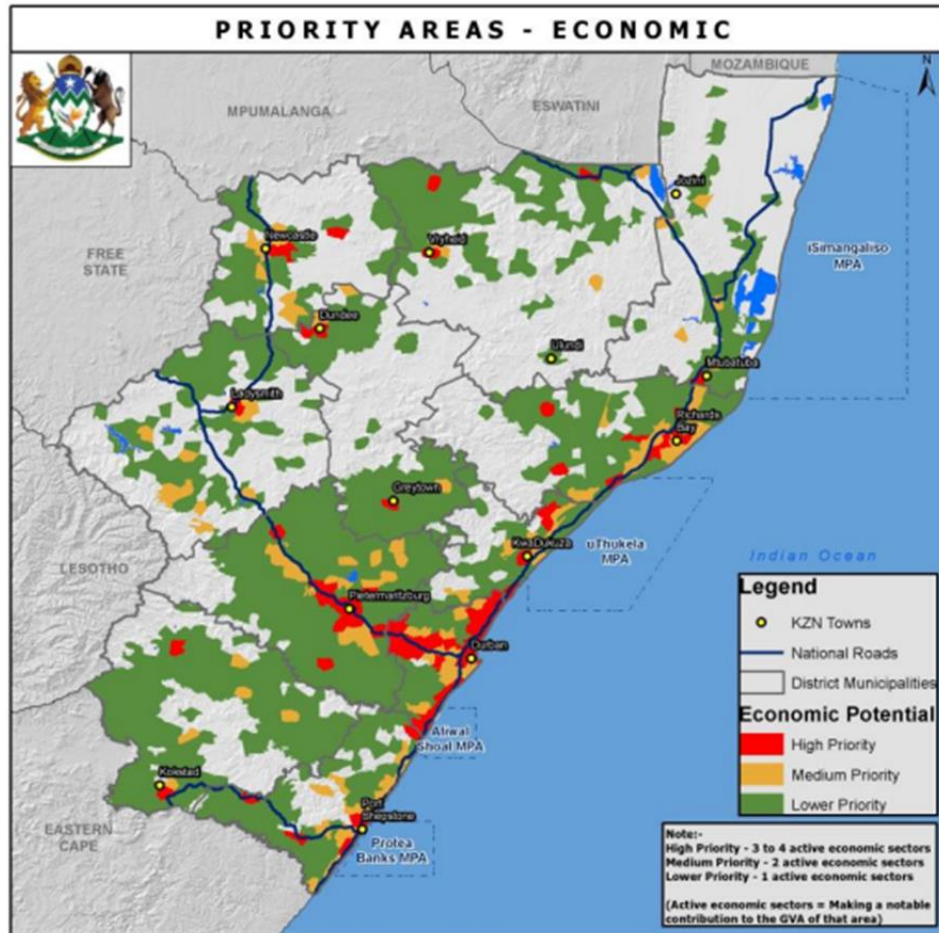
These variables themselves are also in turn represented by several spatial variables which are directly and indirectly representative of the particular spatial component. In order to effectively combine these variables or pillars into a single map of key intervention areas, the categories/level of each variable was weighted and ranked into five similarly described categories to allow for effective overlaying comparisons. The various weighting and categories used per variable is briefly illustrated with each of the variable maps.

It should be noted that where the Social Need and Economic Potential Pillars scored 3 weighted points for areas where highest need and highest potential existing, the Environmental Vulnerability and Accessibility Pillars were weighted in reverse, meaning that where low vulnerability and low accessibility occurred, these areas scored 3 weighted points. The reason for this is to address social needs and economic potential firstly in areas where they will not have a severely negative impact on the environment. Secondly the areas where low accessibility currently occurs needed to be elevated as key intervention areas to address such accessibility constraints. Thus, an area with high social need, high economic potential, low environmental vulnerability, and low accessibility would score a maximum of 20 variable weighted points and be identified as a high priority intervention area.

The Provincial Spatial Economic Development Strategy formulated an extensive strategy based on the potential of key economic sectors (per locality) within KwaZulu-Natal, which included the following:

- Agriculture – including agri-industry (with opportunities to impact considerably on the economic needs of the poor through Land Reform).
- Manufacturing, including heavy and light industry and manufacturing.
- Mining, including coal-, gold- and mineral mining and sand winning.
- Trade including financial, social, transport, retail, and government.

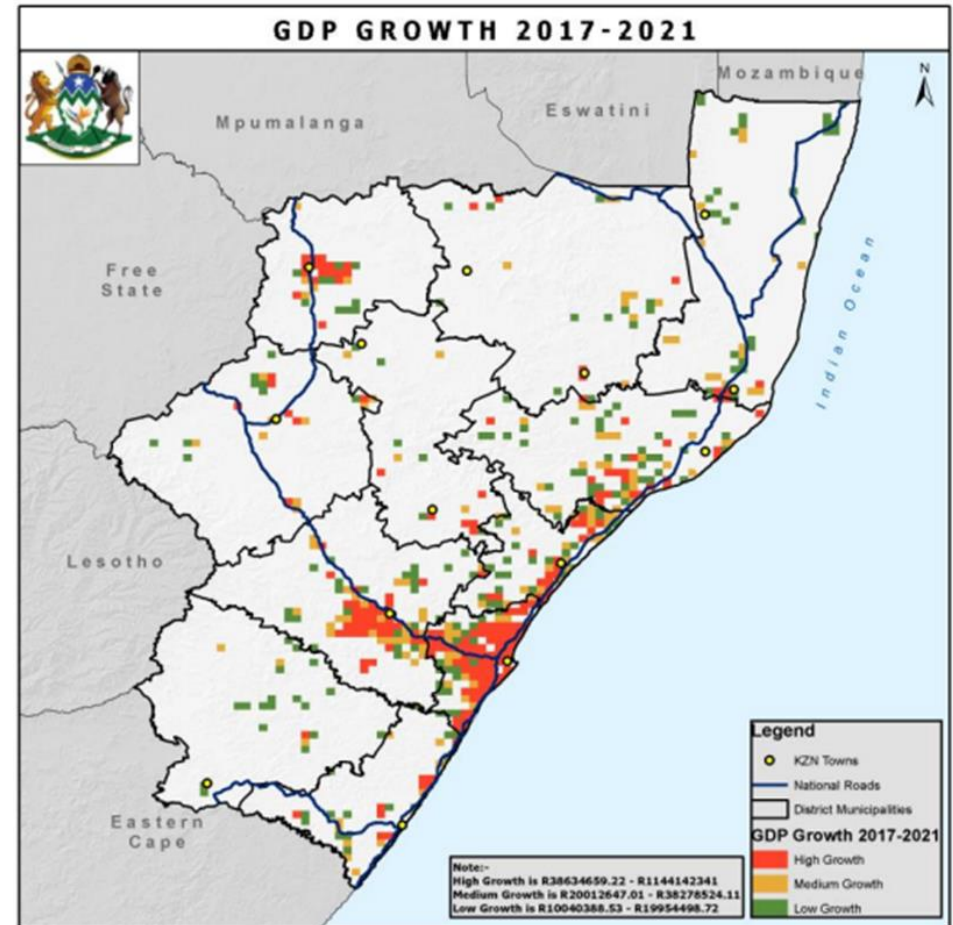
Map 2.3: Economic Priorities



Source: DEMACON ex Provincial Spatial Development Framework (2022 to 2027), 2023

The Cato Ridge area is identified as a high priority economic potential area with high GDP growth.

Map 2.4: GDP Growth Areas



Source: DEMACON ex Provincial Spatial Development Framework (2022 to 2027), 2023

Therefore, investment in the area is encouraged, as it is a high economic growth area with high economic potential.

2.3.3 PROVINCIAL GROWTH AND DEVELOPMENT STRATEGY (2030)

The Provincial Growth and Development Strategy (PGDS) consists of a situational overview which surveyed the growth and development situation in the Province, sets a vision on where the Province aims to be in 2030, identifies seven

strategic goals and thirty strategic objectives that will drive the Province towards this vision.

The purpose of the PGDS is to:

- Set a long term (20 year +) vision and direction for development in the province;
- Serve as the overarching strategic framework for development in the Province applying the 80/20 principle: it is not an inventory of all that we do but is a means of prioritising the province's strategic focus areas;
- Provide spatial context and prioritisation: not just what is to be done but also where;
- Guide the activities and resource allocation of provincial government and other spheres of government, business sectors, organised labour and other role players from civil society that can contribute to development in the province;
- Establish clear institutional arrangements to secure buy-in and ownership, through a structured consultation process with all development partners.
- One strategy and plan for all "Ownership". Provincial government departments and KZN branches of state-owned-enterprises are tasked with the implementation of the Provincial Growth and Development Strategy and as such were referred to as "lead departments"; or "convening departments". The Executive Council Clusters are the custodians of the PGDP together with the Provincial Planning Commission.
- Alignment and integration. Departmental strategic plans, municipal government IDP's and sector strategies and plans should cohere around the key goals and objectives of the PGDP.
- Structured consultation within an agreed institutional framework. Achieving alignment and integration across the range of government and civil society stakeholders is necessary and the PGD Plan recognises the need for an institutional framework which makes this possible.
- Resource commitments and budget alignment. With the agreed set of objectives and targets providing a common platform, the resource commitments of departments and municipal entities will be better leveraged for impact in the province.

Strategic Goal: Job Creation

This goal aims to ensure an expanded and sustained economic output as the fundamental driver for job creation.

- Enhance sectoral development through trade and investment

The enhancement of sectoral development is fundamental to the creation of employment and to growth and development within the Province. The provincial key strategic assets such as the Durban and Richards Bays Ports, the Richards Bay IDZ and the Dube Trade Port present a range of opportunities for the Province. However, the Province still faces significant constraints to the expansion of industrial capacity, namely; lack of new investment to stimulate domestic trade and exports due partially to uncoordinated investment and export promotion, the high cost of electricity and input costs, inflexibility of labour and lack of affordable and zoned industrial land for development. Close to 120,000 jobs were lost in KwaZulu-Natal between 2007 and 2010, which indicates the importance of firstly preventing further job losses, and secondly reversing the trend of job losses through the creation of new employment opportunities and the enhancement of industrial development.

The aim of this objective is to enhance sectoral development through trade (including exports) and investment through the strengthening of traditional sectors, investment into new high potential value-adding sectors, improvement of investment and business environment, provision of affordable and serviced land at key strategic industrial nodes, strengthening the business chamber model, and ensuring access to funding for critical LED projects. The Province has developed various economic and sectoral development strategies, which act guiding documents in the stimulation of sectoral development in the Province.

Expansion is required in the tertiary sectors of tourism, retail, BPO, transport and logistics, finance and business sectors, ICT, and creative industries (film, craft, music). South Africa's Liner Shipping Connectivity Index fell from 33 in 2010 to 39 in 2012, indicating that South Africa has become relatively less competitive within liner shipping trade internationally. Additionally, the CSIR's 9th State of Logistics Costs report indicates that logistics costs as a percentage of total GDP have risen by 0.7% to 12.6% in 2011 and are estimated to have risen to 12.8% in 2012. When comparing logistics cost as a percentage of only transportable GDP (primary and secondary sectors), these costs have increased from 44% in

2011 to 46% in 2012, which is the highest they have been in the past nine years, and much higher than the global average.

The Transport and Logistics sector within KZN is a large contributor to GDP and will continue to play a significant role in the growth of the Provincial economy, particularly in light of the Provincial vision of enhancing industrial development through exports and investment. The KZN Integrated Maritime Industry Development Strategy identifies the maritime industry as a broad, cross-cutting industry, encompassing shipping, transport, and logistics (including warehousing and distribution), marine tourism and leisure, and marine manufacturing.

Numerous challenges currently exist within the industry and the strategy identifies opportunities for growth of the industry, in order to improve the competitiveness of industry to stimulate trade, and to create economic growth and employment within the many sub-industries that exist and have potential for large and small enterprise development. The four key focus areas of the strategy are infrastructure and spatial development, marine sub-sector development, enterprise development and human resource development.

In order to successfully implement those key interventions required within the industry, numerous role players are required to work in close cooperation. In particular, coordination will be required between national projects such as Strategic Infrastructure Projects (SIP) and development of Special Economic Zones, provincial initiatives such as the development of industrial hubs and other transportation and logistics plans, and local initiatives.

This highlights the cross-cutting nature of the maritime, transport and logistics sectors and linkages to the PGDS goals of Job Creation, Strategic Infrastructure, Human Resource Development, Governance and Policy, as well as Spatial Equity. The Province must ensure that maritime sector is prioritised through the goals and objectives of the PGDP, and that key stakeholders are coordinated to ensure effective implementation of critical maritime interventions.

Given the economic assets and linkages that the Province possesses, there is sufficient scope to enhance industrial development through provision of suitably located, affordable, and even serviced land for development, including where possible, encouraging a value-chain or clustered approach to industrial development. The DTI is in the processes of identifying the feasibility of establishing Special Economic Zones (SEZs) in each province. The Province must support the DTI and encourage investment into the SEZ at logistics hub

and mixed-use development zone, through development of a conducive and supporting policy framework, and provision of infrastructure and investment facilitation and coordination functions.

Additionally, an Industrial Hub initiative is being driven by the Department of Economic Development, Tourism and Environmental Affairs (DEDTEA) which seeks to identify and develop industrial hubs within each district, based on the competitive and comparative advantages of the district. This builds on the existing industrial capacity of hubs or clusters of activity, as well as identified new potential opportunities for industrial hub development. The Province must ensure that all municipalities identify areas of potential for industrial development in line with the Industrial Hubs efforts of the DEDTEA, and work towards release of affordable, zoned and even serviced industrial land to private sector for development. In line with the DEDTEA's activities, this must be encouraged within areas of high demand and under-supply and must be centred around the hub and/or cluster development concept which promotes cost reduction and improved efficiencies.

Strategic Goal: Strategic Infrastructure

This strategic goal aims that strategic infrastructure provide for the social and economic growth and development needs of KZN.

Globalization is a dominant feature of the world. As barriers between continents, countries and cities have diminished, and a surging population has urbanized, economic growth and prosperity have become inextricably linked to accessibility; accessibility to markets, to production materials, to services, to food and to culture, which are all preconditions for human survival. The increasing density of urban living, however, can slow the movement of people as well as goods; therefore, accessibility is dependent on an efficient and intricate global network of air, rail, road, and water links between and within our population centres.

Studies confirm that infrastructure development is the foundation for poverty reduction and economic growth in developing countries. As KZN is en route to greater socio- economic growth, there are many unfulfilled needs in the provision of services and infrastructure. The long-term success and participation in the global market by the Province of KwaZulu-Natal will be in its ability to maintain good governance, to continue to provide services and improve its transport and logistics infrastructure. The need is to invest in infrastructure in order to stimulate and sustain growth and development and this includes both operational

infrastructure (water, sanitation, roads etc.) and connectivity (information technology, mobility) infrastructure.

Transport, logistics and communication are important components of the services sector, and the province already enjoys considerable comparative advantages in this regard. A major priority for the province therefore is to build on this comparative advantage by further investment towards positioning KwaZulu-Natal as the trade entrance into the continent. This requires further investments in building a modern infrastructure, particularly transportation and logistics, that reduces business transaction costs, enhances competitiveness with smart and innovative technology support and creating employment opportunities.

The National Development Plan sets a goal of eleven million new jobs to be created by 2030 and identifies structural problems in the economy and points to opportunities in specific sectors and markets or "jobs drivers". The first jobs driver being infrastructure, laying the foundation for higher growth, inclusivity, and job creation. In response to address these challenges and goals, Cabinet established the Presidential Infrastructure Coordinating Commission (PICC) mandate is to ensure systematic selection, planning and monitoring of large projects to unlock economic potential and address socio-economic needs. Therefore, various SIP's have been identified. One SIP is the Durban – Free State – Gauteng Logistics and Industrial Corridor. The SIP Proposes to strengthen the logistics and transport corridor between SA's main industrial hubs; improve access to Durban's export and import facilities, raise efficiency along the corridor and integrate the currently disconnected industrial and logistics activities as well as marginalised rural production centres surrounding the corridor. This includes improving access to Durban's export and import facilities and improving efficiency along the corridor. Additionally, it includes integrating the disconnected industrial and logistics activities as well as marginalised rural production centres surrounding the corridor that are isolated from the main logistics system.

Modal integration is encouraged and the movement of some goods from road to rail emphasized, so to increase the efficient utilization of infrastructure. KZN strategy ought to encompass all transportation modes including air, rail, road, and pipelines. In the longer term, it may be possible to develop systems for intermodal transport of a range of different commodities, but this would only be possible within a rail operation that is geared to customer demand in relation to

general freight. The focus of the state railway system has been developed by government policy and is unlikely to change without very significant institutional and organisational reform of the structure and management of the railway system of the country.

The following catalytic programmes/projects are in support of the proposed intervention, contributing to the overall target indicators:

- Cato Ridge LAP, Development, and release of 119 ha of land for Industrial Development; and
- Dry Port / Inland Logistics Hub at Cato Ridge or surrounding area a proposed private sector development

Strategic Objective: Development of Road and Rail Networks

This strategic objective aims to address the road and rail networks needs in KZN and provide efficiently for cargo and commuter needs. An over-burdened road network and under-utilised rail network are factors contributing to infrastructural deficiencies in the province. Because of the acknowledged lack of investment in public infrastructure spanning some years, freight is more effectively moved by road – which overburdens the road network.

From analysis of road freight operations in the different provinces in South Africa there are several aspects that become apparent and significant. It is very evident that road freight is expanding very rapidly to fill areas of demand, serving a wide range of industries, with purpose-built vehicle and trailer configurations.

Freight will continue to be transported via a combination of road and rail, however what remains of critical importance is the achievement of the proposed and planned for modal shift from road to rail. In the event of the modal shift target not been achieved, the proposed road expansion and capacity upgrades becomes immediately inadequate and could potentially lead to certain routes becoming grid locked with widespread adverse effects to the logistics and other industries impacting negatively on the performance of the Province. The infrastructure stakeholders have recognised the need for multi-modal facilities which cater for fast-moving consumer goods as well as bulk minerals and lighter manufactured goods. The development of nodes in the interior of the province and the enhancement of rail, airfields and corridors will be crucial in this development.

The need for greatly improved rail network for economic development is well illustrated with the example of timber. KZN forestry industry is a major source of

road and rail freight as well as contributing a significant export tonnage through the ports of KwaZulu-Natal. The volume transported on the land modes (road and rail) to processing plants and exported through the ports is estimated at approximately 10 million tons per annum in the form of timber and timber-related products, paper, woodchips, etc. Approximately 1,4 million tons of timber is transported via rail on the KZN branch lines and onto the main lines. Approximately 108,045 tons of timber is also railed from Swaziland to Richards Bay on the Durban - Empangeni - Golela and Swaziland line. The largest proportion of timber is transported by road to various processing plants, mills and for export. The vehicles used are flat decks with steel stakes or purpose-designed, stake-sided trailers with the vehicle configurations of all groups from 5-40 ton carrying capacity. The ideal is to transport heavy goods by rail and free up road for passenger and light commerce. In addition, the issues of accessibility for human and community needs are paramount – improvements in rail infrastructure will increase the population's physical access to goods and services.

The following catalytic programmes/projects as planned in accordance with the Transnet Long Term Planning Framework (LTPF) are in support of the proposed intervention, contributing to the overall target indicators:

- Glencoe to Booth - Transformer Replacement;
- Glencoe to Booth - Implement CTC signal infill scheme to reduce headWASy;
- Glencoe to Cato Ridge - Relieve Gradients and Curves;
- Glencoe to Booth - Upgrade to 25 kV AC and voltage changeover at All DC Traction Intersections;
- Glencoe to Booth - Train Control System - ETCS (Level 3);
- Rolling stock;
- Cato Ridge - Rail Bypass (2033);
- Natcor Rail Line: Section 3 - KZN North Coastlines; and
- Natcor Rail Line: Section 3 - KZN South Coastlines

2.4 ETHEKWINI METROPOLITAN MUNICIPALITY

2.4.1 ETHEKWINI INTEGRATED DEVELOPMENT PLAN (2022/23 TO 2026/27)

The Municipal Systems Act (No.32) of 2000 (MSA) requires that local municipal structures prepare Integrated Development Plans (IDPs). The IDP serves as a

tool for transforming local governments towards facilitation and management of development within their areas of jurisdiction. The MSA identifies the IDP a key component in entrenching developmental local government principles.

Population density in eThekweni Metro is concentrated within the former townships of KwaMashu, Ntuzuma, Inanda and Phoenix in the north, Umlazi, Lamontville and Chatsworth to the South, Clermont/KwaDabeka and Mariannridge in the West and the Durban CBD/Beach, Glenwood, Berea, Cato Manor in the Central areas. These density characteristics have important implications for where people may wish to settle, (whether formally or informally); commuting patterns; public transport and the provision of basic services and social facilities. Fragmentation of the metropolitan area can threaten its potential as an economic engine, and social and environmental problems in any one part of the urban area can stunt overall metropolitan growth.

Because of the self-reinforcing nature of this kind of spatial pattern, fragmentation and low-density settlements can both be attributed to and result in the following:

- Long commuting times (average for the majority of eThekweni commuters is 2 hours return). This in turn impacts negatively on labour productivity and results in high transport costs.
- Impacts on higher order social and economic facilities require large geographic catchments, the consequence with developing in fragmented locations results in new facilities being located far away from much of the population.
- Challenge to quality of life and to long-term sustainability.

Therefore, with Cato Ridge located approximately ± 30 km from Pietermaritzburg and ± 50 km from Durban CBD, employment opportunities to those living in the Cato Ridge area are impeded. Considering this, the development of the proposed logistics hub in Cato Ridge could provide employment opportunities for those living in the surrounding area, consequently improving the quality of life for the community, and addressing the high rural-to-urban migration trends. The Outer West Region (including Cato Ridge) is earmarked in the IDP to provide opportunity for strategic Industrial Expansion and hence employment opportunities.

Freight Transport System

Durban is the trade gateway for the Southern African region, as the busiest port in terms of cargo value and shipping activity. One of the goals for transport in eThekweni is to develop an efficient and integrated freight transport system that will ensure regional economic stability. The region's transportation system requires the optimum integration of the different modes of transport that includes road, rail, aviation, maritime and pipeline with the appropriate modal balances.

To this end and in line with legislative provisions, the eThekweni Transport Authority (ETA) has developed an Integrated Freight and Logistics Strategic Framework and Action Plan for the entire eThekweni Municipal area. This plan was adopted by eThekweni Executive Council on the 30 September 2015. The plan focuses on creating an optimal modal split of freight; the enhancement of efficient freight systems; a suitable freight land use structure; and the development of supporting institutions and programmes. The plan aims to improve the port-city interface, industry requirements and how each of these connect with the broader economy of Southern Africa and the world, while still ensuring efficiency and ease of doing business within the municipal area.

The Integrated Freight and Logistics Strategic Framework and Action Plan addresses the following seven implementation elements:

- Infrastructure – road infrastructure, port and rail infrastructure, truck stops, intermodal facilities, truck staging areas, weighbridges and weigh-in-motions, intelligent traffic systems and traffic signage;
- Operations – incident management systems, and freight management systems;
- Policy and Regulation – policy and bylaw revision and the development of truck route hierarchies;
- Land Use – freight land use plan and port land use interface zones;
- Institutional Development – road rail liaison development, incident management, incentives and penalties application, and additional dedicated freight resources to key departments;
- Funding – funding sources, and incentives and penalties; and
- Communications –developing a freight communications strategy.

2.4.2 ETHEKWENI MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK (2022/23)

This Metropolitan Spatial Development Framework (MSDF) is an integral component of the Integrated Development Plan (IDP) and a key spatial transformation tool which guides how the implementation of the IDP should occur

in space. The MSDF therefore guides the desirable spatial distribution of land uses within a Municipality in order to give effect not only to the spatial vision, goals and objectives of the Municipality but by directing where the city should intervene in space to achieve its transformational objective. This is achieved through the identification of metro-wide spatial priorities and spatially targeting interventions in these key areas. The MSDF is also aligned with provincial and municipal sector plans and strategies as a way of ensuring that the desired spatial form and outcomes of the Municipality are achieved both horizontally and vertically.

The economic development function rests with the Economic Development and Planning Cluster and reports to the Economic Development and Planning Committee (ECOD). The goal is to develop the economic wealth of the eThekweni region for the material well-being of all its citizens and the expected outcome is strong economic growth, sustainable job creation and poverty alleviation.

The eThekweni economy is pillared on three platforms: A strong logistics infrastructure consisting of the Port of Durban; the road and rail network; a growing freight and passenger international airport; and Special Economic Zones (SEZ) such as the Dube Trade Port. A combination of the port as well as the presence of a strong agricultural sector in the province has given rise to a sophisticated manufacturing sector with eThekweni being the second largest concentration of manufacturing activity in the country (after Johannesburg). The presence of scenic beaches; a sporting and events industry; and sub-tropical climate which has spurred the growth of the tourism industry.

eThekweni's exports as a percentage of the national totalled 5.7% during 2020, while eThekweni's contribution to national imports was 10.2%. In eThekweni, imports have grown at a faster compound annual growth rate of 7.0% when compared with exports at 6.1% during 2010-2020 signifying a trade deficit. The decrease of imports (-2.7%) and of exports (-5.7%) is attributed to the severe impacts from the Covid-19 pandemic where major supply- and value-chains were disrupted leading to a slowdown of activity in the ports. Over 75% of exports during 2020 were transport equipment (R21bn); fuel, petroleum, chemicals, and rubber products (R16bn); food, beverage, and tobacco products (R12bn) and metal products, machinery, and household appliances (R11bn). Almost 70% of imports comprised transport equipment (R27bn); fuel, petroleum, chemical and rubber products (R24bn); metal products, machinery, and household appliances (R15bn) and textiles, clothing, and leather goods (R14bn).

eThekweni's main trading partners are China, Germany, the United States, the UK, India, and Japan. In 2019, the operational phase of the Africa Continental Free Trade Area (AfCFTA) was launched thereby establishing a single market for goods and services across 54 countries – making it the world's largest free trade area by number of countries. This is a significant opportunity for eThekweni to boost intra-African trade without import duties, with a market of 1.2 billion people and a GDP of \$2.5 trillion, across 54 countries. This is potentially advantageous for eThekweni, which is dependent on exports and logistics and will underpin the region as the hub port of southern Africa.

Freight and Transport Logistics

The freight and transport logistics is the type of infrastructure that is needed to support, maintain, and grow economic activity. This service infrastructure includes rail linkages, port efficiency, back of port operations (to enhance capacity and range of business), intermodal transport hub in ports and inland and the newly planned dug out port are projects which will give life to KZN, positioning the province as a gateway to Africa.

At the centre of the transport industry is the Port of Durban. The Port of Durban is the busiest on the African continent as it handles the largest number of vessels per annum in comparison to all other African ports. The port offers a combination of port facilities and services. Transnet Ports Authority, formerly known as the National Ports Authority (NPA), is the custodian of all the national ports, managing the most vital conduits of the country's imports and exports.

Having recently celebrated 20 years into our democracy, South Africa still faces major challenges of poverty, unemployment, and inequality at all spheres of Government. The National Development Plan (2012) was developed in response to the abovementioned challenges and aims to eliminate poverty and reduce inequality by 2030. It identified infrastructure as a critical element to facilitate economic growth and job creation. In line with this and to support and stimulate service delivery, job creation and economic transformation the National Infrastructure Plan (NIP) was adopted in 2012 and the Presidential Infrastructure and Coordinating Commission (PICC) was established to integrate and oversee its implementation. The PICC announced 18 Strategic Integrated Projects (SIPs) which represent corridors of proposed infrastructural development, as support to achieving the goals of the NIP. The SIPs cover social and economic

infrastructure across all nine provinces. One of these SIP's (SIP 2) is the Durban – Free State – Gauteng Logistics and Industrial Corridor.

The nationally driven Strategic Integrated Projects have a significant impact on the eThekweni Municipality, in particular, the SIP2 Logistics and Industrial Corridor as it forms the backbone of South Africa's freight network. The main components of the freight corridor are the Port of Durban, well established road, rail and pipeline links to Gauteng, and inland freight terminals to service the broader Gauteng area and countries to the north of our border. The Bay of Natal is a regionally significant estuary and home to Africa's busiest port, handling a wide range of high value cargoes. It plays a critical role in servicing the import and export needs not only of Durban and its extensive KZN hinterland, but also of Gauteng and the Southern African region. Two thirds of South Africa's containers move through Durban, as well as a majority of liquid fuel and automotive cargoes. In addition, Durban handles significant break bulk, dry bulk, and chemical cargoes, and provides facilities for cruise liners, the SA Navy, and for fishing, service vessels and recreational craft.

Durban is the premier gateway port in the South African ports system, with the lowest logistics costs. Durban handles high-value cargoes in a complementary relationship with the Port of Richards Bay, which focuses on bulk exports of minerals. Together the ports service the maritime needs of South Africa's eastern seaboard. As the South African economy grows, the capacity of the port needs to be increased. Over the past ten years, the growth in container traffic through Durban has been three times the national GDP growth rate. There is already pressure on the port, the roads, and in back of port areas, despite recent expansion projects. At an 8% annual container growth forecast the existing transportation infrastructure will reach its limits in 2019. Unless significant expansion takes place, South African economic growth will be constrained, and freight will be forced to relocate to more distant ports, increasing already high transport logistics costs, and compromise South Africa's global competitiveness. The development of the freight corridor and related projects will reduce the cost of doing business and improve productivity, which will create employment and generate wealth locally, regionally, and nationally. The vision covers port, rail, road, and land-use plans, and focuses on national and local economic growth, social upliftment for affected communities, and environmental sustainability.

Investment in infrastructure capacity will exceed a quarter of a trillion Rand, making this one of the most significant projects in the history of South African

freight transportation. The contributions to the local, region and national economies are expected to be significant during construction and operations. The anticipated number of jobs are 62 000 construction jobs and 54 000 permanent jobs locally, and another 22 000 permanent jobs in port related industries elsewhere in KZN. The project will stimulate local and regional economic growth. A growth of R4 billion per year in KZN GDP is projected during the construction phase. During the operational phase the growth is significantly larger and estimated GDP at local level is R12.5 billion per year. Cognisance has been taken of other freight expansion projects to accommodate growth in break bulk, dry and liquid bulk, and automotive volumes, and on other non-freight projects. Provision has been made for port and non-port related growth on the transportation corridors, as well as for expansion of passenger numbers on road and rail. The Port of Durban is the primary contributor to eThekweni's economy which is of provincial and national significance and has seen a steady increase in container traffic in recent times. One of the serious constraints to development is the inefficiencies and congestion in the Durban port operations. Improving the Municipality's logistics infrastructure will ensure the maximization of port economic opportunities.

In the Outer-West, development is to support the national Durban-Gauteng Corridor. This corridor is more than just a logistics route and there are significant development opportunities that these routes will make possible, including developments in Pinetown, Shongweni and Cato Ridge. The City will work with the Province and other Municipalities in proactively planning and opening up opportunities in this corridor. In order for eThekweni to maintain its status as a gateway to Southern Africa and the world, particular attention to its infrastructure planning and delivery is needed. The Municipality must invest in building modern / smart infrastructure, particularly freight and logistics, that reduces business costs, enhances competitiveness, and creates employment firms.

