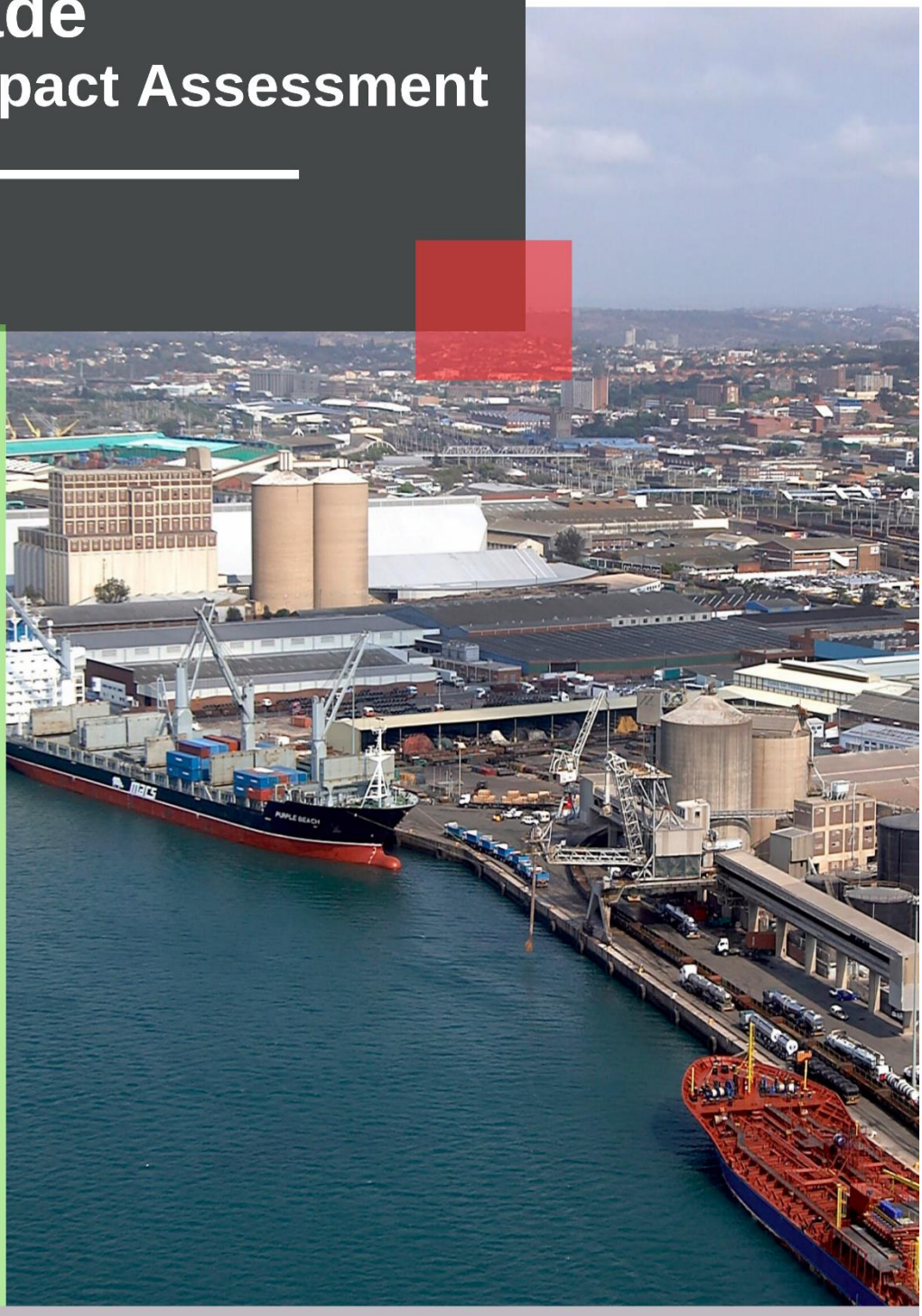
Maydon Wharf Berth 5-11 & 15 Upgrade

Economic Impact Assessment

REPORT



FEBRUARY 2025

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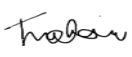
I, Tinotenda Makoni, declare that:

- I act as the independent specialist in this application.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- I declare that there are no circumstances that may compromise my objectivity in performing such work.
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity.
- I will comply with the Act, regulations, and all other applicable legislation.
- I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- All the particulars furnished by me in this form are true and correct.
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

Signature:



Date: 11 December 2024

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I, Stephen Karombe, declare that:

- I act as the independent specialist in this application.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- I declare that there are no circumstances that may compromise my objectivity in performing such work.
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity.
- I will comply with the Act, regulations, and all other applicable legislation.
- I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority.
- All the particulars furnished by me in this form are true and correct.
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

Signature:

Date: 11 December 2024

SPECIALIST REPORT REQUIREMENTS IN TERMS OF APPENDIX 6 OF THE EIA REGULATIONS (2014), AS AMENDED IN 2017

A specialist report prepared in terms of the Environmental Impact Regulations of 2014 (as amended in 2017) must contain:	**Relevant section in report**
Details of the specialist who prepared the report	Pg ii – iii
The expertise of that person to compile a specialist report including a curriculum vitae	Pg ii – iii
A declaration that the person is independent in a form as may be specified by the competent authority	Pg ii – iii
An indication of the scope of, and the purpose for which, the report was prepared	Section 1
An indication of the quality and age of base data used for the specialist report	Section 1
A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 6 & 7
The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment	N/A
A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used	Section 1
Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternative	N/A
An identification of any areas to be avoided, including buffers	N/A
A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers	N/A
A description of any assumptions made and any uncertainties or gaps in knowledge	Section 1
A description of the findings and potential implications of such findings on the impact of the proposed activity or activities	Section 3,5,6
Any mitigation measures for inclusion in the EMPr	Section 6
Any conditions for inclusion in the environmental authorisation	N/A
Any monitoring requirements for inclusion in the EMPr or environmental authorisation	N/A
A reasoned opinion as to whether the proposed activity or portions thereof should be authorised	Section 8
Regarding the acceptability of the proposed activity or activities; and	Section 8
If the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan	Section 8
A description of any consultation process that was undertaken during the course of carrying out the study	N/A
A summary and copies if any comments that were received during any consultation process	N/A
Any other information requested by the competent authority.	N/A

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List of Acronyms

No.	Acronym	Description
1.	BEPP	Built Environment Performance Plans
2.	CAPEX	Capital Expenditures
3.	CGE	Computable General Equilibrium
4.	EIA	Economic Impact Assessment
5.	FDI	Foreign Direct Investments
6.	GDP	Gross Domestic Product
7.	GVA	Gross Value Added
8.	IDP	eThekwini Municipality Integrated Development Plan
9.	IRP	National Development Plan
10.	KZN	KwaZulu-Natal
11.	LED	eThekwini Local Economic Development

No.	Acronym	Description
12.	NDP	National Development Plan
13.	NGP	New Growth Path
14.	OEM	Original Equipment Manufacturer
15.	OI	Input-Output
16.	OPEX	Operational Expenditures
17.	PGDP	Provincial Growth and Development Plan
18.	PGDS	KZN Provincial Growth and Development Strategy
19.	POD	Port of Durban
20.	SA	South Africa
21.	SEIA	Socio-economic Impact Assessment
22.	SIPS	Strategic Integrated Projects
23.	TEUs	Twenty-foot Equivalent Units
24.	TNPA	Transnet National Ports Authority
25.	TPT	Transnet Port Terminals
26.	VAT	Value Added Tax

1 INTRODUCTION

Urban-Econ Development Economists was appointed by WSP to conduct a Socio-Economic Impact Assessment (SEIA) on the development of the Maydon Wharf Upgrade project at the Port of Durban (POD) in eThekwini municipality KwaZulu-Natal.

Therefore, this study provides a specialist socio-economic impact assessment as required and prescribed by the Environmental Impact Assessment (EIA) Regulations of 2014 to assess the potential impacts of this development. This report seeks to assess the potential socio-economic impacts and has included recommendations to enhance the positive impacts and reduce the potential negative impacts of the Project.

1.1 Project Brief

The socio-economic impact assessment aims to assess the anticipated socio-economic impacts of the proposed development on the receiving environment, as well as provide suggestions on measures that could mitigate negative impacts and enhance positive impacts. It further provides a reasoned opinion on the need and desirability of the proposed project from a socio-economic perspective.

A SEIA is the systematic analysis usually used during an EIA to identify and evaluate the potential socio-economic and cultural impacts of a proposed development on the lives and circumstances of people, their families and their communities (Agelebe, Prityi, & Nielsen, 2019). If such potential impacts are significant and adverse, a SEIA can assist the developer, and other parties to find ways to reduce, remove or prevent these impacts from happening.

Based on the understanding of the project's objectives, the purpose of this socio-economic impact assessment is as follows:

- Review of existing documents and information relating to the study area
- Engage with the environmental practitioner, other specialists on the team and the client to gain the necessary background on the project
- Delineate the zones of influence in consultation with other specialists on the team
- Determine the affected communities and economic activities located in the zone of influence and identify sensitive receptors and beneficiaries within the delineated study areas, i.e., people, land uses and economic activities that could be directly or indirectly negatively affected by the proposed project or benefit from it
- Determine the assumptions for the study as well as possible limitations
- Determine the data required to assess potential impacts and review secondary data available to determine the suitability of the data for the analysis and the data gaps
- Collect primary social and economic data (through personal or telephonic interviews) of the parties that may be affected directly or indirectly (positively or negatively) by the proposed project to address data gaps
- Create a socio-economic profile of the potentially affected and benefiting environment, which would then represent a description of the existing impacts exerted on the zones of influence and would be used to assess the potential changes that ensued from the proposed project
- Assess the sensitivities of the identified sensitive receptors relative to the proposed development and analyse potential positive and negative social and economic effects of the proposed development on the local and regional economic activities

- Assess the cumulative effects of the project given the existing and planned developments in the area
- Evaluate the potential positive and negative impacts
- Develop a mitigation plan by proposing mitigation measures for negative effects and enhancement measures for positive impacts
- Provide recommendations on whether the proposed project should be authorised and whether the associated activities are acceptable from the socio-economic perspective

1.2 Study Approach and Methodology

The methodology employed in conducting the study comprised the steps illustrated in Figure 1 below.

Figure 1: Study Approach and Methodology

To achieve the above-mentioned objectives of the study the following methodology and approach was applied:

- Review of existing documents and information relating to the study area
- Review of National, Provincial, and Regional Economic Policy relevant to the study area
- Provision of a Regional Economic Profile for the study area, including current GDP, prominent economic sectors, employment figures and access to services
- Provision of a Regional Demographic Profile for the study area, including population dynamics, age cohorts, level of education and household dynamics
- A determination of the potential direct and indirect impacts during both the construction period and operational period of the project. This includes a consideration of the impact on key factors including employment opportunities, income and regional production
- An assessment of the identified impacts and provision of mitigations of the assessment, and
- Provision of a reasoned opinion indicating whether the development should proceed or not given the assessment of the project

1.3 Data Gathering Process

To provide an accurate representation of the study area's socio-economic environment, several secondary data sources were consulted and analysed. The secondary data was sourced from the following databases and documents:

- Stats SA Census, 2022
- Quantec Research Standardised Regional Database, 2024
- Quarterly Labour Force Survey 2024
- National strategic documents
- Provincial strategic documents
- Regional strategic documents

1.4 Project Assumptions, Limitations and Knowledge Gaps

This section highlights the key assumptions that form the basis of the assessment and discussions of the study. These assumptions are in line with known gaps in the knowledge as well as limitations present within the study and are as follows:

The project will be conducted based on several assumptions, which include but are not limited to:

- Project-related information supplied by the Environmental Assessment Practitioner and the client for the analysis is assumed to be reasonably accurate
- Although the secondary data sources used to compile the socio-economic baseline (demographics and the dynamics of the economy) are not exhaustive, they can be viewed as indicative of broad trends within the study area
- The identification of possible impacts is based on the experience of the project team with similar studies in the past and given the existing desktop-level knowledge of the socio-economic environment
- Possible impacts, as well as stakeholder responses to the identified impacts, cannot be predicted with complete accuracy, even when circumstances are similar and these predictions are based on research and years of experience, taking the specific set of circumstances into account

The limitations of the study include the following:

- The latest available stats at the local municipal level and sub-place were used as the primary source of data. Where possible, this has been augmented with data obtained from the Quantec Standardised Regional Dataset which contains some of the most widely accepted projections of Stats SA data up to 2022. It must be noted that at the time of developing this report, the Census 2022 data was not yet available at the local area/subplace level
- CAPEX AND OPEX information for the proposed precinct is not yet available therefore the economic impacts could not be quantified. Consequently, the assessment is presented in a qualitative format and maybe updated on availability of the CAPEX and OPEX information

1.5 Report Structure

The remainder of the report is structured into the following chapters:

Table 1. Report Structure

	Section title	Description
1	Introduction	This section provides the background to the report and the methodologies used to conduct the research process. The content structure is as follows: • Project Brief • Understanding Socio-economic Impact Assessment • Study Approach and Methodology • Data sources • Assumptions and limitations,
2	Project Description & Location	• A detailed description of the project • The description of the project site with its location. • Overview of the POD and its role in eThekwini/KZN/SA economy,

	Section title	Description
		• Overview of Maydon Wharf berths and its role in the eThekwini/KZN economy
3	Policy Alignment and Planning Context	This section provides the Legislative and Policy Context of port development. The content structure is as follows: • National Policy Alignment and Planning • Provincial Policy Alignment and Planning • Local Policy Alignment and Planning
4	Baseline Socio-economic Profile of the Area	This section explores the socio-economic status of the area of influence. The content is structured as follows: • Demographic Profile • Skills, Education and Employment • Household incomes • Macro-economic analysis
5	Socio-economic Impact Assessment	This section provides the socio-economic impact assessment, which will discuss the approach used to carry out the assessment. The assessment will discern between the potential socio-economic during the construction and operational phase of the development. The content structure is as follows: • Socio-economic impact rating approach • Socio-economic impacts during the construction phase • Socio-economic impacts during the operations phase • Cumulative Impacts • Concluding remarks
6	Conclusion	This section summarises and consolidates the key findings of the study. It also provides concluding remarks and recommendations.

2 PROJECT DESCRIPTION AND LOCATION

2.1 Background and Rationale of the Project

The Transnet National Ports Authority (TNPA) aims to foster the expansion of the Oceans Economy and broaden the scope of benefits provided by the ports to a more extensive array of participants and stakeholders. Given that ports serve as a growth catalyst, their role is pivotal in combatting the three significant challenges afflicting South Africa: unemployment, poverty, and inequality.

The Port of Durban is positioned to benefit from several strategic developments and initiatives emanating from the Port Master Plan and Segment Strategies which will also see the Port being positioned as a Southern Hemisphere and Indian Ocean maritime hub. This is largely due to its geographical location and proximity to prominent trade routes.

Strategic initiatives that support the port's positioning include the Durban Container Terminal Expansion, Automotive Terminal Expansion, Durban Bay Waterfront, New Point Container Terminal, New Multi-purpose Terminal, the relocation of the SA Navy and the Expansion of Bayhead roads to link with other major highways.

The vision of the Port of Durban is "to be an enterprise driver, full-service port that provides integrated supply chain smart port solutions to ensure customer satisfaction, financial sustainability, through operational efficiencies within a safe and secure environment".

A series of infrastructure investments are in the pipeline for the Port of Durban, with a few projects already concluded, which collectively position the Port of Durban as a contemporary and advanced port facility. The following table outlines the current and future development at the Port of Durban.

Table 2: Current and future developments at the Port of Durban

No.	Initiative	Type	Status
1.	New Cruise Terminal	Modern	Completed and operating
2.	eThekwini Durban Bay Waterfront Development	Modern	Concept
3.	Container Storage for Pier 2		Concept
4.	Automotive Terminal Expansion		Concept
5.	New Point Container Terminal	Modern	Concept
6.	Maydon Wharf Channel Deepening		Concept
7.	Entrance Channel Widening & Deepening		Concept
8.	Pier 2 Berth Deepening		Concept
9.	New Multi-Purpose Terminal	Modern	Concept
10.	SA Navy Satellite Station		Concept
11.	Pier 1 Phase 1 Container Terminal	Modern	Concept
12.	New Dry Dock	Modern	Concept
13.	Infill DCT Basin		Concept
14.	Reconstruction of Island View Berth 1	Modern	Concept
15.	Pier 1 Phase 2 Container Terminal & Island View Turning Basin		Concept
16.	New Maydon Wharf Container Terminal	Modern	Concept
17.	Second Access Road		Concept
18.	Bayhead & Langerberg Roads Upgrade		Concept

Source: TNPA 2023

2.1.1 Port Development Framework Plan

This section provides the following updated PDFPs for the Port of Durban:

- Short- term (2019-2028)
- Medium- term (2029-2048)
- Long-term (beyond 2048)

Together with these plans, the foreseen changes between the different layouts are listed.