Cato Ridge has been identified as one of the industrial expansion and potential dry port areas in the Municipality that can respond to the increasing demand for industrial land in eThekweni Municipality and provide logistics support for the port. However, the area faces enormous challenges especially with regards to traffic issues (limited accessibility) and as a result the area has not been unlocked and used to its full potential. By improving the infrastructure, upgrading the N3 and addressing the sewer issue these challenges can be addressed and the area can be unlocked for industrial and logistic development. The development of

Cato Ridge will also serve as a stimulus to unlocking the potential of the surrounding areas of Mpumalanga and Hammarsdale. The eThekweni Municipality SDF identifies Cato Ridge as a major focus for industrial expansion of Local, Provincial and National significance.

The greater Cato Ridge Local Area includes large tracts of undeveloped industrial zoned land that has been mooted as part of a major metropolitan industrial growth node. The area is 14 256 ha in extent, comprising 6% of the eThekweni Municipality area and is located on the western edge of the Municipality boundary. It is ideally located on the SIP2 corridor and straddles the N3 national route between Durban and Johannesburg, the provincial R103 alternative route between Durban and Pietermaritzburg and the Natal Corridor (Natcor) railway line to the South. Cato Ridge is identified as an investment opportunity area as well as an industrial node. An investment opportunity area is area that provide opportunities for new invested that need to be supported by public investment as well as the involvement of the private sector. An industrial node provides specialised focused services while having a metro-wide significance.

2.4.3 FIVE YEAR ECONOMIC RECOVERY AND SHARED GROWTH PATH (2022 TO 2027)

In 2020 the world found itself battling the worst pandemic (Covid-19) in a century, which plunged the global economy into recession. eThekweni was already in recession at the start of the pandemic, and this has continued to deepen, resulting in increased unemployment and the closure of hundreds of micro and small businesses. The municipality responded quickly by developing an economic recovery plan which, alongside national measures, moderated the economic impact of Covid-19 while protecting the poor and most vulnerable groups.

This strategy not only address the impacts of Covid-19 on the local economy, but also the aftermath of the recent civil unrest in eThekweni. The recent riots in KZN have sent the province into an even more perilous economic state. The unrest, although sparked by political grievances and factions, was a direct result of the alarming rates of unemployment, inequality, and poverty within the province. The priority is to rebuild the economy in a more inclusive and sustainable manner.

The eThekweni economy is pillared on three platforms.

- Firstly, strong logistics infrastructure consisting of the Port of Durban; the road and rail network; a growing freight and passenger international airport; and the Dube Trade Port Special Economic Zone (SEZ).
- Secondly, the combination of the port as well as the presence of a strong agricultural sector in the province has given rise to a sophisticated manufacturing sector with eThekweni being the second largest concentration of manufacturing activity in the country (after Johannesburg).
- Thirdly, the presence of scenic beaches; a sporting and events industry; and a sub-tropical climate which has spurred the growth of the tourism industry.

At the close of 2020, eThekweni continued to be a significant contributor to the country's economy, contributing 10.1% to South Africa's total GDP 1. The city is one of five major metros in the country and hosts the third largest economy behind Tshwane (11% of national GDP) and Johannesburg (15% of national GDP) and followed by Cape Town (10% of national GDP) and Ekurhuleni (6.7% of national GDP).

The severity of threats to the economy have come to light as a result of the recent riots and social unrest that have shaken the region. The lack of economic growth, contraction of the economy, and major job losses have led to an increasing social burden. By the end of 2020, a staggering 56.2% of the working-age population in eThekweni was unemployed or was not an active participant in the workforce. This is the highest rate compared with the other major metros, indicating that eThekweni is carrying a disproportionately greater burden of economically inactive citizens. In addition, the average disposable income in eThekweni is lower than Cape Town, Johannesburg, and Tshwane, which means that this lower income has to be stretched to support the greater social burden in the region, resulting in severe economic hardships. Additional threats include further waves of the Covid-19 pandemic, the rising social unrest that could persist, the national debt crisis, skills migration, and the decline in tax revenue.

The National Economic Recovery and Reconstruction Plan sets out to reposition the country onto a growth path by prioritising the following 9 priority areas:

Aggressive infrastructure investment

- Employment orientated strategic localisation, reindustrialisation, and export promotion.

- Energy security
- Support for tourism recovery and growth
- Green economy interventions
- Gender equality and economic inclusion of women and youth
- Mass public employment interventions
- Strengthening food security
- Macro-economic intervention

Therefore, due to the economic strain currently on the eThekweni Metro, economic growth is imperative, if not the first priority. This document identified various primary priority sectors. The first listed is the port, ocean economy and logistics, including:

- Maritime engineering, ship and boat building and repair
- Ocean tourism, oceanic study, renewable energy, and sport
- Logistics administration

Therefore, identifying this as the priority for economic development and growth. In order to create a liveable city that works for all its residents, there must be good health, quality education, a safe environment and well managed public and private spaces. Infrastructure must support inclusive growth and people must have equitable access to economic opportunities. To achieve success, the municipality must focus on its relative advantages, which include:

- Export competitiveness and supply chain integration
- Tourism development
- Manufacturing output with focus on African and foreign markets.

The need to target the growth in tradable sectors is based on the relative advantage of eThekweni as a location that is export competitive as well as the relatively small local market and buying power. Hence this will form the core of the strategy.

In order to achieve the Strategic Focus Area (SFA) of a compact, productive and liveable city that connects citizens with economic opportunities, the following should be implemented to unlock investment through catalytic infrastructure development:

- Regenerating the Inner City to be people-centred and a catalyst for change: Establishment of economic development company

- Establishment of economic development company: Unlock the Cato Ridge logistics hub
- Develop infrastructure to unlock Cornubia and Dube Trade Port: Implement the listed catalytic projects (including the Cato Ridge logistics hub)
- Facilitate the implementation of catalytic economic projects: Develop public private partnerships models in bulk infrastructure and develop an infrastructure plan aligned to economic priorities

Given the municipality's current limitations in its ability to fund bulk infrastructure, a public-private partnership model is a keyway of achieving bulk infrastructure provision. The following two pilot projects have been identified to benefit from such partnerships:

- Ntshongweni Multi-Use Node
- Cato Ridge Logistics Hub

2.4.4 eTHEKWINI BUILT ENVIRONMENT PERFORMANCE PLAN (2020 TO 2021)

The BEPP seeks to support the call of the National Development Plan as well as the Integrated Urban Development Framework which is also articulated in the City's IDP to support the spatial transformation of the built environment.

The BEPP follows the strategic direction set in the SDF and there is a high level of accord between the spatial priorities of the SDF and the BEPP. These priorities were presented in an integrated form during the Capital Budget internal engagements at the end of 2018- see map below. Both plans give prominence to promoting economic growth, higher residential densities and mixed land uses along the first phase of the public transport routes – this gives effect to a transit-oriented development approach:

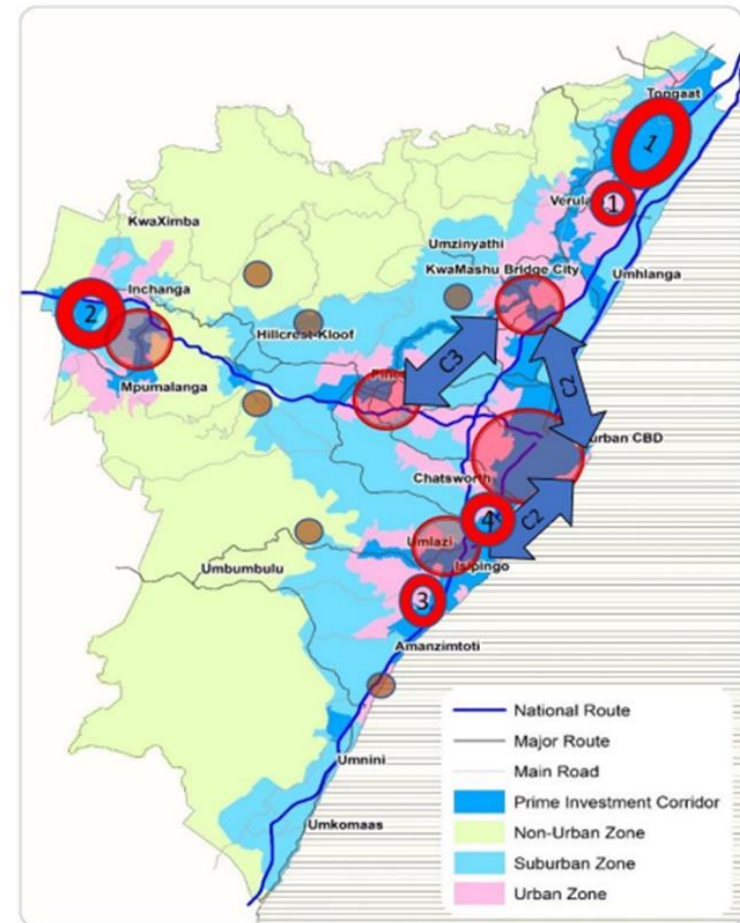
The Prime Investment Corridor incorporates all of the SDF Priority Urban Investment Areas (circled in red on the Integration map below);

- Aerotropolis/Cornubia;
- Inner City Regeneration;
- SIP2 / Cato Ridge / Keystone/ Hammarsdale;
- South Illovo;
- Port and Back of Port;
- Land Uses to support IPTN/ Densification (C2 and C3 corridors);

- Inner City;
- Bridge City;
- Umlazi;
- Pinetown; and
- Mpumalanga.

According to the BEPP, many of the Catalytic Projects within the BEPP display an excellent alignment with the SDF Priority Urban Investment Areas.

Map 2.5: SDF Spatial Priorities and Prime Investment Corridor



Cato Ridge Multi Modal Development

Development of a Logistics Hub / Inland or Dry Port with the following business units, Mega Truck Stop and Staging with various amenities, such as overnight facility, 700 to 1,000 truck parking bays, fuel station, convenience stores, driver's wellness centre, pharmacy truck and tyre repair facilities, Container and Automotive Terminal with an envisaged maximum container annual throughput capacity of about 750,000 TEUs, Logistics and Industrial Park with warehouse facility for added container services such as stuffing and de-stuffing. The Industrial Park will house various manufacturing facilities and Tank Farm (Petroleum Product Storage) with an estimated annual throughput capacity of 3,168,000 million Litres.

The project aligns with the eThekweni Municipality Spatial Development Framework (SDF) 2020 and falls within the Prime Investment Corridor. The Development Planning, Environment and Management Unit has completed a Local Area Plan for the greater Cato Ridge area. After a comprehensive public participation process, Council approved the Local Area Plan endorsing the multi modal hub within the Cato Ridge area to create much needed jobs and grow the local economy.

2.4.5 ETHEKWINI INDUSTRIAL SPATIAL STRATEGY

Until now, eThekweni Municipality has not had an overarching, citywide, approach to industrial development. Industries have located in areas of convenience and in areas that have been historically zoned for such purposes.

Table 2.4: Industrial and Occupancy Rates for the Outer West Region

Industrial Township		Outer West	Waterfall	Hammarisdale	Cato Ridge	Outer West Sub-Total	TOTAL EMA	Outer West as a Portion of the EMA
Industrial Zoning (Ha)	Noxious		0.0	0.0	0.0	0.0	636.6	
	General		22.2	268.0	1 083.1	1 373.3	3 262.7	
	Service/Light		43.3	0.0	38.9	82.2	1 406.6	
	Other		0.0	0.0	0.0	0.0	1 780.3	
	Total		65.5	268.0	1 122.0	1 455.5	7 086.2	20.5%
Taken Up (Ha)		Noxious	-	-	-	0.0	564.5	

Given the lack of appropriate land and the high demand it is critical that strategies to provide space for these activities are developed. Given this and the port expansion and progress of Dube Trade Port, the Industrial Spatial Strategy focuses on areas of potential within the city and will recommend the approach to addressing this.

An industrial-related demand issue is with regards to the growth of the port and demand for land logistics in close proximity. Uncertainty of the port expansion also puts further pressure to rethink and re-design industrial land within and land outside the port (back of port). Allowances for the relocation of certain industrial activities in the back of port must be made; and appropriate spaces allocated packaged with incentives.

In contrast to the spatial clustering of the manufacturing sectors, the Logistics and Transport businesses are found in high concentrations close to the port, with dispersed concentrations moving away from the port. The scale and intensity of this sector reflects the importance of the role of Durban's port within the industrial sector as a whole. However, it is envisaged that demand for logistics from this area will remain high as it is linked directly to the port.

Outer West Region

Table and figures below demonstrate the Outer West's enormous potential to develop the industrial sector. Whilst noxious industry may have an impact on water catchments, the remote location and vacant land would make it the only viable location for noxious industry.

Industrial Township	Outer West	Waterfall	Hammarisdale	Cato Ridge	Outer West Sub-Total	TOTAL EMA	Outer West as a Portion of the EMA
	General	17.8	148.5	344.4	510.7	2 150.8	12.1%
	Service/Light	17.1	-	19.2	36.3	1 153.1	
	Other	-	-	-	0.0	1 606.0	
	Total	34.9	148.5	363.6	547.0	5 474.4	
	%	53.3%	55.4%	32.4%	37.6%	77.3%	
Unoccupied (Ha)	Noxious	-	-	-	0.0	72.2	56.4%
	General	4.4	119.5	738.7	862.6	1 144.1	
	Service/Light	26.2	-	19.7	45.9	288.7	
	Other	-	-	-	0.0	176.3	
	Total	30.6	119.5	758.4	908.5	1 611.8	
	%	46.7%	44.6%	67.6%	62.4%	22.7%	

Source: DEMACON ex Industrial Spatial Strategy, 2023

62.4% (908ha) as indicated in the table is currently undeveloped in the Outer West area. The availability of this land promotes the strategic significance of the Outer West in the Industrial Spatial Strategy. The Outer West is industrially under-developed, with the only cluster of significance being the Textile/Clothing cluster at Hammarisdale. There is also a small Truck/Transport Service and Spares cluster at Cato Ridge/Camperdown. The largest factory in the area is Assmang's Ferro-Alloy smelter at Cato Ridge. This area is coming under focus due to the shortage of industrial land elsewhere in the EMA. It is strategically important because of its location on the western corridor between Durban and Pietermaritzburg and also being on the main road and rail connection to Gauteng and the Free State. Furthermore, most of the land is zoned for industrial uses, which has encouraged a steady market interest.

Cato Ridge

Cato Ridge remains the only major undeveloped area with significant industrial potential. There are currently approximately 10 manufacturing plants at Cato Ridge plus a small number of light industrial companies. The largest plant is the Manganese smelter belonging to Assmang who are also the largest landowner. There is a limited rail shunting facility at the Cato Ridge Station and the N3 highway passes through the centre of the town. Thus, it has good transport connectivity however the configuration of the off-ramp makes it difficult to enter and exit.

In viewing Cato Ridge as a future industrial area, it is important to look at the bigger picture of long-term industrial development within the Province. Cato Ridge is the starting point for what is a natural industrial corridor from Durban through Pietermaritzburg to Ladysmith and Harrismith. In time, this can extend right through the Free State to Gauteng to greater or lesser extents. In the shorter

term the section from Cato Ridge to Pietermaritzburg should be planned as an integrated corridor. It is said that Cato Ridge has the potential to develop into the Midrand of KwaZulu Natal. In this industrial strategy Cato Ridge is envisaged as the next noxious industrial complex and logistic node for the eThekweni region.

The anticipated increase in cargo volumes handled through the Port would strongly intensify the need for additional logistics space. An important additional dimension, which should therefore be considered, is the development of an inland Container Terminal, possibly supported by a logistics park and overnight truck-stop. This depends largely on the form and extent of development decided for the Port and the amount of space on the DIA land allocated for container handling and distribution.

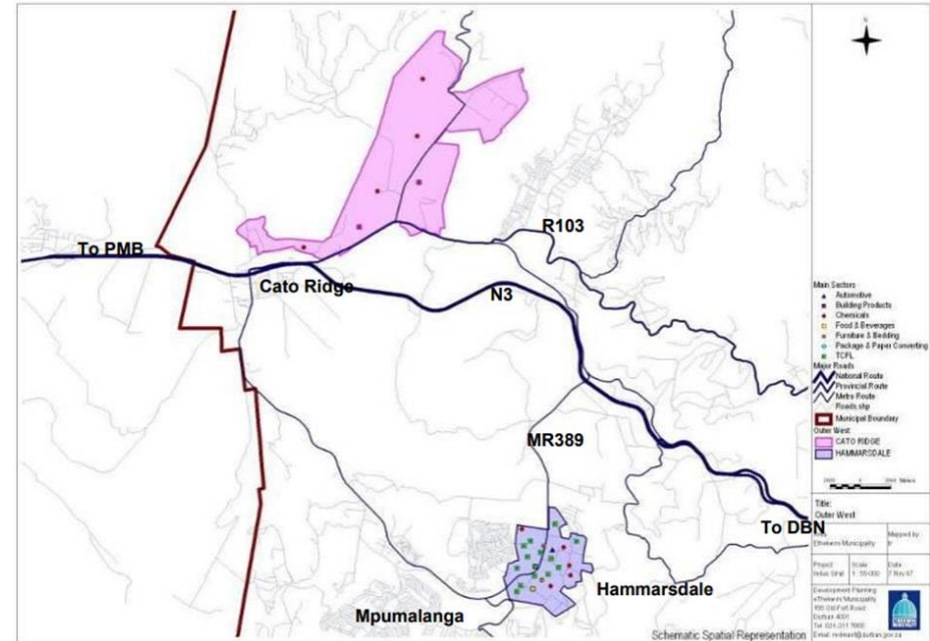
Such a development to provide sufficient capacity for the logistics sector would also impact on Transport volumes, forms, and movements. Ideally a hotshot service either by road or rail or both, linking the Cato Ridge Terminal/Logistics Park directly with the Port, should be established to ensure speedy and efficient movement of cargoes between the two locations.

There is considerable undeveloped land in the Cato Ridge area and a large population of low-income residents in adjoining semi-rural areas from which to draw the bulk of factory employees. The town of Cato Ridge is also expanding and well placed relative to Durban and Pietermaritzburg and could thus be attractive for administrative and middle management staff.

Cato Ridge and Mpumalanga are earmarked for industrial development within eThekweni Municipality. These have been identified as suitable locations due to:

- Vast amounts of vacant land
- Ideal location between the Port, Pietermaritzburg and even Gauteng
- The market interest in the area
- Its potential to act as support to port and the new airport
- The land already being zoned for industrial uses
- The major landowners in the area support the notion to expand industrial development.

Map 2.6: Spatial Schematic of Industrial Activities by Sector in the Outer West



Source: DEMACON ex Industrial Spatial Strategy, 2023

2.5 OUTER WEST REGION

2.5.1 CATO RIDGE LOCAL AREA PLAN (2018)

The greater Cato Ridge Local Area Plan (LAP) study area includes large tracts of undeveloped but zoned industrial land that have been mooted as part of a major metropolitan industrial growth node. This role has been ascribed by virtue of its location on the strategic N3 logistics corridor (SIP2) and the related need to provide job opportunities for the growing formal and informal residential suburbs of the Outer West Region of eThekweni Municipality.

Cato Ridge is strategically located on the N3 corridor equidistant between Durban and Pietermaritzburg. The Port of Durban is the major growth factor driving economy of Durban. This growth follows international trends for global supply chains where local businesses out-source segments of their business to other firms and thus require a greater reliance on logistics-based industries to support this trend. The growth of the Durban Port, and its effect on the local

industrial and logistics-based land market, can be quantified using growth projects for Container Movements (TEUs - Ten-foot equivalent Unit) through the Durban Container Terminal.

There is limited potential for new industrial areas within the Central, South Durban Basin and South areas of Durban, at most an additional 154ha could be realised in the Central and SBD area and 230ha in the South. For Port based development it is likely that these areas will see a retrofitting of existing industrial stock and a “pushing-out” of industries that do not need to be in the area. These businesses will have to relocate within eThekweni. There is land capacity to grow to the North, a possible 3,000ha but the north is not located on the N3 corridor and will require additional transport costs so logistic based firms would be reluctant to be located too far north. There is a potential 1,732ha of land in the Outer West which could also absorb relocated firms, new industrial development in eThekweni and is strategically located on the N3 corridor.

Cato Ridge must be understood within this development context. The west is no longer merely the under-developed agricultural periphery of Durban that accommodates dramatic topography, dormitory suburbs, rural/traditional residential areas, and old decentralised industrial nodes. The west is changing into a more complex and integrated development region, a region that needs to engage with the new national and metropolitan logistics imperatives, accommodate historic backlogs and redress past spatial imbalances all whilst ensuring that environmental imperatives are not lost in the process.

Industrial and Logistic Hubs

Establishing Cato Ridge as City/Regional Logistics Hub and Industrial Production Node which complements existing industrial zones of the City and provides for expansion of industry and enhancement of the City's logistics platform. This could be based on using existing Rail infrastructure north of the N3 as a base for a regional logistics hub OR through the establishment of a new much larger logistics hub on western edge of Cato Ridge (Camperdown). Either way the zones immediately adjacent to the N3 will provide opportunities for logistics and industrial activity growth and development.

According to this directive, General Industry land use should be accommodated in the existing Harrison Industrial area and new developments should be carefully controlled and appropriately sited and designed to avoid impacting on the existing amenity and character of adjoining areas as well as the

environmental sensitivity of adjacent areas. Industrial and logistics expansion opportunities to be provided east of the existing Cato Ridge village and in the Harrison South areas. Logistic hub facilities can be accommodated within these areas provided direct access to this area from the N3 be secured via a new interchange. Clustering of activities with each of the industrial sub-areas should be encouraged i.e., food and beverages to the north of Harrison in the vicinity of the Abattoir, recycling in the vicinity of the landfill, metal products along the P1-3 in the vicinity of Assmang and SAFAL Steel and Chemicals and Building Supplies along the P1-3. Warehousing and distribution facilities should be clustered within Harrison South (provided the new interchange is built).

The following table indicated the intended land use designation, intention, and development controls for industrial development in the Cato Ridge area.

Table 2.5: LAP Land Use Designations and Recommended Land Use Zones (Scheme)

Land Use Designation	Land Use Intention	Intended Development Controls	Area of Application
Light Industry: Medium Impact	Medium impact industrial and business development that permits manufacturing uses that are compatible with land uses permitted in adjacent sensitive land use zones, such as residential, mixed use and open space zones, i.e., manufacturing activities that usually do not involve significant vibration, noise, or odour.	1.4 FAR 70% Coverage 6 storeys	Establish a new light industrial precinct east of the existing Cato Ridge Village, south of the existing industrial developments of Harrison Flats in Harrison South and in Cato Ridge East.

Land Use Designation	Land Use Intention	Intended Development Controls	Area of Application
	May permit warehousing and distribution facilities, truck stops, container depots and staging areas. Is considered medium impact due to major traffic associated with possible truck staging and truck stop.		
Industry: Medium Impact	Medium impact industrial and business development, including general, light, and service industry and business. Warehousing and distribution must be ancillary to main primary industrial activity.	1.5 FAR 70% Coverage 4 storeys	Consolidation of existing industrial development on Harrison Flats
Industry: Low Impact	Low impact industrial and business development, including general, light, and service industry and business that are sensitive to adjacent	0.5 FAR 50% coverage 2 storeys	North of the N3 and Cato Ridge Village where development is in environmentally sensitive areas.

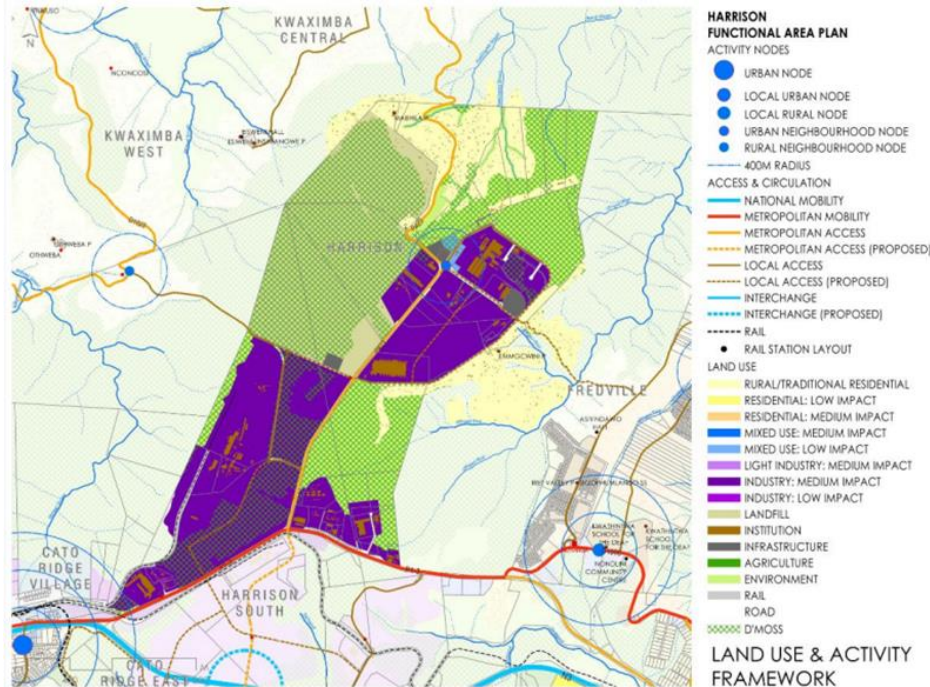
Land Use Designation	Land Use Intention	Intended Development Controls	Area of Application
	environmental protection areas. Warehousing and distribution must be ancillary to main primary industrial activity		

Source: DEMACON ex Cato Ridge Local Area Plan (2018), 2023

It is estimated that approximately 424ha of net developable industrial land could be realised in the Greater Cato Ridge Area. This has the potential to create between 35 532 and 63 450 employment opportunities. In terms of a low employment scenario, conservative estimates indicate that employment density is approximately 84 jobs/ha. High scenario employment density is as estimated at 150 jobs/ha. New mixed use net developable land area is of the order of 19ha. This translates to between 950 and 4 750 jobs based on a low employment density of 50 jobs/ha and a high employment density of 250 jobs/ha.

Harrison Functional Area Plan

- Land Use and Activity
 - Consolidate and revitalise Harrison Flats as a metropolitan node for mixed medium impact manufacturing industrial node where new industrial, logistic, warehouse & distribution facilities are activities permitted.
 - Encourage clustering within the focus area i.e., food and beverages in the vicinity of the Abattoir, metal products around the Assmang and SAFAL steel complexes, chemicals and building materials along the P1-3 corridor and recycling activities around the proposal landfill site.

Map 2.7: Harrison Functional Area Plan

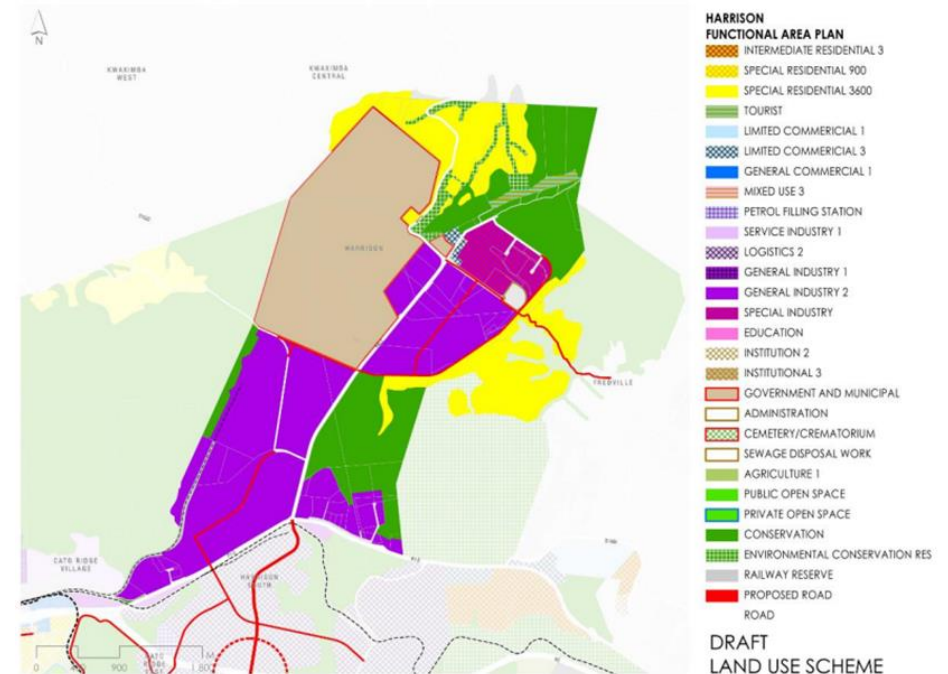
Source: DEMACON ex Cato Ridge Local Area Plan (2018), 2023

The above map illustrates that the proposed development site is earmarked for general industrial land uses, while only the surrounding area is earmarked for conservation.

2.6 ALTERNATIVE LOCATIONS OVERVIEW

The preceding analysis of strategic objectives, drivers and spatial planning affords an opportunity to assess project location alternatives in light of opportunity areas specifically identified in line with the intended logistics and warehousing nature of the proposed development.

From a macro-locational perspective, the Outer West Region of eThekweni is identified as the primary location where available, serviced, zoned and available industrial land is located that can support future industrial orientated growth and development. According to the eThekweni Industrial Spatial Strategy more than

Map 2.8: Harrison Functional Area Plan - Draft Land Use Scheme

Source: DEMACON ex Cato Ridge Local Area Plan (2018), 2023

56% of available industrial land in eThekweni is situated in the Outer West Region. Furthermore, long-term strategic planning indicates the prioritisation of Cato Ridge as a logistics hub area that can support logistical efficiency of the Port of Durban.

Overall, from a macro perspective the Outer West Region and specifically Cato Ridge is a preferred locational choice in contrast to other regions. Macro planning by national and provincial governments also recognise the importance of Cato Ridge as a logistics opportunity area.

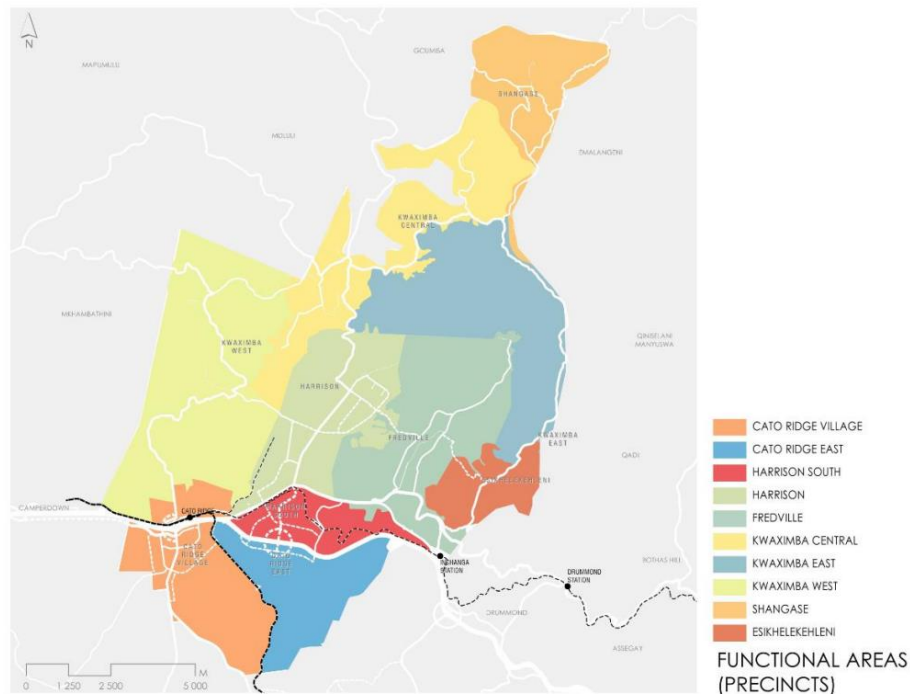
Considering the broader Outer West Region, the prominent industrial nodes in the area consist of Cato Ridge, Hammarsdale and Waterfall. More than 83% of available industrial zoned land in the region is located in the Cato Ridge area. Although Cato Ridge is situated more than 50km from the Port of Durban, the rail infrastructure available in area as well as proximity to the SIP 2 N3 logistics

corridor prioritises its suitability to accommodate future logistics orientated development opportunities.

In contrast, Hammarsdale as an industrial node in the area has a sizeable scale and access to rail infrastructure, but the node is removed from the N3 corridor and lacks future expansion potential to accommodate large scale logistics orientated development opportunities.

Within the context of Cato Ridge, the Cato Ridge Local Area Plan identifies 10 functional areas that can support different development typologies and functions. Of the 10 functional areas, the Cato Ridge Village, Cato Ridge East, Harrison, and Harrison South functional areas are of importance (these areas support a mixture of uses that includes industrial locations as well as the proposed development sites). In considering alternative locations within the local area, the aforementioned functional areas can be reviewed as alternative opportunity areas for the development.

Table 2.6: Cato Ridge Local Area Plan Functional Areas



- Cato Ridge Village
 - The area is to be defined as a mixed-use area serving the local community
 - Freight related activities are proposed to be relocated from the village (moving the existing truck stop from the village)
 - Industrial development north of the P1-3 road is to be consolidated and restricted
- Cato Ridge East
 - Establish Cato Ridge East as a mixed low impact manufacturing industrial and logistics activity node where new industrial, logistic, warehouse & distribution facilities are activities permitted
- Harrison
 - Consolidate and revitalise Harrison Flats as a metropolitan node for mixed medium impact manufacturing industrial node where new industrial, logistic, warehouse & distribution facilities are activities permitted
 - Traditional and rural residential activities to be consolidated
 - Grazing lands to be identified
- Harrison South
 - Establish Harrison South as mixed low impact manufacturing industrial and logistics activity node where new industrial, logistic, warehouse & distribution facilities are activities permitted

The preceding information suggests that functional areas such as Cato Ridge East, Harrison and Harrison south can be used to support industrial, logistics and warehousing orientated development opportunities. the Harrison and Harrison South Functional Areas represent the proposed development opportunity discussed and assessed in this report. It can therefore be inferred that the proposed development site is ideally situated to not only support the objectives of the Cato Ridge LAP and other overarching strategic documents but also already occupies the most strategic locationally appropriate location alternatives.

Furthermore, assessment of the site within the context of strategic documents and policy in short did reveal that Cato Ridge (and its industrial zoned land) is identified by the SDF, Industrial Spatial Strategy, the Integrated Freight and

Logistics Strategic Framework and Action Plan, BEPP, etc. as a key location where logistics/warehousing/industrial orientated development could be facilitated in support of the SIP2 intervention and growth and development of the Port of Durban (by extension the economy). The zoned industrial land in Cato Ridge (and specifically the client's property) is prized given the shortage of strategically located industrial land in the metropolitan region, especially land along the N3 corridor or land that can be used for logistics and warehousing orientated development. Information further suggests the development of an intermodal hub/truck staging area development in the immediate area of Cato Ridge which further enhances the Cato Ridge node's logistics/warehousing/industrial related development opportunity. Overall, the development site's location and its existing industrial zoning compliments the existing and proposed industrial uses in the area (including the smelter) and could add to the existing logistics and manufacturing function of the Cato Ridge node by encouraging clustering of complimentary uses (existing and future) and driving agglomeration of key economic function.

2.7 SYNTHESIS

In the directives analysed, the economic impact that transportation and logistics infrastructure have on the economy is immeasurable. This is prevalent when viewed from the prism of all spheres of government – national, provincial, and local. Therefore, development of the proposed warehousing and logistics orientated development could have a sizeable effect at all levels of the economy (i.e., national, provincial, and local economies) in terms of facilitating investment and unlocking growth opportunities. Furthermore, the development could create employment opportunities throughout the provincial economy and especially provide job opportunities to local/immediate communities. The direct employment opportunities created by the proposed development and indirect job opportunities stimulated throughout the economy as a result of its operation could positively impact on household quality of life.

The proposed development could further enhance the attractiveness of the Cato Ridge area as an investment opportunity, especially given the logistics and warehousing orientated nature of the development and its alignment with the intended future development aspiration of the Cato Ridge area. The proposed development could also act as a catalyst for sticky capital because of the alignment that the proposed development has with the Durban Port and its logistics expansion objectives.

An assessment of possible alternative locations in eThekweni, the Outer West and Cato Ridge revealed that the proposed development site is optimally located to respond to the strategic narrative of logistics orientated development in the Cato Ridge node and no other immediately accessible locations are available for consideration.

The Port of Durban is currently burdened by severe logistics congestion that strain existing infrastructure and detract from the effective and efficient operations of the Port. The Port of Durban is the premier import and export port of South Africa, requiring the port to be efficient in its logistics operations. The functionality of the Port has a direct impact on the national economy because of the reliance national exporters place on the port to export their products as well as the efficiency by which the port can import necessary consumer items into the country.

Local and national government have had long-term aspirations to develop an inland port in the Cato Ridge area as a response to the logistical congestion at the Port of Durban. To date these aspirations have not yet materialised and the Port of Durban remains constrained and less than efficient. The proposed development could, as previously mentioned, actively contribute to this goal, by facilitating a logistics function in a key node that could contribute to alleviating congestion at South Africa's largest port. The multiplier effect of such a development could enhance economic growth opportunities.

Given that the proposed development could create environmental risk factors, these factors could be offset by the economic opportunity the proposed development offers. By contributing to addressing a logistics constraint at the Port of Durban the economic benefits that the project offers are not only localised and contained but could stimulate economic opportunities that have sizeable national economic growth implications. Furthermore, local area plans and regional planning have identified the area and the specific development site for industrial and logistics opportunities therefore underpinning the strategic value that local and provincial government afford the property.



3 ECONOMIC PROFILE

3.1 INTRODUCTION

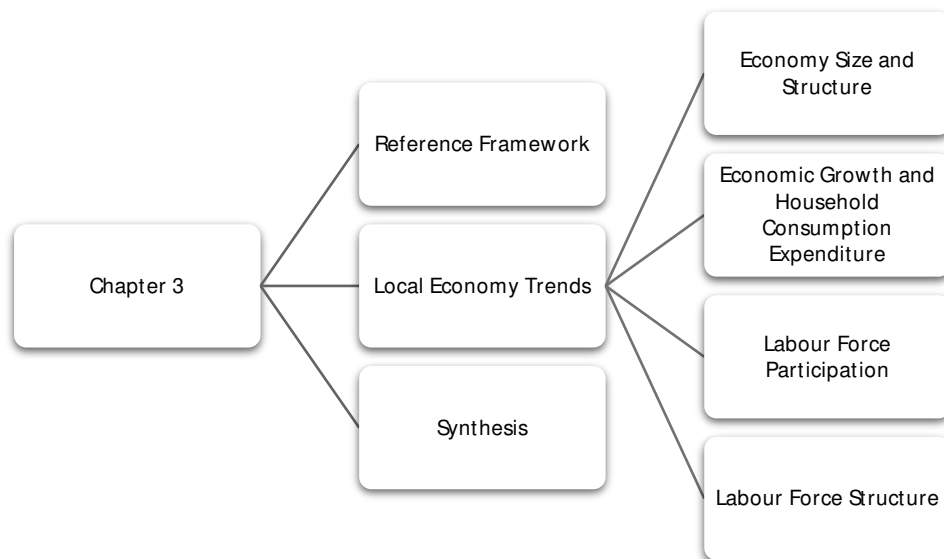
An intricate, though well-defined relationship exists between the economy and urban real estate markets. The performance of specific economic sectors serves as proxy for the performance of these real estate markets.

The purpose of this chapter is to outline the salient features of the study area economy in terms of selected time series economic indicators, most notably the economic profile and growth trends within the local economy.

As such, this chapter provides insight into the composition and stability of the local economy and hence, provides a more comprehensive assessment of medium- to long-term investment prospects than the conventional demographic analysis.

The following diagram provides an overview of the key themes addressed in this chapter.

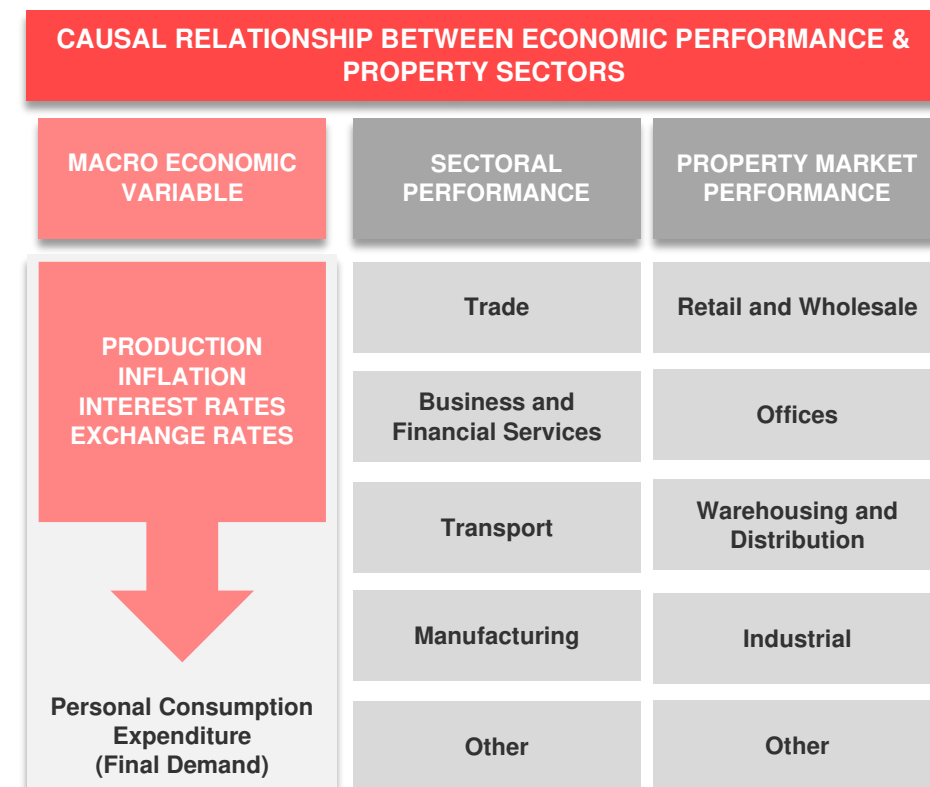
Diagram 3.1: Chapter 3 Core Themes



3.2 REFERENCE FRAMEWORK

The causal relationship between economic sector performance and property market performance is illustrated in Diagram 3.1. The economic indicators of an area form the basis for current demand for commercial product offerings and serve as drivers for future growth in demand. Subsequent paragraphs highlight the main indicators for the market area under investigation

Diagram 3.2: Causal Relationship between Economic Performance and Property Sectors



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3.3 LOCAL ECONOMY TRENDS AND PERFORMANCE

The following section is focused on the salient features that define and characterise the sub-regional and regional economies within which the proposed project is situated. The section seeks to geographically define sub-regional and regional economies, analyse the size and composition of the sub-regional economy compared to regional economies, outline growth trends and changes, the size and participation of the labour force, and the composition of the labour force as an indicator to current and future skills demand.

3.3.1 GEOGRAPHICALLY DEFINING THE SUB-REGIONAL AND REGIONAL ECONOMY

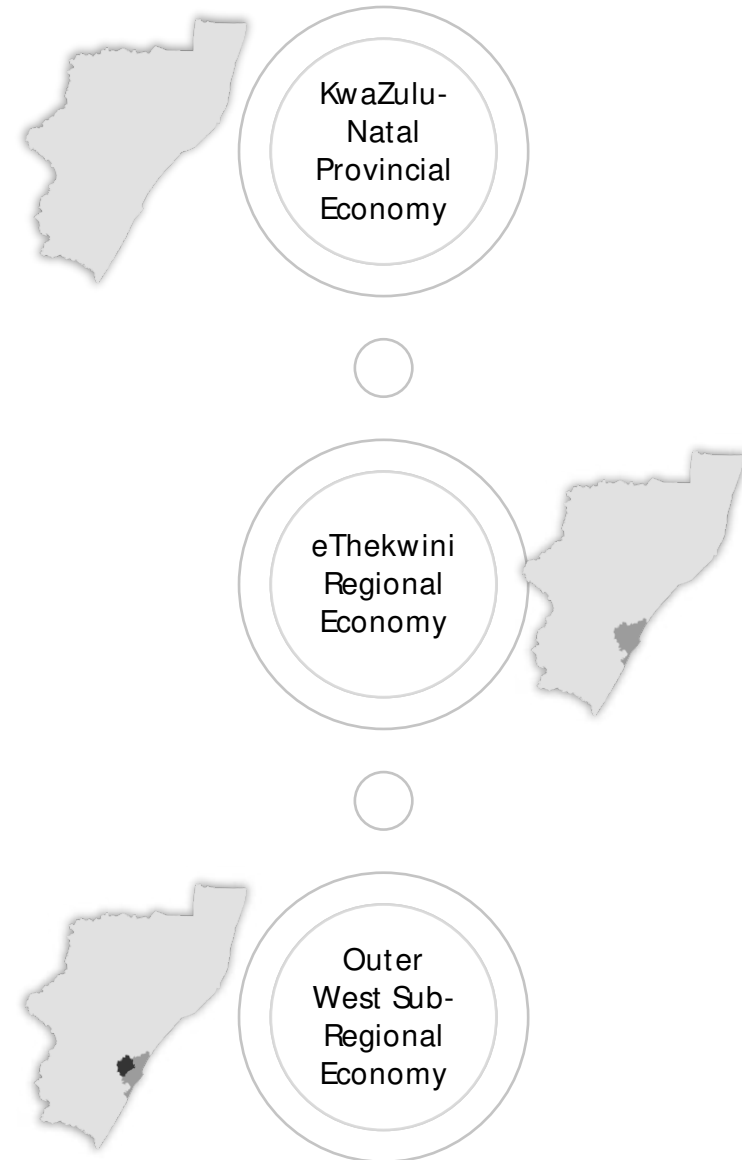
The geographic context of a sub-regional or regional economy is an important characteristic that should be defined. The importance of defining the geographic extent of local or regional economies relate to:

- Clearly defining the geographic area which is incorporated as part of a local/regional economy
- Understanding the extent of economic functions that contribute to a local/regional economy and
- Clearly understanding the spatial context and inter-relations between a local/regional economy and its surrounding areas

Defining the geographic context of a sub-regional or regional economy thus enables targeted analysis and a clear understanding of how a local or regional economy could impact/influence the proposed project.

The following diagram provides a basic illustration of the geographic positioning of the proposed project in relation to sub-regional and regional economies whilst the maps provide a more detailed expression of the sub-regional and regional economies.

Diagram 3.3: Regional and Sub-Regional Economic Context



3.4 ECONOMY SIZE AND STRUCTURE

ECONOMY SIZE AND CONTRIBUTION

Outer West
Sub-Regional Economy GVA
(current prices 2021)

R43.7 billion



contribution to
the eThekweni
Regional
Economy



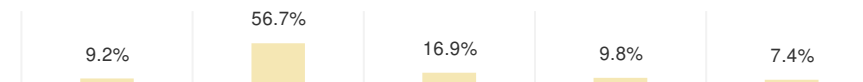
contribution to
the KwaZulu-
Natal
Provincial
Economy

The Outer West sub-regional economy is the **4th largest** contributor to the total economy of the City of eThekweni's regional economy.

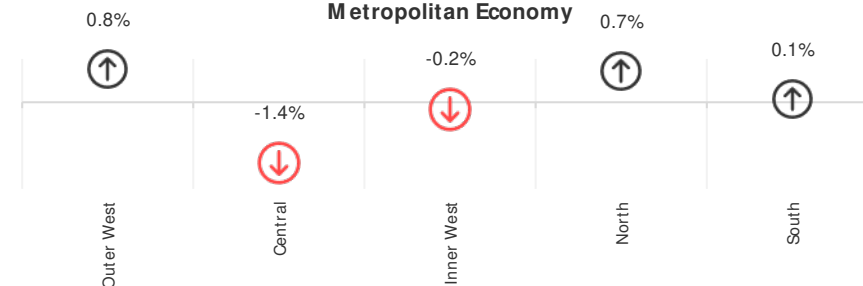
Compared to other economies in the metropolitan area, the Outer West sub-regional economy has **increased** its proportional contribution to the regional economy since 2011. Therefore, the sub-regional economy **continually expands** its importance as a key economic region of, not only the eThekweni, but the KwaZulu-Natal Province as well.

COMPARATIVE ECONOMY SIZE AND CONTRIBUTION ANALYSIS

Proportional Contribution per Local Economy to the City of Tshwane Metropolitan Economy

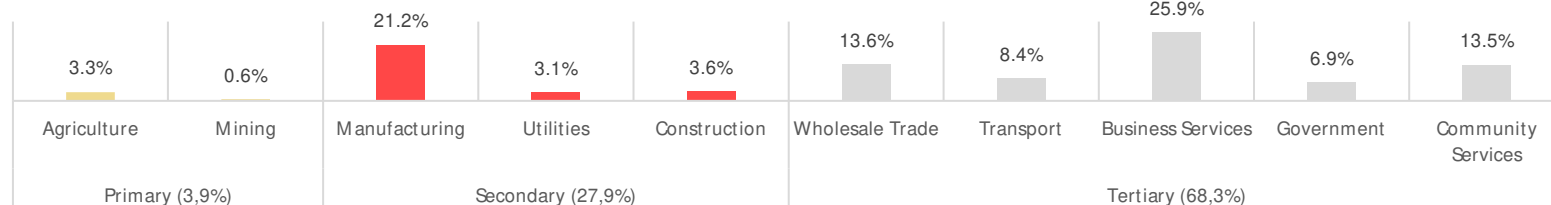


Shift in Proportional Contribution to the City of Tshwane Metropolitan Economy



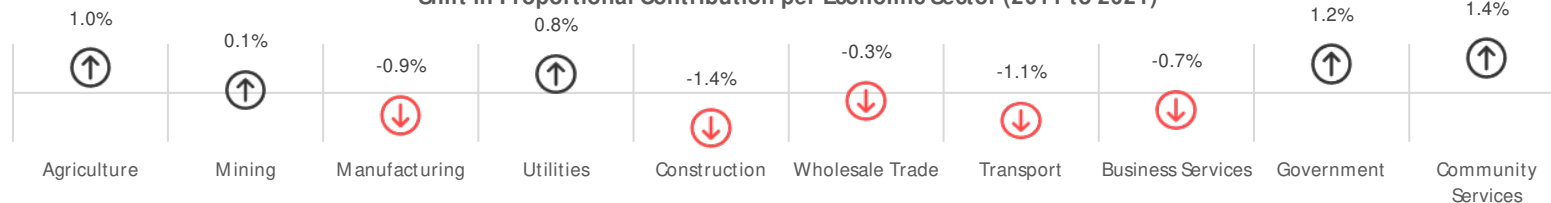
ECONOMY STRUCTURE AND PROPORTIONAL SHIFTS

Proportional Contribution per Economic Sector to the Total GVA of the Sub-Regional Economy



The sub-regional economy is characterised by the **tertiary sector**, with a sizeable **manufacturing industry** in support

Shift in Proportional Contribution per Economic Sector (2011 to 2021)



Drivers in the sub-regional economy are the **business services** and **community services** sectors

These sectors have maintained **positive** growth and are **sizeable contributors** to sub-regional economic output

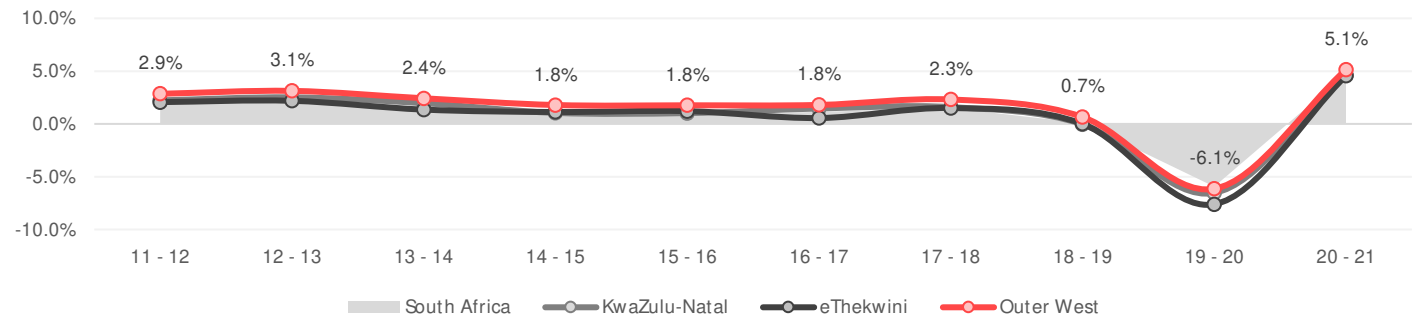
3.5 ECONOMIC GROWTH AND HOUSEHOLD CONSUMPTION EXPENDITURE

ECONOMY GROWTH

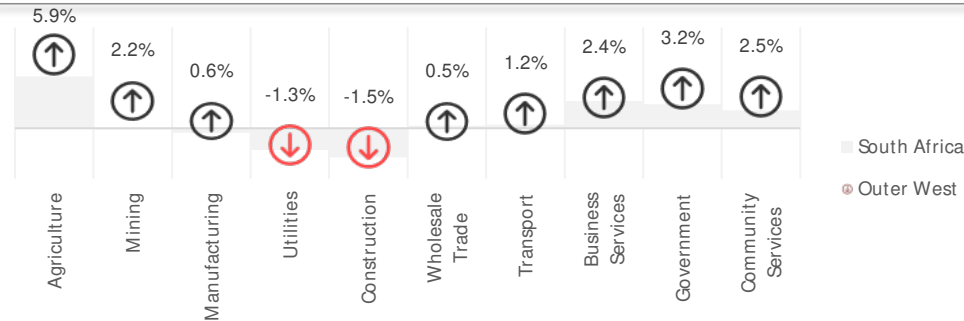
1.5% average annual growth of the sub-regional economy over the previous 10 years
(2011 - 2021)

0.7% average annual growth of the sub-regional economy over the previous 5 years
(2011 - 2021)

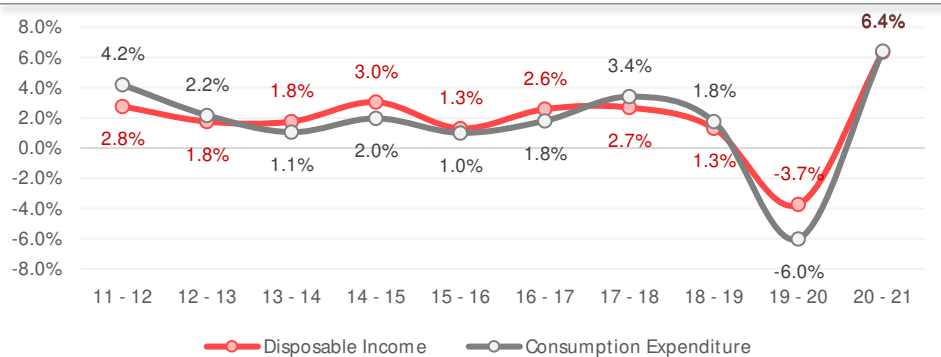
The sub-regional economy is recovering economic capacity lost during 2020. In 2021 the sub-regional economy was **1.3%** below pre-pandemic economic GVA output



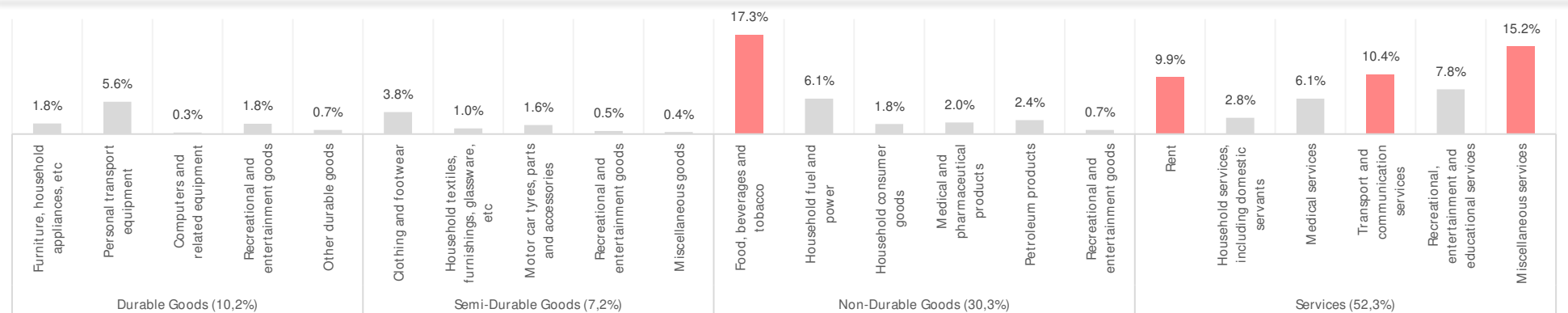
AVERAGE ANNUAL GROWTH PER ECONOMIC SECTOR



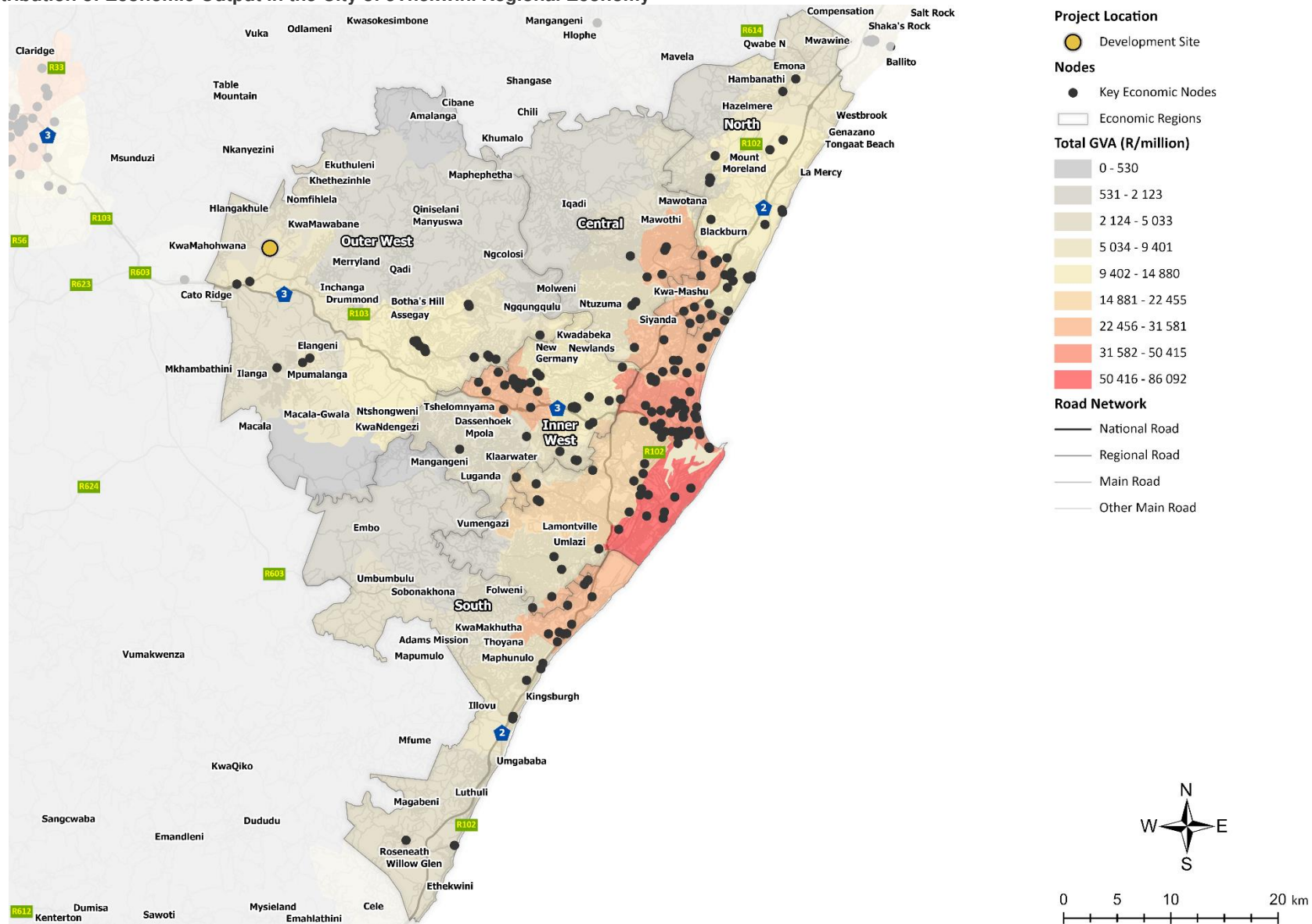
DISPOSABLE INCOME & CONSUMPTION EXPENDITURE



CONSUMPTION EXPENDITURE PER EXPENDITURE TYPE

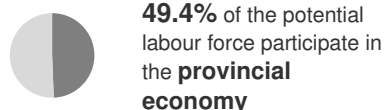
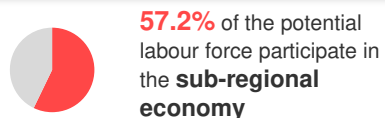


Odiameni Kwasokesimbone Mangangeni



3.6 LABOUR FORCE PARTICIPATION

LABOUR FORCE PARTICIPATION RATE (%)

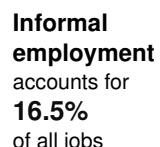


Compared to the regional average, the sub-regional economy maintains, on average, a lower labour force participation rate

Year	Sub-regional (%)	Regional (%)
2021	60.2	57.2
2020	58.4	54.7
2019	63.5	59.9
2018	63.3	59.5
2017	63.8	60.1
2016	62.8	58.9
2015	62.3	58.2
2014	61.3	56.7
2013	61.0	56.2
2012	60.6	55.6
2011	60.3	55.2

■ eThekweni ■ Outer West

STRUCTURE OF EMPLOYMENT



15 769 informal jobs exist in the local economy

The **informal economy** lost **6 826 jobs** since 2011 at an average rate of **-683 jobs per year**

80 017 formal jobs exist in the local economy

The **formal economy** gained **11 274 jobs** since 2011 at an average rate of **1 127 jobs per year**

Skilled Jobs



24 179 jobs

5 018 jobs added since 2011

502 jobs gained per annum

Semi-Skilled Jobs



33 290 jobs

4 722 jobs added since 2011

472 jobs gained per annum

Low-Skilled Jobs



22 548 jobs

1 534 jobs added since 2011

153 jobs gained per annum

The unemployment rate of the local economy is **41.6%**

The unemployment rate has started to increase from a low of **35.1%** in 2016

The data shows that the sub-regional economy is experiencing a slowdown in the rate at which the local economy can produce jobs