The port development framework is guided by the following principles:

- **Demand** – this principle states that any current and future planning for the ports must align with the current and future demand
- **Capacity Planning** – this principle states that the improvement of infrastructural and operational efficiency, maximising the port zone functions, and the development of back-of-port logistics areas to increase port capacity
- **Long term Planning** – this principle states that there is integration and alignment of port and rail capacity planning, and that the ports maintain a level of flexibility that allows swift responses to changing technological and economic conditions
- **Integration** – this principle states that there is regional integration and that the planning initiatives of key stakeholders. Furthermore, the principle ensures that there is port system-wide capital investment

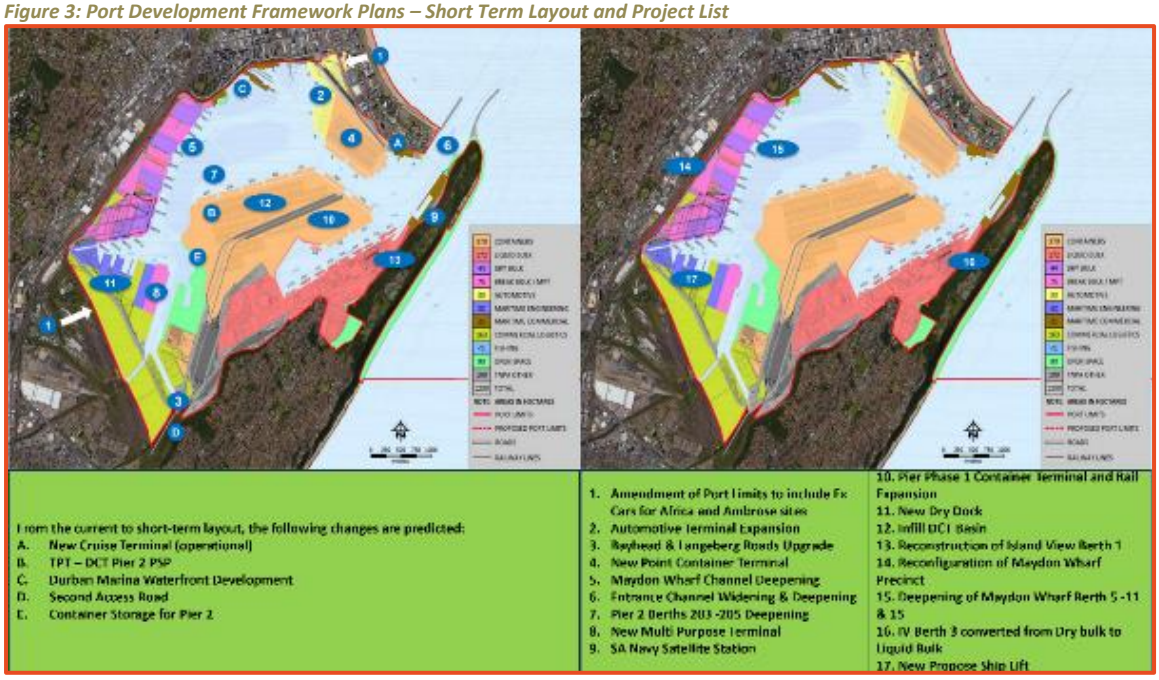
The Figure 2 below displays the current layout of the Port of Durban.

Figure 2. Port of Durban current layout

Source: National Ports Plan, 2022

A total of twenty-two (22) projects have been outlined for the Port of Durban, encompassing the short-term development plan spanning up to 2032, as depicted in the Figure 3 below. Notably, the Durban Cruise Terminal, a project accomplished in 2021, is now fully operational.

Figure 3: Port Development Framework Plans – Short Term Layout and Project List



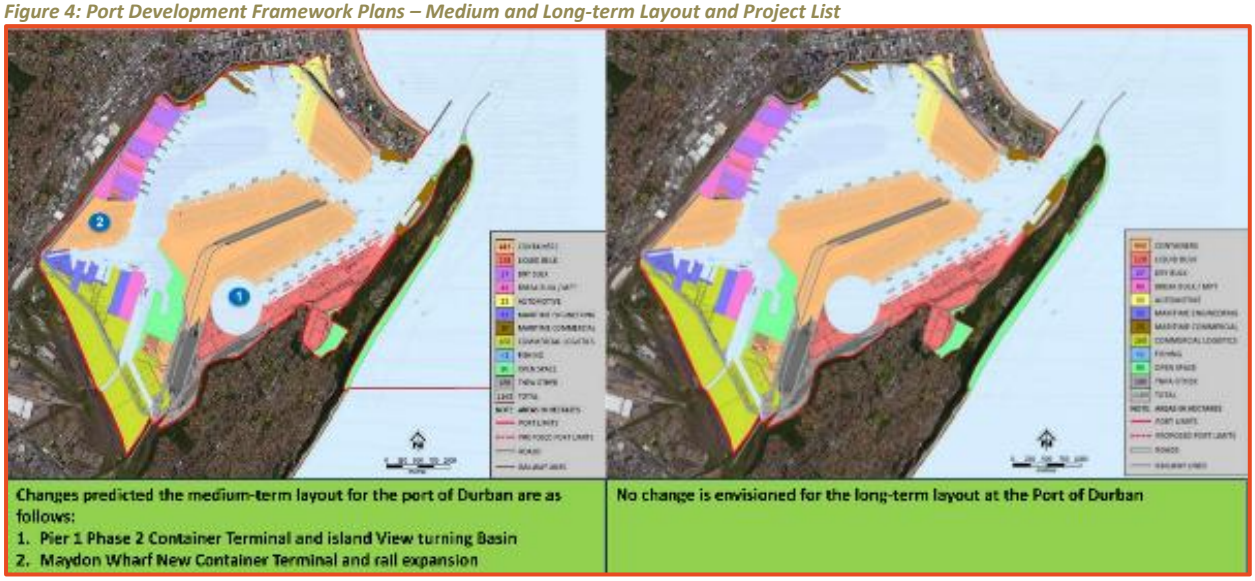
Source: National Ports Plan, 2022

From the current to short-term layout, the following changes are proposed:

- From the current to short-term layout, the following changes are envisaged:
- A. New Cruise Terminal (operational)
- B. TPT – DCT Pier 2 PSP
- C. Durban Marina Waterfront Development
- D. Second Access Road
- E. Container Storage for Pier 2
- 1. Amendment of Port Limits to include Ex Cars for Africa and Ambrose sites.
- 2. Automotive Terminal Expansion
- 3. Bayhead & Langeberg Roads Upgrade
- 4. New Point Container Terminal
- 5. Maydon Wharf Channel Deepening
- 6. Entrance Channel Widening & Deepening
- 7. Pier 2 Berths 203 -205 Deepening
- 8. New multi-Purpose Terminal
- 9. SA Navy Satellite Station
- 10. Pier Phase 1 Container Terminal and Rail Expansion
- 11. New Dry Dock
- 12. Infill DCT Basin
- 13. Reconstruction of Island View Berth 1
- 14. Reconfiguration of Maydon Wharf Precinct
- 15. Deepening of Maydon Wharf Berth 5 -11 & 15
- 16. IV Berth 3 converted from Dry bulk to Liquid Bulk
- 17. New Propose Ship Lift.

Two (2) projects have been recommended for implementation at the Port of Durban, within the medium-term planning horizon spanning from 2032 to 2052, as illustrated in the Figure 4 below. There are no long-term projects envisaged for the Port of Durban beyond the year 2052.

Figure 4: Port Development Framework Plans – Medium and Long-term Layout and Project List



Source: National Ports Plan, 2022

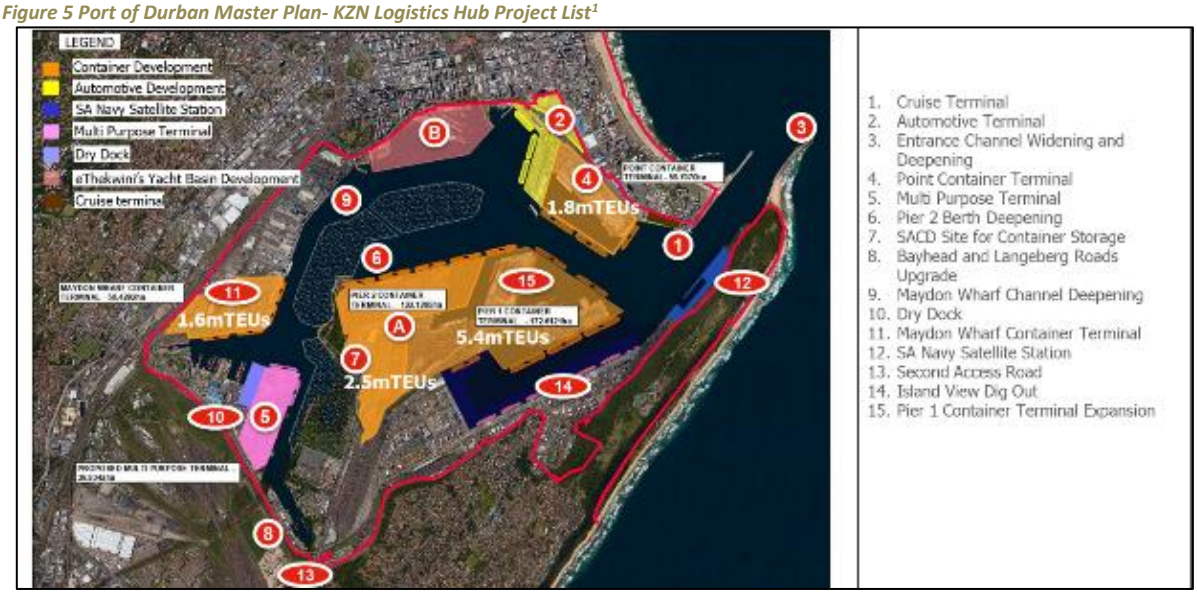
Changes envisaged for the short-term to the medium-term layout for the port of Durban are as follows:

1. Pier 1 Phase 2 Container Terminal and Island View Turning Basin
2. Maydon Wharf New Container Terminal and rail expansion

2.1.2 Port of Durban Master Plan – KZN Logistics Hub

Various Master-planning exercises have been undertaken to identify projects which are required to enhance logistics capacity ahead of demand, with the KZN Logistics Hub being established to deliver projects in the Port of Durban. Fifteen (15) Projects have been proposed for the POD as part of the KZN Logistics Hub as shown in the Figure 5 below. A description of each project, as provided by TNPA, is included following the figure.

Figure 5 Port of Durban Master Plan- KZN Logistics Hub Project List[1]



Source: TNPA, 2020

[1] Taken from a list of DLH Projects, TNPA, 2022

Table 3: KZN Logistics Hub Project List

Project	Description
Cruise Terminal	This project has been completed
Automotive Terminal	The scope of work for this project is to demolish T-Jetty Buildings and Infrastructure and construct new parking bays. Approximately 2 500 new parking bays have been projected
Entrance Channel Widening and Deepening	The scope of work for this project is to Lengthen and Deepen the Port entrance channel to cater for the 18 000 TEU (Twenty-foot Equivalent Unit) container ship.
Point Container Terminal	The scope of work for this project is to: relocate car terminal to T-Jetty; extend Point terminal further into the bay by infill; and construct new deeper quays and a fully-fledged container terminal (1,8M TEU).
Multi-Purpose Terminal	The scope of work for this project is to build a new multipurpose terminal in Bayhead
Pier 2 Berth Deepening	The scope of work for this project is to construct 3 new deep-water berths on the north quay by extending the quay line 50m into the bay
SACD Site for Container Storage	The scope of work for this project is to extend the existing Pier 2 Container Terminal into the SACD site.
Bayhead and Langeberg Roads Upgrade	The scope of work for this project is to widen the roadways from a 2-lane carriage way to a 3-way carriage for both the inbound and outbound carriageways
Maydon Wharf Channel Deepening	The scope of work for this project is to widen the Maydon Wharf channel from 139m to 150m and deepen the channel to -15m.
Dry Dock	The scope of work for this project is to construct a new drydock in the Bayhead ship repair precinct.
Maydon Wharf Container Terminal	The scope of work for this project is to construct a new container terminal in Maydon Wharf with a capacity of 1,6M TEU (Twenty-foot Equivalent Unit). The general cargo capacity will be rationalised to make way for this new initiative
SA Navy Satellite Station	The scope of work for this project is to construct a satellite navy base in the BMA precinct. The new main Navy Base will be constructed in Richards Bay.
Second Access Road	The scope of work for this project is to construct a new access road from Bayhead into the national road system in conjunction with City.
Island View Dig Out	The scope of work for this project is to demolish existing quays and cut back the quay line by 170m. Dredge out the necessary land mass. This involves the construction of 6 new Deepwater liquid berths with a water depth of 16,5m and supporting infrastructure.
Pier 1 Container Terminal Expansion	The scope of work for this project is to relocate the Naval Base to Richards Bay and construct a new container terminal via a phased expansion execution strategy.

Source: TNPA, 2020

2.2 Project Description

The Maydon Wharf berth deepening project aims to enhance the capacity of the port by accommodating larger vessel drafts, thereby improving overall efficiency and growing demands of maritime trade. The upgrading project is estimated to take a total of 127 months to complete including 7 months of preconstruction activities. The berths to be upgraded are numbers 5,6,7,8,9,10,11 and 15 of the Maydon Wharf.

The Table 4 shows the berth length and the time estimated to complete its construction.

Table 4. Berth Length and Estimated Construction Time

Berth	Length	Construction time (Months)
5	198 m	23
6	156m	15
7	244m	15
8	172m	10
9	180m	15
10	225m	15
11	201m	15
15	214m	12

Source: WSP 2024

The following activities will be conducted:

2.2.1 Preconstruction activities

Upon the award of the contract, the following preconstruction activities must be undertaken by the Contractor:

- Procurement of Long Lead Items: The procurement of long lead items, such as the piles, should commence immediately after the contract award. The manufacturing and shipping of these items must start as soon as possible to prevent any project delays.
- Sea Disposal Application: The sea disposal application must be submitted promptly, as the maximum response time is 90 days from the date of application. This application is valid for three years, and no dredging activities may occur without this permit. The contractor must ensure timely application submission at the project's start and manage the renewal process as needed.

- Permitting:

Construction Permit: This permit must be obtained from the relevant authority before any construction activities can commence.

Access Permit: Following the port induction, an access permit for all employees must be secured before mobilisation can begin.

Hot Work Permit: For any hot work activities, permits must be obtained from the fire department. The contractor is responsible for the costs associated with these permits, which include separate permits for landside and water-side works. This will be an ongoing requirement, and the contractor must ensure that no hot work is conducted without the appropriate permits in place.

2.2.2 Key activities

The following sub-section is a brief description of the key phases of the envisaged construction works.

2.2.2.1 Initial Setting Out and Preparatory Works

The first phase of the construction involves the setting up of survey points and the construction footprint. Survey work is carried out throughout the construction work to maintain alignment with the design drawings. During this phase, a screening survey for rubble, debris and existing sub-terrain infrastructure (like timber piles) should also be undertaken. Test piles will also be undertaken to

ensure that the design requirements are met. This phase will also include inspecting and aligning existing services that must be demolished or relocated.

All electrical services must be isolated and made safe before the commencement of any construction activities. Ensure that all necessary precautions are taken to prevent any electrical hazards

2.2.2.2 Coping Demolition

It is during this phase that existing copings are demolished and were applicable to facilitate the new construction works. A section of the existing cope beam at Berth 12 will be demolished and reinstated after the construction of Berth 11 to ensure a closed retaining structure for Berth 11 is provided and the backfilling is contained.

2.2.2.3 Sheet Pile Installation

A combi-wall system will be used. At Berth 8, only the kingposts of the combi-wall will be taken up to coping height whereas the AZ profiles will only be taken up to the required fill retention height. The pile driving exercise will be conducted via barge. However, the anchorage of sheet piles can be done either via barge or via land depending on the type of equipment and plant available to the contractor. Where anchors are installed, these will be Muller-Verpress piles. Certain berths will require a tie-back beam which has its anchor pile foundation installed and is connected to the sheet pile wall via tie-rods.