68 176

EA population
Unemployed

95 786

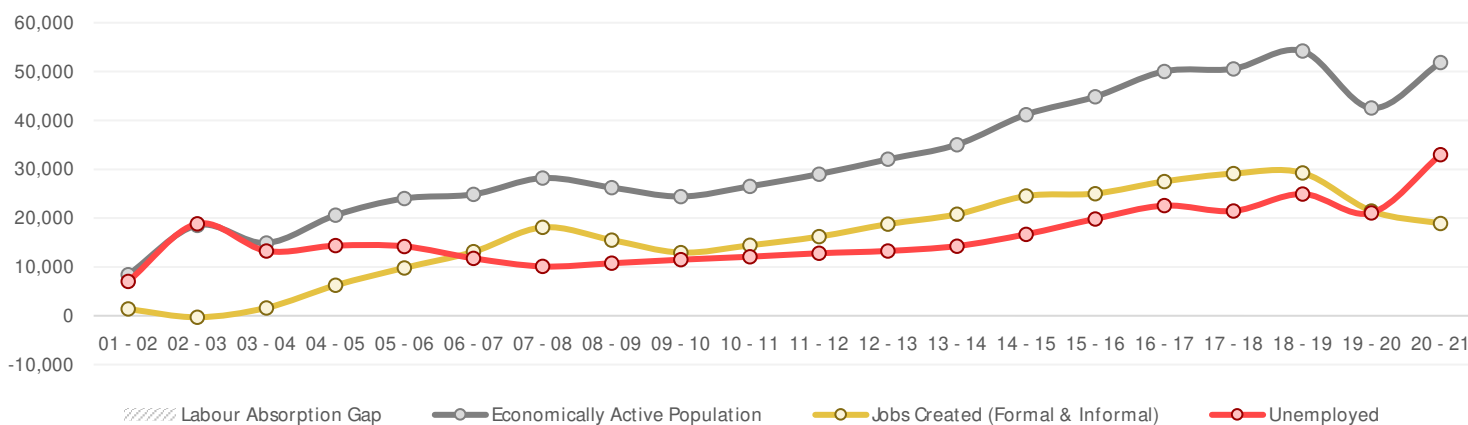
EA population
Employed

LABOUR DEMAND

25 359 people became economically active since 2011

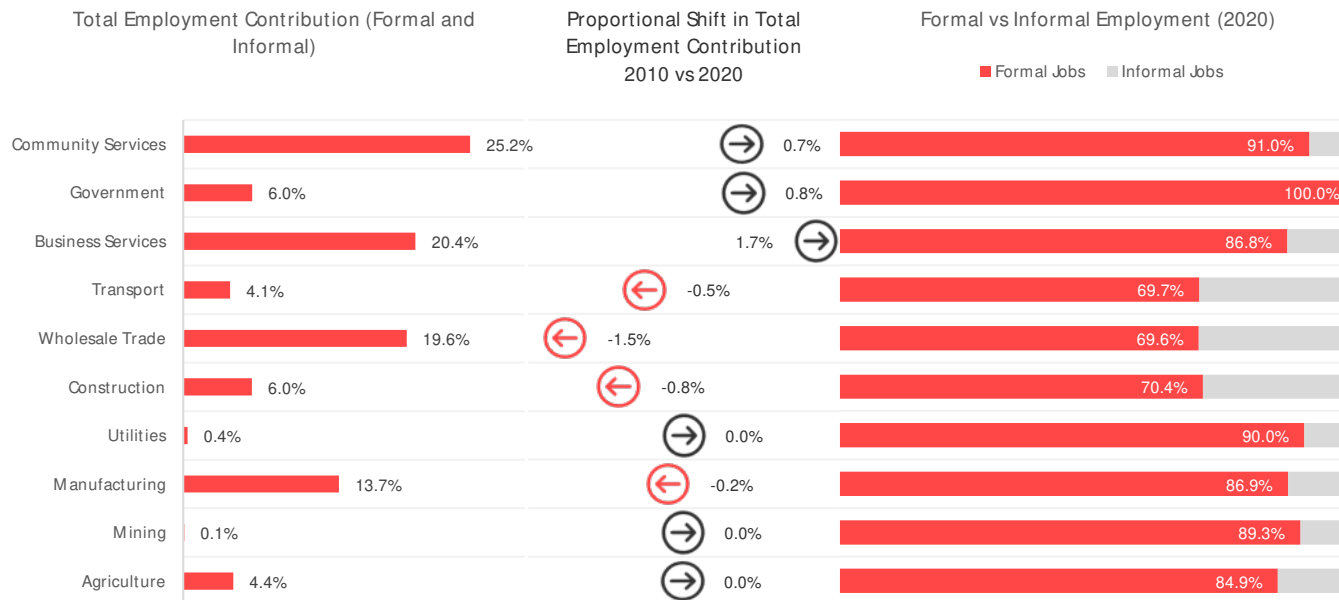
4 448 people found employment since 2011

20 911 people became unemployed since 2011

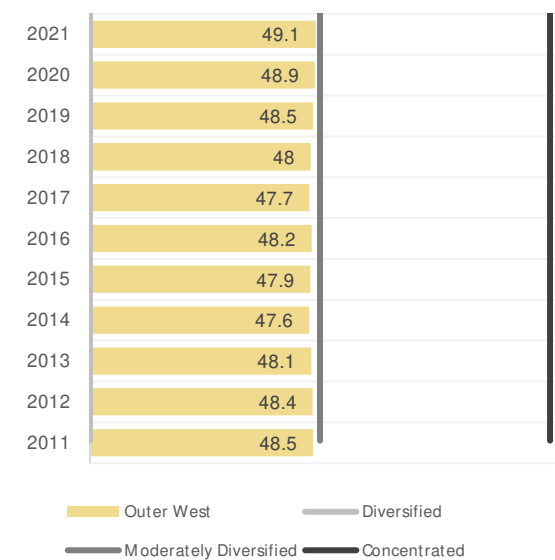


3.7 LABOUR FORCE STRUCTURE

EMPLOYMENT CONTRIBUTION PER ECONOMIC SECTOR

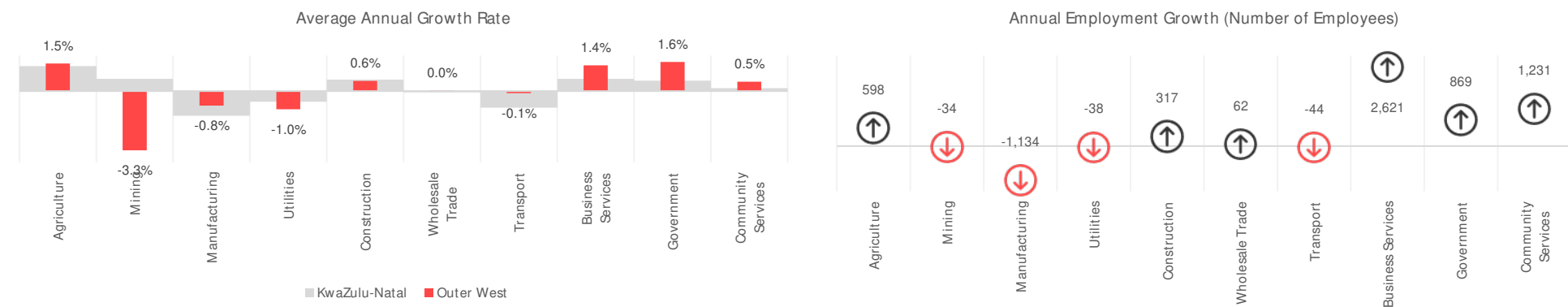


TRESS INDEX (10 INDUSTRIES)



A tress index measures the degree of concentration or diversification of an economy on a sectoral basis. The value of zero represents a completely diversified economy, while higher values show more concentration of economic activities

EMPLOYMENT GROWTH PER SECTOR (2009 to 2019)



3.8 SYNTHESIS

The following provides a summary of the preceding analysis:

Location

- The proposed project is situated in the Outer West sub-regional economy. The sub-regional economy forms part of the eThekweni regional and KwaZulu-Natal provincial economies.
- The city of eThekweni regional economy is the primary economy of the KwaZulu-Natal Province and is a prominent national economic contributor.

Economy Size and Distribution

- The size of the sub-regional economy in relation to other sub-regional economic geographies provides an indication of the relative importance of a sub-regional economy in the context of the broader economic environment within which it operates.
- The Outer West sub-regional economy proportionally contributes 9.2% to the regional economy and approximately 5.0% to the provincial economy.
- The sub-regional economy is, therefore, the fourth largest contributor to economic output in the eThekweni regional economy and a major role-player in the size of the provincial economy.

Economic Profile

- To highlight the economic growth trends of the Outer West sub-regional economy, reference is made to the growth and associated trends of sub-sectors that make up the economy. The reference focuses on the proportional contribution made by each economic sub-sector to the total Outer West sub-regional economy.
- Historic trends for the sub-regional economy as well as contributions made by each economic sub-sector to the sub-regional economy show that in 2021, the tertiary economic sector proportionally contributed more than 68% to the total economy of the Outer West sub-regional economy, while the secondary sector proportionally contributes 27.9% and the primary sector 3.9%.

- Proportionally, the business services sector (25.9%) is the largest contributor to the sub-regional economy. Economic sub-sectors such as manufacturing (21.2%) and wholesale and trade (13.6%) contribute the second and third largest proportions of economic output.
- Economic sub-sectors such as mining (0.6%), utilities (3.1%) and agriculture (3.3%) proportionally contribute the least to economic output.

Economic Growth

- Between 2011 and 2021, the sub-regional economy expanded at an average annual rate of 1.5%. In contrast, between 2016 and 2021, the sub-regional economy expanded by 0.7%.
- It should be noted that the level 5 and level 4 lock down regulations in the early stages of 2020 (March to June) impeded the normal operation of the majority of the economy. As a result, the economy of the country contracted and, therefore, the sub-regional economy was also impacted – primarily the reason why the average annual growth of the sub-regional economy expanded at a rate sizeably smaller than long-term growth trends between 2016 and 2021. If economic data for the year 2020 is excluded from the analysis, the sub-regional economy expanded by 2.1% between 2011 and 2019. Likewise, the sub-regional economy expanded between 2016 and 2019 by 1.6%.
- The sub-regional economy follows a similar growth trajectory to the regional, provincial, and national economies – primarily as a result of the similar structure of the economic geographies.
- Even though the sub-regional economy follows a similar cyclical trend to that of the provincial and national economy, the sub-regional economy expands at a rate greater than the regional, provincial, and national economy.

Growth In Consumption Expenditure and Disposable Income

- A positive correlation exists between final consumption expenditure and disposable income, which in turn reveals similar up-and downturns to the business cycle as a whole.
- The average annual growth rate of final consumption expenditure in the sub-regional economy for the period 2011 to 2021 is 1.7%, while over the short to medium term (2016 to 2021) the average annual growth rate was 2.1%.

- The average annual growth rate for disposable income for the period 2011 to 2021 is 2.0%, while over the short to medium term (2016 to 2021) the average annual growth rate was 2.1%.

Household Expenditure Per Category

- The trade sector is largely driven by expenditure on goods and services (retail sales) by a wide variety of consumer elements such as households, businesses, government departments and exports. Retail sales can be classified per different types of goods and services.
- Goods, in this instance, can be considered in terms of durable, semi-durable and non-durable goods. Durable goods refer to items such as furniture, personal transport equipment and entertainment goods, while semi-durable goods refer to clothing, footwear, and household textiles.
- Non-durable goods refer to food, medicine, and petroleum products. These goods are consumed and used daily.
- A general urban South African trend indicates that the decrease in expenditure directed towards non-durable groceries is declining year-on-year with a rise in consumption expenditure on semi durables including clothes and footwear.
- These trends can be ascribed to the high rate of inflation on non-durables (especially meat) and unabated clothing and footwear deflation.
- Food, beverages, and tobacco products are the largest expenditure items of household, with a proportional contribution of 17.3% in 2021, which is less than the national (19.7%) average and lower than the provincial (20.6%) percentage.
- The second largest expenditure item is miscellaneous services (e.g., education), representing approximately 15.2% of household expenses.
- The third largest expenditure item for household in the sub-regional economy is transport and communication services (10.4%).

Employment and Labour Participation

- The average labour force participation rate for the Outer West sub-regional economy amounts to 57.2%. The sub-regional economy outperforms regional and provincial labour force participation trends.
- It should be noted that the impact of lockdown regulations can be observed when comparing labour force participation in 2020 to 2021.

- A total of 11 274 formal jobs have been created between 2011 and 2021 in the sub-regional economy - is approximately 1 127 formal employment opportunities gained per year.
- The number of skilled employment increased at an average of 502 jobs per year, while semi-skilled employment gained 472 jobs per year, and low skilled employment gained 153 jobs per year.
- The informal sector decreased by 6 826 jobs between 2011 and 2021 - is approximately - 683 informal jobs per year.
- The economically active segment of the labour force increased by 25 359 people between 2011 and 2021. Approximately 4 448 people were employed in the sub-regional economy between 2011 and 2021.
- It is evident that the economically active segment of the population is growing faster than the absorption capacity of the sub-regional economy, meaning that potential jobs seekers are growing faster than the rate at which the sub-regional economy is creating employment. This could force job seekers to look for employment outside the sub-regional economy.
- The main employment creating sectors within the sub-regional economy are the business services, wholesale and trade, manufacturing, and community services, contributing more than 78% to the jobs created within the sub-regional economy



4 DEMOGRAPHIC PROFILE

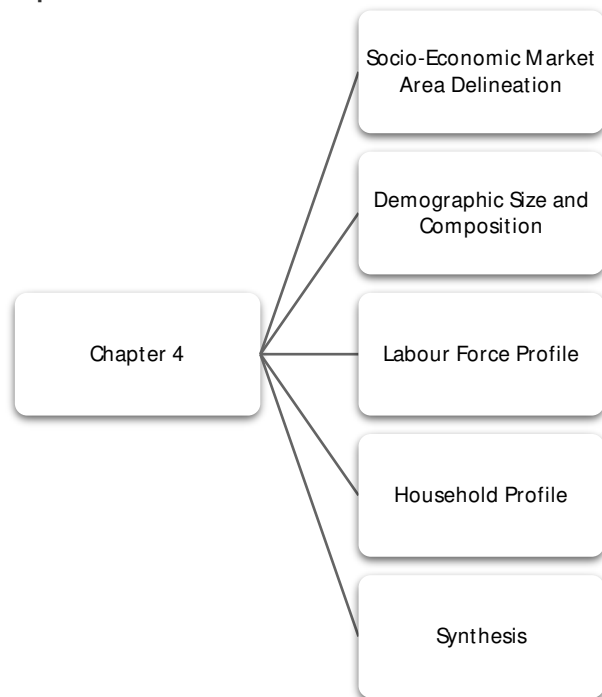
4.1 INTRODUCTION

The demand for economic/non-economic activities is, in part, based on demand generated by the demographic component of a specific market area or catchment. The current demographic composition in a market area coupled with past trends and future potential growth, impact on the current and future demand for economic and non-economic activities.

The purpose of this Chapter is to provide analysis of the demographic component of the resident market area that can be considered alongside the sub-regional economy's trends and performance to complete a demographic and economic perspective of interactions between population and their local economic conditions.

The following diagram provides an overview of the key themes addressed in this chapter.

Diagram 4.1: Chapter 4 Core Themes



4.2 SOCIO-ECONOMIC MARKET AREA DELINEATION

The demand created by the population of a geographic area forms the cornerstone of the viability of a development, as it affects the economic growth through the provision of labour and entrepreneurial skills and determines the demand for the production output.

Examining population dynamics is essential in gaining an accurate perspective of those who are likely to be affected by any prospective development or investment. This chapter, therefore, provides the key socio-economic indicators of the primary market, informed by national and international trade area delineation criteria, as well as the following:

- Consumer market behaviour and expenditure trends
- Regional and sub-regional levels of accessibility
- Geographic barriers
- General consumer mobility patterns and drive times.

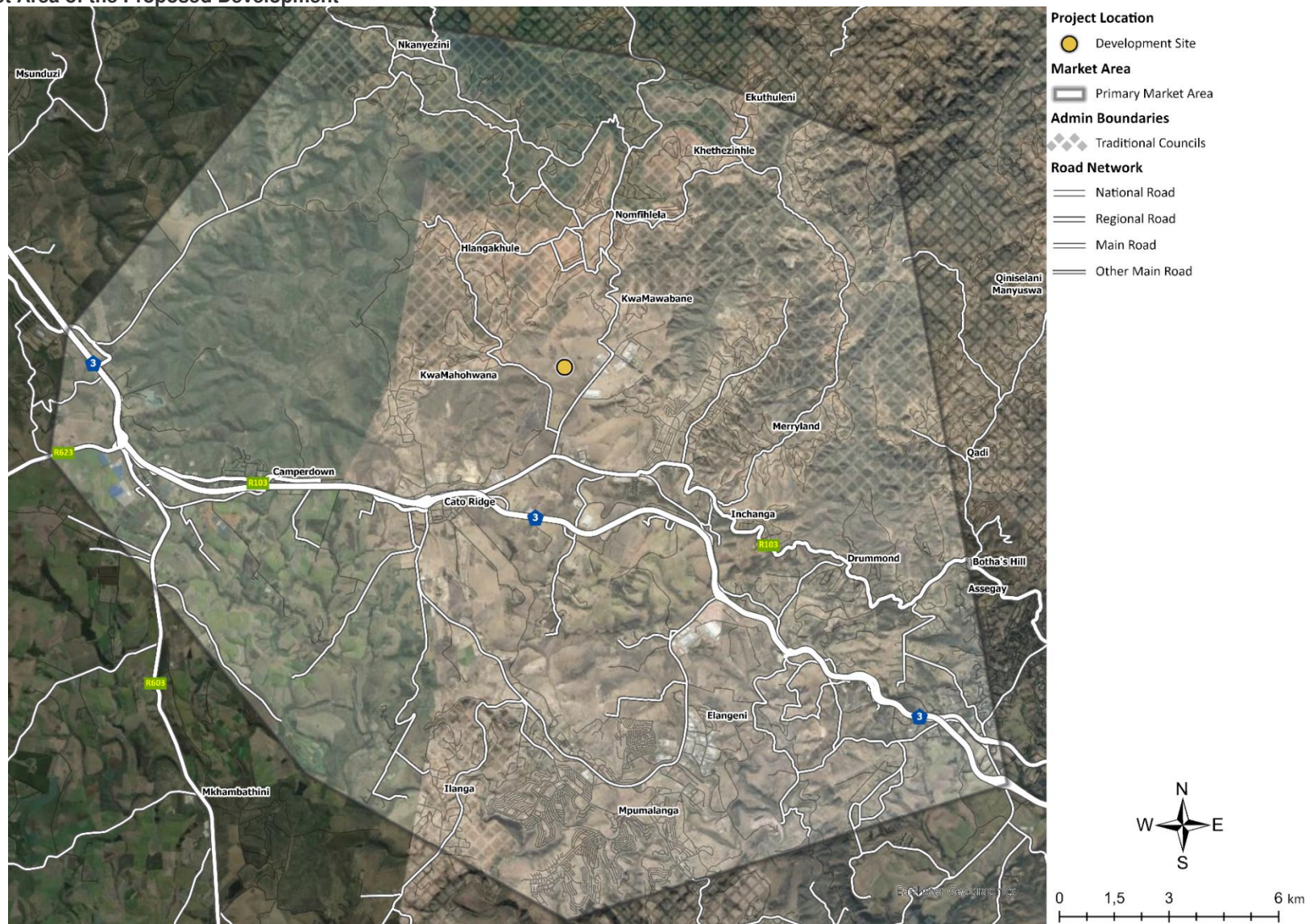
The primary market area identified for the proposed project is based on an approximated 15- to 20-minute drive time polygon. The market area consists of a range of geographies that include rural and natural open spaces, traditional councils and informal settlements, urban locations and small services centres, and industrial activity.

Centrally within the market area are the small urban service centres of Cato Ridge and Camperdown. These service centres are located along the N3 corridor which dissects the market area from east to west. Key economic activities such as industry, warehousing and logistics concentrate along the N3 corridor and select decentralised locations.

The northern areas of the market area consist of rural and open space areas intertwined with traditional authority administration areas (represents traditional residential localities). The south-eastern portions of the market area consist of suburban and small holding localities whilst southern portions contain a combination of informal, formal, and traditional residential areas (the area is referred to as Mpumalanga). The Elangeni industrial area is also found here.

The following map provides an overview of the primary market area of the study and its key defining attributes.

Map 4.1: Market Area of the Proposed Development



Source: DEMACON, 2023

4.3 DEMOGRAPHIC SIZE AND COMPOSITION

POPULATION SIZE



213 301
PEOPLE IN THE
PRIMARY
TRADE AREA

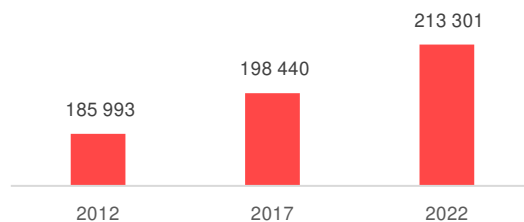
Population
Average Annual
Growth Rate
1.34%



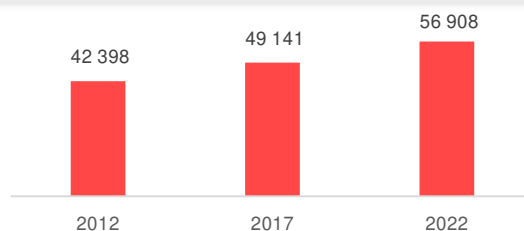
56 908
HOUSEHOLDS

Household
Average Annual
Growth Rate
2.95%

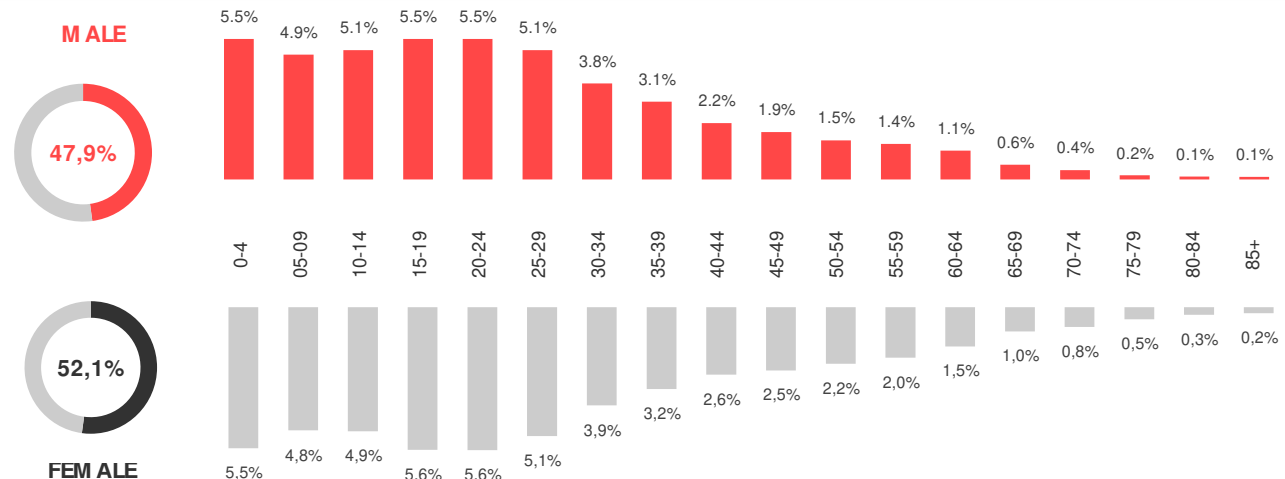
POPULATION GROWTH



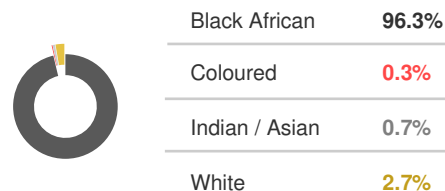
HOUSEHOLD GROWTH



AGE AND GENDER PROFILE

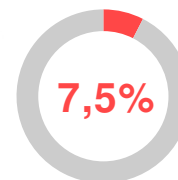


POPULATION GROUP



MIGRATION PROFILE

Data indicates that 7.5% of people migrated to the primary market area since 2011.



EDUCATION PROFILE

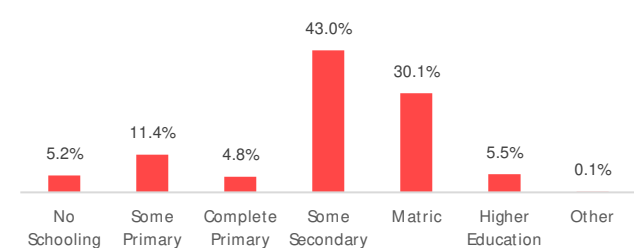
Educational Institution Attendance (Persons 20+ Years)

31.6%
attend a
UNIVERSITY

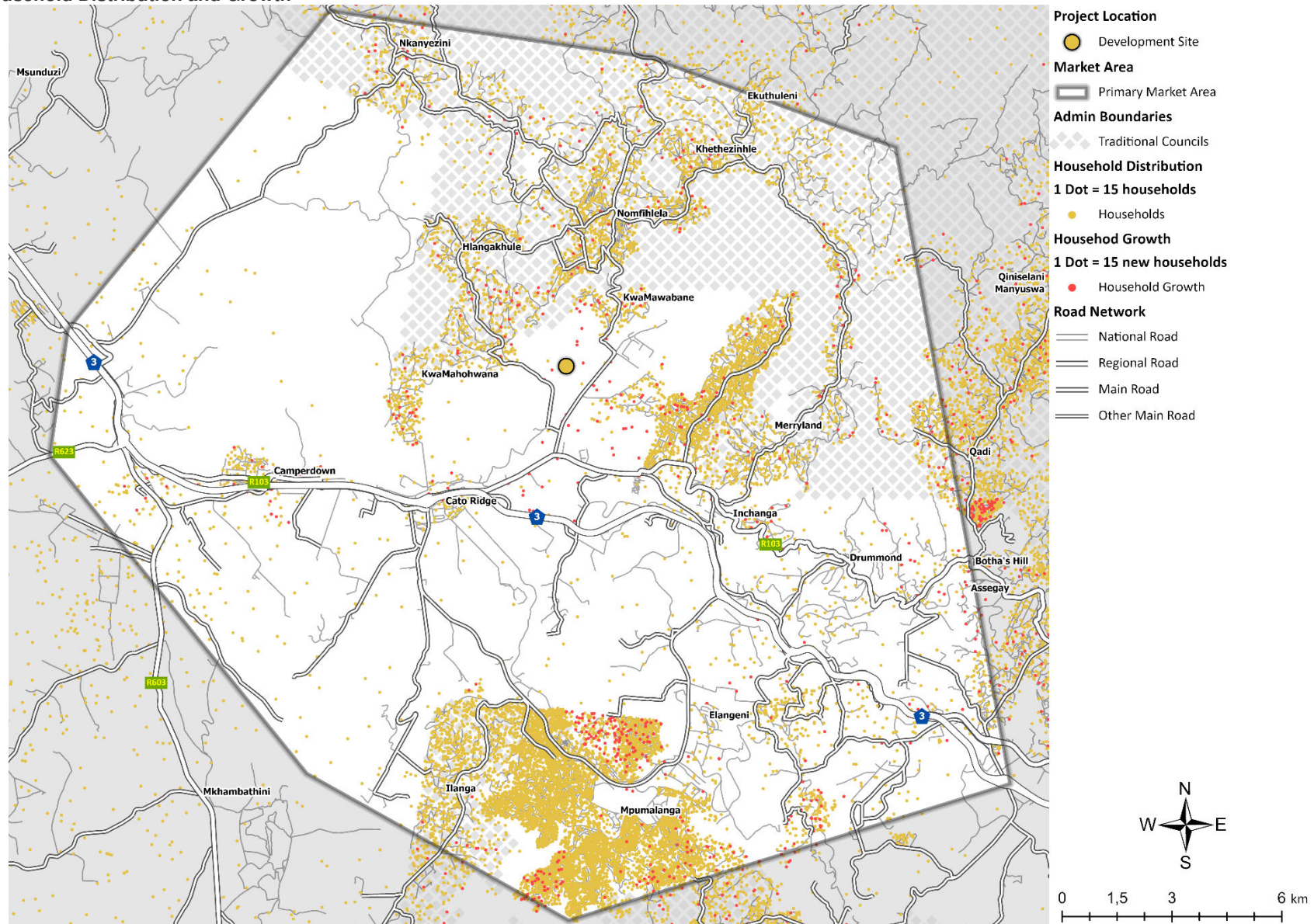
28.2%
attend a
ORDINARY
SCHOOL

15.4%
attend an
ABET

Highest Level of Education Obtained – Working Age Population (15 to 64)



Map 4.2: Household Distribution and Growth

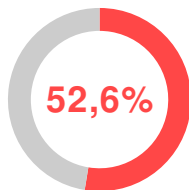


Source: DEMACON GIS, 2023

4.4 LABOUR FORCE PROFILE

ECONOMICALLY ACTIVE SEGMENT

ECONOMICALLY
ACTIVE
Population

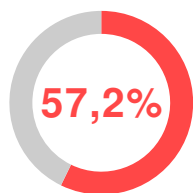


47.4% Not Economically Active

Economically active population refers to a person of working age 15 to 65 who are either employed or unemployed.

Not economically active population refers to ages 0 to 14 and 65 and older, persons unable to work or persons engaged in educational activities or are homemakers.

EMPLOYMENT PROFILE



Employed
Economically
Active

42.8% Unemployed Economically Active

Employed and unemployed persons are considered to be economically active and thus is a segment of the economically active percentage.