2.2.2.4 Return Wall

Return sheet piles will need to be installed at the end of certain berths before backfilling can commence. This will provide a closed “box” which material can be deposited into. These sheet pile walls will be temporary between Berths 5 and 6, 6 and 7, 9 and 10, 10 and 11. Between Berths 7 and 8, as well as Berths 8 and 9 permanent return walls will be installed to secure the backfill on Berths 7 and 9 while Berth 8 remains an open-berth structure. No return walls are required at Berth 15.

2.2.2.5 Initial Backfill

The backfill reclamation will be done in increments along with a dewatering operation up to the level required to complete the structural works via landside operations.

2.2.2.6 Structural Repair Works

Where applicable this includes reinforcement and modification of the existing beams to withstand the increased load and strength requirements. Locally available concrete repair products will be utilised following recommendations from the existing berth assessment carried out as part of the pre-feasibility study.

The existing rear piles on Berths 6, 7, 9, 10 and 11 will be repurposed as support for the rear beams and vertical load transfer of the MV Anchor piles. The bearing capacity of the rear piles in its existing non-damaged state were determined adequate for the new anchor forces. Therefore, the integrity of these piles is imperative to the design philosophy of the new structures. These existing rear piles will need to undergo non-destructive testing such as the cross-hole sonic pile integrity test to ensure the piles are suitable for the intended purpose.

2.2.2.7 New Coping and Slab Casting

Upon completion of the required backfill and layer works where applicable, new coping beams and slabs will be cast. Slab panels will be cast in an alternating pattern with joints installed as per design.

2.2.2.8 Furniture And Finishes

This is the final stage of the structural construction works and involves the installation of bollards, fenders and paint demarcations on the quay where required.

2.2.2.9 Dredging and Placement of Scour Protection

Following the structural phase, the next phase involves dredging the seabed to achieve the required depth. Scour protection measures are also implemented to ensure the stability and longevity of the newly deepened berths. Under communication EAC-0007 from TNPA, the dredging and installation of scour protection for one berth should be completed before the start of construction on the next berth. The plant and equipment will need to be mobilised and demobilised after each berth construction.

Given that dredging will occur per berth, it is crucial to ensure that the process does not disturb or compromise the adjacent existing structures. The deepening operation sequence as requested by TNPA will undermine the adjacent berth's piles, as these structures were originally designed to accommodate a dredge depth of only -10 mCD, not the new dredge depth of -14.5 mCD. The contractor will need to install temporary works restraint measures to protect the adjacent berths for example sloping material back into the berth under construction to create a rock berm. This would require the newly deepened berth to be operated as if the dredge level is -10mCD until the adjacent berth is deepened.

2.2.3 Construction Methodology

Works will be undertaken under the principal activities as outlined below:

2.2.3.1 Berth 5

The Berth 5 deepening will be undertaken in a two-phase construction plan to accommodate the existing gantry crane that will remain intact. One-half of the berth will be under construction while the gantry crane is situated on the existing structure, whereafter it will be moved to the new structure while the remaining half of the berth is deepened.

Phase 1:

- Site establishment, survey and setting out
- Remove existing bollards and fenders, and demolish the cope beam
- Install new combiwall for the entire berth
- Demolition of existing slab
- Inspection, non-destructive testing and repair of existing piles and beams where applicable
- Installation of grouted MV anchor piles
- Install temporary return wall
- Incrementally backfill and de-water till the bottom of the new coping beam level
- Place reinforcing steel, erect shutters and cast coping beam
- Complete backfill and layer works up to the bottom of the new slab level
- Cast new slab

- Create a temporary rail crossing from the existing to the new structure
- Move the gantry crane onto the new structure

Phase 2:

- Demolition of existing slab
- Inspection, non-destructive testing and repair of existing piles and beams where applicable
- Installation of grouted MV anchor piles
- Incrementally backfill and de-water till the bottom of the new coping beam level
- Place reinforcing steel, erect shutters and cast coping beam
- Complete backfill and layer works up to the bottom of the new slab level
- Cast new slab
- Installation of fenders, bollards, access ladders, mooring rings, sacrificial anodes, as well as finishes (paintwork, etc) on new cope beam
- Install and connect new rail for the gantry crane
- Dredging
- Installation of scour protection

2.2.3.2 Berth 6, 7, 9, 10 & 11

- Site establishment, survey and setting out
- Remove existing bollards and fenders, and demolish the cope beam
- Install new combiwall
- Demolition of existing slab and beams
- Inspection, non-destructive testing and repairs to existing structures
- Install rear MV anchor piles
- Install tie-rods
- Erect shutters and cast the new tie-back beam
- Install transverse return sheet pile retention walls
- Incrementally backfill and de-water till the bottom of the new coping beam level
- Erect shutters for the new coping and cast coping beam
- Complete backfill and layer works up to the bottom of the new slab level
- Cast new slab
- Installation of fenders, bollards, access ladders, mooring rings, sacrificial anodes, as well as finishes (paintwork, etc) on new cope beam
- Dredging
- Installation of scour protection

2.2.3.3 Berth 8

- Site establishment, survey and setting out
- Remove existing fenders and bollards
- Inspection, non-destructive testing and repairs to existing structures
- Install new sheet pile king posts
- Drive sheet piles in between king posts to the required soil retention level
- Cast new cope beam with anchoring between new and existing cope beams
- Installation of fenders, bollards, access ladders, mooring rings, sacrificial anodes, as well as finishes (paintwork, etc) on new cope beam
- Dredging

- Installation of scour protection

2.2.3.4 Berth 15

- Site establishment, survey and setting out
- Remove existing bollards and fenders
- Install new combiwall
- Partial demolition of existing quay wall and service trench
- Install rear MV anchor piles
- Install tie-rods
- Cast new rear beam for anchor support
- Backfill between new combi-wall and existing gravity quay structure DEEPENING OF MAYDON WHARF
- Place reinforcing steel, erect shutters and cast new coping beam
- Place reinforcing steel, erect shutter and cast new service trench
- Complete backfill and layer works up to the bottom of the new slab level
- Cast new slab
- Installation of fenders, bollards, access ladders, mooring rings, sacrificial anodes, as well as finishes (paintwork, etc) on new cope beam
- Dredging
- Installation of scour protection

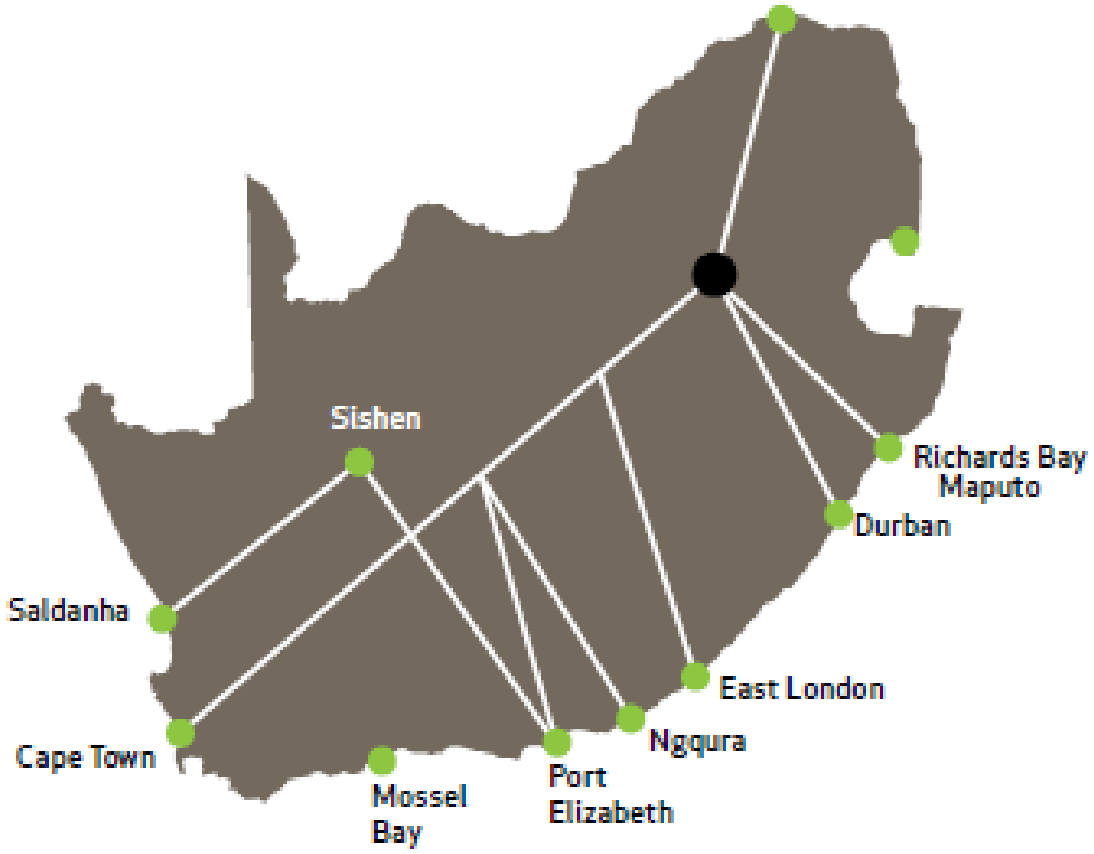
2.3 Project Location

2.3.1 Port of Durban Overview

South Africa's strategic geographic position along one of the world's busiest international sea routes offers unparalleled opportunities for developing a diversified maritime economy. The country's coastline, spanning approximately 2,798 kilometres, houses a national ports system consisting of eight commercial seaports managed by TNPA. Operating under a "landlord" model, the TNPA ensures the development, maintenance, and governance of port infrastructure while allowing private operators to manage cargo-handling services.

Among these ports, the Port of Durban, situated on South Africa's eastern coast in KwaZulu-Natal, stands as the largest and most active port in the southern hemisphere. Known as "Africa's Gateway," it serves as a critical conduit for global trade, linking South Africa to international markets and facilitating imports and exports that underpin the country's economy. This port is a linchpin for regional and continental trade, directly contributing to economic growth and the industrial development of Southern Africa.

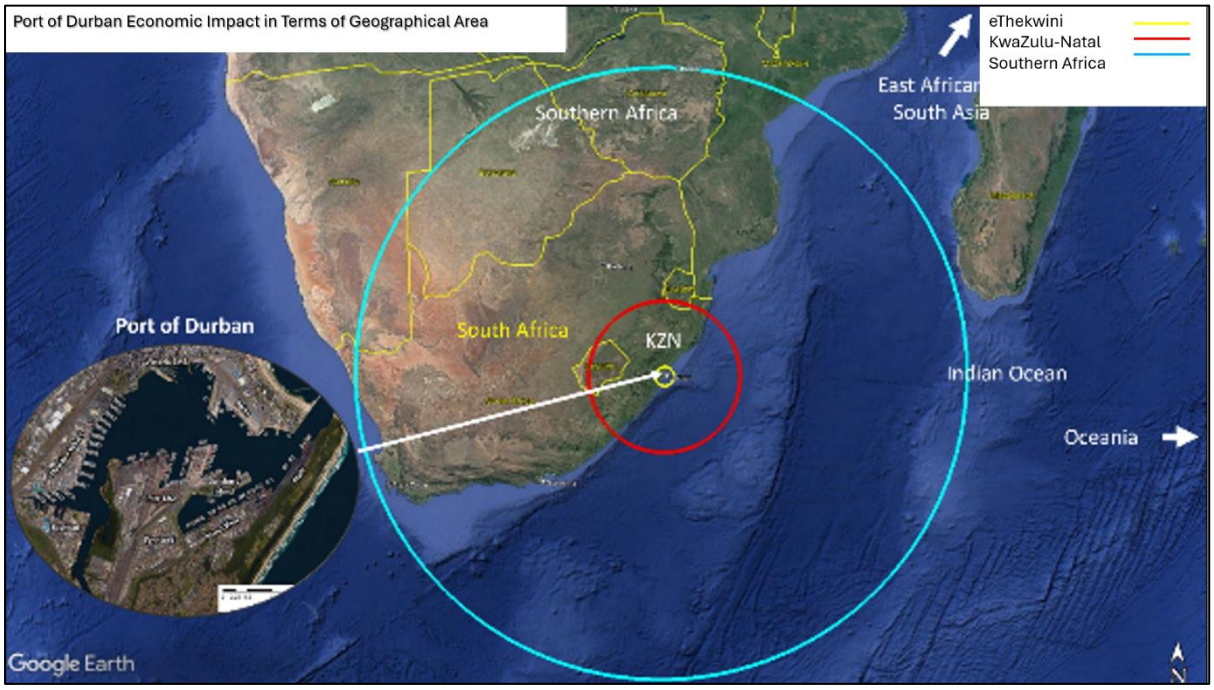
Figure 6. South Africa's Port System



Source: TPNA Brochure, 2024

The Port of Durban is situated in the city of Durban within eThekwini Metropolitan Municipality, in the province of KwaZulu-Natal on the eastern coast of South Africa.

Map 1: Geographical location of the Port of Durban in a broad perspective



Source: Google Earth, 2024

With its strategic location along the Indian Ocean coastline, the Port of Durban serves as a key link in global trade routes, connecting South Africa to Asia, Europe, the Americas, and other African nations. Its efficiency and capacity have a direct impact on the cost and reliability of international supply chains.

Map 2: Port of Durban as a key link in global trade routes

Source: Transport Geography.org, 2023

The Port of Durban serves several regions such as KZN, Gauteng and a large portion of the Southern African hinterland while handling an estimated 60% of South Africa's container traffic. The port is served with excellent rail and road links to Gauteng in the west and points south and north. A total of 302km of rail tracks extend throughout the port area along with several major marshalling yards.

The Port of Durban handles a diverse range of cargo, including containerised goods, liquid bulk, break-bulk, and vehicles. With an annual capacity exceeding 3.3 million twenty-foot equivalent units (TEUs), it manages approximately 60% of South Africa's containerised cargo and over 30 million tons of general cargo annually. Its facilities include specialised terminals for automotive exports, bulk grain handling, and liquid fuels, as well as extensive warehousing and cold storage options.

Despite its prominence, the Port of Durban faces stiff competition from domestic and international ports. Domestically, it contends with other South African ports such as Cape Town, known for handling refrigerated cargo; Richards Bay, a leader in bulk commodities like coal; and the modern Ngqura deep-water port, which supports transhipment. Regionally, ports such as Mombasa in Kenya, Suez in Egypt, and Beira in Mozambique compete for African trade traffic due to their proximity to key trade routes and inland connections.

Within the Port of Durban, operational efficiency is further ensured by its division into five distinct precincts, each specialising in different services (See Figure 7 below). This strategic segmentation allows for focused management and tailored services to meet the diverse demands of maritime and trade operations at the port. The port's strategic objective is to ensure efficient port services, connectivity, and capacity are provided to enable seamless cargo flows.

Figure 7. Port Of Durban Precincts

Source: TPNA Brochure, 2024

The following Table 5 shows the level of imports and exports by port in 2022 in Rand terms.

Table 5. Value of Imports and Exports by Port, 2022

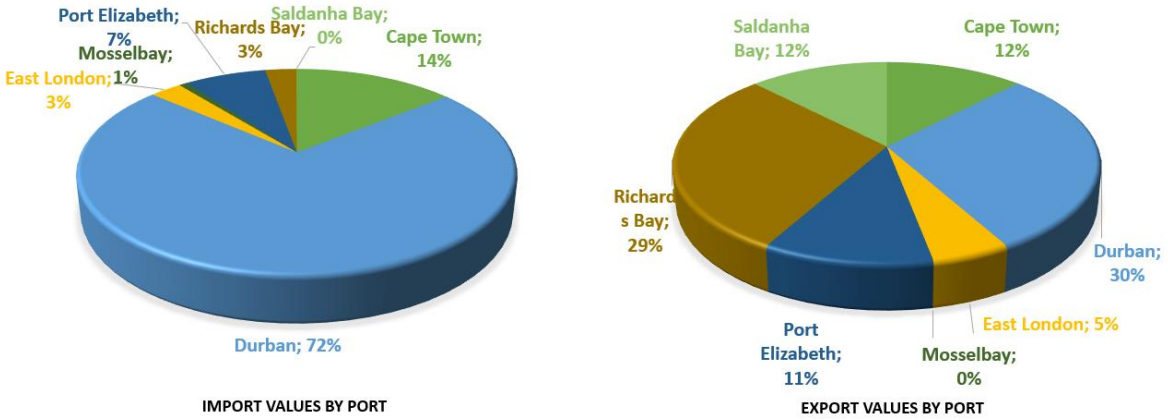
Port	Imports	Exports	Total Trade Value
Cape Town	R193 721 496 857	R118 145 310 392	R311 866 807 249
Durban	**R985 833 529 675**	**R285 294 924 034**	**R1 271 128 453 709**
East London	R38 833 874 241	R49 847 635 110	R88 681 509 351
Mosselbay	R9 603 184 052	R51 189 972	R9 654 374 024
Port Elizabeth	R99 413 885 502	R108 000 066 154	R207 413 951 656
Richards Bay	R37 946 153 854	R283 968 236 284	R321 914 390 138
Saldanha Bay	R296 815 897	R119 229 502 909	R119 526 318 806
Grand Total	**R1 365 648 940 078**	**R964 536 864 855**	**R2 330 185 804 933**

Source: TNPA, 2023

The Port of Durban boasts the most substantial trade volumes among all the commercial ports within the nation, accommodating a total of over R1.27 trillion worth of goods passing through its facilities. As depicted in Figure 8 below, the Port of Durban significantly leads in importation, representing 72% of the aggregate imports into South Africa. Furthermore, it commands the highest share in exportation, constituting 30% of the total value of South African exports. The Port of Durban is not only pivotal to KwaZulu-Natal's economy but also to the broader South African economy. By handling 72% of the country's imports and 30% of its exports, the POD acts as the principal gateway for international trade, driving regional and national economic growth. Its strategic location and robust infrastructure make it an indispensable hub for industries reliant on imports and exports, including manufacturing, agriculture, and mining. Moreover, the high trade volumes passing through the port

generate significant employment opportunities and bolster government revenue through tariffs and customs duties, reinforcing its role as an economic catalyst for both KwaZulu-Natal and South Africa.

Figure 8. Share of total Imports and Exports (in Rand Terms) by port 2022



Source: TNPA, 2023

To maintain its competitiveness and meet growing demand, the Port of Durban is undergoing significant modernisation efforts, including deepening berths, upgrading equipment, and enhancing digital infrastructure to reduce congestion and improve operational efficiency. These developments aim to position Durban as a world-class hub capable of handling larger vessels and increasing throughput in alignment with global shipping trends. The Maydon Wharf Berths upgrades under review in this assessment form part of these upgrades.

2.3.2 Maydon Wharf Overview

Maydon Wharf is a pivotal terminal within the Port of Durban, specialising in handling a diverse range of cargo types, including break bulk, dry bulk, liquid bulk, and multipurpose goods. The terminal's facilities are equipped to manage the efficient loading and unloading of cargo, featuring dedicated berths, cranes, and expansive storage areas. To ensure seamless connectivity between the port and inland destinations, the precinct boasts robust infrastructure, including integrated road and rail networks.

Key operational improvements at Maydon Wharf are focused on decongestion strategies. These initiatives aim to reduce reliance on road freight by increasing rail freight volumes, streamlining truck movements through road de-proclamation to minimise access points, and implementing a one-way traffic system. Enhanced security management measures further support the precinct’s goal of optimising traffic flow and ensuring operational efficiency (TNPA Durban Brochure, 2018).

Currently, Maydon Wharf houses 27 terminals operated by 13 terminal operators, catering to specific cargo needs. These include five major dry bulk terminals, four break bulk terminals, five multipurpose terminals, and three liquid bulk terminals. The precinct features 15 berths, of which 10 are fully operational, providing extensive capacity to handle the diverse cargo demands.

The following Table 6 shows the terminal operators at the Maydon Wharf Precinct and the type of cargo handled in the fiscal year 2022/23.

Table 6: Terminal operators at the Maydon Wharf Precinct

Terminal Operator	Type of Operation:	Main operations being undertaken
Circle Ridge Trading (Pty) Ltd	Dry Bulk	Minerals
Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (Millweed House)	Multi-Purpose	Break Bulk cargo, Dry Bulk cargo, Packing, Unpacking and storing of containers & Project Cargo. (Open Yard, Bulk, Steel.)
Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (Herschell Road)	Multi-Purpose	Break Bulk cargo, Dry Bulk cargo, Packing, Unpacking and storing of containers & Project Cargo. (Pulp, Fine Paper and fertilizer)
Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (MW10)	Multi-Purpose	Break bulk, Dry bulk cargo, Containers and Project cargo. (Pulp, Fine paper and Fertiliser.)
Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (MW15)	Multi-Purpose	Forest Products include pulp, paper, logs eucalyptus, steel and rice. (Containers: Maize, Soya Bean, Rice, Sunflower Pallet, fluorspar and Soya bean Meal)
Bidfreight Port Operations (Pty) Ltd, – Maydon Wharf (Sunburst – Wisely Road)	Multi-Purpose	Break Bulk cargo, Dry Bulk cargo, Packing, Unpacking and storing of containers & Project Cargo. (Pulp, Fine Paper and fertilizer)
Tata Chemicals SA (Pty) Ltd– Maydon Wharf (Brunner Mond)	Dry Bulk	Handling of Soda Ash, Port Ash & Fertiliser
Maydon Wharf Port Terminals (Pty) Ltd - Maydon Wharf	Break Bulk	Intake, cold storage and dispatching of citrus and dry goods. Loading & dispatching containers via road transport. Cold treatment of specialised products, that is, Avo's. (Fruits, Break Bulk)
Maydon Wharf Port Terminals (Pty) Ltd - Maydon Wharf	Break Bulk	Intake, cold storage and dispatching of citrus and dry goods. Loading & dispatching containers via road transport. Cold treatment of specialised products, that is, Avo's. (Fruits, Break Bulk)
Profert (Pty) Ltd	Break Bulk	Imports granular fertilizer, Fertilizer Materials, animal feed and farming and farming equipment; Profert (Pvt) Ltd Export granular fertiliser and fertilizer raw material. (Fertilizer, steel and Containers)
Grindrod (Pty) Ltd – Maydon Wharf 13	Multi-Purpose	Handling and Storage of full and Empty containers Import or Export; Handling and storage of abnormal cargo import or export; Handling of Steel Coils, Sheets and

Terminal Operator	Type of Operation:	Main operations being undertaken
		Profile Import or Export; Handling and storage of General Cargo. (Fertiliser, Steel, Containers)
Grindrod (Pty) Ltd – Maydon Wharf Jenkyn Road	Multi-Purpose	Handling and Storage of full and Empty containers Import or Export; Handling and storage of abnormal cargo import or export; Handling of Steel Coils, Sheets and Profile Import or Export; Handling and storage of General Cargo. (Fertiliser, Steel, Containers)
Grindrod (Pty) Ltd – Maydon Wharf, Methven Road	Multi-Purpose	Handling and Storage of full and Empty containers Import or Export; Handling and storage of abnormal cargo import or export; Handling of Steel Coils, Sheets and Profile Import or Export; Handling and storage of General Cargo. (Fertiliser, Steel, Containers)
Grindrod (Pty) Ltd – Maydon Wharf (Ex Hullets site)	Multi-Purpose	Handling and Storage of full and Empty containers Import or Export; Handling and storage of abnormal cargo import or export; Handling of Steel Coils, Sheets and Profile Import or Export; Handling and storage of General Cargo. (Fertiliser, Steel, Containers)
FFS	Liquid Bulk	Receipt, storage and handling of molasses and for purposes incidental thereto. Import and Export of Molasses. Transfer of Molasses and related products within the terminal. Receipt and loading into the terminal from road tankers or rail wagons; and out of terminals into road tankers or rail wagons. (Pure Can Molasses)
Bidvest Tank Terminals (Pty) Ltd: T/A Bidvest Tank Terminals – Maydon Wharf	Liquid Bulk	Veg Oil (Liquid Bulk)
Manuchar SA (Pty) Ltd – Maydon Wharf	Multi-Purpose	Handling in and out of Raw materials. IE. Non-Hazardous, products packed in Bulk Bag. Products: Paraffin Wax, STPP, SS, SAD, Rice. (Sodium Sulphate, Sodium Tripolyphosphate, paraffin wax)
Protank (Pty) Ltd, trading as Indian Ocean Terminals – Maydon Wharf	Liquid Bulk	(Caustic soda Lye; Pharmaceutical White; Oil, Mono Ethylene; Glycol (Meg), Linear; Alkyl Benzine (lab); Lube and Base Oils; Soy biodiesel, Veg; and Animal fats and waxes.)
Profert (Pty) Ltd – Maydon Wharf: (Fertilizer & Urea)	Dry Bulk	Present Profert (Pty) Ltd imports granular fertilizer, Fertilizer Materials, animal feed and farming and farming equipment; Profert (Pvt) Ltd Export granular fertiliser and fertilizer raw material. (Fertilizer, steel and Containers)
South African Bulk Terminals Ltd trading as	Dry Bulk	Handling of Agricultural goods including Rice, Wheat, Maize, Other Grains, Malt, Soybeans, Sunflower Seeds

Terminal Operator	Type of Operation:	Main operations being undertaken
Rennies Bulk Terminals – Maydon Wharf		and Oilcakes. Also Handles Fluorspar, Soda ash and fertilizer.
South African Sugar Association - Sugar terminal –Maydon Wharf	Dry Bulk	Handling of Sugar.
Transnet Port Terminals, a division of Transnet SOC Limited – Agriport	Dry Bulk	Maize (export), Woodchips (export), Wheat (import), and Soya (import), once or twice we handled Sorghum
Transnet Port Terminals, a division of Transnet SOC Limited – Maydon Wharf	Multi-Purpose	Containers, Ferro Chrome, Met Coke, Steel.
Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd –Maydon Wharf, Shadwell Road.	Multi-Purpose	Handling and storage of Full and Empty Containers Import or Export; Handling and Storage Abnormal Cargo Import or Export; Handling and storage of Steel coil, Sheet and Profiles Import or Export; handling and storage of General Cargo.

Source: TNPA, 2023

The Table 7 below outlines the installed capacities of the terminal operators at the Maydon Wharf Precinct.

Table 7: Design and Installed Capacity (tons) at Maydon Wharf Precinct per Terminal Operator, 2022/23 fiscal year

No.	Terminal Operator	Private Terminal Operator		TNPA	
		Installed Capacity	Design Capacity	Installed Capacity	Design Capacity
1.	FFS	887 040	887 040	887 040	887 040
2.	Bidvest Tank Terminals (Pty) Ltd	594 720	594 720	594 720	594 720
3.	Protank (Pty) Ltd, trading as Indian Ocean Terminals	320 000	528 000	320 000	528 000
4.	South African Bulk Terminals Ltd trading as Rennies Bulk Terminals	2 879 444	2 879 444	2 934 022	3 241 952
5.	Circle Ridge Trading (PTY) LTD	82 500	82 500	776 874	776 874
6.	Tata Chemicals SA (Pty) Ltd	176 097	176 097	514 203	598 779
7.	Profert (Pty) Ltd	292 000	505 684	317 520	756 000
8.	South African Sugar Association - Sugar terminal	1 050 000	1 470 000	2 249 100	2 249 100
9.	Maydon Wharf Port Terminals (Pty) Ltd	372 848	410 132	747 600	747 600
10.	Profert (Pty) Ltd	245 163	245 163	342 401	1 066 291

No.	Terminal Operator	Private Terminal Operator		TNPA	
		Installed Capacity	Design Capacity	Installed Capacity	Design Capacity
11.	Bidfreight Port Operations (Pty) Ltd	2 378 853	3 107 969	4 162 578	7 776 881
12.	Grindrod (Pty) Ltd	1 112 414	1 112 414	3 576 771	5 394 066
13.	Manuchar SA (Pty) Ltd	197 746	197 746	517 279	766 339
	TOTAL	**10 588 825**	**12 196 909**	**17 940 108**	**25 383 642**

Source: TNPA, 2023

Maydon Wharf is primarily a cargo-handling area, dealing with a wide range of goods, including bulk commodities like minerals, chemicals, and agricultural products. The following Table 8 shows the actual volumes of cargo handled at the Maydon Wharf Precinct for the 2022/23 fiscal year. In total, a significant volume of 10.1 million tons of cargo traversed through this precinct.

Table 8: Volumes handled at the Maydon Wharf Precinct, 2022/23 fiscal year

Terminal Operator	2022/23 Actual Volumes (tons)
FFS	87 214
Bidvest Tank Terminals (Pty) Ltd	137 208
Protank (Pty) Ltd, trading as Indian Ocean Terminals	81 591
South African Bulk Terminals Ltd trading as Rennies Bulk Terminals	2 066 054
Circle Ridge Trading (PTY) LTD	304 708
Tata Chemicals SA (Pty) Ltd	399 504
Profert (Pty) Ltd	240 000
South African Sugar Association - Sugar terminal	840 000
Maydon Wharf Port Terminals (Pty) Ltd	446 532
Profert (Pty) Ltd	201 504
Bidfreight Port Operations (Pty) Ltd	3 456 185
Grindrod (Pty) Ltd	1 305 993
Manuchar SA (Pty) Ltd	560 157
TOTAL	**10 126 650**

Source: TNPA, 2023

2.4 Study Area Delineation

This section investigates the various dynamics of the proposed project site. It considers the area in which the project will take place, enabling a better understanding of who the project will directly affect.

Study area delineation depends on the type of economic activity that is analysed and the perceived spread of economic impacts that are expected to be generated from the Project during both the construction and operation phases. The city where the site is located (Durban) is likely to experience some direct, indirect and induced impacts resulting from the activities on the site; however, it is unlikely that a local economy can be sufficiently diversified to supply all materials and services and

support construction and operational activities from start to finish. This is especially relevant given the operational importance of the Port of Durban to the South African economy. As a major trade gateway, the POD connects Durban to global supply chains. Economic impacts therefore tend to extend to the local and district municipality and spread throughout the entire national economy.

The area surrounding the site is industrial and commercial. The potential zone of influence of the proposed development will not be limited to the POD but will extend beyond the boundaries of the proposed development site due to the potential socio-economic impacts. As such, the following zones of influence are delineated for the purpose of the analysis:

1. **Primary zone of influence**: This is the immediate location of the proposed project where direct effects on the environment, economy, and local communities are expected. It typically includes the project site and its surroundings where construction and operational activities will directly occur. For the purpose of the analysis of the impact of the upgrade of the Maydon Wharf Berth 5-11 and 15, as well as the assessment of potential local economic impacts that could ensue from the proposed development, the primary zone of influence is determined to be the eThekwini municipality.
2. **Secondary zone of influence**: This area extends beyond the immediate project site to encompass the broader district or municipality (in this case. It includes communities and environments that may experience indirect impacts due to the project, such as increased economic activity, infrastructure development, or service demands. In the context of this socio-economic impact assessment, KwaZulu-Natal province is identified as the secondary area of impact. This designation means that while the proposed project's direct effects will be felt most immediately within its primary location eThekwini, its influence will also extend throughout the province. As the secondary area of impact, KZN is expected to experience broader socio-economic benefits and some indirect impacts, including potential job creation, increased demand for local services, and enhanced economic activity associated with the project's construction and operation.
3. **Tertiary zone of influence**: The tertiary zone of influence extends to the national level, encompassing the broader South African economy. While the direct and indirect impacts of the project are largely localised within eThekwini and KwaZulu-Natal, the tertiary zone experiences induced impacts that result from the economic activity generated by the project. These include increased tax revenues, enhanced trade facilitation due to the operational improvements at the Port of Durban, and the integration of Durban's logistics and trade activities into national supply chains. Although these impacts are less immediate and more diffuse compared to those in the primary and secondary zones, they contribute to the overall economic development of South Africa by enhancing the country's trade competitiveness, fostering economic linkages, and supporting industrial growth.

While this report prioritises the mentioned zones, relevant information about other areas will also be included when necessary.

3 POLICY ALIGNMENT AND PLANNING CONTEXT

A policy review is essential in determining whether a project aligns with the socio-economic objectives set out by the various spheres of government. This broad overview serves as an early warning system for assessing whether the proposed project and its anticipated consequences advance the objectives of national, provincial, and local governments' developmental policies, allowing possible red flags or issues to be identified and appropriate recourse to be undertaken to avoid costly delays.

The chapter provides a discussion on the policies and strategic documents that were identified as applicable to the study areas from various spheres of government. This context plays an important role in identifying and assessing the potential socioeconomic impacts associated with the project and a key component of the socio-economic Impact Assessment process is to assess the proposed project in terms of its suitability with regards to the planning and policy context.

3.1 National Policy Environment

South Africa, with its extensive coastline and numerous seaports, has a well-developed framework of policies and regulations governing the operation and management of its ports. These policies and regulations are essential for ensuring maritime safety, security, trade facilitation, and environmental protection.