OCCUPATION PROFILE

Skilled
Occupations
16.7%



Semi-Skilled
Occupations
46.1%



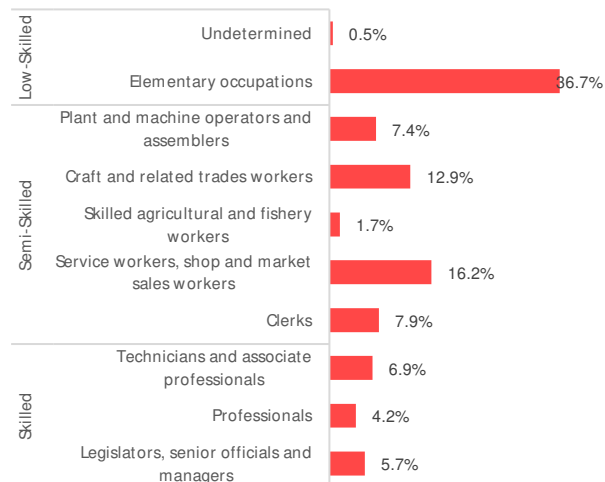
Low-Skilled
Occupations
36.7%



**ELEMENTARY
OCCUPATIONS
ARE THE MOST POPULAR
36.7%**

**SERVICE WORKERS,
SHOP AND MARKET
SALES WORKERS
ARE THE SECOND MOST
POPULAR
16.2%**

**CRAFT AND RELATED
TRADES WORKERS
ARE THE THIRD MOST
POPULAR
12.9%**



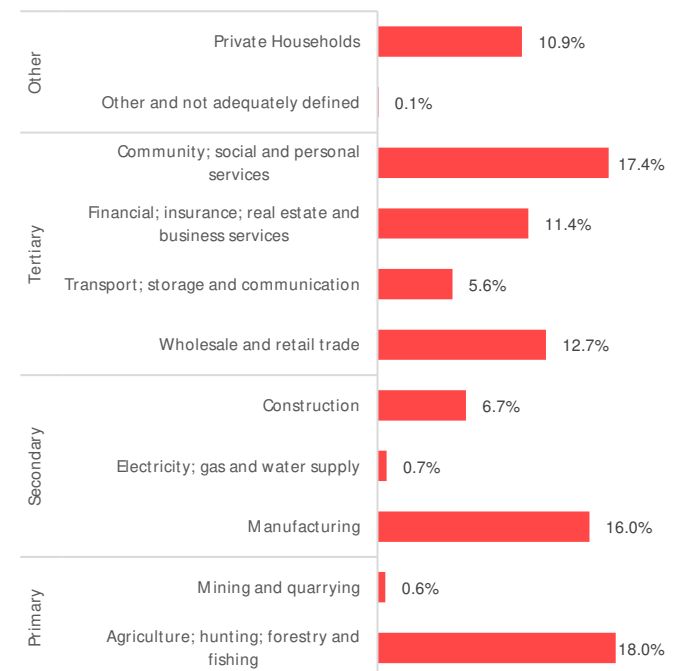
EMPLOYMENT PER INDUSTRY



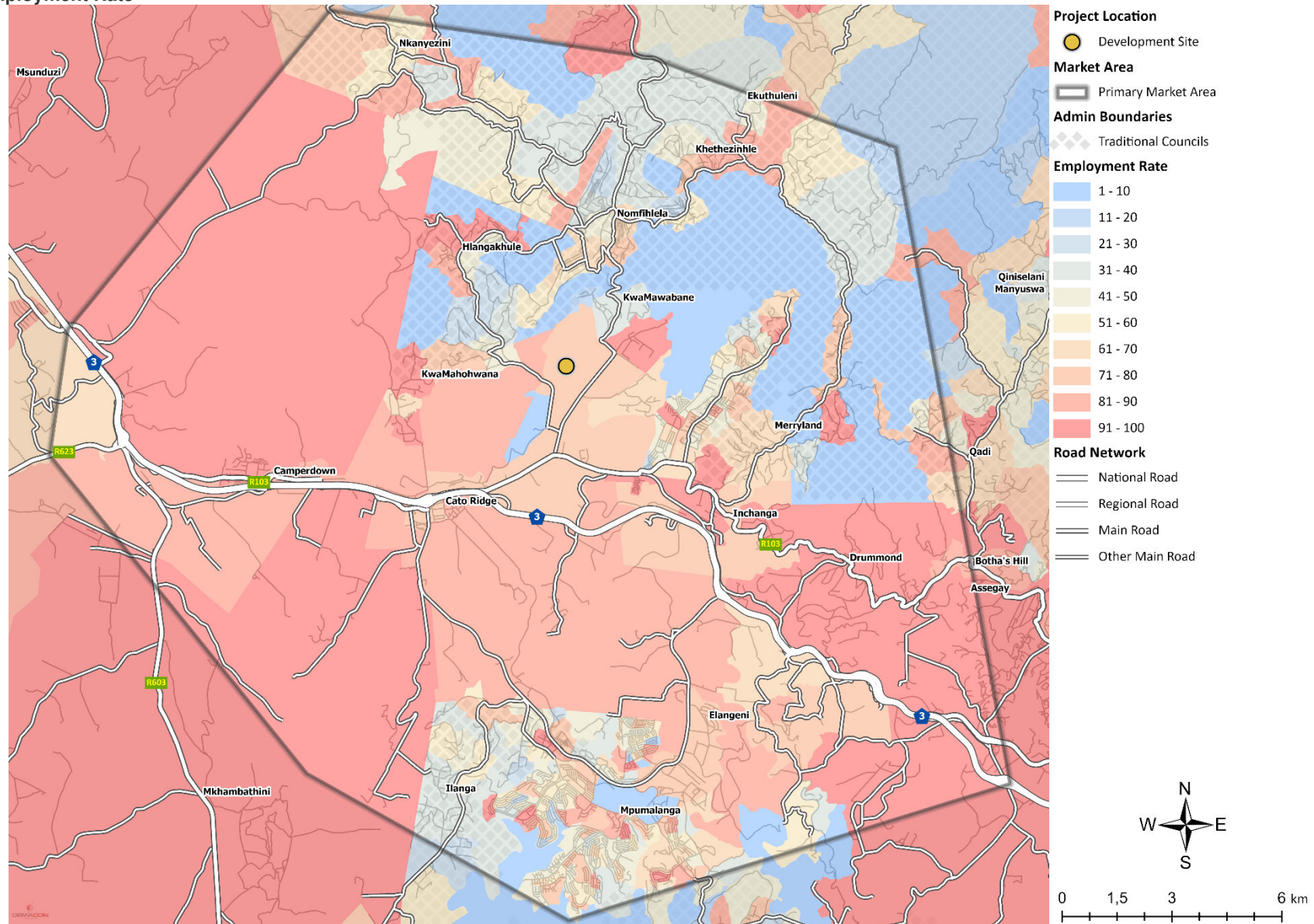
18.5%
Employed in the
Primary Sector

23.3%
Employed in the
Secondary Sector

47.2%
Employed in the
Tertiary Sector



Map 4.3: Employment Rate



Source: DEMACON GIS, 2023

4.5 HOUSEHOLD PROFILE

DWELLING TYPOLOGY

Majority of Households Reside in a **Formal Dwelling** **77.0%**

1.6% of households reside in an **informal dwelling**

21.5% of households reside in a **traditional dwelling**

Semi-detached house	0.1%
Caravan/tent	0.2%
Townhouse	0.3%
Flatlet	0.3%
Informal (Backyard)	0.6%
Flat / Apartment	0.8%
Cluster	0.8%
Informal (Main)	1.0%
Other	1.9%
House/flat/room in backyard	2.8%
Traditional	21.0%
House	70.1%

TENURE STATUS

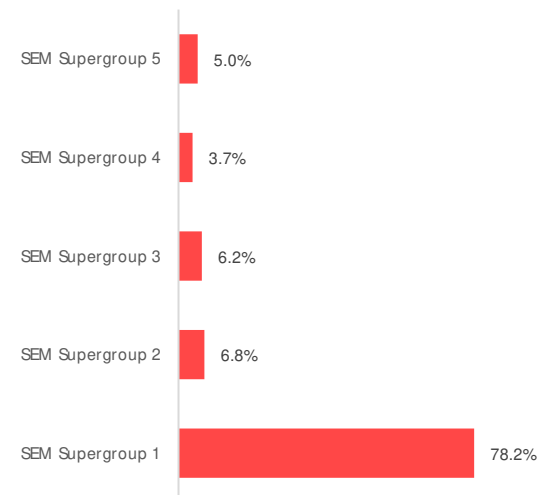


52.9% of households **own** and have **paid** for the property where they reside

9.3% of households **own** but have **not finished paying** for the property where they reside

25.6% of households **occupy** the property where they reside **rent free**

SEM



HOUSEHOLD INCOME PROFILE

Average annual household income for all SEM Groups (2020)

R80 788

Average annual household income for SEM Groups 2+ (2020)

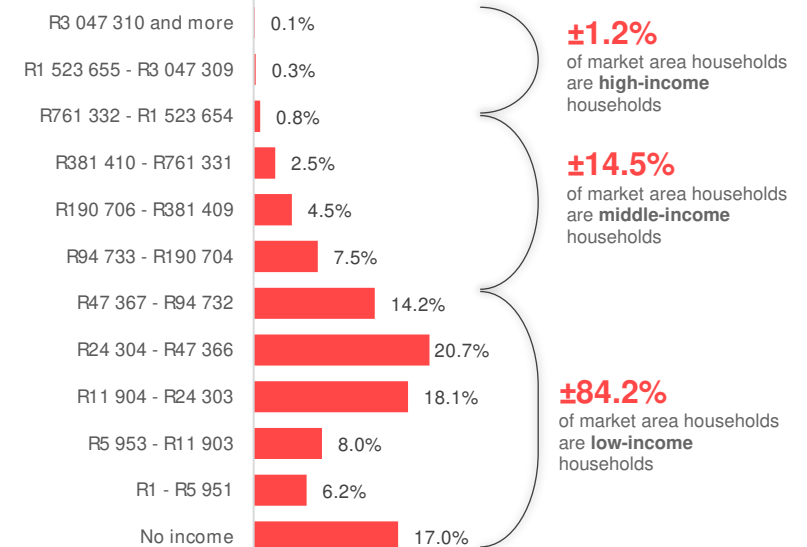
R291 520

Average monthly household income for all SEM Groups (2020)

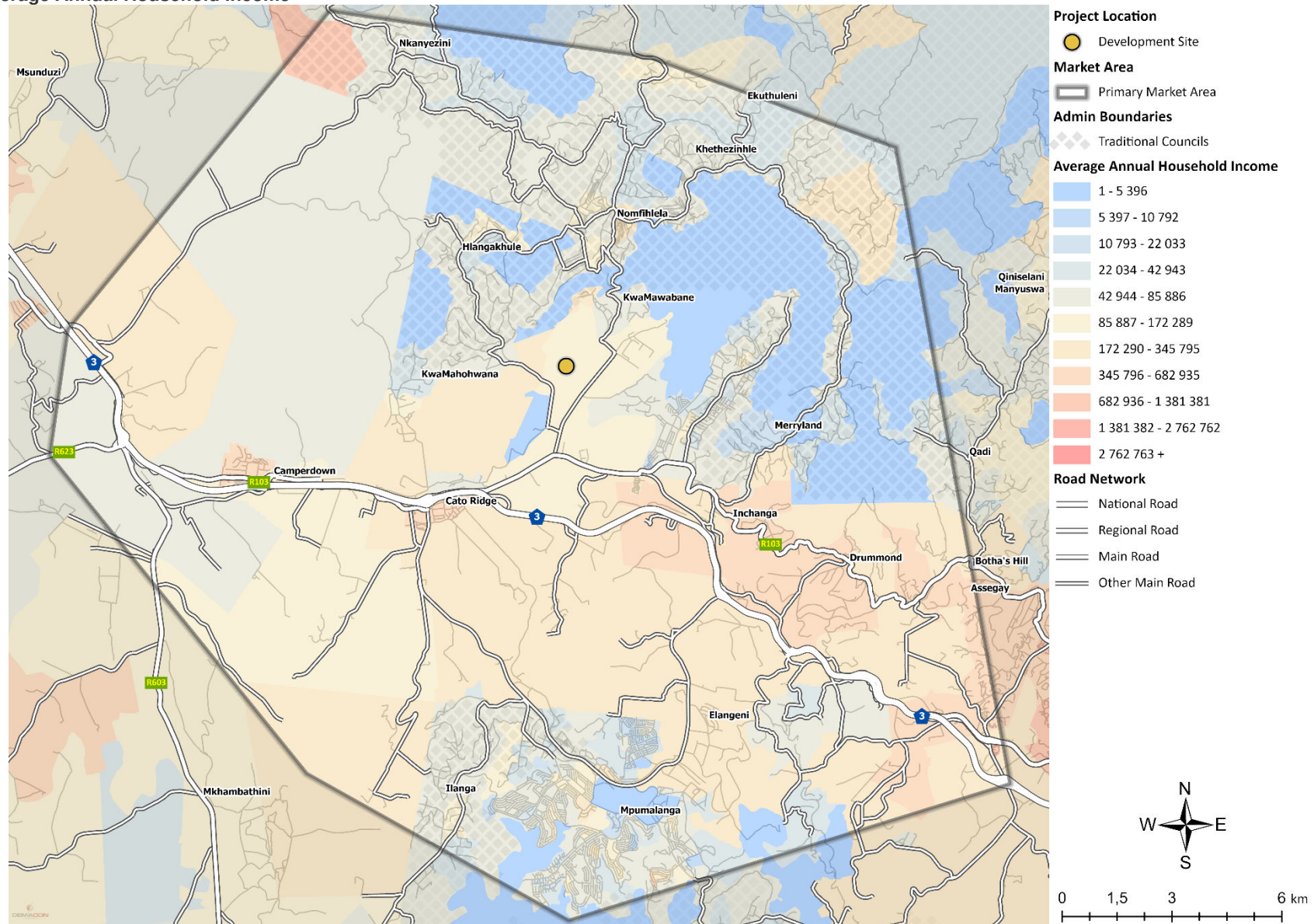
R6 732

Average monthly household income for SEM Groups 2+ (2020)

R24 293

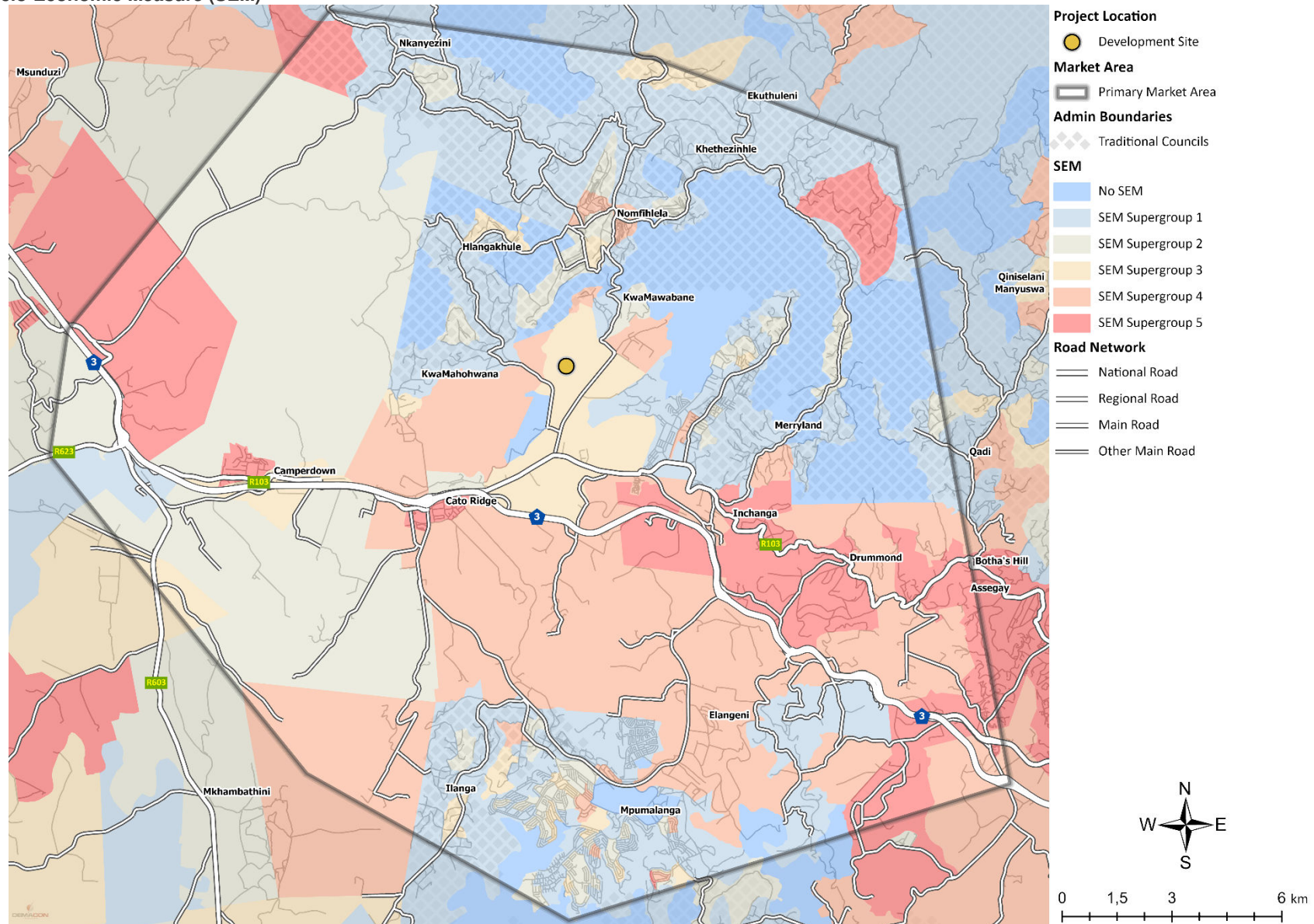


Map 4.4: Average Annual Household Income



Source: DEMACON GIS, 2023

Map 4.5: Socio-Economic Measure (SEM)



Source: DEMACON GIS, 2023

4.6 SYNTHESIS

Population Size and Growth

Approximately 213 301 people and 56 908 households reside in the primary market area. The average household size is 3.8 people per household, which decreased from an average of 4.5 in 2011.

The average annual growth rate of the population is 1.34% per annum, while the average annual growth rate of households is 2.95% per annum.

Age and Gender Profile

The age and gender profile reveal that:

- There are typically more females than males in the primary market area
- Children, aged 0 to 14 represent 30.7% of the market area population
- Youth, aged 15 to 34, represents 40.0% of the market area population
- Adults, aged 35 to 64, represents 25.3% of the market area population
- Elderly, aged 65 and older, represent 4.0% of the market area population

The profile shows a proportionally large contribution from the 0 to 29 male and female age categories. The profile is typical of an area that consists of a mixture of traditional, rural, and urban localities. Households in traditional areas tend to have a sizeable youth population as opposed to urban and rural locations.

Population Group Profile

The population group profile of the primary market area shows that the largest proportion of the population is Black African (96.3%), followed by the White (2.7%) and Indian/Asian (0.7%) population groups. Proportionally, the smallest population group is Coloured (0.3%).

Migration Profile

Since 2011, the primary market area has experienced a low to moderate influx of population. More than 7% of the population moved to the market area in recent years. Approximately 95% of migrants to the market area are South African citizens, whilst the remaining 5% are international migrants. The data is an attribute of rural and traditional areas.

Education Profile

Highest Level of Education Attained by Working Age Population (15 to 64)

Working age population residing in the market area are moderately educated whereby more than 5% of the population have attained a tertiary education. Slightly more than 30% of the population have attained grade 12 certification and 43% have only completed some secondary education.

A sizeable proportion of the population (11.4%) have completed some primary education. Individuals with no education represent a sizeable proportion of the population, 5.2% of the resident population.

Attendance at an Education Institution (Persons Aged 20 and Older)

Persons in the market area that are aged 20 years and older and are currently enrolled at an educational institution are mostly enrolled at tertiary education institutions – represents ±51% of individuals. Individuals are primarily enrolled at universities (31%), ordinary schools (28%) and ABET centres (15%).

Economically Active Population and Employment

Approximately 53% of the population of the primary market area are economically active, meaning that slightly more than half of the population in the primary market area are of working age and are actively participating in the economy or seeking employment.

The remaining 47% represent the population that fall outside the scope of the economically active population definition and represent children, youth, the elderly and disabled persons that are not able to be employed.

Of the economically active population, 57% are employed and 43% are unemployed. The primary market area is characterised by a small economically active market segment, reflecting high dependency ratios – the profile is representative of areas dominated by traditional authorities.

Employment per Industry

Approximately 47% of employed persons are employed in tertiary economic sectors of which the financial and business services and community and related services sectors are the most prominent.

The secondary economic sector is proportionally the second largest sector in which economically active individuals in the market area are employed (23%).

The manufacturing and construction sectors are the most prominent sectors and represent 16% and 7% of sectors in which persons are employed.

The primary economic sector proportionally represents the least number of employed persons (19%) and is dominated by the agriculture sector.

Employment per Occupation

In the market area, approximately 17% of the employed population are employed in skilled occupations of which technicians and associated professionals are the most prominent.

Semi-skilled occupations proportionally represent 46% of employed persons of which service workers, shop and market sales workers are the most prominent.

Low skilled occupations proportionally represent 37% of total employed persons. Elementary occupations are the most prominent.

Dwelling Typology

Households in the market area primarily reside in formal dwellings (77%). Because of the rural/traditional nature of the market area, more than 21% of dwelling types are traditional dwellings.

Tenure Status

Approximately 53% of households in the primary market area own the dwelling/property in which they reside and have fully paid the bond registered to the property. Approximately 12% of households are renting the dwelling/property in which they reside, while 9% of households have not yet fully paid the bond registered on their property.

Approximately 26% of households occupy the dwelling in which they reside rent-free. Rent-free occupation is typical to township areas with a large component of government subsidised housing and informal settlements.

The data suggests that because households are by and large located in traditional areas, dwelling ownership is prominent and underpinned by households that reside within dwellings rent-free, i.e., residing with friends and family.

Household Income Profile

Approximately $\pm 84\%$ of households can be classified as low-income households (monthly income less than R108 500 per annum and eligible for government sponsored – subsidy - housing). Middle income households represent $\pm 15\%$ of households (annual household income up to R995 500). Affluent households (R995 501 and more) represent $\pm 1\%$ of households.

The average annual household income for the resident population for 2022 amounts to R80 7886 per annum, which amounts to R6 732 per month for all SEM groups. For SEM groups 2 and higher, the average income is R291 520 per annum, which amounts to R24 293 per month.

The household income data reveals that approximately 70% of households are eligible for a subsidised housing scheme benefit (monthly income of R3 500 and less), whilst 26% are eligible for affordable accommodation (FLISP or Social Housing) and 4% of households can afford a bond.

SEM Profile

The discontinuation of the All Media Products Survey (by the South African Audience Research Foundation (SAARF)), on which the Living Standard Measure (LSM) classifications were based, gave way to a new measurement system called The Socio-Economic Measure model (SEM). The newly released SEM model is a more accurate reflection of South African society in terms of how people live and is not dependent solely on durables, as the historical LSMs have been. The new SEM offers marketers a statistical and technical solution that depicts how our citizens are living, not only what they have in their homes.

Approximately 78% of households form part of the SEM supergroup 1, while 7% of households are categorised as SEM supergroup 2. 6% of households form part of SEM 3, while SEM 4 represents 4% of households. SEM 5 represents 5% of households.



5 SOCIO-ECONOMIC AND FISCAL IMPACT ASSESSMENT

5.1 SOCIO-ECONOMIC AND FISCAL IMPACT ASSESSMENT PURPOSE

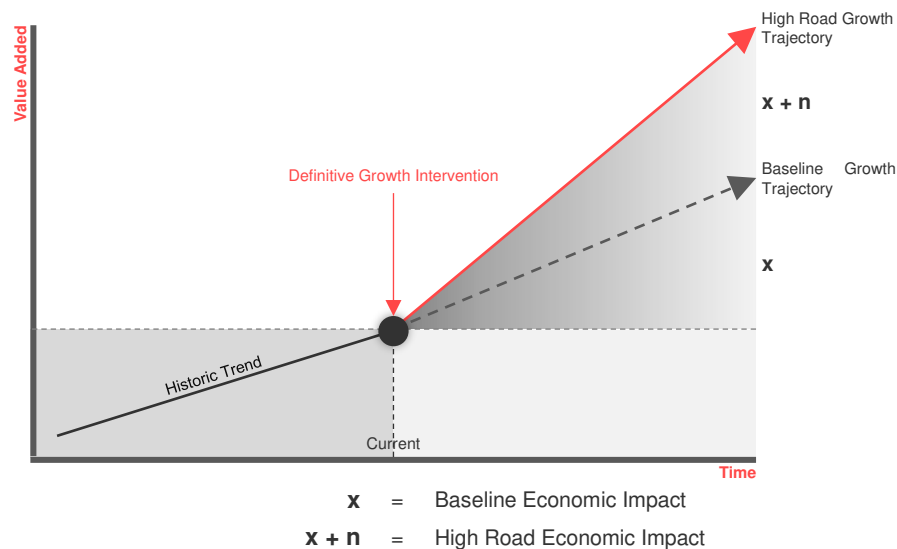
The purpose of the chapter is to assess the anticipated socio-economic impact that could be generated as a result of the implementation and operation of the proposed development. Capital investment during the construction phase and operational revenue during the operational phase are used to quantify the potential impact on the regional, provincial, and national economies.

The impact refers to the ripple effect throughout the economy caused by investment in a specific economic sector/land use. This impact stretches beyond the jobs and income generated by the original project. To estimate the total socio-economic impact, the input-output model is employed.

5.2 INPUT-OUTPUT MODEL METHODOLOGY

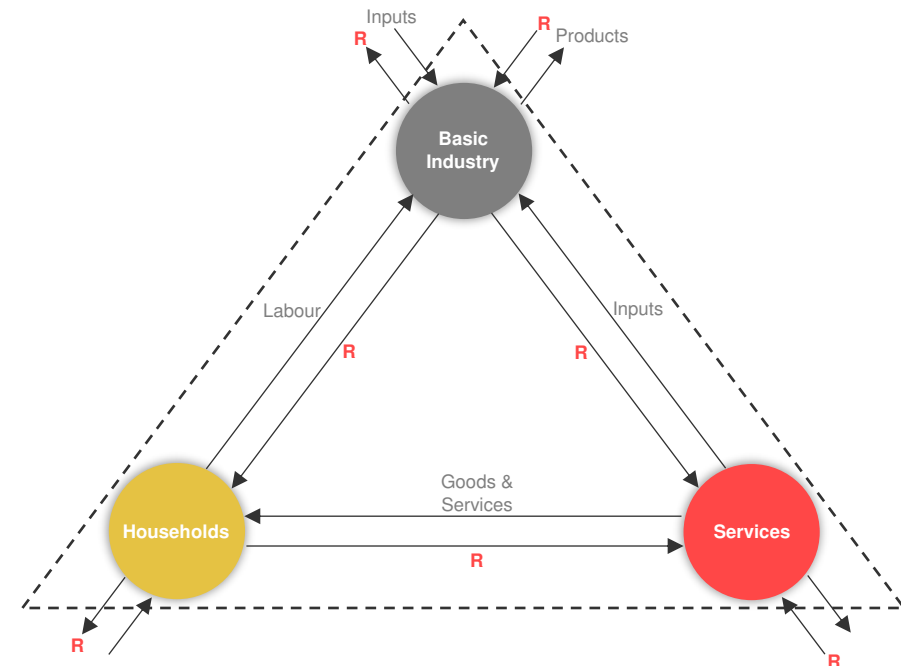
The following figure conceptually illustrates the socio-economic impact that the proposed mixed-use development could have on the economy in terms of additional GDP.

Diagram 5.1: Economic Impact of a Development



Before the input-output model is discussed it is necessary to understand the community economic system and underlying interrelationships (Refer to Diagram 5.2).

Diagram 5.2: Community Economic System



There is a strong interrelationship and interdependence between the three dominant sectors of the local economy: Basic industry, households, and services. These interrelationships refer to sectors purchasing from other sectors, sectors selling to other sectors, sectors selling outside of the local economy and sectors buying outside of the local economy.

This results in the flow of labour, inputs, goods, and services as well as money within and beyond the local economy. The input-output analysis creates a picture of a provincial economy describing the flows to and from industries and institutions. In other words, it describes the provincial economy and predicts the estimated impacts resulting from a change in the economy.

The Input-Output Model depicts economic relationships between different components of an economy by identifying monetary flows (expenditures, receipts) between various units. The relationship between the initial spending and the total effects generated by the spending is known as the multiplier effect of the sector, or more generally as the impact of the sector on the economy. The input-output table represents the nucleus of the Inset-Output Model – as reflected in Table 5.1.

Table 5.1: Schematic Presentation of the Input-Output Model

	Intermediate Outputs	Final Demand	Total Production
Intermediate Inputs	Quadrant I x11 x12 x21 x22 xn1 xn2 m11 m12	Quadrant II C1 G1 I1 IC1 E1 C2 G2 I2 IC2 E2 Cn Gn In ICn En MC MG	X1 X2 Xn Mn
	Quadrant III A1 A2 B1 B2 T1 T2	Quadrant IV VC VG Vi VIC VE	A B T
Total Production	X1 X2 Xn	C G IC E	Z

Final demand (Y) can be presented by the following formula:

$Y = C + I + G + (X - Z)$ where:

C: Private consumption expenditure
I: Gross domestic fixed investment
G: Government consumption expenditure
X: Exports
Z: Imports

Both the intermediate inputs as well as intermediate outputs for the different production sectors are shown in Quadrant I. This quadrant is usually referred to as the transaction table or transaction matrix and is an indication of the transfer of goods and services between the industrial sectors for production purposes.

The different final demand components as applied in the input-output table are shown in Quadrant II. Components of final demand are private consumption

expenditure (C), government consumption expenditure (G), gross domestic fixed investment (I), change in inventories (IC) and total exports (E).

Quadrant III represents the demand for primary inputs by the industrial sector. The elements of primary input, which are referred to are the remuneration of employees (A), the gross operating surplus (B) as well as net indirect taxes (T).

Quadrant IV is that portion of primary input, which is part of the final demand.

The linkage effects between the various sectors in the transaction matrix can be presented by x_{ij} , which shows the flow of goods from sector i to sector j.

The input-output model consists of three basic components:

- Transaction Table: illustrate the monetary flows of goods and services in a local economy for a given period
- Direct Requirements Table: indicates the purchases of resources (inputs) by a sector from all sectors to produce one Rand of output (creating a production recipe)
- Total Requirements Table: indicates the indirect and induced transactions caused by the purchases of resources (inputs) by a sector from all sectors

The input-output table is also based on certain basic assumptions:

- It is possible to group the different production activities in homogeneous industries
- The demand for intermediates by a particular sector will change in direct proportions to the specific sector's change in output
- No substitution of intermediates is possible due to price changes
- No technological change takes place
- Each sector produces only one primary product

It should be noted that:

- All rand values in the report represent 2021 current prices
- The different measures of economic impact cannot be added together and should be interpreted separately
- The model quantifies the economic impacts for a specific amount of time, and it is not derived gradually over time

- The input-output table is based on provincial supply and use tables, therefore, the multipliers and other related data measure economic impacts throughout the provincial economy (Quantec derived multipliers based on StatsSA Annual Financial Statistics, GDP at various economic levels, employment data and quarterly labour force surveys, 2021).

Impacts are traced through the provincial economy in terms of the application of a set of multipliers derived from provincial economic accounts (only local transactions are used to create the multiplier effect).

A multiplier summarises the total impact that can be expected throughout the economy from one-unit change for a given sector. There are several types of multipliers used by the model:

- Output multipliers (Business revenue or sales): it estimates the total change in sales volume
- Employment multipliers: measures the total change in employment resulting from an initial change in output/production of a specific industry
- Value-added multiplier (GDP): provides an estimate of the additional value added to the products as a result of this economic activity. Value-added includes employee compensations, corporate profits, indirect business taxes, and proprietary and other property income. It is the sum of the remuneration of employees and the gross operating surplus.
- Income multiplier: measures the total increase in income in the local economy resulting from a 1 Rand increase in total output/production
- Taxation multiplier: measures the increase in tax revenue that the national treasury could collect from the operation of business activities
- SMME opportunities measure the potential of the economy to create opportunities for new SMME's based on the causal relationship with an increase in the GDP of the economy. The analysis also considers the relationship between SMME growth and black ownership. The relationship takes into consideration GDP growth (StatsSA) and concomitant business registration and ownership data (SARS).
- Potential skills requirements: measures the demand for jobs based on different skill levels, i.e., low, semi and skilled jobs
- Sector profiling: measures the linkage of defined land uses with sectors of the economy and estimates the impact that increased economic activity could have on the various components of the economy.