Table 9. Summary of main national policy principles relating to upgrading the Maydon Wharf berth

Policy / Regulation	Development Principles
National Ports Act	• This is the primary legislation that governs the management, operation, and development of the ports in South Africa, including the Port of Durban. The Act establishes the National Ports Authority (NPA) as the entity responsible for the country's ports. It outlines the functions and powers of the NPA, port operations, tariffs, security, environmental protection, and other matters related to port administration. • A National Port Act has a significant impact on the Port of Durban in terms of infrastructure investment, trade facilitation, job creation, and overall economic growth. It involves expansions, improvements in logistics and connectivity, increased cargo handling capacity, and potentially lead to more efficient and competitive port operations.
Merchant Shipping Act, 1951 (Act No. 57 of 1951)	• Regulates various aspects of merchant shipping, including the registration of ships, the safety of vessels, the conditions of employment for seafarers, and the protection of the marine environment. • It authorises the inspection of ships to ensure their compliance with safety and environmental standards and provides for the detention of unsafe vessels until necessary corrections are made.
National Industrial Policy Framework	• There have been difficulties with both the price and quality of the infrastructure necessary for trade and development. • The efficiency of the basic rail and port infrastructure, as well as the availability and cost of broadband telecommunications infrastructure, have emerged as major cross-cutting constraints. Similarly, there is a need for sufficient and cost-effective energy supply via a reliable distribution system

Policy / Regulation	Development Principles
National Development Plan 2030	• A long-term vision and strategic framework for South Africa's economic and social development. • Emphasises the need for significant investment in infrastructure, including ports and transportation networks. The Port of Durban will play a pivotal role in facilitating the import and export of goods, making efficient and modern port infrastructure a priority. • The NDP focuses on expanding the country's exports and trade, particularly with other African countries. Port of Durban will need to handle increased trade volumes efficiently and promote connectivity with neighbouring countries to support trade growth. • Efficient logistics and supply chain management are essential components of the NDP's strategy to enhance competitiveness. Port of Durban is a key point in the logistics chain, and its efficiency is vital for achieving NDP goals.
Industrial Policy Action Plan	• Aimed at promoting industrialisation and economic development in the country. • Outlines various strategies and measures to support and grow key industries, create jobs, and enhance economic competitiveness. • As IPAP aims to stimulate industrial production and exports, the volume of goods moving through South African ports is likely to increase. Ports will play a crucial role in facilitating the import and export of raw materials, intermediate goods, and finished products associated with IPAP-targeted industries. • To accommodate increased trade volumes and support the industrial sectors outlined in IPAP, investment in port infrastructure, including the expansion and modernisation of port facilities and transportation links, may be necessary. Such investments could be aligned with IPAP goals.
Integrated Resource Plan IRP (2019)	• Aims to create employment and balance trade by identifying the preferred generation technology required to meet expected demand growth.
New Growth Path	• Accelerating economic growth, creating jobs, and reducing poverty and inequality. • Guide economic policies and initiatives in South Africa, focusing on key sectors and areas that could drive sustainable growth.

Policy / Regulation	Development Principles
Operations Phakisa Oceans Economy	• Unlocking the economic potential of South Africa's extensive coastline and marine resources by fostering sustainable development, job creation, and economic growth in the ocean-related sectors. • Focuses on several key sectors, including maritime transport and manufacturing, offshore oil and gas exploration, marine protection services and ocean governance, aquaculture, and marine tourism. • Fast-track the implementation of the country's National Development Plan (NDP) by adopting a results-driven and collaborative approach. • The government aims to address key socio-economic challenges.

3.2 Provincial Policies Environment

The provincial government of KwaZulu-Natal plays a role in shaping policies related to the economic development of the province, which includes strategies to enhance the competitiveness and economic contribution of the Maydon Wharf berth.

Table 10: Summary of main provincial policy principles relating to the Port of Durban

Policy / Regulation	Development Principles
KwaZulu-Natal (KZN) Provincial Growth and Development Strategy and Plan (PGDS AND PGDP)	• The PGDS and PGDP prioritise investments in transportation networks, logistics, and port facilities, which could potentially enhance the capacity, efficiency, and competitiveness of the Port of Durban. Improved infrastructure can attract more trade, both import and export and stimulate economic activity. • TNPA is proactively pursuing cohesive intergovernmental collaboration to ensure that port assets are optimally utilised. The alignment of Port, City and provincial planning will be critical to achieve this. • Improve inter-modal connectivity between the Port of Durban and the Inland Hub. • Enormous capital investment in the Port of Durban and related infrastructure has been unlocked to enhance the competitive and comparative advantage of the region.

KZN Investment Strategy	• Infrastructure Investment: KZN Investment Strategy allocates resources to upgrade and expand transportation and logistics infrastructure around the Port of Durban. This involves improving road and rail connections, enhancing cargo handling facilities, and modernising the overall port infrastructure. These improvements contribute to increased trade efficiency and attractiveness for investors. • Trade and Export Promotion: The investment strategy prioritises industries that rely on KZN ports for importing raw materials and exporting finished goods. By aligning investment efforts with these industries, the port's role as a key trade gateway can be enhanced, leading to economic growth. • Foreign Direct Investment (FDI): The strategy focuses on attracting foreign direct investment by highlighting the strategic importance of the KZN ports, mostly the Port of Durban as a gateway to regional and global markets. Policies and incentives that make it easier for foreign investors to set up businesses near the port could drive economic activity. • Job Creation: Investments attracted through the strategy lead to the creation of jobs, both directly within the port and its associated industries and indirectly in the broader supply chain and service sectors. • Industrial Clusters: The investment strategy encourages the development of industrial clusters around the port. These clusters could facilitate collaboration, knowledge sharing, and economies of scale among related industries, further boosting the economic impact. • Innovation and Technology: The strategy supports investments in innovation and technology adoption, making the region more attractive for industries that rely on advanced manufacturing processes, logistics technologies, and digital solutions. • Sustainable Development: The investment strategy incorporates sustainability principles, promoting environmentally friendly practices and encouraging investments in renewable energy, waste management, and other sustainable initiatives. • Infrastructure for Investment Attraction: Apart from port-related infrastructure, the strategy focuses on creating an attractive business environment by investing in utilities, business parks, and other amenities that make the region appealing to investors. • Value-Added Services: The investment strategy facilitates the growth of value-added services around the port, such as warehousing, distribution, and other logistics-related activities, which can contribute to the overall economic ecosystem

Policy / Regulation	Development Principles
KZN Provincial Spatial Development Framework	• Sets out to be the spatial expression of the Provincial Growth and Development Strategy (PGDS) and provide spatial context for proposed strategic interventions. • Port of Durban serves as primary entry and exit point from the province for both goods and passengers. • The province benefits, in terms of access and connectivity, from an extensive national railway network. • The Durban–Gauteng corridor, by far, is the most important economic corridor in the country and is expecting massive increases in freight volumes. • The Port of Durban will need some critical port expansion within the 2035 timeframe of the PSDF as indicated in the National Ports Plan. The prioritisation of these upgrades is critical to the economic growth and success of the province
Provincial Spatial Economic Development Strategy (PSEDS)	• The Provincial Spatial Economic Development Strategy (PSEDS) has identified a hierarchy of provincial nodes that contribute strategically to the provincial, regional and local economies as well as serve as vital service centres to communities. • The eThekwini focuses primarily on establishing inter-municipal planning processes to ensure that the development opportunities presented in this region are optimised.
KZN Industrial Development Strategy (IDS)	• Port and rail efficiencies need to improve exponentially to ensure the basic efficiencies of provincial industries forming part of global value chains such as the automotive and chemicals industries, but also for industries seeking to realise the PGDS vision of KwaZulu Natal as a gateway to Africa and to the World. • Identifying comparative advantages within the province (such as access to the coast) and building competitive advantage from this basis (such as modern port infrastructure) begins to permit specific industries to set up base in the province and compete successfully over time.

Policy / Regulation	Development Principles
KZN Export Strategy	• KZN Export Strategy encourages businesses to diversify their exports, targeting new markets and products. This diversification leads to a broader range of goods passing through the Port of Durban, reducing dependency on specific industries or markets and increasing the port's resilience to economic fluctuations. • KZN Export Strategy contributes to the overall economic growth of the region. Increased export activities can lead to higher income levels, increased tax revenue, and improved economic indicators for the surrounding area. • KZN Export Strategy enhances the global competitiveness of local industries. This could lead to more favourable trade terms, higher demand for locally produced goods, and an improved reputation on the international stage. As a major gateway, the Port of Durban's efficiency and effectiveness are vital to maintaining this competitiveness. • The strategy encourages businesses to optimise their supply chains to improve efficiency and reduce costs. This optimisation has a cascading effect on logistics networks, potentially requiring changes to how goods are transported, stored, and distributed around the port.

3.3 Local Policy Environment

The eThekwini development plans and frameworks outline the long-term development priorities and goals of the eThekwini Municipality, which includes the city of Durban and its surrounding areas. These serve as a comprehensive strategic framework for guiding the growth, development, and service delivery within the municipality.

Table 11: Summary of main local policy principles relating to the Port of Durban

Policy / Regulation	Development Principles
eThekwini Local Economic Development Strategy (LED)	• Focuses on improving the overall infrastructure of the region, which can directly benefit the Port of Durban. • Improved road networks, transportation systems, and logistics infrastructure which enhance the port's connectivity to its hinterland, making it more attractive to businesses and investors. • Attract both domestic and foreign investment
eThekwini Municipality Integrated Development Plan (IDP)	• It is noted that in eThekwini, imports have grown at a faster rate than exports between 2009-2018. The most exported products include motor vehicles, parts and accessories and basic iron and steel while the most imported products include motor vehicles, parts and accessories and basic chemicals. • The number one export partner is Japan, while the top import partners are Germany and China.

Policy / Regulation	Development Principles

eThekwini Regional Spatial Development Plan (RSDP)	• Durban-Free State-Gauteng logistics and industrial corridor:
	  ○ Strengthen the logistics and transport corridor between SA's main industrial hubs.
	  ○ Improve access to Durban's export and import facilities.
	  ○ Integrate Free State Industrial Strategy activities into the corridor.
	  ○ New port in Durban.
	• One of the goals for transport in eThekwini 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 including road, rail, aviation, maritime and pipeline with the appropriate modal balances.

eThekwini Economic Recovery Plan	• The plan will focus on investment in infrastructure and catalytic projects to grow the economy and create decent jobs. • The plan will focus on infrastructure delivery, energy reforms, climate change and radical budget re-engineering reforms.
Strategic Integrated Projects (SIPS)	• The SIPS provide an integrated framework for the delivery and implementation of social and economic infrastructure across the face of South Africa. • Some of the SIPS that affect the Port of Durban include the following: SIP 1 – Unlocking the northern mineral belt with Waterberg as the catalyst. SIP 2 – Durban-Fre State-Gauteng logistics and industrial corridor. SIP 3 – South-Eastern node & corridor development. SIP 6 – Integrated municipal infrastructure project. SIP 7 – Integrated urban space and public transport programme. SIP 8 – Green Energy in support of the South African economy. SIP 11 – Agri-logistics and rural infrastructure.
eThekwini Built Environment Performance Plan (BEPP)	• Built Environment Performance Plans (BEPP) have become a key component of the municipal package of plans. • The BEPP is a performance-based funding mechanism focused on the spatial targeting of development within integration zones as a means of achieving greater integration and compaction of cities by developing improved strategic infrastructure which will positively impact the port of Durban.

3.4 Policy Alignment

This section explores the alignment of the Upgrade of the Maydon Wharf berths 5-11 and 15 with economic policies at a national, provincial, and local municipality level. Table 12 highlights each policy objective and projects that are in alignment with the objectives.

Table 12: Maydon Wharf Upgrade Project Policy Alignment

POLICY	OBJECTIVES	MAYDON WHARF BERTH 5-11 & 15 UPGRADE PROJECT ALIGNMENT
NATIONAL POLICY ENVIRONMENT		
National Ports Act	Govern the management, operation, and development of the ports in South Africa.	x
	Establishes the National Ports Authority (NPA) as the entity responsible for the country's ports.	x
	Outlines the functions and powers of the NPA, port operations, tariffs, security, environmental protection, and administration.	x
	Promotes infrastructure investment, trade facilitation, job creation, and overall economic growth.	x
Merchant Shipping Act, 1951 (Act No. 57 of 1951)	Regulates merchant shipping, registration of ships, the safety of vessels, the conditions of employment for seafarers, and the marine environment.	x
	Authorises the inspection of ships.	x
National Industrial Policy Framework	Advocates for sufficient and cost-effective energy supply via a reliable distribution system.	
National Development Plan - 2030	Employment Creation.	x
	Balance domestic coal supply security with growth in exports.	
	Improve collaboration between relevant port operators and other relevant stakeholders.	x
Industrial Policy Action Plan	Improve rail infrastructure for coal.	
	Strengthen and optimise freight corridors.	x
	Improve coal-transport corridors.	
	Expand capacity for mineral exports.	
	Promotes industrialisation and economic development.	x
	Employment creation and enhanced economic competitiveness.	
	Stimulate industrial production and exports.	x
Integrated Resource Plan IRP 2019)	Improve collaboration between relevant port operators and other relevant stakeholders.	x
	Promote Foreign Direct Investment	x
Medium Term Strategic Framework (MTSF)	Employment creation	x
	Achieve a trade balance	x
	Improve operational performance of seaports	x
Medium Term Strategic Framework (MTSF)	Attract Foreign Direct Investment	x
	Employment Creation	x
	Achieve a trade balance	
	Improve critical network infrastructure	x

South African Economic Reconstruction and Recovery		
South African Economic Reconstruction and Recovery Operations Phakisa Oceans Economy	Improve efficiency and capacity of South African ports	x
	Improve efficiency and capacity of South African ports	x
	Improve critical network port infrastructure	x
	Improve collaboration between relevant port operators and other relevant stakeholders.	x
Operations Phakisa Oceans Economy PROVINCIAL POLICY ENVIRONMENT KwaZulu-Natal (KZN) Provincial Growth and Development Strategy and Plan (PGDS AND PGDP)	Employment creation	x
	Promote development of scarce skills	x
	Develop seaports and airports	x
	Develop strategic infrastructure	x
PROVINCIAL POLICY ENVIRONMENT		
KZN Provincial Growth and Development Strategy (PGDS)	Employment Creation	x
	Develop ports and harbours in KZN to operate at optimal capacity	x
	Develop rail and road networks	
KZN Provincial Spatial Development Framework Provincial Spatial Economic Development Strategy (PSEDS)	Provide spatial context for proposed strategic interventions.	x
	Port of Durban serves as the primary entry and exit point from the province for goods and passengers.	x
	Optimisation of development opportunities	
KZN Industrial Development Strategy (IDS) KZN Investment Strategy	Improving port and rail efficiencies	x
	Employment Creation	x
Provincial Spatial Economic Development Strategy (PSEDS)	Trade and export promotion	x
KZN Industrial Development Strategy (IDS)	Infrastructure investment	x
	Innovation and technology	

KZN Investment Strategy KZN Export Strategy	Diversification of exports	
	Economic Growth in the Region	x
	Global Competitiveness	x
KZN Export Strategy LOCAL POLICY ENVIRONMENT eThekwini Local Economic Development Strategy (LED)	Supply Chain Optimisation	
	Improving infrastructure in the region	x
	Attract domestic and foreign investment	x
LOCAL POLICY ENVIRONMENT		
eThekwini Local Economic Development Strategy (LED) eThekwini Regional Spatial Development Plan (RSDP)	Improve Access to the Durban Port	x
	Promotion of optimal integration of the different modes of transport such as road, rail, aviation, maritime and pipeline with the appropriate modal balances.	
eThekwini Economic Recovery Plan	Employment Creation	x
	Improve Access to the Durban Port	x
Strategic Integrated Projects (SIPS)	Employment Creation	x
eThekwini Economic Recovery Plan District Development Model	Development of the Durban-Free State-Gauteng logistics and Industrial corridor	
	Manage port congestion	
Strategic Integrated Projects (SIPS) eThekwini Built Environment Performance Plan (BEPP)	Improve the current technology for the Integrated Port Management System	
	Achieve a trade balance surplus	x

Source: Urban-Econ, 2024

4 LITERATURE REVIEW

The proposed upgrades to the Maydon Wharf Berth 5-11 and 15 within the Port of Durban are integral to the continued growth of South Africa's logistics and trade infrastructure. The Port of Durban, the largest and busiest port in sub-Saharan Africa, serves as a crucial hub for imports and exports in the Southern African region. The Port of Durban faces increasing pressure due to growing trade volumes and outdated infrastructure (Roberts et al., 2020). The port is essential for South Africa's economy, with over 60% of the country's container traffic passing through it. However, there are significant challenges related to congestion, outdated handling equipment, and insufficient capacity to accommodate larger vessels and high cargo volumes (Fisher, 2019). Upgrading the Maydon Wharf berths is expected to enhance its capacity for handling cargo, boost operational efficiency, and improve the competitiveness of the port on both regional and global levels (Department of Transport, 2020).

4.1 Challenges at the Port of Durban

The port's existing infrastructure struggles to meet the demands of modern shipping logistics, which increasingly require ports to handle larger vessels and faster turnaround times. The Port of Durban has been grappling with inefficiencies, particularly in container handling, which impacts the global competitiveness of South Africa's trade sector (Van der Walt & Simpson, 2020). These inefficiencies also cause delays and bottlenecks, reducing the port's ability to handle the growing volume of goods, which is critical as global supply chains evolve and demand for port services continues to rise.

4.2 Importance of port upgrades

The upgrade of port facilities plays a crucial role in the economic development of a country or region by enhancing trade capacity and improving logistical efficiency. Literature on port upgrades suggests that modernizing port infrastructure not only reduces congestion and improves turnaround times but also increases the competitive edge of a region in global trade. In a study on the impact of port infrastructure on economic growth, Leiman et al. (2018) assert that improvements in port capacity are directly correlated with increased trade volumes, more efficient cargo handling, and reduced shipping costs. Similarly, Joubert (2019) highlights that the capacity to handle larger volumes of goods in modernized ports significantly enhances a nation's ability to compete in international markets. These findings are particularly relevant to the Port of Durban, where the Maydon Wharf berths upgrade seeks to enhance the port's efficiency, positioning it to manage the growing trade volumes that have come with regional economic growth.

4.3 Infrastructure and Connectivity

Increased demand for logistical services has spurred the need for infrastructural improvements not only within the Port of Durban but also in surrounding areas. The development of complementary logistics facilities such as the Cato Ridge Dry Port and the Westown Industrial Precinct, as discussed by Morris (2020), reinforces the interconnectedness of trade infrastructure and the importance of a coordinated approach in regional development. Morris emphasises that integrating rail, road, and port facilities is essential for enhancing supply chain efficiency. This resonates with the objectives of the Maydon Wharf berth 5-11 and 15 upgrade, which aims to create better linkages between the port's

operations and regional logistics facilities, ensuring faster and more efficient cargo movement to and from the port.

4.4 Technological Advancements in Port Operations

The integration of advanced technologies is an essential component of modern port upgrades. Smart ports, which incorporate Internet of Things (IoT) systems, automated cargo handling, and digital platforms for tracking and managing logistics, are becoming increasingly important. According to Bichou et al. (2020), technological improvements not only enhance the efficiency of cargo handling but also improve safety and reduce operational costs. For Maydon Wharf, implementing such technologies could further enhance its competitiveness and operational capacity. The shift towards automation and digitisation could be critical for addressing increasing demand and managing larger cargo volumes.

4.5 Sustainability and Social Considerations

The environmental sustainability of port upgrades is an increasingly critical concern. Research by Zhang et al. (2021) and Morris & Lee (2021) highlights the need for implementing green technologies and practices in port upgrades, such as energy-efficient systems, renewable energy use, and improved waste management strategies. Given the increasing global focus on sustainability, it is essential to consider how the Maydon Wharf berth 5-11 and 15 upgrade incorporates sustainable practices to minimise the environmental footprint, including water and air quality management. Effective environmental management strategies are therefore necessary to mitigate these adverse effects. This is crucial for the Maydon Wharf berths upgrade, which will need to balance the economic advantages of increased trade capacity with sustainable environmental practices. Furthermore, Ngubane and Dlamini (2020) explore the social implications of port development, noting that local communities may experience disruptions during construction phases, although job creation and infrastructure improvements can offset some of these challenges. In the case of the Maydon Wharf berth upgrade, similar social dynamics may play out, with potential disruptions during construction but long-term benefits in terms of employment and regional economic growth.

4.6 Conclusion

The upgrade of the Maydon Wharf berth 5-11 and 15 aligns with global trends in port infrastructure development, which emphasise the importance of efficiency, environmental sustainability, and regional integration. Drawing from the literature on port development, such upgrades can significantly enhance the competitive position of the Port of Durban, fostering economic growth, improving logistics efficiency, and supporting regional infrastructure improvements. However, careful attention must be given to managing environmental and social impacts to ensure that the benefits of the upgrade are maximised.

5 BASELINE SOCIO-ECONOMIC PROFILE OF THE AREA

The Maydon Wharf precinct plays a crucial role within the broader operations of the POD, given its strategic handling of diverse cargo types such as break bulk, dry bulk and multipurpose goods. This makes it a cornerstone of Durban's logistics and trade infrastructure. Its ability to process significant volumes of cargo efficiently directly supports the economic vitality of the eThekwini Municipality, KwaZulu-Natal Province, and South Africa on a national level. The Maydon Wharf precinct's strategic role within the Port of Durban amplifies its influence on the local and regional economy. Its operations are integral to the economic vitality of eThekwini and KwaZulu-Natal, with ripple effects that benefit the national economy. Investments in improving Maydon Wharf's infrastructure and operational efficiency are therefore not only beneficial to the precinct but also pivotal to sustaining the economic growth of the eThekwini and KwaZulu-Natal at large.

This section focuses on profiling eThekwini and KwaZulu-Natal as the primary and secondary areas of impact (respectively) because the direct economic benefits of the Maydon Wharf berth 5-11 and 15 upgrades are most significantly concentrated within these regions. The majority of the operational and construction-related activities are localised within eThekwini, and the broader KwaZulu-Natal economy also captures substantial indirect benefits due to its regional integration with the Port of Durban's supply chains. Although South Africa is identified as a tertiary Area of Influence, the impacts at a national level are predominantly limited to induced effects, which are relatively minor compared to the concentrated direct and indirect benefits experienced locally and regionally. Thus, the scope of this analysis prioritises the areas with the most pronounced and measurable economic effects.

5.1 eThekwini Socio-economic Profile

5.1.1 Demographics - Population Size, Distribution and Structure

The eThekwini Municipality, located in KwaZulu-Natal, includes the city of Durban, the largest city in the province. The eThekwini has experienced significant population growth due to urbanisation, from 2.7 million in 1994 to 4.2 million in 2022. As a highly urbanised area, eThekwini Municipality had 1.1 million households in 2022, with a growth rate of 2.1% as shown in the Table 13 below.

Table 13: Population of eThekwini Metropolitan Municipality, 1996 - 2022

	1996	2001	2011	2022	Growth Rate/Average Household Size
Population	2 775 941	3 125 267	3 476 686	4 239 901	1,6%
Households	650 303	792 455	963 011	1 122 738	2,1%

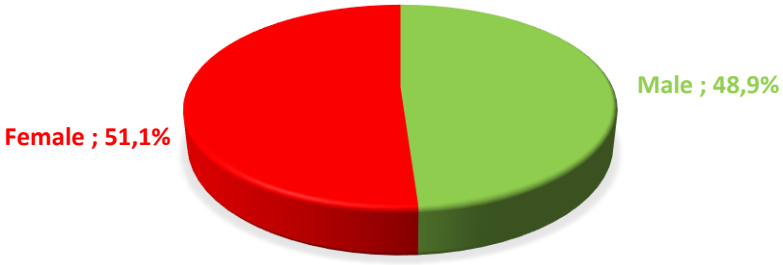
Source: Stats SA, 2022

People from rural areas and other parts of South Africa are drawn to eThekwini in search of better economic opportunities, education, and healthcare. This influx of people has contributed to the municipality's growing population.

5.1.1.1. Age, Gender and Race

In line with both national and provincial gender splits, eThekwini has a larger female population than males with 51,1% females and 48,9% males as shown in the graph below.

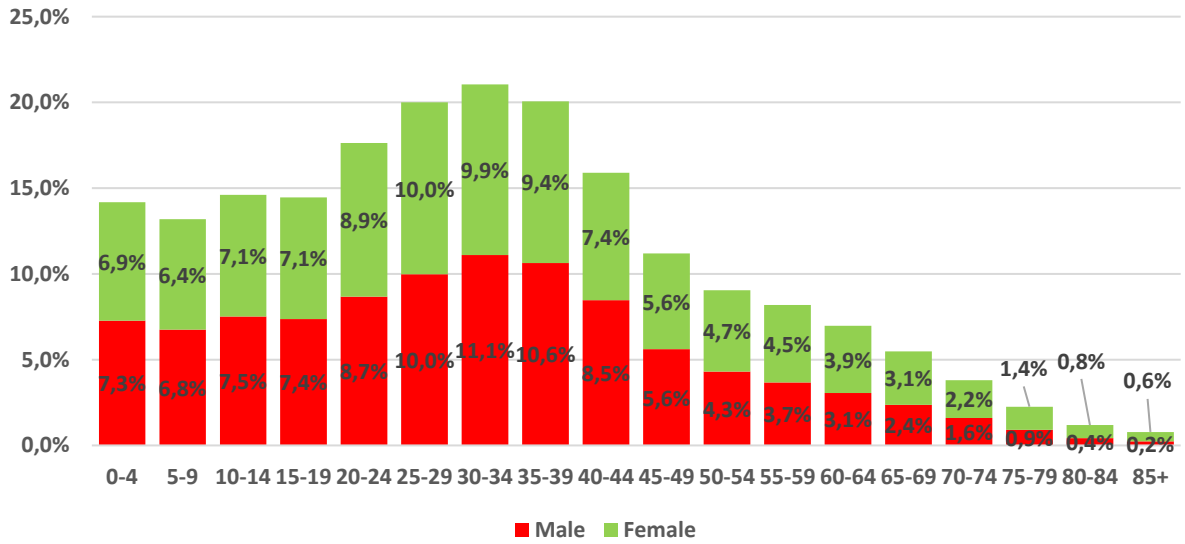
Figure 9: eThekwini Gender Distribution, 2022



Source: Stats SA, 2022

The population pyramid of eThekwini Municipality typically has a broad base, indicating a higher proportion of younger individuals, and narrows toward the top, suggesting a lower percentage of elderly individuals. This shape is characteristic of a developing or transitional population.

Figure 10: eThekwini Gender and Age Group Distribution, 2022



Source: Stats SA, 2022

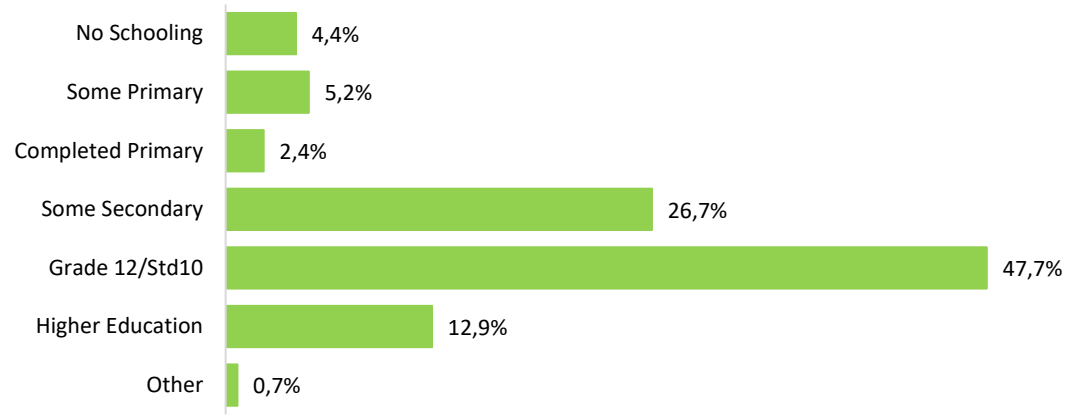
Individuals under the age of 49 are predominantly male, while those above 49 are mostly female. This indicates that there is a larger male working-age population in eThekwini.

5.1.2 Skills and Education

5.1.2.1. eThekwini's Education Profile

The following Figure 11 provides an outline of the detailed education profile of eThekwini municipality.

Figure 11: The highest level of education (20+ years), eThekwini, 2022



Source: Quantec Regional Standardised Data, 2024

An estimated 47,7% of adults in eThekwini (above the age of 20 years) have achieved a matric qualification or higher. While approximately 4,4% of the population in eThekwini has no schooling. However, on average, the municipality has been experiencing a slight increase in the proportion of adults with no schooling coupled with a growing proportion of the population receiving higher education. As shown in the Table 14 below, the proportion of adults with no schooling has increased from 4,3 % in 2011 to 4,4% in 2022 while the proportion of adults with higher education increased from 12,0% in 2011 to 12,9% in 2022.

Table 14: Level of education in eThekwini, 2011 and 2022

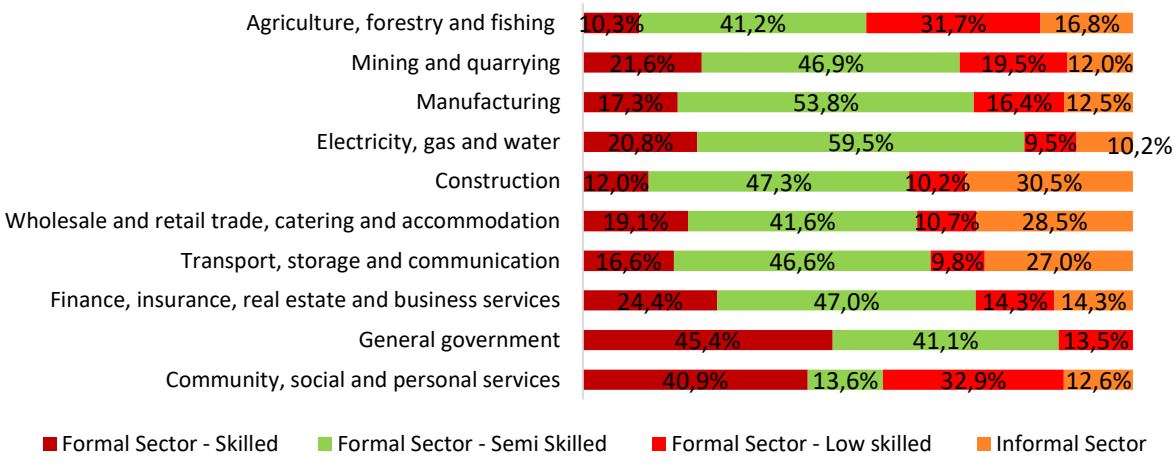
Level of education	2011	2022	% change
No Schooling (20+ years)	4,3%	4,4%	↑ 0,1%
Higher education (20+ years)	12,0%	12,9%	↑ 0,7%

Source: Stats SA, 2022

5.1.2.2. eThekwini's Skills Profile

However, the skills profile provided in the Figure 12 below underscores the necessity for elevating the skill levels of the overall workforce within the nation.

Figure 12: Skill level by Industry in eThekwini, 2022



Source: Quantec Regional Standardised Data, 2024

The eThekwini is characterised by a diverse economic landscape that encompasses various sectors, including manufacturing, services, trade, transport, tourism, and agriculture. Thus, the economy offers employment opportunities to a wide range of professionals, support staff, and service workers with a large proportion being low to semi-skilled.

5.1.3 Labour Market

Of the total population in eThekwini, 72.2% falls within the working age group (15-64 years) with 62% being economically active. Much of the employment is within the are employed in formal sector (82.3%). However, like the provincial and national trends, high levels of unemployment and underemployment persist, particularly among the youth. eThekwini currently has an unemployment rate of 20.6% which is lower than both the provincial (32.6%) and the national unemployment rates (32.1%). Economic disparities and income inequality also affect the distribution of employment opportunities.