- In addition to the preceding multipliers, reference is also made to the need and demand for social amenities based on economic growth. The growth of the economy increases the demand for jobs. Consequently, an increased demand for jobs, aligned with increased livelihoods increases demand for social amenities. The impact tool seeks to measure the increased demand for a spectrum of social amenities.

Difference between multipliers and turnover:

Turnover is typically used as a synonym for the output or production of business. Turnover refers to the number of times some of the initial Rand that is received from outside the community, changes hands within the community. Example: 1 Rand received from a new investment changes hands five times within the local economy. The multiplier is 1.66, although some portion of the initial Rand turns over five times.

During each exchange of money for goods or services, some of the original Rand leaves the local economy, which reduces the amount spent locally during the next exchange. Multipliers measure the full impact of a Rand on the local economy, whereas turnover merely indicates the number of times some of the initial Rand is spent locally.

The economic impact can be measured in terms of three effects:

- Direct effects: those economic effects caused by the new investment or proposed project
- Indirect effects: occurs to industries in the backward linked industries that supply goods and services to the proposed development. Economic activity triggered by the purchases made as a result of the initial round of project expenditure
- Induced effects: result from households spending some of the additional income they receive on goods and services within the local, regional, and provincial economies.

There are two types of multipliers:

- Type 1 multipliers: Include direct or initial spending, as well as indirect spending or business buying and selling to each other
- Type 2 multipliers: Include Type 1 multiplier effects, plus household spending based on the income earned from the direct and indirect effects – the induced effects

In summary: Economic impacts represent the positive or negative effects caused by the expansion or contraction of an area's economy, resulting from the changes in a facility or project. In the case of the proposed project, it represents the impacts caused by the proposed construction activities.

Subsequent sections provide an overview of the estimated socio-economic impacts that could be caused by the implementation and operation of the proposed mixed-use development. The impact is also estimated in terms of two project phases – the construction and the operational phases.

5.3 KEY INDICATORS AND INPUTS

The following section provides an overview of the key indicators and inputs used to inform the input-output model. The data used as input to the model assists with calculating an estimated capital expenditure (CAPEX) and estimated operational revenue (OPEX) of the proposed development when fully developed and operational.

Table 5.2: Economic Impact Modelling Key Indicators and Inputs

Land Use Type	Estimated Bulk (m ²)	CAPEX	OPEX
 Light Industry, warehousing, and logistics	1 232 400	R9 797 580 000	R10 350 927 600
Total		R9.8 billion	R10.4 billion

The following indicators have been used to estimate the capital expenditure cost and operational revenue of the proposed development:

- The total developable extent of the properties proposed for the development equals 308.1 hectares
- Applying a floor area ratio of 0.4 as per information provided by the SOM Group the potential floor area of the properties equal 1 232 400 m²
- At present, no detailed costing of the project has been completed and therefore the following capital investment information is preliminary estimates used to inform the impact assessment

- Applying an average construction cost of R6 000 per m², the total capital investment value for **top structures** is estimated to be **R7 394 400 000** (2022 prices)
- Furthermore, the cost for **flat and serviced land** (refers to bulk infrastructure and site preparations) is estimated to be R1 150 per m² which totals to **R1 417 260 000** capital investment for the project (2022 prices)
- Lastly, the installation of **furniture, fittings and related services** is estimated to be R800 per m² which totals **R985 920 000** capital investment for the project (2022 prices)
- In total, the **preliminary estimated capital investment** of the project is **R9 797 580 000** throughout the project's construction period (2022 prices)
- Detailed operational revenue of end user light industry, warehousing and logistics operations have not yet been costed. For the purposes of this impact assessment an operational revenue of R8 399 per m² is applied. The **estimated operational revenue** of the proposed development at maturity and optimal operational output is **R10 350 927 600** (2022 prices)

5.4 IMPACT SYNOPSIS

Total Estimated Capital Investment (CAPEX) and Operational Revenue (OPEX)

The total estimated capital investment of the Cato Ridge Warehousing and Logistics Development (Net Present Value for the current year) is R9.8 billion – It should be noted that the Total CAPEX includes expenditure on furniture, fixtures, fittings and related services.

The total estimated operational revenue (annualised on-site business sales or turnover) of the development (Net Present Value for the current year) is R10.4 billion.

Summary of Construction Phase Impacts

Impacts generated during the construction phase of the project are once-off and are sustained for as long as construction occurs. These impacts dwindle as construction activity comes to an end and the development becomes operational

– then operational impacts, which are created and sustained annually, are activated.

The total CAPEX (Capital Investment) of the project could temporarily add approximately R20.1 billion in additional business sales, R8.4 billion in additional GDP (contributes $\pm 1.06\%$ to the provincial economy) and approximately 30 114 once-off jobs (formal and informal) throughout the KwaZulu-Natal provincial economy.

An estimated 338 new formal small, medium and micro-enterprise opportunities could be created. Black-owned SMME's would potentially represent 73.14% of new formal SMME opportunities, given the prevailing legislative environment.

Formal employment opportunities during the construction phase represent 21 200 jobs (total direct, indirect and induced). Approximately 20.61% of formal employment opportunities are expected to be filled by skilled labourers compared to 56.78% semi-skilled labourers and 22.6% low-skilled labourers.

Additional compensation paid to employees during the construction phase is estimated to be approximately R2.6 billion.

It is estimated that approximately R2.4 billion in additional taxes could be generated during the construction phase. The largest contributor to new taxes is as a result of personal income tax, contributing 37.83% to all taxes collected economywide.

Summary of Operational Phase Impacts

Operational phase impacts are generated when the productive-land uses of the development commence with operations. Impacts created during the operational phase are "sustained" impacts. "Sustained impacts" are impacts that are continuously generated (i.e. created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

The total OPEX of the project could annually add approximately R20.6 billion in additional business sales, R8 billion in additional GDP (contributes $\pm 1\%$ to the provincial economy) and approximately 22 899 sustained jobs (formal and informal) throughout the KwaZulu-Natal provincial economy.

An estimated 450 new formal small, medium and micro-enterprise opportunities could be created throughout the lifetime of the project. Black-owned SMME's could represent 73.13% of new formal SMME opportunities.

Formal employment opportunities created throughout the lifetime of the project represent 17 868 jobs (total direct, indirect and induced). Approximately 23.07% of formal employment opportunities are expected to be filled by skilled labourers compared to 54.01% semi-skilled labourers and 22.93% low-skilled labourers. Additional annual compensation paid to employees during the operational phase is estimated to be approximately R3 billion.

It is estimated that approximately R2.4 billion in additional taxes could be generated annually during the operational phase. The largest contributor to new annual taxes is as a result of personal income tax, contributing 36.13% to all taxes collected economywide.

Overall Outcome

Overall, the construction and operational phase of the project would have a measurable positive effect on the KwaZulu-Natal provincial economy, generating sizeable GDP over the short- to long-term, high additional business sales and new business formation and a considerable number of new employment opportunities - across all skill levels. Additional taxes can contribute to national and local treasuries and households across the province can increase their livelihoods.

The increased demand for social amenities will influence the fiscus and operation of public sector entities. The increased pressure on the fiscus is offset by the addition of productive rateable assets through the envisaged capital investment in the project.

5.4.1 CONSTRUCTION PHASE IMPACTS

The following section provides a concise overview of impacts that could arise during the construction phase of the proposed project. For a detailed breakdown of construction phase impacts, please refer to the Annexure. Please note that all effects of the construction phase are unsustained meaning that impacts are once-off and sustained for the duration of the construction phase.

Overarching Impacts

Total
estimated
CAPEX
of the project

R9.8 billion

- **R20.1 billion** Additional Business Sales
- **R8.4 billion** Additional GDP
- **30 114 jobs** Additional Formal and Informal Jobs

Estimated Number of New Enterprise Opportunities


Micro Enterprises
(1 to 10 employees)
162


Small Enterprises
(11 to 50 employees)
120


Medium Enterprises
(51 to 200 employees)
56

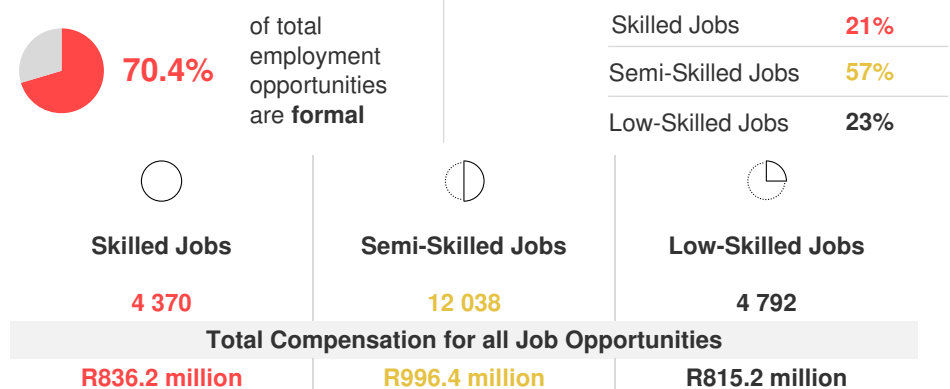
Calculations indicate that the total estimated GDP impact of the construction phase could create **338** new SMME enterprise opportunities

 **73.1%** of opportunities could be **black owned**

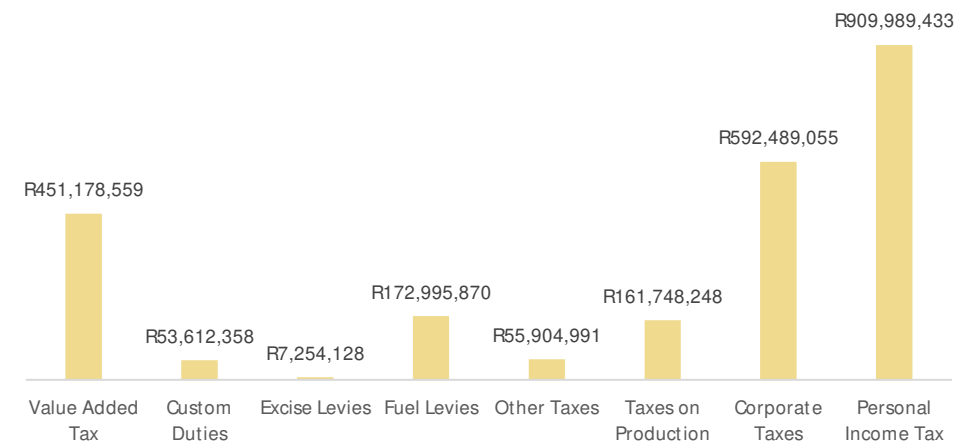
Social Amenities Potentially Required

No social amenity impacts apply during the construction phase

Formal Job Opportunities and Compensation



Impact on Taxation



5.4.2 OPERATIONAL PHASE IMPACTS

The following section provides a concise overview of impacts that could arise during the operational phase of the proposed project. For a detailed breakdown of operational phase impacts, please refer to the Annexures. Please note that all effects of the operational phase are sustained meaning that impacts are continuously generated (i.e., created and then sustained annually) as soon as the full operation of the project commences (long-term impacts).

Overarching Impacts

Total

estimated
OPEX
of the project

R10.4 billion



R20.6 billion

Additional Business Sales



R8.0 billion

Additional GDP



22 899 jobs

Additional Formal and Informal Jobs

Estimated Number of New Enterprise Opportunities



Micro Enterprises
(1 to 10 employees)

217



Small Enterprises
(11 to 50 employees)

159



Medium Enterprises
(51 to 200 employees)

74

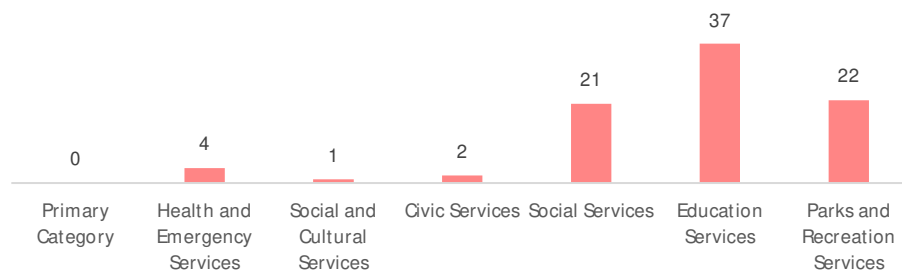
Calculations indicate that the total estimated GDP impact of the construction phase could create **450** new SMME enterprise opportunities



73.1%

of opportunities could be **black owned**

Social Amenities Potentially Required



Formal Job Opportunities and Compensation



78.0%

of total employment opportunities are **formal**

Skilled Jobs **23%**

Semi-Skilled Jobs **54%**

Low-Skilled Jobs **23%**



Skilled Jobs

4 121



Semi-Skilled Jobs

9 650



Low-Skilled Jobs

4 097

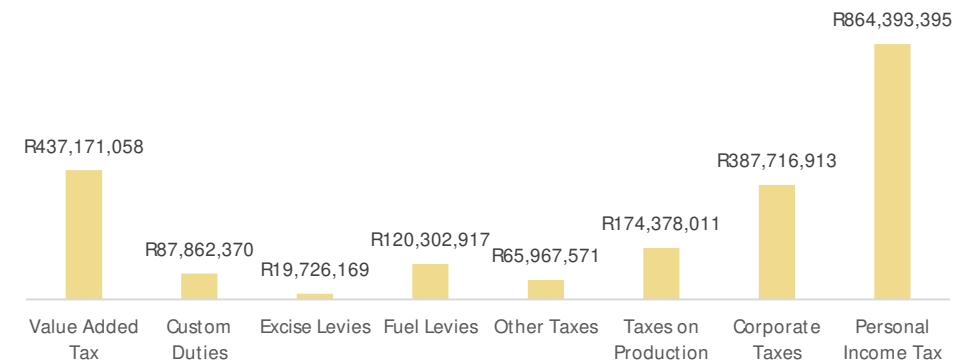
Total Compensation for all Job Opportunities

R957.6 million

R1.1 billion

R936.3 million

Impact on Taxation

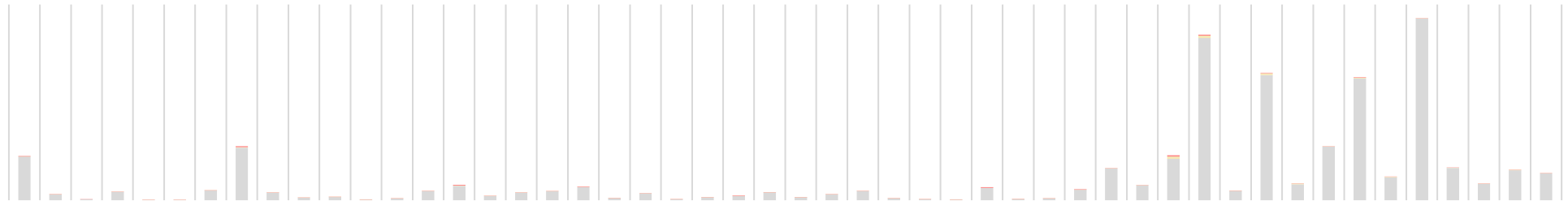


Property taxes total approximately **R395 910 410** per annum

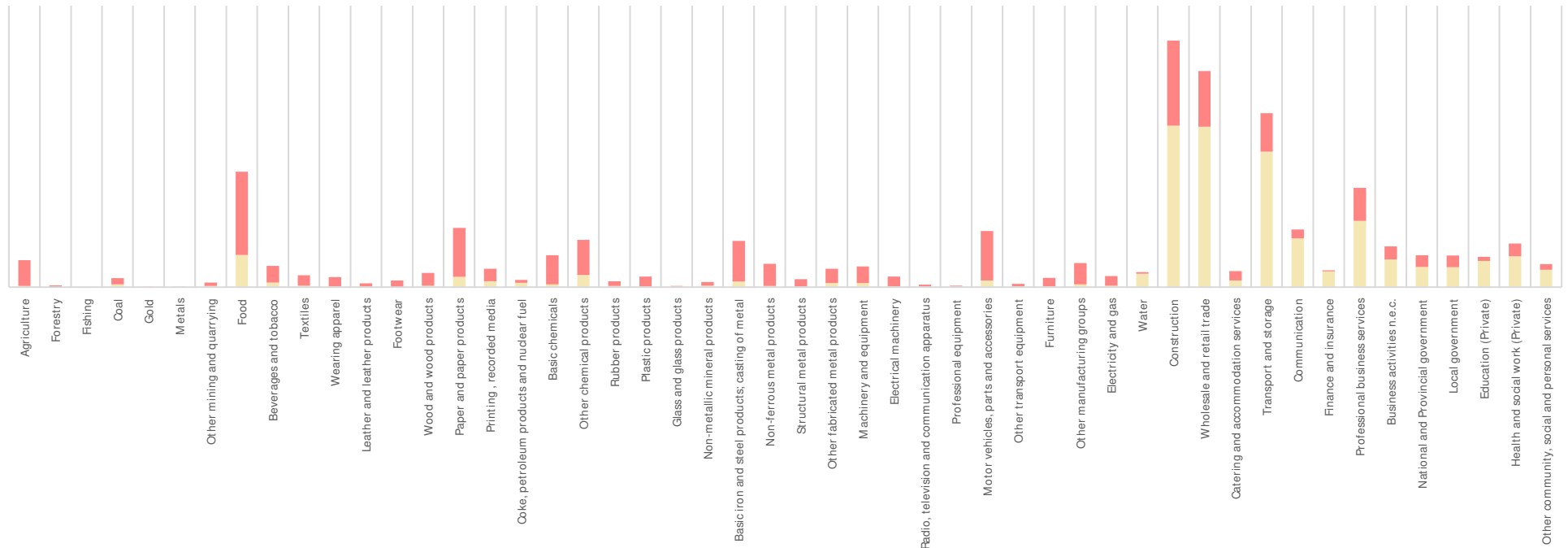
5.4.3 EFFECTS ON THE PROVINCIAL ECONOMY

The following illustrates the impact that the proposed development has on the Gauteng provincial economy by providing a graphical representation of the distribution of added GDP as a result of the construction and operational phase of the project.

Detailed Impact on the KwaZulu-Natal Economy



Detailed Sectoral Impact



5.5 SUMMARY OF ECONOMIC IMPACT BENEFITS

The following provides a concise perspective on the input and multiplier effect of the proposed development (based on the preceding impact assessment).

Capital Investment		Multiplier Effect (Impact)					
Construction Phase (CAPEX)		Unsustained Impacts		Direct (e.g., metro)	Indirect (e.g., province)	Induced (e.g., national)	Total
Total CAPEX	R9.8 billion	Financial Impact	Additional Business Sales	R13.8 billion	R1.7 billion	R4.6 billion	R20.1 billion
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)	R1.6 billion	R217.7 million	R580.2 million	R2.4 billion
			Property Rates and Taxes – Municipal	R0			
		Economic Impact	Additional GDP (Market Prices)	R5.2 billion	R829.0 million	R2.4 billion	R8.4 billion
		Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)	100	16	46	162
			Small Enterprises (11 to 50)	74	12	34	120
			Medium Enterprises (51 to 200)	34	6	16	56
		Social Impact	Additional Jobs (Formal and Informal)	20 524	1 783	7 807	30 114
			Total Compensation Benefits of New Jobs Created (Salaries and Wages)	R1.5 billion	R227.0 million	R942.9 million	R2.7 billion
		Operational Phase (OPEX)		Sustained Impacts (annualised; at maturity)		Direct (e.g., metro)	Indirect (e.g., province)
Total OPEX	R10.4 billion	Financial Impact	Additional Business Sales	R14.3 billion	R1.7 billion	R4.6 billion	R20.6 billion
			Total Production, Product and Operational Taxes (including VAT, Levies, Personal Income Tax, Corporate Taxes, etc.)	R1.4 billion	R211.1 million	R592.7 million	R2.2 billion
			Property Rates and Taxes – Municipal	R395.9 million			
		Economic Impact	Additional GDP (Market Prices)	R4.8 billion	R788.5 million	R2.4 billion	R8.0 billion
		Business Impact – New business opportunities and/or business employment expansion	Micro Enterprise (1 to 10)	154	16	47	217
			Small Enterprises (11 to 50)	113	12	34	159
			Medium Enterprises (51 to 200)	52	6	16	74
		Social Impact	Additional Jobs (Formal and Informal)	13 053	1 873	7 974	22 899
Total Compensation Benefits of New Jobs Created (Salaries and Wages)	R1.8 billion		R221.1 million	R963.1 million	R3.0 billion		



6 ECONOMIC COST-BENEFIT ANALYSIS

6.1 INTRODUCTION

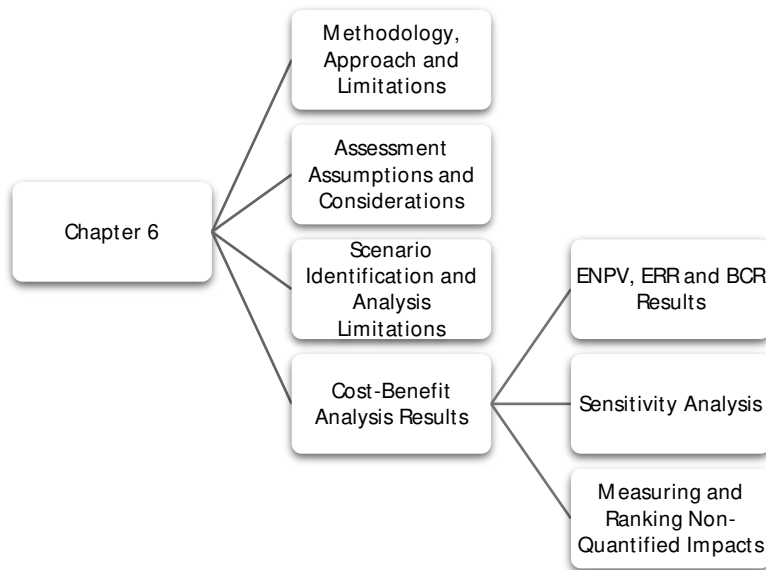
The purpose of this chapter is to conduct an Economic Cost-Benefit Analysis (ECBA) as part of the overarching economic assessment of the proposed Cato Ridge development.

The chapter provides a consolidated overview of the ECBA conducted. It focuses on providing a brief overview of the assumptions used to inform the assessment and to draw attention to key outcomes. The key outcomes are used to assess the potential social costs and/or benefits that may arise as a result of the implementation of a logistics/warehousing orientated development opportunity in the Cato Ridge area.

Given the preceding, the report seeks to assess the extent of costs and benefits to society based on various scenarios that are compared with each other in order to determine the social suitability of a project or its alternatives – thus providing a comparison of the economic net present value, economic internal rate of return and benefit-cost ratio to find an optimal solution.

The following Diagram provides the extent of the work covered by the CBA.

Diagram 6.1: Chapter 6 Core Themes



6.2 METHODOLOGY, APPROACH AND LIMITATIONS

The following provides an overview of the methodology employed in order to complete an ECBA of the proposed development and development site.

The section also provides an overview of any limitations to the model and the impact that these limitations might have on the model, its outcomes, and the perspectives of a project's implementation.

Diagram 6.2 (overleaf) provides a diagrammatical representation of the methodology used to conduct the ECBA contained in this report. Prior to the diagram, a short description is provided of each step to highlight the key methodological components that make up each step and to emphasize whether any limitations are associated with each step.

Key assumptions that underpin the analysis is discussed in later sections.

The methodology of the ECBA consists of the following eight steps:

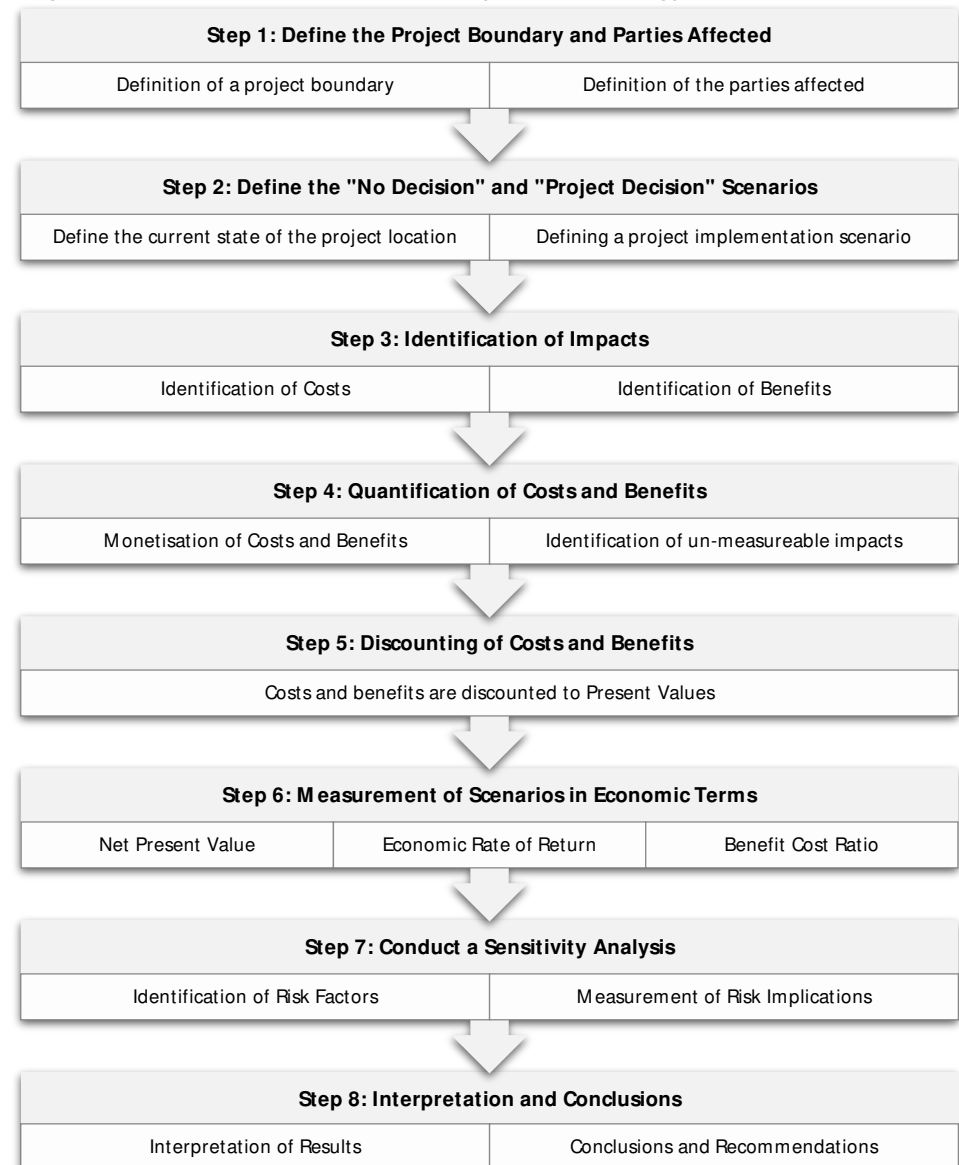
- **Step 1: Define the Project Boundary and Parties Affected**
 - This step involves the identification of a project boundary, i.e., area of interest/impact. It is important to demarcate the project area because the project boundary assists with the identification of affected parties and defines the range of direct and indirect impacts that arise as a result of the project. This step also requires that parties affected by the project be identified. The identification of affected parties assists with identifying which costs and benefits should be measured
- **Step 2: Define the “No Decision” and “Project Decision” Scenarios**
 - It is important to identify the current state of the project location and its impact on affected parties identified by the previous Step, i.e. No Decision Scenario. The No Decision Scenario is the NILL argument against which the project and all other alternatives are measured – no decision was taken to implement a project or alternatives
 - This Step also requires defining a Project Decision Scenario. The Project Decision Scenario is the state where a decision was

taken to implement a chosen project and certain social costs and benefits could arise

- This Step also allows for the identification of other Scenarios. These "Other" Scenarios typically involve the identification of costs and benefits of other opportunities that could be implemented on the project site as an alternative development opportunity. For example, the development of agricultural land used for maize production into a factory. The alternative "Other" opportunity cost would be the economic/social costs and/or benefits if the agricultural land were to be used for e.g., soya bean production

- Step 3: Identification of Impacts, i.e., Costs and Benefits
 - This Step involves the identification of impacts that affect parties within the project boundary. The focus is primarily on social related impacts and not necessarily business entity revenue baselines. The impacts identified should be categorised as either a cost or a benefit to an affected party and the project as a whole
 - The identification of an impact should also take cognisance of externalities, i.e., external impacts. Externalities are the effects of a project on the environment, ecology, or general standard of living of a community which are not reflected by the prices of inputs or outputs
 - Induced behaviour should also be considered as an impact. Behavioural changes as a result of a project's implementation should be measured. For example, a new bridge not only shortens the trip for the existing traffic, but it will also induce many people to travel who were previously put off by the long distance
 - As far as possible, social consequences should be quantified, and where such quantification is not possible, they should be reported qualitatively

Diagram 6.2: Economic Cost-Benefit Analysis Methodology



Source: DEMACON, 2023

- Step 4: Quantification of Costs and Benefits
 - This Step involves the quantification of each cost and benefit where possible. Quantification of cost and benefit streams via direct measurement of the impact itself or, if necessary, measurement of an appropriate proxy for the impact. If direct measurement of the impact or proxy is not possible, the impact or proxy should be estimated using appropriate estimation tools and techniques
 - Should it not be possible to measure an impact, it should nevertheless be recorded for the reader to understand that several impacts exist that could in "unquantified" terms impact on the community's net cost and/or benefit from a proposed project
- Step 5: Discounting Costs and Benefits
 - This Step involves the discounting of project cost and benefit streams to present values
- Step 6: Measurement of a Project in Economic Terms
 - This Step involves the calculation of Net Present Value, Economic Rate of Return and Benefit-Cost Ratio to define the value of the project in economic terms
- Step 7: Conducting Sensitivity Analysis
 - This Step involves undertaking a sensitivity analysis on the cost and benefit streams. The analysis should be based on risk factors, which have been identified in the project setting
- Step 8: Interpretation and Conclusions
 - This Step involves the interpretation of results and the reporting of said results

In terms of the ECBA methodology, the following limitations apply:

- The ECBA provides an analysis of economic efficiency, i.e., the gains/losses that a community can derive from the implementation (or no implementation) of a project. The ECBA does not account for the economic equity of a project's impacts – the distributional effects associated with economic gains are explored in Chapter 5 of this report
- The ECBA takes into consideration several impacts that relate to social, economic, and environmental considerations and accounts for these impacts by means of externalities. Although considered, these impacts do not necessarily include the total value the community attaches to certain aspects. Contingent Valuation Methods have not been employed to measure the willingness to pay and/or accept from the community's perspective
- Fundamental impacts in the broader economy as a result of the multiplier effect of operational revenue and capital investments are not reflected in this analysis. The impact on employment, output, GDP, and other indicators in the broader economy are beyond the scope of this analysis when considered in light of direct impacts generated by a proposed development on a community and the costs and/or benefits that a community experiences as a result
- The ECBA targets the analysis of a base case scenario, a project implementation scenario and, where applicable, a project alternative scenario. The ECBA does not venture beyond the three scenarios identified and, in many cases, make reference to only the base case and project implementation scenarios
- The ECBA is reliant on high-level baseline information and estimations given that a full financial modelling exercise has not yet been completed. Financial assumptions such as CAPEX and OPEX data in this report could differ from data contained in a full and detailed financial assessment.