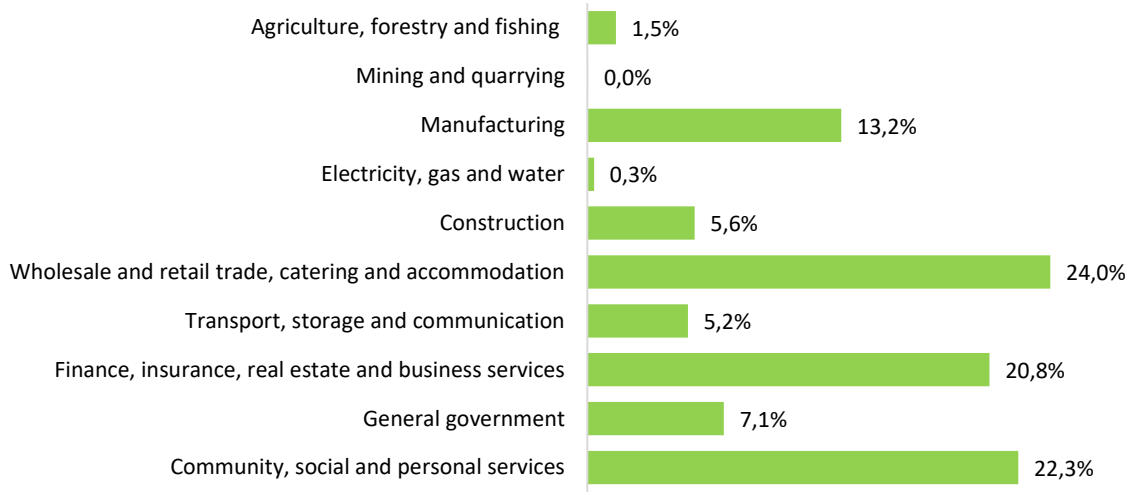
Table 15: Employment and Unemployment in eThekwini, 2024

AREA	eThekwini	UNIT
Employment profile	72.2%	Working age population
	82.3%	Formal employment
	17.7%	Informal employment
	20.6%	Unemployment Rate
	76.9%	Labour Force Participation Rate
	49.2%	Labour Absorption Rate

Source: Quarterly Labour Force Survey (QLFS) Q2:2024

The Figure 13 below shows the percentage of employed people in each industry in eThekwini Municipality.

Figure 13: Employment by Sector in eThekwini, 2024



Source: Quantec Regional Standardised Data, 2024

The municipality's economic activities contribute to employment opportunities across a broad spectrum of industries. Most of the people in eThekwini are employed in the Wholesale and retail trade, catering & accommodation (24%), as well as within the service industries. As a major port city,

eThekwini has a robust transport and logistics sector. Employment in this sector encompasses activities related to port operations, logistics, freight handling, and transportation services.

5.1.4 Household Income

Income inequality is a prominent feature of eThekwini's household income landscape. The municipality comprises a mix of affluent areas, middle-income neighbourhoods, and impoverished communities. In terms of the average annual household income levels in eThekwini, a large proportion of households earn very low incomes with about 82.7% of households earning less than R153 600 on average per annum as shown in the following Table 16.

Table 16. Average annual household income, eThekwini, 2024

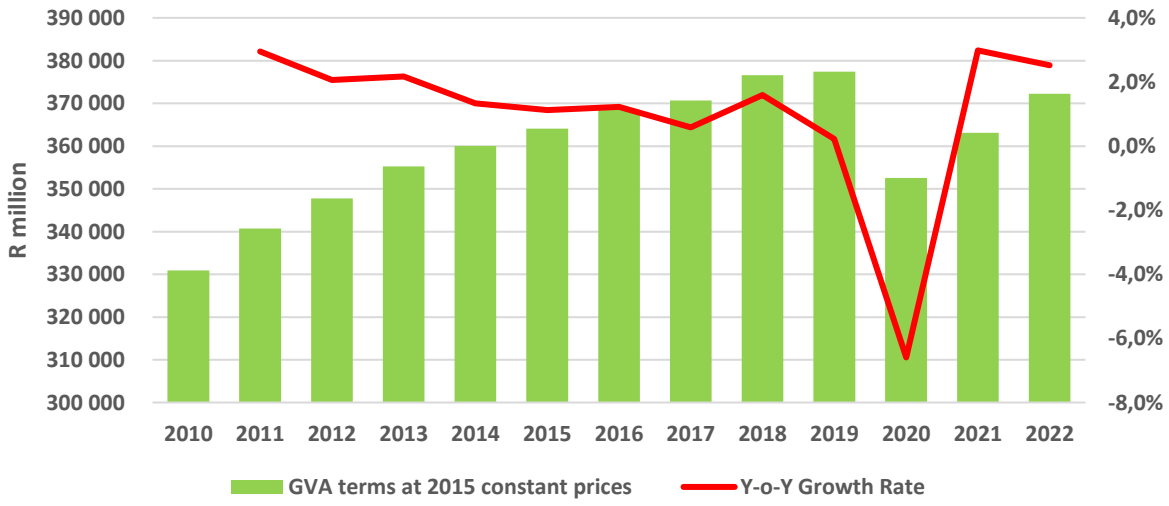
INCOME CATEGORY	ANNUAL INCOME	% HOUSEHOLDS
Very low income	No income	17.0%
	R1 - R4 800	4.2%
	R4 801 - R 9 600	6.2%
	R9 601 - R 19 200	14.3%
Low income	R19 201 - R 38 400	16.9%
	R38 401 - R 76 800	13.4%
	R76 801 - R153 600	10.7%
Emerging middle class	R153 601 - R307 200	8.6%
	R307 201 - R614 400	5.7%
Realised middle class	R614 401 - R1 228 800	2.0%
Emerging affluent	R1 228 801 - R2 457 600	0.6%
Affluent	R2 457 601 and more	0.3%

Source: Quantec Regional Standardised Data, 2024

5.1.5 Economic Size, Growth and Performance

The following chart depicts the economic size and growth of the eThekwini economy from 2010 to 2022.

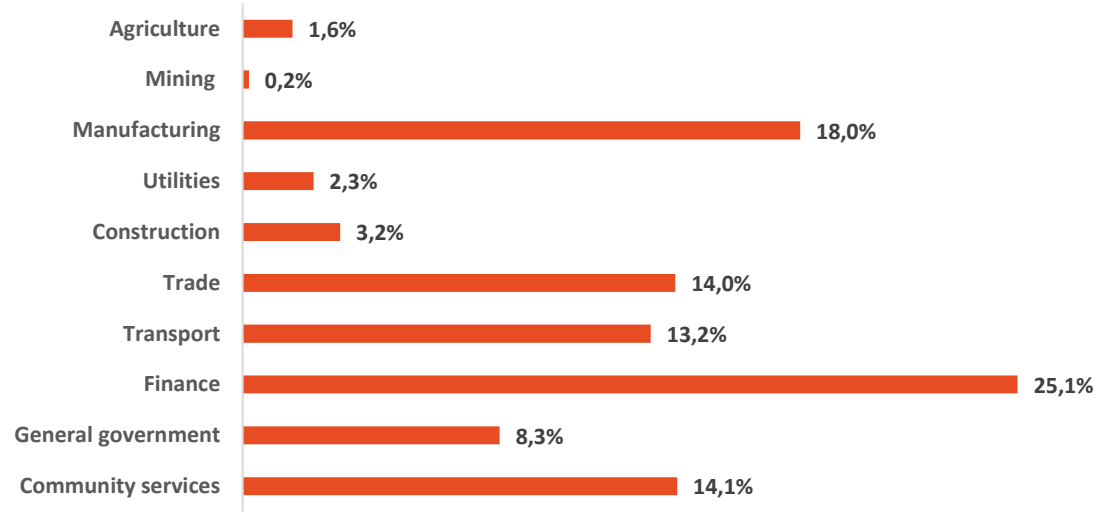
Figure 14: Economic size and growth of the eThekwini economy in GVA terms at 2015 constant prices, 2010 - 2022



Source: Quantec Regional Standardised Data, 2024

The KZN economy is dominated by eThekwini Metro. This is the main economic hub for the province making up over half (55.6%) of the total provincial economic output. Except for the Agricultural and Mining sectors, the Metro closely reflects the provincial sectoral distribution. eThekwini shows high-level establishment in predominantly the secondary and tertiary sectors. The Manufacturing (18.0%); Finance, Insurance, Real Estate and Business services (25.1%); and Wholesale & Retail Trade (14.0%) sectors are accountable for more than 50% of the region's higher-than-average development. The significant contribution of the Transport sector (13.2%) indicates the important role played by logistical support in the industrialised metro.

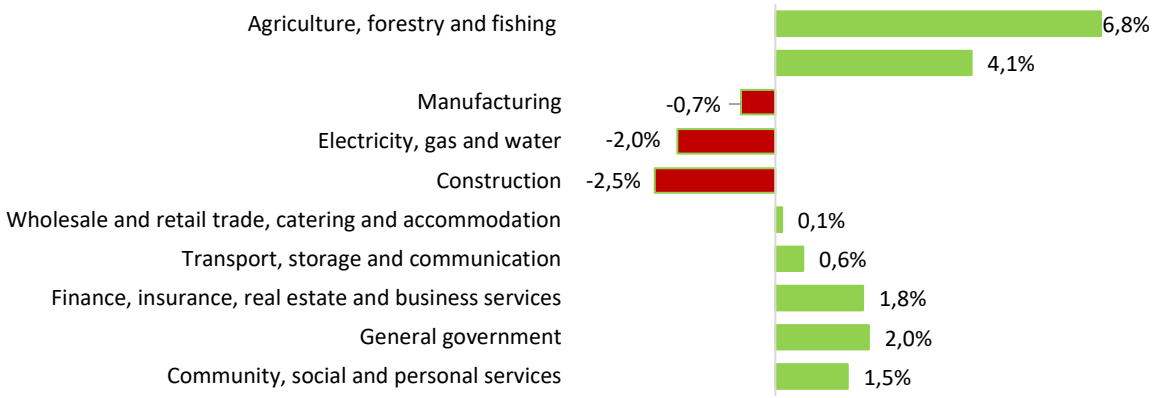
Figure 15: eThekwini Municipality Economic Structure, 2022



Source: Quantec Source: Quantec Regional Standardised Data, 2024

The agriculture sector has exhibited the most rapid growth in GVA terms between 2010 and 2022 (6.8%). Broad sector decline is noted in the construction industry as well as the utilities sector. Interestingly, the manufacturing sector in the municipality also contracted over the 10 years as shown in the Figure 16 below.

Figure 16: Compound Annual Growth Rate per sector in GVA terms, eThekwini Municipality, 2010 - 2022



Source: Quantec Regional Standardised Data, 2024

Transport, storage and communication

This is an important supporting industry in the eThekwini municipality economy and is also directly impacted by the Port operations. The industry has an average sector share of about 13.6% of total GVA which has remained relatively stable over 10 years. The industry has also had positive growth however, with the contraction in the Manufacturing industry in 2020 and the national lockdown restrictions on movement, the Transport and Communication experienced a sharp decline in 2020.

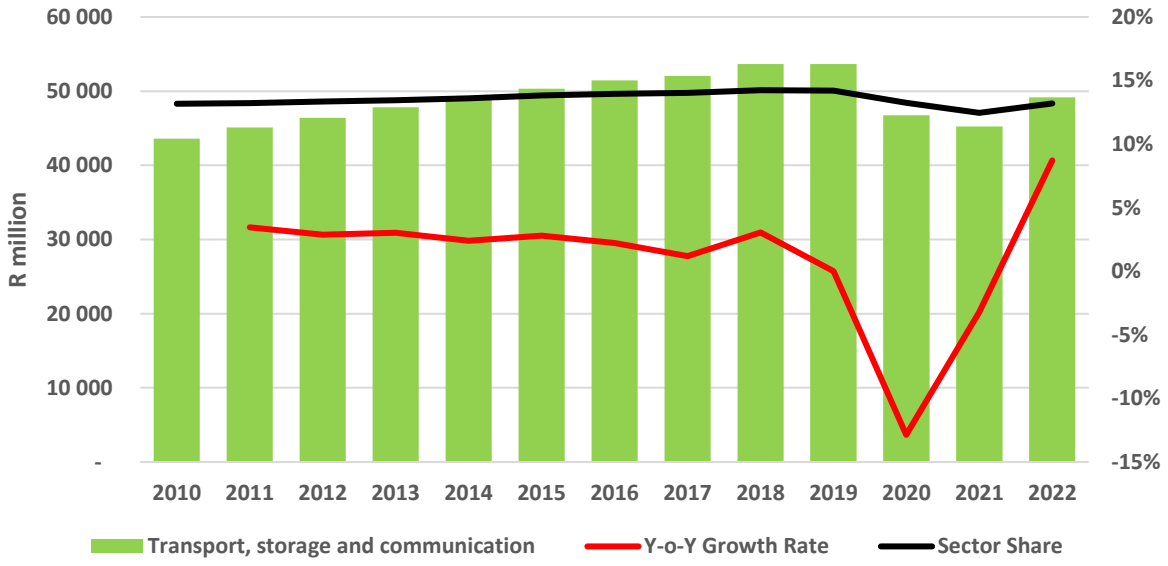
However, with the Port of Durban and Port of Richards Bay as well as the international airport as key destinations for the transport, storage and commination, this is industry is expected to continue to have a stable sector share within the municipality.

Transport and communication are viewed as a significant contributor to the economy of Durban (14.54%) for several reasons including:

- The Port of Durban, which is a major transportation hub.
- Established road infrastructure of which the N2 and N3 routes forms the backbone.
- The establishment of the King Shaka International Airport and Dube Trade Port.

No other district in KwaZulu-Natal can match the Transport capacity of eThekwini, and as such the major Transport and logistics companies continue to be attracted to the metro.

Figure 17. Performance of the Transport, storage and communication sector, eThekwini, 2010 - 2022

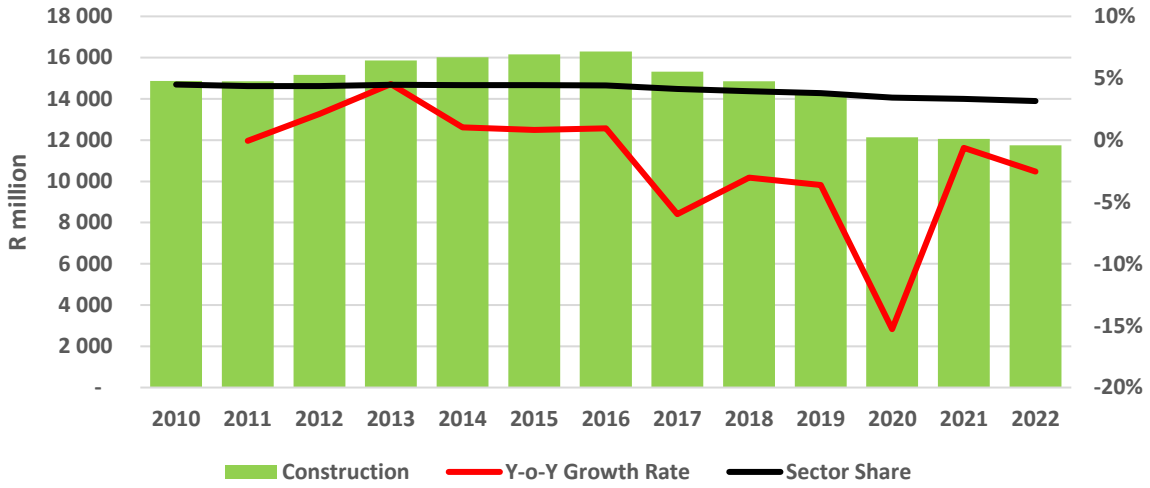


Source: Quantec Regional Standardised Data, 2024

Construction

In eThekwini, the construction sector is a relatively stable albeit small sector within the economy with an average sector share of about 4.0% annually. Even though the sector showed a marked decline between 2016 and 2019, it is slowly recovering to the pre-pandemic levels.

Figure 18: Performance of the Construction sector, eThekwini, 2010 - 2022



Source: Quantec Regional Standardised Data, 2024

5.2 KwaZulu-Natal Socio-Economic Profile

5.2.1 Demographics - Population Size, Distribution and Structure

According to the latest Census data, 2022, the KwaZulu-Natal (KZN) population is 11 562 055 persons in 2 822 880 households as shown in the Table 17 below.