6.3 ASSESSMENT ASSUMPTIONS AND CONSIDERATIONS

This section provides an overview of the assumptions and considerations used to assess the ECBA of the project. The purpose of this section is to identify and describe several scenarios applicable to the proposed development site. These

scenarios are assessed to determine the different costs and benefits to society based on the implementation of most likely development opportunities.

Furthermore, the costs and benefits identified are described. The purpose is to provide a concise description of the assumptions so that all factors that influence and/or impact different scenarios are understood.

6.3.1 MODEL ASSUMPTIONS AND CONSISTENCIES

The following section provides the primary static assumptions applied within the model. The purpose is to highlight assumptions that remain constant and are used to define elements such as discounting, growth, and time-periods.

The following table provides information regarding static assumptions within the ECBA model.

Table 6.1: Static Assumptions in the Cost-Benefit Analysis Model

Assumption	Description
Base Year	- The base year for the project is 2023 - A base year should ideally reflect the year in which a decision to proceed with a project will be taken - The base year is also the year to which costs and benefits are discounted to, to arrive at a present value (PV)
Constant (Real) Prices	- The ECBA makes use of constant prices - The price year for the project is 2023 - A price year reflects the year in which the value of all costs and benefits are expressed - The price year is used to express the costs and benefits of the project in real terms (conversion from nominal to real prices) - A 20-year average inflation rate of 3.5% is used to deflate future values to constant prices - Relative price shifts are used as and when necessary to reflect costs and/or benefits that do not escalate over time at a rate similar to that of other costs/benefits
Costs and Benefits (Direct and Externalities)	ECBA in terms of an economic analysis is concerned with direct costs and/or benefits of a project, i.e., impacts generated on project users due to the use of a new/improved good or service (e.g., less trucks on a highway, less wait times at an intermodal facility, etc.)

	For the purposes of this ECBA, externalities are taken into account. Externalities in this instance refers to costs/benefits that spills over from the project on parties that are not necessarily primary targets of the proposed project e.g., water pollution, noise pollution, emissions, etc.)
Project Life	- Total time-period under consideration is 30 years - Construction phase from 2023 to 2043 – construction will be done incrementally over a 5-to-20-year time period - Operational phase 2024 to 2054. Take-up of available space will also occur incrementally over the period of consideration and starts one-year after construction starts
Social Discount Rate (SDR)	The Economic Cost of Capital for the project is 10% (National Treasury, 2022)
Project Assessment Criteria	- The project assessment criteria make use of three measurement functions - Net Present Value (NPV) – The difference between the benefits and costs (the net benefit) in the specified year is discounted to the present by using the social discount rate. A positive NPV suggests a social benefit to the community - Economic Rate of Return (ERR) - The discount rate at which the present values of cost and benefits are equal. The ERR must be greater than the SDR to imply a social benefit - Benefit-Cost Ratio (BCR) – The ratio of the present value of the benefits relative to the present value of the costs. A BCR greater than 1 suggests more present value benefits than costs

6.4 SCENARIO IDENTIFICATION AND ANALYSIS LIMITATIONS

The following section identifies scenarios applicable to the proposed development and its geographic location. The goal is to provide a baseline indication of the scenarios to be analysed as well as to highlight limitations that exclude any project alternatives from the analysis.

6.4.1 BACKGROUND AND KEY INFORMANTS

The proposed development site is situated in the Cato Ridge node of the eThekweni Metropolitan Municipality. The site is approximately 58 km from the

Port of Durban and forms part of a strategic metropolitan node targeting logistics and industrial orientated development. The development site is primarily undeveloped and is home to endangered grassland species. The site has, however, in recent years been encroached on by surrounding traditional communities and has been subjected to illegal mining and subsistence cattle farming by said community. The development is zoned for industrial activities and forms part of the broader strategic industrial development opportunities of the metropolitan area.

Other informants of the site include:

	Location	- The development site is owned by Assmang - The site is undeveloped but zoned industrial - The areas around the development site are traditional residential
	Zoning	Industrial
	Topography	- The 3 PDAs are situated in a region known as the Valley of a Thousand Hills, which is a region of moderate to extreme undulated topography, leading to local variations which do not represent any biophysical hazard for development (no to the low-risk group) in the sense of storms and flooding - The 3 PDAs are situated on mostly flat land (between 0% and 5% slope)
	Geotechnical	The study area is considered suitable for the proposed land uses
	Vegetation and Biodiversity	- The PDAs of the project is primarily covered by KZNSS grassland - The grassland is affected by invasive alien plants and illegal sand mining
	Heritage	- A phase 1 heritage assessment found existing farmstead buildings in disrepair and 6 potential archaeological sites - Mitigation measures are necessary

	Access	Access to the site is facilitated by the R103 which accesses the N3 (west) and Hillcrest (south)
	Utilities	- The development site would need to establish connections to bulk infrastructure either exiting or planned in the Cato Ridge area - Bulk infrastructure would also need to be installed for each subsequent erf to be development
	Community Facilities	- Social facilities present in the immediate and broader area - Availability of retail, healthcare, education, and transport
	Demographic Overview	- Youthful population - expanding - Households have limited disposable income available - Characterised by nearby traditional authorities
	Economic Overview	- Local economy is characterised by the secondary and tertiary sectors for output and employment - Local economic growth is decelerating - Labour absorption is inadequate due to limited economic growth
	Project Size and Market	- The final project area will consist of approximately 358 hectares of land distributed between the three PDAs - The development of the PDAs will primarily focus on warehousing and logistics orientated development supported by necessary bulk infrastructure and related services - The Cato Ridge area is zoned for industrial activities and is considered to be a strategic node for local and regional logistics planning

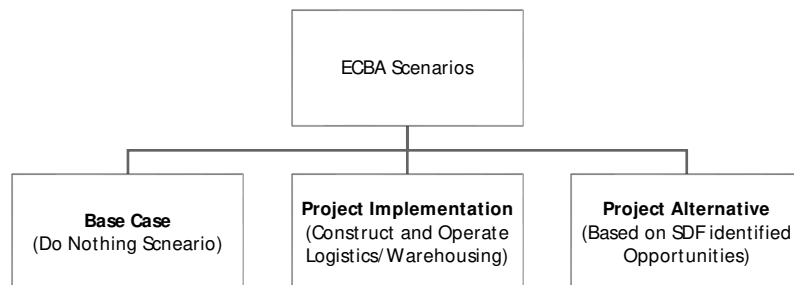
6.4.2 SCENARIO IDENTIFICATION AND LIMITATIONS

This section focuses on identifying the core scenarios that will be considered for the ECBA. The section also highlights limitations that eliminate any alternatives that could be assessed as a project option.

The identification and definition of scenarios for this ECBA is based on a predefined set of scenario perspectives. The three scenario perspectives are defined as:

- A base case scenario that focuses on assessing the current status quo and its costs and benefits to society at large
- A project implementation scenario that focuses on assessing the cost and benefits to society if a warehousing/logistics/light industrial project is implemented
- A project alternative scenario which focuses on assessing the costs and benefits to society in the event that an alternative land use typology to warehousing/logistics/light industrial is implemented on the site

Diagram 6.3: Scenarios Overview



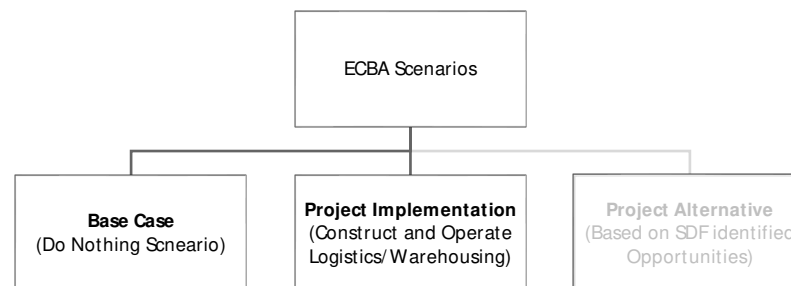
Taking into consideration the preceding section's information, several scenarios are identified that could be reviewed as part of the ECBA. The Base Case Scenario, i.e., a do-nothing scenario, considering the preceding section, identifies that the property is not yet developed/improved. The draft scoping report (2022) for the project identifies that although the property is not yet developed, informal activities intermittently occur on the property (illegal sand mining and cattle grazing). The site does offer environmental benefits in the form of endangered grasslands and has a limited heritage value that can be mitigated. The draft scoping report does however also identify that *"In the absence of a formalised land release project for the study area, the continuation of trends in current land use (fires, grazing, settlement, sand mining and industrial land use) will lead to the further degradation of grasslands. Appropriately designed development can unlock value from the land and also deliver much-needed socio-economic value, whilst at the same time securing the conservation of*

representative portions of the grassland". The information suggests that a do-nothing scenario could influence the environmental potential of the site.

The second scenario focuses on the implementation of a warehousing/logistics/light industrial development opportunity on 358 hectares of land (on three PDAs). The overall purpose of this ECBA is to assess the benefits and costs to society in the event that the proposed development is implemented. Overarching local and regional strategic planning identify the property as an industrial node which can actively contribute to the central logistics operations of the City of eThekweni and Port of Durban. The subject property is also zoned industrial furthermore asserting the industrial intent of the property from a developer and municipal perspective. The property is also close to an inter-modal logistics facility which is a central component to the logistics efficiency of eThekweni and the Cato Ridge Node. The proposed development could influence the local community from a financial, economic, social and community perspective.

A third scenario, or project alternative scenario, has been influenced by the desired spatial form of the greater Cato Ridge area as identified by the eThekweni SDF and Cato Ridge LAP. Because the development site is optimally located in an established and growing industrial node and because the desired future use of the property is industrial, the proposed development site is not contextualised in terms of another land use or development opportunity outside the preferred layout and use proposed by the draft scoping report. Therefore, an alternate use is not assessed as part of this ECBA.

Diagram 6.4: Final Scenarios Selection



6.4.3 DEFINITION OF THE BASE CASE SCENARIO – IDENTIFICATION OF COSTS AND BENEFITS

The base case scenario, also known as the ‘do nothing scenario’, is focused on the continuation of the status quo of the proposed development property in line with its role and function within the local community. The draft scoping report (2022) for the project identifies that although the property is not yet developed, informal activities intermittently occur on the property (illegal sand mining and cattle grazing). Furthermore, invasive alien plant species impact on the current state of the property’s environmental benefits. Therefore, impacts identified on the property are based on the environmental significance of the property as well as the inherent economic benefit that the community derives from the property.

The table provides an overview of the costs and benefits of the scenario. The table outlines each cost and benefit’s assumptions and other information relevant to the ECBA.

Table 6.2: Base Case Scenario Cost and Benefit Identification and Assumptions

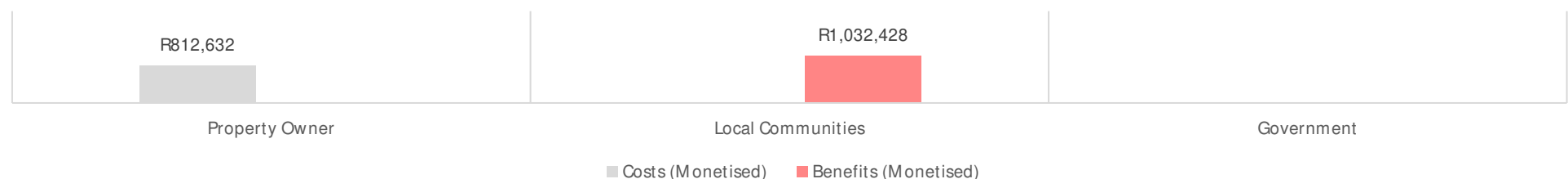
Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (R/annum)
Cost	The property remains in its current condition and is subject to general costs associated with municipal levies and tariffs and maintenance costs where applicable	- It is assumed that from the Draft Scoping Report (2021) that no maintenance is carried out on the property - The property is, however, subject to municipal rates and taxes and therefore the cost incurred on the property is subject to the payment of applicable rates (eThekweni Medium-Term Budget 2021/22) - The development site consists of several properties that are individually rated and have different rating categories (eThekweni Supplementary Valuation Roll (2021))	Property owner	2023	2053	1.0000	R812 632
Benefit	The property, according to the Draft Scoping Report (2022) is home to KZNSS grassland. The existing environmental feature adds to the benefit that the community derives from the property. Environmental benefits include, amongst others, carbon capturing, erosion control, pollination, biological attributes, recreation, and aesthetics	- The proposed development site is home to KZNSS grassland which affords the local community an environmental benefit - The impact is a function of the environmental value of the property (proxy value for grassland is R24 332 per hectare) and the size of the property (358 hectares) (David Suzuki Foundation (2008))	Community	2023	2053	1.0000	R1 032 428
Cost and Benefit	According to the Draft Scoping Report (2022) the property is subject to intermittent illegal	Illegal sand mining is a cost to property owners because the illegal mining of sand creates detrimental environmental	- Community - Property owners	2023	2053	1.0000	Not monetised

	sand mining. Illegal sand mining can provide costs and benefits to property owners and the community	impacts by altering environmental assets not approved by regulatory authorities as appropriate for mining activities. These effects place a burden on property owners. Furthermore, the degradation of environmental assets because of illegal activities removes any benefits the community could have gained from the asset. The community/illegal miners could benefit from the activity through the sale of the illegally mined sand. The sale of the illegally mined sand contributes to the livelihood of these illegal miners and benefits households. Property owners typically do not gain benefit from these activities.					(Qualitatively assessed)
Cost and Benefit	According to the Draft Scoping Report (2022) the property is subject to intermittent cattle grazing by local subsistence farmers. The agricultural activity can provide costs and benefits to property owners and the community	- Intermittent cattle grazing by subsistence farmers negatively affects environmental assets that have not specifically been allocated for agricultural purposes. Property owners and the community experience a cost because of long-term and incremental losses of the natural environment - A benefit that the community derives is the sale of cattle or the use of cattle as meals to feed to local/community households	- Community - Property owners	2023	2053	1.0000	Not monetised (Qualitatively assessed)

Source: DEMACON Research, 2023

The preceding table shows that the cost burden of the project falls on the property owner (Approximately R812 632 in the base year). The cost burden includes the rates and tariffs applicable to the property. Beneficiaries of the scenario include the community who benefit from the property as a result of its environmental qualities.

Figure 6.1: Costs versus Benefits per Impacted Party



6.4.4 DEFINITION OF THE PROJECT IMPLEMENTATION SCENARIO – IDENTIFICATION OF COSTS AND BENEFITS

The project implementation scenario is focused on the development of 358 hectares of land in the Cato Ridge area. The developable land is spread across three proposed development areas. The development of the PDAs will primarily focus on warehousing and logistics orientated development supported by necessary bulk infrastructure and related services. An inter-modal freight hub is to be developed close to the development site which is considered to be an important component to the project and its opportunities in terms of logistics efficiency and economic growth. The costs and benefits of the scenario are structured to reflect the range of factors that stem from the construction and operation of the proposed development site.

The table provides an overview of the costs and benefits of the scenario. The table outlines each cost and benefit's assumptions and other information relevant to the ECBA. Monetisation data refers to the base year value of a cost or benefit and does not account for inflation, conversion, and present values. The data is indicative and should be used as a basis to inform readers of the full base year value of each cost / benefit at full capacity before long-term forecasting and conversions are applied.

Table 6.3: Project Implementation Scenario Cost and Benefit Identification and Assumptions

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
Cost	Capital expenditure costs associated with the construction of the proposed development site	- The capital cost of the proposed development is based on high-level cost estimations given that detailed financial modelling has not yet been concluded – calculated by DEMACON. - The capital costs of the project are a function of estimated gross floor area (± 1.2 million m^2) and a construction cost factor (R7 950 per m^2 - includes buildings, infrastructure, furniture, fittings, and related services). - The construction phase will be between 5- and 20-years and incrementally applied. The construction phase will be coordinated with market demand. - Source: DEMACON Market Research, 2022	Business Owner	2023	2053	0.8604	R9 797 580 000
Cost	Operational costs associated with the day-to-day activities of a logistics/warehousing orientated development	- The operational cost is based on initial operational expense estimates calculated by DEMACON - Operational costs are a function of the estimated gross floor area of the project (± 1.2 million m^2) and an operational cost per m^2 factor (R2 114 per m^2) - Take-up of available gross floor area will occur based on a 5% take-up increment per year - The operational costs also include expenses on major maintenance costs. The cost is a function of the estimated gross floor area of the project (± 1.2 million m^2) and 5% cost of CAPEX factor	Business Owner	2024	2053	0.8604	R3 095 172 600

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
Cost	The property, according to the Draft Scoping Report (2022) is home to KZNSS grassland. The existing environmental feature adds to the benefit that the community derives from the property. Environmental benefits include, amongst others, carbon capturing, erosion control, pollination, biological attributes, recreation, and aesthetics.	- Source: DEMACON Market Research, 2022 - The proposed development site is home to KZNSS grassland which affords the local community an environmental benefit - The impact is a function of the environmental value of the property (proxy value for grassland is R24 332 per hectare) and the size of the property (358 hectares) - Source: David Suzuki Foundation, 2008	Community	2023	2053	1.000	R1 032 428
Benefit	The proposed development could create an integrated logistics offering in Cato Ridge, incorporating intermodal freight transport (road to rail and vice versa) between the Port of Durban and Cato Ridge. The logistics/warehousing offering of the proposed development combined with the development of an intermodal freight facility (implementation phase) could limit the number of heavy trucks that travel between Cato Ridge and the Port of Durban. The reduction of heavy trucks on major roadways unlocks several external benefits to communities: - Reduction in road accidents - Reduction of traffic congestion - Reduction in emissions - Reduction in landway costs - Reduction in noise pollution - Reduction in policing required - Reduction in water pollution from roads	- Static Assumptions - By making use of an inter-modal facility the cost to community of using rail transport is offset by the benefit to community that a reduction in heavy trucks offer - Distance from Cato Ridge to the Port of Durban 58 km by road 68 km by rail - The proposed inter-modal facility has a planned capacity of 750 000 TEUs annually 1.044 billion ton per km could be shifted from road to rail per year - Reduction in accidents - The impact considers the burden a freight related accident places on community and the economy. The impact considers the externalities related to all costs involved in an accident, i.e., vehicle loss/repair, injuries sustained, administrative components, etc. - Road freight cent per km.ton ratio of 7.6 - Rail freight cent per km.ton ratio of 0.6 - Original data reported in 2013 and adjusted to current 2022 - Reduction in congestion - The impact considers that when traffic on a segment of road exceeds the free-flow capacity, it increases travel times. Congestion is an external cost in terms of	Community	2024	2053	1.0000	R210 883 238

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
		time that is lost en route from one location to another compared with the travelling time the journey would have taken if there was sufficient capacity. Trucks and delivery vehicles take up more space on the roads and contribute towards increased travelling times - o Road freight cent per km.ton ratio of 2.9 - o Rail freight cent per km.ton ratio of 0.0 - o Original data reported in 2013 and adjusted to current 2022 prices • Reduction in emissions - o When fossil fuels are burned, greenhouse gasses, such as carbon dioxide, sulphur, and combusted particle matter, are released into the atmosphere. This places an external cost on the environment and should be internalised. Abatement costs are calculated based on health risks and their contribution to global warming. A fundamental change to the latest model has been the inclusion of emissions other than CO2 in the emission cost calculations - o Road freight cent per km.ton ratio of 2.9 - o Rail freight cent per km.ton ratio of 0.0 - o Original data reported in 2013 and adjusted to current 2022 prices • Reduction in landway costs - o Roadway or land-use value is defined as the opportunity cost of having a road or railway occupying a piece of land instead of it having another revenue-generating use. It excludes the original road that was developed as social infrastructure for the mobility of the population, but includes the land required to expand the pavement footprint, due to increased freight demand. Roads are an integral part of social development. Once development has taken place, roads are used for logistical and other transportation purposes, and are considered a sunk cost. This cost can be transferred to road users through annually					

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
		- discounting the cost of the land that the roads are built on - o Road freight cent per km.ton ratio of 1.5 - o Rail freight cent per km.ton ratio of 0.2 - o Original data reported in 2013 and adjusted to current 2022 prices • Reduction in noise - o An often-overlooked cost to society is the ill effects of noise pollution. Due to the logarithmic nature of sound, a doubling in traffic volume increases the noise level by three decibels. Once noise levels reach 50–60 dB(A), the noise can be considered annoying - o Road freight cent per km.ton ratio of 2.9 - o Rail freight cent per km.ton ratio of 0.0 - o Original data reported in 2013 and adjusted to current 2022 prices • Reduction in policing cost - o Road users are largely exempt from funding the policing services that are available to them. No single province is isolated, and as such, road users from other provinces benefit from local policing budgets. As such, policing can be seen as a national cost to road users - o Road freight cent per km.ton ratio of 0.5 - o Rail freight cent per km.ton ratio of 0.0 - o Original data reported in 2013 and adjusted to current 2022 prices • Reduction in water pollution - o Water pollution includes organic waste or persistent toxicants run-off from roads generated from vehicle use: engine oil leakage and disposal, road surface, particulate matter and other air pollutants from exhaust and tyre degradation - o Road freight cent per km.ton ratio of 5.2 - o Rail freight cent per km.ton ratio of 0.0 - o Original data reported in 2013 and adjusted to current 2022 prices • <i>Source: Environmental Affairs, Freight Shift from Road to Rail, 2013</i>					

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
Benefit	Because of the sector specific employment opportunities created by the proposed development (transport and storage sector), a mismatch between skills within the local community and skills required at the development is present. The local community will overtime seek to upskill in order to attain employment opportunities at the proposed development. The upskilling of the workforce adds to the economic and social value of the local workforce.	- The impact is a function of the proportion of labourers that could require upskilling to be employed at the proposed development (2 3 86 labourers) and the labour force value such a skilled worker will add to the local labour pool (Approximately R60 000 per labourer upskilled) - Source - Statistics South Africa, Census 2011 Skills Profile, 2011 - South African Reserve Bank, Quarterly Bulletin on Labour Dynamics, 2022	Community	2024	2053	0.8500	R143 159 917
Benefit	At present the Port of Durban is congested by roadside freight deliveries and collections. Stationary time at the Port has increased dramatically in recent years and as a result truck drivers waste an enormous amount of time at the Port to offload/onload goods. Because of the integrated logistics opportunity, the proposed development offers, a sizeable number of truck drivers could gain value from a time cost saving.	- The impact is a function of stationary time spent per truck at the Port of Durban (approximately 300 minutes per truck per day) and the proportion of trucks that could be diverted from the Port because of the logistics function the proposed development offers (8.3% of trucks at the Port) - Source: - eThekweni Transport Authority, Landside Logistics Supporting the Port of Durban, 2018 - eThekweni Built Environment Performance Plan, 2021	Logistics Sector Labour Force	2024	2053	0.8500	R146 767 578
Benefit	The employment opportunities that the proposed development could offer over the medium- to long-term could influence the livelihood and quality of life of its labour force. International research suggests that a direct link exists between life expectancy of a person and the monthly/annual income that person earns. It is inferred that because of an improvement of	- The impact is a function of increased life expectancy (in South Africa every additional R1 000 earned per month equates to 0.2214 years added to a person's life expectancy), the value of recreational time in South Africa (R34 per Hour) and the number of employees that could benefit from employment at the proposed development during its lifecycle (10 803 jobs created) - Source: - Statistics South Africa, Mid-Year Population Estimates, 2022	Community	2024	2053	0.8500	R7 955 326 741

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
	monetary capabilities of labourers employed at the development that the life expectancy of employed workers will also increase. The improved life expectancy adds social and economic value to communities because of longer lifecycles and the value of time that is attached to a longer life.	Statistics South Africa, Quarterly Employment Survey – Q3 2022, 2022					
Benefit	The implementation of the proposed development could assist with further diversifying the regional economy	The transport, storage and communication sector currently contribute 8.4% to the regional economy. The development of logistics orientated development in the area could contribute to diversifying the existing base of the regional economy and stimulate linkages to value chain economic sector growth opportunities	- Businesses - Community	2023	2053		Not monetised (Qualitatively assessed)
Benefit	The proposed development offers an opportunity to attract additional foreign and domestic investment into the local economy	The proposed development and its logistics function could attract additional investment into the area because of the cluster effect that industries such as logistics can offer. The clustering of supporting industries allows for agglomeration of economic activity which assists with creating attractive investment nodes	- Businesses - Community - Local government	2023	2053		Not monetised (Qualitatively assessed)
Cost	Local labour supply side constraints (i.e., a mismatch of skills from the local community) could over the short- to medium-term be met through the “importation” of labour	Because a skills mismatch exists between the local labour force (4% of local labour are in the transport sector and skilled in accordance with the sector’s requirements) and transport sector orientated industries, short- to medium-term labour demand could be met with imported labour until such time that upskilling of the local labour force is achieved. The import of labour removes employment opportunities from local communities and therefore could influence the economic and social impact that the proposed development could have.	Community	2023	2053		Not monetised (Qualitatively assessed)
Benefit	Increased demand for social facilities and amenities	Social facilities and amenities (e.g., healthcare, policing, postal services, etc) demand could rise because of an influx of employment seekers and the improved	- Community - Local government	2023	2053		Not monetised

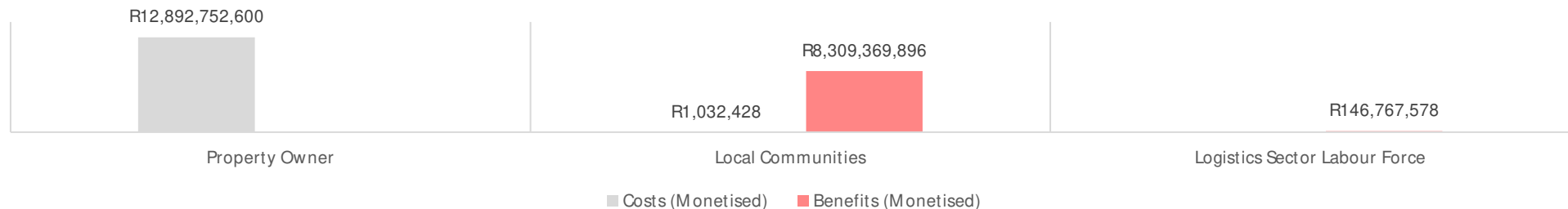
Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
		- livelihoods of households that benefitted as a result of the direct, indirect or induced impact of the development's operation. - The increased demand leads to improved services in the area and general upliftment of the community.	- Provincial government - National government				
Cost	In-flux of employment seekers	- The prospect of employment opportunities in the local economy could attract potential job seekers from beyond the local economy and therefore limit local community employment and the spending of money earned – remittances to homesteads. - In the event that labour must be sourced from outside the local area, these migrants could be viewed as temporary.	- Community - Local government	2023	2053		(Qualitatively assessed)
Cost	Population increase would have to be met by a concomitant increase in local policing capacity	- An influx of population either employed or looking for employment, may lead to increased crime activity. - Opportunity seekers that do not find employment may turn to crime and in turn influence local community safety. - The introduction of persons outside the local labour market (i.e., sourcing from other provinces for instance) could introduce a criminal element.	- Community - Local government	2023	2053		Not monetised
Benefit	Speculative pricing activity in nearby towns can be expected	As a result of the mine's operation, speculative pricing activity in nearby towns and nodes may occur. Speculative pricing in terms of increasing property prices, rental values, etc. could drive opportunities for property market development and growth.	- Community - Property Owners	2023	2053		(Qualitatively assessed)

Cost / Benefit	Description	Assumptions	Impacted Parties	Impact Start	Impact End	Conversion Factor	Monetisation (Base Year Value)
Benefit	Sustained demand for new development (i.e., residential, retail, etc.)	Due to the increased livelihoods of households as a result of the direct, indirect and induced impacts of the operation of the development, increased demand for land uses such as retail, entertainment, etc. can occur. The influx of population to the area could also drive demand growth.	- Community - Businesses	2023	2053		Not monetised
	Increased prospect of informal settlements	Existing informal settlements could expand, or new settlements could be established due to an influx of jobseekers to the local economy who cannot find employment.	Community	2023	2053		(Qualitatively assessed)

Source: DEMACON Research, 2022

The preceding table shows that the cost burden of the project falls on the property owner and future investors, developers, and property owners (Approximately R13.3 billion in the base year). The cost burden includes the construction and operational cost of the project. Beneficiaries of the project include local communities who benefit from a reduction in heavy vehicle movements and the external benefits (noise, air, congestion, accidents, etc.) that accrue as a result as well as an upskilling of the labour force and potential life expectancy gains (R8.5 billion in the base year). Existing labourers in the logistics sector are also afforded a time cost saving whereby their stagnant time at the Port of Durban is reduced because of improved logistics efficiency (R146 million in the base year).

Figure 6.2: Costs versus Benefits per Impacted Party



6.4.5 SCENARIO IDENTIFICATION OUTCOMES

Analysis of the scenarios identified indicates that three possible scenario options were explored, i.e., a base case scenario, a project implementation scenario, and a project alternative scenario.

Taking into consideration key informants and necessary background information, two of the three scenarios were identified for further analysis in the ECBA. The two scenarios include:

- Taking into consideration the preceding section's information, several scenarios are identified that could be reviewed as part of the ECBA. The Base Case Scenario, i.e., a do-nothing scenario, considering the preceding section, identifies that the property is not yet developed/improved. The draft scoping report (2022) for the project identifies that although the property is not yet developed, informal activities intermittently occur on the property (illegal sand mining and cattle grazing). The site does offer environmental benefits in the form of endangered grasslands and has a limited heritage value that can be mitigated. The draft scoping report does however also identify that "In the absence of a formalised land release project for the study area, the continuation of trends in current land use (fires, grazing, settlement, sand mining and industrial land use) will lead to the further degradation of grasslands. Appropriately designed development can unlock value from the land and also deliver much-needed socio-economic value, whilst at the same time securing the conservation of representative portions of the grassland". The information suggests that a do-nothing scenario could influence the environmental potential of the site.
- The second scenario focuses on the implementation of a warehousing/logistics/light industrial development opportunity on 358 hectares of land (on three PDAs). The overall purpose of this ECBA is to assess the benefits and costs to society in the event that the proposed development is implemented. Overarching local and regional strategic planning identify the property as an industrial node which can actively contribute to the central logistics operations of the City of eThekweni and Port of Durban. The subject property is also zoned industrial furthermore asserting the industrial intent of the property from a developer and municipal perspective. The property is also close to an inter-modal logistics facility which is a central component to the logistics efficiency of

eThekweni and the Cato Ridge Node. The proposed development could influence the local community from a financial, economic, social and community perspective.

Based on first round indicators, the total market price, irrespective of the start year of individual impacts and devoid of discounting, show that both the base case scenario and project implementation scenario provide benefits to society.

Table 6.4: Total Construction Costs, Annual Costs, Annual Benefits for Different Scenarios

Variable	Base Case Scenario	Project Implementation Scenario
Total Real Construction Cost		- R9 797 580 000
Total Real Annual Costs	- R812 632	- R3 095 172 600
Total Real Annual Benefits	R1 032 428	R8 456 137 474
Difference between Annual Costs and Benefits	R219 796	R5 360 964 874

The largest benefactor of the proposed project are the local community and the labour force that could be employed. In order for the community and labour force to benefit from the project, the property owner, developers and investors carry the largest cost/burden.

6.5 COST-BENEFIT ANALYSIS RESULTS – COMPARING SCENARIOS

In this section the results of the cost-benefit analysis calculations are reported. The section focuses on providing an overview of the Net Costs and Benefits per scenario for the proposed development (as identified in Chapter 1). Furthermore, the outcomes of the project assessment criteria, i.e., NPV, ERR and BCR are reported. The outcome of the analysis is used to assess different scenarios in terms of their sensitivity and potential risks.

6.5.1 PROJECT ASSESSMENT CRITERIA ANALYSIS

The following section of the report focuses on reporting the outcome of the CBA and its scenarios by means of comparing the project assessment criteria previously identified. The project assessment criteria report and compare the Net Present Value, Economic Rate of Return and Benefit-Cost Ratio of each scenario. The project assessment criteria indicates whether a project, or project

alternative, represent a social benefit and/or cost and assist with weighing options in order to select an option that is best suited to the community and the resources at its disposal.

The following table provides an overview of the outcome of the CBA for the base case and project implementation scenarios. All costs and benefits have been converted to economic values and discounted based on the economic cost of capital. The table shows that the base case scenario offers a positive NPV and a BCR of 1.466. Comparatively, the project implementation scenario also boasts a positive NPV. The project implementation scenario has an ERR of 20%. The ERR is greater than the ECC (10%) indicating that the project offers an overall benefit to society and that the gains of the scenario are more than the benchmark expected return.

The BCR of the project implementation scenario is greater than that of the base case scenario, i.e., 1.466 compared to 1.387 respectively. Therefore, the indicator suggests a positive relationship between net present costs/benefits.

The project implementation scenario has an ERR greater than the ECC and a positive NPV. The data shows that the project implementation scenario offers greater benefits to the local community than the base case scenario. Therefore, the project implementation scenario offers a social benefit and is the preferred scenario for the project site.

Table 6.5: Comparison of the Project Comparison Criteria per Scenario

Variable	Base Case Scenario	Project Implementation Scenario
NPV Costs	-R9 376 791	- R11 694 602 207
NPV Benefits	R13 004 158	R17 146 052 040
Net Present Value	R3 627 367	R5 451 449 833
Economic Rate of Return	0%	20%
Benefit-Cost Ratio	1.387	1.466

NPV – a Positive NPV indicates an overall social benefit to the community affected

ERR – an ERR greater than the SDR (8%) offers a sizeable community benefit. An ERR equal to the SDR shows that the costs and benefits are in equilibrium with each other, whilst an ERR less than the SDR indicates a marginal social cost to the community

BCR – a BCR greater than 1 indicates that a positive relationship exists between the present value of costs and benefits. BCR's are effective tools in ranking and selecting the most socially advantageous project option for a community

Source: DEMACON Calculations, 2023

6.6 SENSITIVITY ANALYSIS AND RISK FACTORS

The following section focuses on the outcomes derived from a sensitivity analysis of the CBA scenarios. Sensitivity analysis allows for the identification of factors that pose a risk to the economic performance and outcome of a given project scenario. In other words, a sensitivity analysis is a review of the variables of a CBA scenario in order to establish the degree to which the project assessment criteria are influenced and in effect could pose future risks for a project's success and/or sustainability. The following sections provide an overview of the sensitivity analysis of each CBA scenario and identifies which factors can be considered to be risks given their propensity to impact on the NPV, ERR and BCR.

6.6.1 SENSITIVITY ANALYSIS

Sensitivity analysis for the CBA is based on a What-If analysis which seeks to measure the impact that several independent values have on a range of dependent values. For the purposes of this CBA, sensitivity analysis is conducted based on the several independent values that could pose a risk to the outcome of the economic benefits that could be derived from the project. The afore mentioned independent values are adjusted within a What-If Analysis in order to test the impact these variables may have on the ENPV, ERR, EMRR and BCR of the project. The following tables provide an overview of the sensitivity analysis for each of the variables of the CBA scenarios. The tables address each scenario individually in order to consciously provide information and interpretations per scenario considered.

6.6.1.1 BASE CASE SCENARIO SENSITIVITY ANALYSIS

The base case scenario is based on a no-go implementation baseline whereby the project is never implemented and current elements such as environmental benefits or operational costs are maintained. Independent risk factors that have been identified for the base case scenario's sensitivity analysis include:

- Changes to the CPI index – changes CPI could influence the pricing of environmental factors over the medium- to long-term and therefore is an important consideration
- Changes to the amount of land that will be affected by the development – at present 368 hectares of land will be affected by the project. Should this amount increase, the environmental benefit that the community gains from the properties could be more severely impacted

- Changes to property tariff increases – significant changes to increasing property tariffs could impact on the range of benefits or costs imposed on the community

The following table provides an overview of the sensitivity analysis of the base case scenario based on the preceding independent risk factor changes.

Table 6.6: Base Case Scenario Sensitivity Analysis

Testing Changes to the CPI Index from its current 6% value			
CPI Change	ENPV	EIRR	EBCR
1,00%	78 437	9.1%	1.01
2,00%	384 536	5.7%	1.06
3,00%	819 997	0.6%	1.11
4,00%	1 442 093	0.0%	1.18
5,00%	2 335 691	0.0%	1.27
6,00%	3 627 367	0.0%	1.39
7,00%	5 507 023	0.0%	1.54
8,00%	8 261 066	0.0%	1.74
9,00%	12 323 431	0.0%	2.00
10,00%	18 354 162	0.0%	2.34

Testing changes to the amount of land that could be impacted – current impacted land 368 hectares			
Land Area Change	ENPV	EIRR	EBCR
368	3 627 367	0.0%	1.39
480	7 902 617	0.0%	1.84
592	15 384 306	0.0%	2.64
704	23 801 205	0.0%	3.54
816	30 815 287	0.0%	4.29
928	35 199 089	0.0%	4.75
1 040	37 171 800	0.0%	4.96
1 152	37 747 174	0.0%	5.03
1 263	37 829 370	0.0%	5.03

Testing changes to the rate at which property tariffs increase – current rate is 5%

Escalation Change	ENPV	EIRR	EBCR
1,00%	6 109 138	0.0%	1.89
2,00%	5 603 035	0.0%	1.76
3,00%	5 029 009	0.0%	1.63
4,00%	4 375 192	0.0%	1.51
5,00%	3 627 367	0.0%	1.39
6,00%	2 768 481	0.0%	1.27
7,00%	1 778 050	0.0%	1.16
8,00%	631 438	6.0%	1.05
9,00%	-701 014	13.4%	0.95
10,00%	-2 255 044	19.1%	0.85

Source: DEMACON Calculations, 2023

The sensitivity analysis of the base case scenario shows that the underlying assumptions applied in the CBA are sensitive to fluctuations in price index and the amount of land affected. In general, changes to current prevailing market conditions closer monetary targets set out by the South African Reserve Bank and National Treasury could adversely affect the long-term benefits gained by local communities.

6.6.1.2 PROJECT IMPLEMENTATION SCENARIO SENSITIVITY ANALYSIS

The project implementation scenario is based on the implementation of a logistics and warehousing orientated development over a 20-to-30-year period. The project could generate sizeable costs and/or benefits to society which inadvertently could be positively or negatively be affected by changes to underlying economic assumptions. Independent risk factors that have been identified for the base case scenario's sensitivity analysis include:

- Changes to the CPI index – changes CPI could influence the pricing of several factors such as operational revenue, costs, and cost of time over the medium- to long-term and therefore is an important consideration
- Changes to the construction cost CPI – construction costs over the long-term could influence the financial and economic sustainability of the project (given the project's long-term implementation plan).

- Changes to the rate at which logistics and warehousing space becomes operational is a key factor – the take-up of logistics orientated space and the operationalisation of these spaces are crucial to the economic benefits that the project could produce.

The following table provides an overview of the sensitivity analysis of the project implementation scenario based on the preceding independent risk factor changes.

Table 6.7: Project Implementation Scenario Sensitivity Analysis (R/million)
Testing Changes to the CPI Index from its current 6% value

CPI Change	ENPV	EIRR	EBCR
1,0%	2 893.3	17.4%	1.56
2,0%	3 458.0	18.1%	1.59
3,0%	4 051.5	18.7%	1.60
4,0%	4 636.2	19.2%	1.59
5,0%	5 143.0	19.6%	1.54
6,0%	5 451.4	19.8%	1.47
7,0%	5 357.4	19.6%	1.36
8,0%	4 523.3	18.8%	1.23
9,0%	2 399.3	16.6%	1.09
10,0%	(1 901.6)	0.0%	0.95

Testing changes to the construction cost CPI from its current 5.6% value

Land Area Change	ENPV	EIRR	EBCR
1,6%	6 366.8	21.6%	1.59
2,6%	6 171.2	21.2%	1.56
3,6%	5 955.2	20.8%	1.53
4,6%	5 716.2	20.3%	1.50
5,6%	5 451.4	19.8%	1.47
6,6%	5 157.5	19.2%	1.43
7,6%	4 830.7	18.6%	1.39
8,6%	4 466.8	17.9%	1.35
9,6%	4 060.9	17.2%	1.31

Testing changes to the construction cost CPI from its current 5.6% value
Testing changes to the rate at which completed logistics space is taken-up by the market – currently 5% per annum is applied

Escalation Change	ENPV	EIRR	EBCR
1,0%	(1 709.3)	5%	0.75
2,0%	178.4	10%	1.02
3,0%	2 066.1	14%	1.22
4,0%	3 953.8	17%	1.37
5,0%	5 451.4	20%	1.47
6,0%	7 729.3	22%	1.58
7,0%	9 617.0	24%	1.66
8,0%	11 504.7	26%	1.72
9,0%	13 392.5	28%	1.77
10,0%	15 280.2	30%	1.82

Source: DEMACON Calculations, 2023

The sensitivity analysis of the project implementation scenario shows that the underlying assumptions applied in the CBA are sensitive to fluctuations in price indexes and take-up rates. In general, changes to current prevailing market conditions closer monetary targets set out by the South African Reserve Bank and National Treasury could adversely affect the long-term benefits gained by local communities. The take-up of logistics space could also contribute to economic benefits and improved market conditions could escalate economic benefits derived from the project.

6.7 MEASURING AND RANKING NON-QUANTIFIED IMPACTS

The following section focuses on assessing the non-quantified costs and benefits identified in this chapter. The purpose of the analysis is to measure each impact's relative significance to the overall project and/or scenario it impacts on.

6.7.1 APPROACH

The assessment of non-quantified impacts is done by making use of several criteria that qualitatively measure the status, extent, magnitude, duration, and probability.

Each criterion is described below:

Table 6.8: Qualitative Impact Measurement Criteria

Criteria	Description	Measurement Scale
Impact Status	Measures whether an impact is positive or negative	Positive to Negative
Extent of the Impact	Measures the most likely areas/communities/elements that will be affected given their proximity to the impact location	Low to High
Duration of the Impact	Measures the approximately lifecycle of the impact	Less than One Year to Longer than 15-Years
Magnitude of the Impact	Measures the extent to which an impact will alter elements affected by a specific impact	No change to definite change

Impact Significance Rating

Description	Rating	Score
The impact has limited influence, or the impact is unknown	No Impact	0
The impact does not have a direct influence on the decision to develop in the area	Low	Up to 15
There is an impact, but can be mitigated	Low to Medium	16 to 30
The impact could influence the decision to develop in the area unless it is effectively mitigated	Medium	31 to 45
The impact will have a direct influence on the decision to develop but there are means of mitigating the impact	Medium to High	46 to 60
The impact will have a direct influence on whether to develop, but there is limited scope to mitigate these impacts	High	60 and above

The impact is measured in terms of the afore mentioned criteria and a final impact significance rating determined. The impact significance rating assist with ranking impacts in terms of their severity.

6.7.2 IMPACT ASSESSMENT

The following section provides an overview of the impact assessment of non-quantified impacts per scenario identified.

6.7.3 BASE CASE SCENARIO

The following table provides an overview of the measurement outcomes of the unquantified impacts of the scenario.

Table 6.9: Impact Significance of Base Case Scenario Unquantified Impacts

Impact	Criteria					Significance Rating
	Status	Extent	Duration	Magnitude	Probability	
According to the Draft Scoping Report (2022) the property is subject to intermittent illegal sand mining. Illegal sand mining can provide costs and benefits to property owners and the community	-	1	2	5	4	32 Medium
According to the Draft Scoping Report (2022) the property is subject to intermittent cattle grazing by local subsistence farmers. The agricultural activity can provide costs and benefits to property owners and the community	-	1	2	2	5	20 Low to Medium

The preceding identifies that the continued illegal mining on the development site as well as subsistence grazing could influence the environmental benefit that local communities derive from the properties. Illegal sand mining is the most pressing factor negatively affecting the project location. Given the preceding, the development site does still maintain a high level of environmental and social significance.

6.7.4 PROJECT IMPLEMENTATION SCENARIO

The following table provides an overview of the measurement outcomes of the unquantified impacts of the scenario.

Table 6.10: Impact Significance of Project Implementation Scenario Unquantified Impacts

Impact	Criteria					Significance Rating
	Status	Extent	Duration	Magnitude	Probability	
The implementation of the proposed development could assist with further diversifying the regional economy	+	5	4	4	4	52 Medium to High
The proposed development offers an opportunity to attract additional foreign and domestic investment into the local economy	+	5	3	4	5	60 Medium to High
Local labour supply side constraints (i.e., a mismatch of skills from the local community) could over the short- to medium-term be met through the "importation" of labour	-	2	2	3	4	28 Low to Medium

Impact	Criteria					Significance Rating
	Status	Extent	Duration	Magnitude	Probability	
Increased demand for social facilities and amenities	+	2	3	3	4	32 Medium
In-flux of employment seekers	-	3	2	3	5	40 Medium
Population increase would have to be met by a concomitant increase in local policing capacity	-	2	2	2	3	18 Low to Medium
Speculative pricing activity in nearby towns can be expected	+	2	3	3	5	40 Medium
Sustained demand for new development (i.e., residential, retail, etc.)	+	2	3	4	5	45 Medium
Increased prospect of informal settlements	-	2	3	4	4	36 Medium

The preceding identifies that the proposed development could stimulate several external benefits and negative effects to not only the local community but the broader economic and real estate markets as well. The proposed development could positively contribute to society's benefits derived from the project by diversifying the local economy and attracting domestic and foreign investment. Furthermore, livelihood upgrades of households affected by the proposed development could stimulate increased service delivery in the local community whilst also unlocking demand for other land uses such as retail and residential development. Property pricing could also be affected in a positive manner.

From a negative perspective the proposed project could potentially require the importation of skilled labour to address the skills-gap that exists between the project's requirements and the local labour force's capabilities. The project could also stimulate an influx of job seekers that in turn place a burden on existing resources and infrastructure.

Overall, the project creates several positive and negative impacts in the local community and broader regional environment. The information suggests that positive factors outweigh negative factors. Negative impacts could also be

mitigated by formulating an appropriate mitigation strategy for identified negative impacts.

6.8 SYNTHESIS

The CBA undertaken in this report weighed the costs and benefits of the two uses, i.e., vacant land and logistics and warehousing development, against each other. The two options/scenarios afford different perspectives to the costs and benefits that the local community could derive from the use of the development site. For instance, the visual properties of the site coupled with environmental attributes such as ecology and carbon storing offer a benefit to the local community whereas a logistics and warehousing orientated development affords the local community employment opportunities, livelihood upgrades, decongestion of roadways, less accidents, less pollution, time cost savings, etc.

Taking into consideration a range of identified, defined, and quantified costs and benefits per CBA scenario, the following table highlights the key results obtained from the analysis.

The data suggests that, although both scenarios have a positive effect on the local community and affords a net benefit in terms of localised resources, the construction and operation of a logistics and warehouse development would create the most meaningful benefit to the local community and its resources given the NPV and ERR.

Overall, the benefits associated with the implementation of the proposed development in the local community represent:

- A reduction of heavy vehicles between Cato Ridge and the Port of Durban offers the community several external benefits that contribute to the overall well-being of the community and its resources. The external positive impacts generated by the proposed development include:
 - A reduction in the number of road accidents involving freight transportation
 - A reduction in congestion on major transport routes and improving the efficiency of traffic flows
 - Reducing emissions by reducing the distance travelled by freight related vehicles
 - Shifting the value of transportation infrastructure from freight users to community road users
 - Reducing noise levels on major roads adding to community wellness
 - Reducing policing on major freight transport routes
 - Reducing water pollution by removing pollutants spilled by freight vehicles on roads and runoff areas
- Upskilling of the local labour force. Although not immediate, the community could benefit from long-term upskilled labour
- Freight operators (truck drivers) could save on time spent stationary at the Port of Durban increasing the value of their time spent
- Life expectancy according to international data is linked to increased household income. As a consequence of the project, workers employed at the project could experience increased life expectancy and add value and time to their livelihoods
- Other impacts include
 - Increased household livelihoods
 - Increased demand for alternative land uses such as retail
 - Increased service delivery on the local community

- Increased property prices and speculative property pricing

The following table provides an overview to outcome of the CBA per scenario.

Table 6.11: Comparison of the Project Assessment Criteria per CBA Scenario

Variable	Base Case Scenario	Project Implementation Scenario
NPV Costs	-R9 376 791	- R11 694 602 207
NPV Benefits	R13 004 158	R17 146 052 040
Net Present Value	R3 627 367	R5 451 449 833
Economic Rate of Return	0%	20%
Benefit-Cost Ratio	1.387	1.466

NPV – a Positive NPV indicates an overall social benefit to the community affected

ERR – an ERR greater than the SDR (10%) offers a sizeable community benefit. An ERR equal to the SDR shows that the costs and benefits are in equilibrium with each other, whilst an ERR less than the SDR indicates a marginal social cost to the community

BCR – a BCR greater than 1 indicates that a positive relationship exists between the present value of costs and benefits. BCR's are effective tools in ranking and selecting the most socially advantageous project option for a community

In the context of costs to the community; construction and operational costs are necessary expenses required to implement and sustainably operate the proposed development in order for benefits to be unlocked.

Even though the implementation of the proposed development affords a net benefit to the community in which it will operate, several risk factors are at play that could influence the range and extent of benefits derived. These risk factors include:

- a significant debt burden from increasing construction inflation could negatively affect the potential the proposed development has to provide a fully developed and operational project sustainably and cost-effectively – cannot unlock the full potential of the development
- Changes to the CPI index – changes CPI could influence the pricing of several factors such as operational revenue, costs, and cost of time over the medium- to long-term and therefore is an important consideration
- Market appetite and economic conditions could limit the potential take-up of the proposed development. Limitations in take-up could hamper

unlocking social, economic, and financial benefits from the proposed development

The risk factors do offer potential pitfalls that influence the sustainability and functionality of the proposed development. What should be noted is that the risk factors do require a sizeable departure from their current estimates in order to adversely affect the project, i.e., remove the net benefits of the project to the community.

Considering the preceding, the following critical success factors should be borne in mind when reviewing and/or planning the implementation of the proposed development:

- A clear directive of funding options and partners should be identified. It is important that the debt burden not be escalated to such a stage the project becomes unfeasible in the long-term
- Ensuring that sufficient bulk infrastructure is acquired and/or sourced in order to ensure long-term capacity and operational efficiency
- Containing construction costs as close to projected construction estimates in order to limit the cost burden of the project
- Ensuring that the project remains aligned with initiatives and strategic objectives of nearby projects and the municipality's long-term vision for the area.
- Enabling close relationships with the proposed multi-modal development is important to ensure that the project contributes and benefits from logistical efficiency
- Ensure continuous monitoring and evaluation of the project post-construction



7 SYNTHESIS

7.1 SYNTHESIS

Due to the limited availability of industrial land suitable for development in the eThekweni region, vacant and developable industrial land has become a strategic resource. Considering the limited amount of land available for industrial expansion, eThekweni's Outer West Region is identified by local and regional planning policy as a strategic region capable of facilitating future industrial and logistics growth due to its access to the N3 logistics corridor and undeveloped industrial land. The region is, according to the eThekweni Industrial Spatial Strategy, under-developed in terms of its industrial capability with and can offer an alternative industrial orientated investment opportunity that can build on the established industrial nodes already present in Durban and its immediate surrounds.

Based on an assessment of alternative locations in eThekweni, the Outer West, and Cato Ridge, it has been determined that the proposed development site is well positioned to address the strategic narrative of logistics-oriented development in Cato Ridge and there are no other locations that are immediately accessible.

Cato Ridge as a node in the Outer West Region forms part of eThekweni's development drive to unlock and develop opportunities along the SIP2 (N3 corridor between Durban and Gauteng) corridor. Cato Ridge has specifically been identified by the City as a catalyst for industrial and logistics orientated development because of the potential the location has to act as a dry port facility or as a location that can provide access to zoned industrial land. The Cato Ridge node is furthermore also considered to be an investment location that should be targeted by public and private sector actors as an economic driver. By extension, Cato Ridge and its industrial development opportunities could also act as a mechanism for development in the broader Outer West Region, specifically in the Mpumalanga and Hammarsdale areas.

Because of the strategic significance of the Outer West Region and Cato Ridge in particular, the development opportunity the area offers (manufacturing, warehousing, and logistics) has provincial and national impact potential. From a logistics perspective, national and provincial planning policy identify the significance and importance of the sector as a primary enabler of economic growth and development. The KwaZulu-Natal Growth and Development Strategy seeks to build on the comparative advantage the province has in terms of its

logistics and transport infrastructure in order to facilitate sustained long-term economic growth as a platform for socio-economic development. Cato Ridge and its immediate surrounds form part of the priority economic areas of the province. The National Development Plan also targets sustained economic growth by focussing on strategic infrastructure projects such as SIP 2 along the N3 highway.

The Industrial Policy Action Plan and South Africa Country Investment Strategy furthermore acknowledges the need and requirement of logistics as a backbone for economic growth and development whereby competitiveness of economic functions, regional growth, socio-economic development, and sustained development are supported by a logistics and transport network. The Medium-Term Expenditure Framework seeks to build upon and expand transport infrastructure and logistics operations as a means to facilitate overall economic growth, industrialisation and exports.

The strategic notions encapsulated by local, provincial, and national planning policy suggest that transport and logistics functions are a core development focus for the country's future economic and socio-economic growth. This is especially true within the context of eThekweni and its economic function as a national logistics node. The Port of Durban is facing growth constraints because of the limited expansion capability of immediate industrial and logistics nodes and as a result, economic growth fuelled by logistics and transport is subdued.

The Cato Ridge development assessed by this economic report could add to the logistics capability of the eThekweni economy and could actively address the strategic economic directives identified by local, provincial, and national planning policy (as previously discussed). The proposed development is situated on available and zoned industrial land in Cato Ridge which is identified by local strategic planning policy as a potential development opportunity for logistics and industrial activity. Overarching, the proposed development could actively engage with the desired economic growth trajectory of the city and could as a result impact on the social context within its immediate area of influence.

The socio-economic profile of residents residing within the primary market area of the proposed development identifies that between 40% and 45% of the local economically active population are unemployed and that the Outer West local economy only absorbs approximately 445 economically active people into the local workforce per year. The data suggests that on average more than 2 000

people become unemployed in the local economy and market area per year because of the condensed economic opportunities available in the local economy. Hence, the labour absorption gap continually increases and as a result of the segment of households that fall within the low-income band continually expands. The afore mentioned aspects have wide range of socio-economic implications and the capability of households to sustain livelihoods become ever increasingly difficult.

The proposed development could have profound economic and socio-economic impacts. From an economic perspective, the proposed development's R9.8 billion capital investment during its construction phase (5- to 20-years) could in total stimulate more than 30 114 temporary employment opportunities throughout the KwaZulu-Natal provincial economy and more than R8.4 billion in additional GDP economy-wide.

During the project's operational phase, nearly 23 000 new employment opportunities could be sustained annually throughout the KwaZulu-Natal provincial economy at the project's maturity (initial data suggests that operational revenue at the project's maturity could reach R10.4 billion per annum at 2022 prices). On site jobs could represent up to 60% of jobs created. The project could also stimulate new enterprise development, increased fiscal taxation (R2.2 billion annual taxation throughout the provincial economy and more than R395.9 million in property taxes) and require investment into social amenities.

From a socio-economic perspective the proposed project could contribute to job creation and an increase in the livelihood of local and regional beneficiaries of direct and indirect employment opportunities. Increased livelihoods could stimulate the need for social amenities and other property market development opportunities such as retail, residential and services projects.

An economic-cost benefit analysis revealed that the proposed project could also contribute to the overall welfare of society. The CBA weighed the costs and benefits of two uses, i.e., vacant land and logistics and warehousing development, against each other. Each option/scenario provides a different perspective on the benefits and costs associated with using the development site. For instance, the visual properties of the site coupled with environmental

attributes such as ecology and carbon storing offer a benefit to the local community whereas a logistics and warehousing orientated development affords the local community employment opportunities, livelihood upgrades, decongestion of roadways, less accidents, less pollution, time cost savings, etc.

The CBA suggests that, although both scenarios have a positive effect on the local community and affords a net benefit in terms of localised resources, the construction and operation of a logistics and warehouse development would create the most meaningful benefit to the local community and its resources.

The aforementioned data therefore suggests that the project offers a strategic opportunity to engage with, and contribute to, forward-looking economic and socio-economic growth by actively engaging with local, provincial and national planning policy. The socio-economic context within which the proposed development will be constructed can be afforded a range of benefits as a result of increased access to job opportunities and the prospects of further sustained economic growth. External factors such as a reduction of accidents, a reduction in emissions, life expectancy increases, increased value of time and limiting congestion further contribute to the overall welfare society could enjoy as a result of the project.

Overall, the project could positively contribute to the expansion of the economy and because of the logistics orientated nature of the development could contribute to opportunities to sustain economic growth and socio-economic development.

Table 7.1: Summary of Key Indicators of the Impact Analysis

Cato Ridge Development	
	Average Annual Local Economy Growth Rate (2011 to 2021)
	1.5% (all sectors)
	Labour Absorption Rate
	17.5% of new economically active people since 2011 found employment locally
	83.5% of employment is formal
	70.7% aged 34 and younger
	Demographic Profiling
	7.5% of people moved into the area since 2011
	R6 732 average monthly household income
	49.3% of households can be classified as indigent
	CAPEX = R9.8 billion OPEX = R10.4 billion
	Development Type = Industry, warehousing, and logistics
	Additional Annual Business Sales R20.6 billion
	Additional Annual GDP R8.0 billion
	Quantitative Impact Analysis – Operational Phase (Total Impact – Provincial)
	Created and Sustained Additional Formal Employment 17 868 jobs
	Skilled Formal Jobs = 4 121 jobs Semi-Skilled Formal Jobs = 9 650 jobs Low-Skilled Formal Jobs = 4 097 jobs
	The proposed development could create economic impacts throughout the provincial economy. Most notably, the construction phase primarily impacts the construction, trade, transport and storage and financial services sectors. The operational phase generates economic impacts throughout the provincial economy and primarily influences trade, financial services, business services and the manufacturing of textiles, beverages and tobacco and wood products. These impacts are economy-wide, i.e., distributed throughout the provincial economy.



Economic Cost-Benefit Analysis

Cato Ridge Development

Base Case Scenario (property remains undeveloped)

R3 627 367 Net Present Value

0% Economic Rate of Return

1.387 Benefit-Cost Ratio

Project Implementation Scenario (property remains undeveloped)

R5 451 449 833 Net Present Value

20% Economic Rate of Return

1.466 Benefit-Cost Ratio

The data shows that the base case scenario offers a positive NPV and a BCR of 1.387. Comparatively, the project implementation scenario also boasts a positive NPV. The project implementation scenario has an ERR of 20%. The ERR is greater than the ECC (10%) indicating that the project offers an overall benefit to society and that the gains of the scenario are more than the benchmark expected return.

The BCR of the project implementation scenario is greater than that of the base case scenario, i.e., 1.466 compared to 1.387 respectively. Therefore, the indicator suggests a positive relationship between net present costs/benefits. The project implementation scenario has an ERR greater than the ECC and a positive NPV. The data shows that the project implementation scenario offers greater benefits to the local community than the base case scenario. Therefore, the project implementation scenario offers a social benefit and is the preferred scenario for the project site.

ANNEXURE B: GENERALISED COST-BENEFIT ANALYSIS RESULTS

Base Case Scenario Economic Resource Flow Statement

			2023	2028	2033	2038	2043	2048	2053
Benefits		NPV							
Community Benefits									
Total Environmental Value of Development Area	13.00	M' ZAR	1.03	1.15	1.28	1.42	1.58	1.76	1.95
Total Benefits	13.00	M' ZAR	1.03	1.15	1.28	1.42	1.58	1.76	1.95
Costs									
Operational Phase									
Total Annual Property Taxation	9.38	M' ZAR	0.81	0.86	0.91	0.97	1.03	1.09	1.16
Total Costs	9.38	M' ZAR	0.81	0.86	0.91	0.97	1.03	1.09	1.16
Net Benefits/Costs			0.27	0.35	0.43	0.52	0.63	0.76	0.90

Economic Opportunity Cost of Capital	10%
Economic Net Present Value	3.63 M' ZAR
Economic Rate of Return	0% %
Modified Economic Rate of Return	0% %
Economic Benefit-Cost Ratio	1,387 %

Project Implementation Scenario Economic Resource Flow Statement

		2023	2028	2033	2038	2043	2048	2053
Benefits								
Operational Revenue								
Sales from Business Activities	M' ZAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Community Benefits								
Accident Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	8.5	25.4	69.7	146.5	242.4	386.4
Congestion Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	3.7	10.9	29.9	62.8	103.9	165.7
Emissions Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	7.1	21.0	57.6	121.1	200.3	319.4
Landway Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	1.7	5.1	13.9	29.2	48.3	77.0
Noise Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	3.6	10.8	29.5	62.0	102.7	163.7
Policing Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	0.6	1.7	4.7	9.9	16.4	26.2
Water Pollution Reduction due to Less Trucks Transporting TEUs between the Development Site and the Port of Durban	M' ZAR	0.0	6.5	19.2	52.8	110.9	183.5	292.6
Upskilling of the Local Community	M' ZAR	0.0	15.1	37.4	85.1	148.6	204.3	270.6
Time Saved by Truck Drivers	M' ZAR	0.0	11.1	24.7	50.7	79.6	98.4	117.2
Life Expectancy Increase because of Increased Household Income	M' ZAR	0.0	604.9	1 347.5	2 766.4	4 357.1	5 400.2	6 448.3
Total Benefits	M' ZAR	0.0	662.8	1 503.8	3 160.2	5 127.8	6 600.5	8 267.1

			2023	2028	2033	2038	2043	2048	2053
Costs									
Construction Phase									
CAPEX	4 640.8	M' ZAR	835.9	364.8	1 211.8	528.9	359.7	0.0	0.0
Operational Phase									
OPEX	7 063.2	M' ZAR	0.0	222.4	549.7	1 251.7	2 186.9	3 006.6	3 982.5
Major Maintenance	108.7	M' ZAR	0.0	0.0	132.4	0.0	283.3	0.0	249.8
Environmental Impacts									
Loss of Endangered Grassland	20.4	M' ZAR	1.0	1.4	1.8	2.5	3.3	4.4	5.9
Total Costs	11 833.2	M' ZAR	836.9	588.6	1 895.7	1 783.1	2 833.3	3 011.1	4 238.3
Net Benefits/Costs	5 471.6		(836.9)	74.2	(392.0)	1 377.0	2 294.5	3 589.5	4 028.8

Economic Opportunity Cost of Capital	10%	
Economic Net Present Value	5 451.5	M' ZAR
Economic Rate of Return	20%	%
Modified Economic Rate of Return	15%	%
Economic Benefit-Cost Ratio	1.466	%