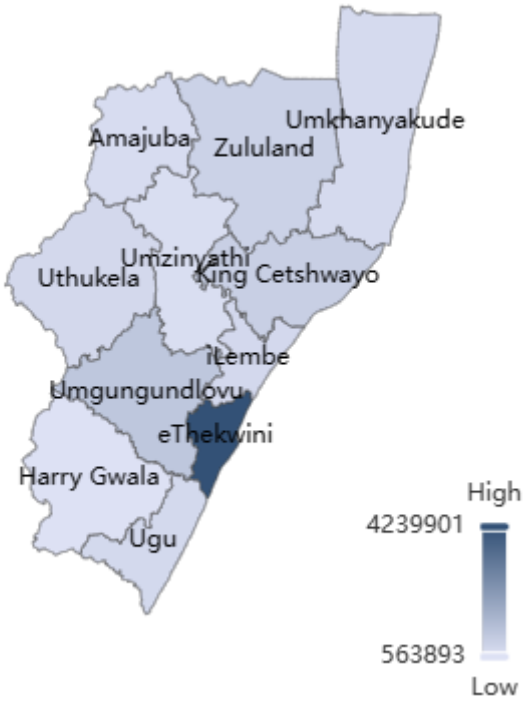
Table 17: Population of KwaZulu-Natal, 1996 - 2022

	1996	2001	2011	2022	Growth Rate/Average Household Size
Population	8 929 753	9 499 001	10 267 301	11 562 055	1,0%
Households	1 936 825	2 122 110	2 398 002	2 822 880	1,5%

Source: Quantec Regional Standardised Data, 2024; Stats SA Census Data, 2022

KZN has the second largest population size in South Africa, after Gauteng, making up about 20% of South Africa's population. The percentage change in the share of the population residing in KwaZulu-Natal between 2011 and 2022 was 0.6%, showing an increase in share. Much of the population is concentrated within eThekwini as shown in the figure below.

Figure 19: KZN Population Distribution, 2024



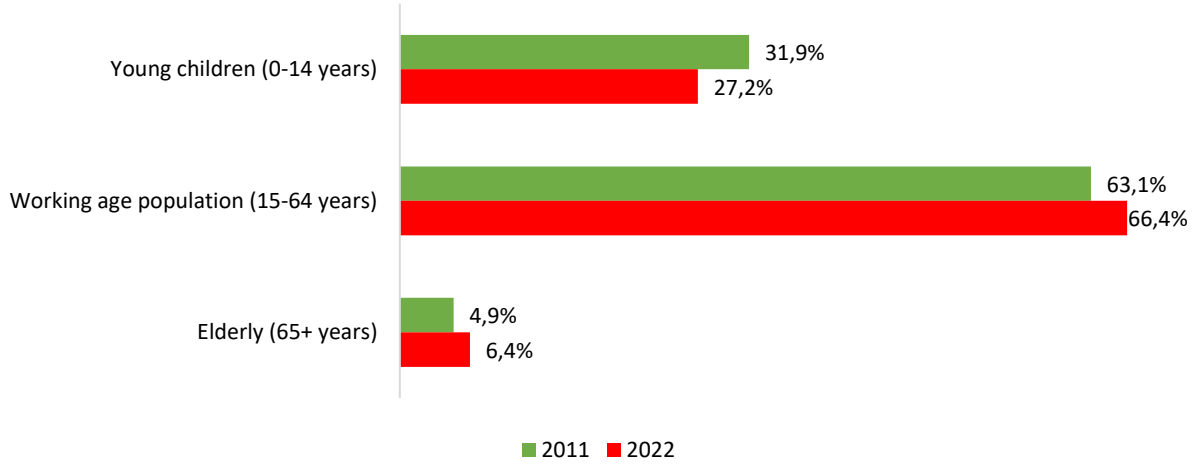
Source: Stats SA, 2022

The population of KZN grew by 17.4 percent between 2011 and 2022, from 10.2 million persons in 2011 to 12.4 million persons in 2022 (Stats SA, 2023) with a Compound Annual Growth Rate (CAGR) of 1.9% over the 10-year period. The CSIR projects that the population may reach up to 14.7 million people by 2050.

5.2.1.1. Age, Gender and Race

The province has a predominantly youthful demographic, with a growing working age group, as illustrated in the graph below.

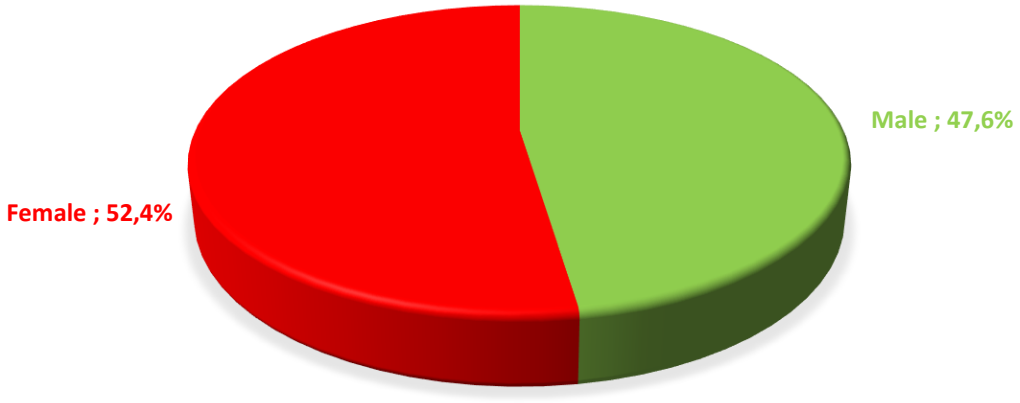
Figure 20. KZN Age Distribution, 2011 and 2022



Source: Stats SA, 2022

Regarding the gender distribution, 47.6% of KZN's population comprises males, while 52.4% are females as shown in the graph below.

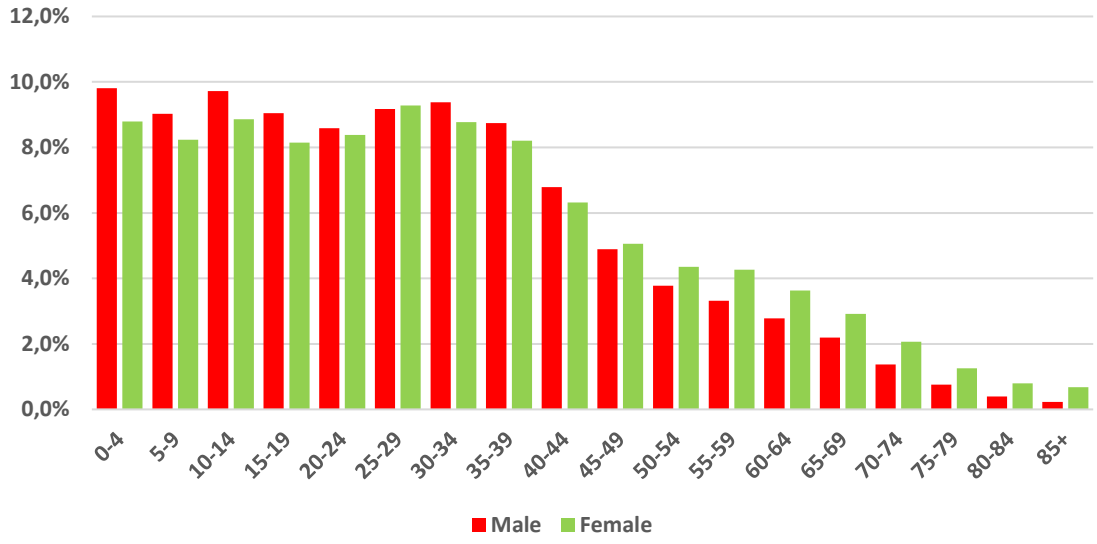
Figure 21: KwaZulu-Natal Gender Distribution, 2022



Source: Stats SA, 2022

The population pyramid of KwaZulu-Natal typically has a broad base, indicating a higher proportion of younger individuals, and narrows toward the top, suggesting a lower percentage of elderly individuals. This shape is characteristic of a developing or transitional population.

Figure 22: KwaZulu-Natal Gender and Age Group Distribution, 2022



Source: Stats SA, 2022

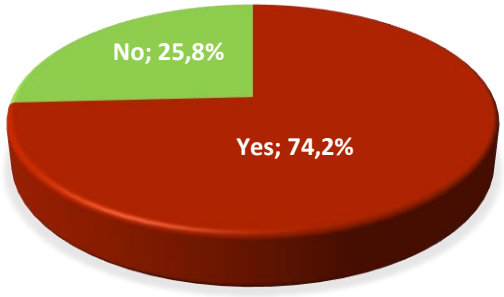
In KZN the group that is under 44 years of age is predominantly male, while those above 44 are mostly female. This implies a potential labour force for various industries. However, effective workforce management, education, and skill development are crucial to harness the demographic dividend.

5.2.2 Education and Skills

5.2.2.1. Education Profile

The following Figure 23 depicts the functional literacy of the KZN population based on the latest Census data. About 74.2% of the school-age population (5 – 24 years) in KZN has some form of formal education while 25.8% has never attended an educational institution.

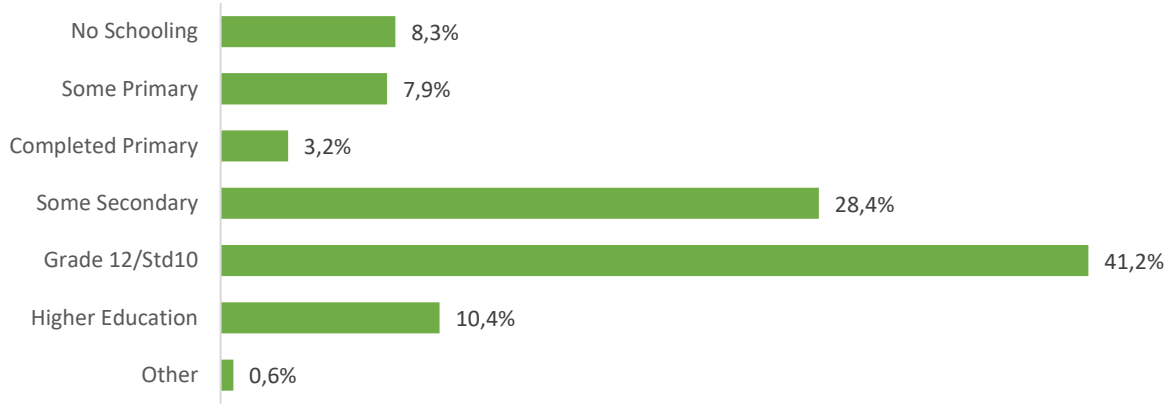
Figure 23: Attendance at an educational institution (5-24 years), KZN



Source: Stats SA, 2022

The following Figure 24 provides an outline of the detailed education profile of KZN. 41.2% of adults in KZN (above the age of 20 years) have achieved a matric qualification or higher. While approximately 8.3% of the population in KZN has no schooling. This may be attributable to the proportion of the population in the province falling within the very young age cohorts below school-going age.

Figure 24: Level of Education (20+ years), 2022



Source: Stats SA, 2022

On average, KZN has been experiencing a decline in the proportion of adults with no schooling. There are also growth rates in the proportion of people receiving higher education. As shown in the Table 18 below, the proportion of adults with no schooling has declined from 10.7% in 2011 to 8.3% in 2022 while the proportion of adults with higher education increased from 0.9% in 2011 to 10.4% in 2022.

Table 18: Level of education in KZN, 2011 and 2022

Level of education	2011	2022	% change
No Schooling (20+ years)	10.7%	8.3%	-2,4%

Level of education	2011	2022	% change
Higher education (20+ years)	9.0%	10.4%	1,4%

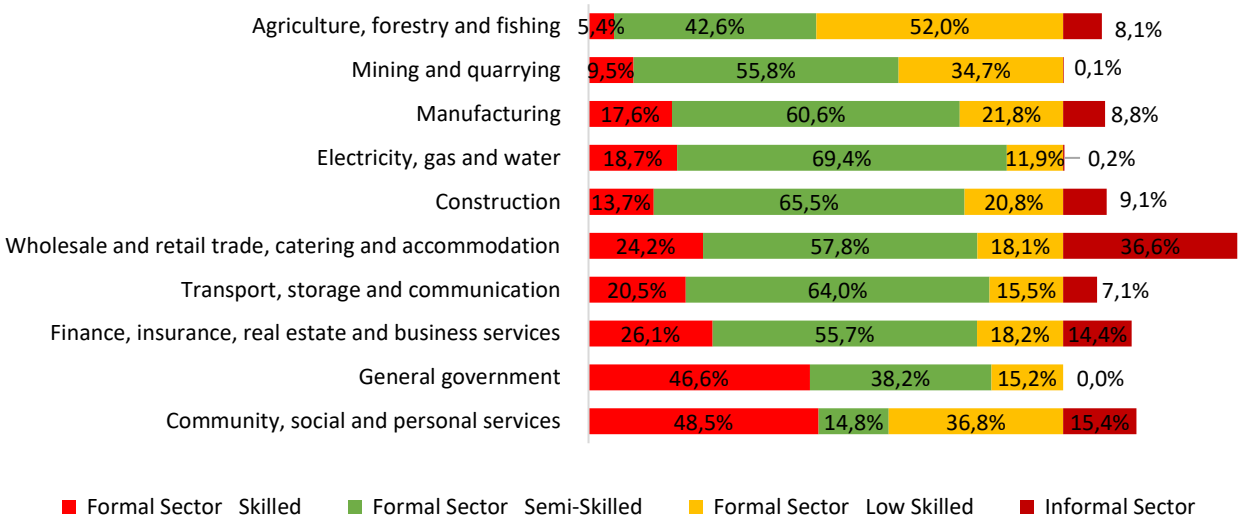
Source: Stats SA, 2022

The situation regarding education in KZN has improved over the past ten years. However, problems in the education sector are still prevalent including high drop-out rates at the secondary and tertiary level, poor performances in the National Senior Certificate Examination, and a mismatch in skills gained from the formal education system and the requirements in many sectors of the economy. Progress made in education is hampered by problems of human capital development including inequality in access to tertiary education among young people in different sub-groups of the population.

5.2.2.2. Skills Profile

The following Figure 25 outlines the skills profile for the KZN province. A significant proportion of individuals who hold formal employment in various economic sectors fall within the category of semi-skilled or low-skilled workers.

Figure 25: Skill level by Industry in KZN, 2022



Source: Quantec Regional Standardised Data, 2024

5.2.3 Labour Market

Following from the education and skills analysis are the broad employment and unemployment dynamics in the province.

Some key labour market dynamics include establishing the unemployment rate, the labour force participation and the size and structure of employment within the province.

Table 19: KwaZulu-Natal Employment Profile, 2024

AREA	KWAZULU-NATAL	UNIT
Employment profile	63.6%	Working age population
	50.5%	Formal employment
	12.9%	Informal employment

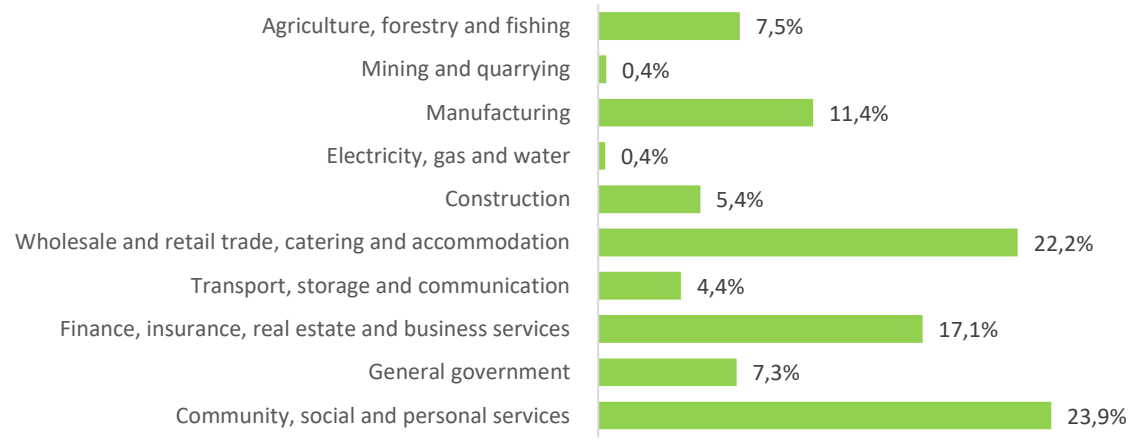
AREA	KWAZULU-NATAL	UNIT
	31.2%	Unemployment Rate
	37.1%	Labour Force Participation Rate
	53.9%	Labour Absorption Rate

Source: Quarterly Labour Force Survey (QLFS) Q2:2024

The official unemployment rate has risen by 1.4 percentage points to 31.2% in Q2 2024. The prevalence of unemployment among the youth is still a persistent challenge in KZN. This may be attributed to the lack of employable skills and further worsened by low educational attainment as most young people tend to drop out of school before completing secondary level. It is within this backdrop that the province has a large number of discouraged work-seekers and thus high unemployment rate.

The following graph depicts the per-sector employment profile in KZN. The bulk of the employment in KZN is within the formal sector with 63.4% of total employment. The informal sector has 19.7% of employment and the rest is within household employment.

Figure 26: KZN employment per sector

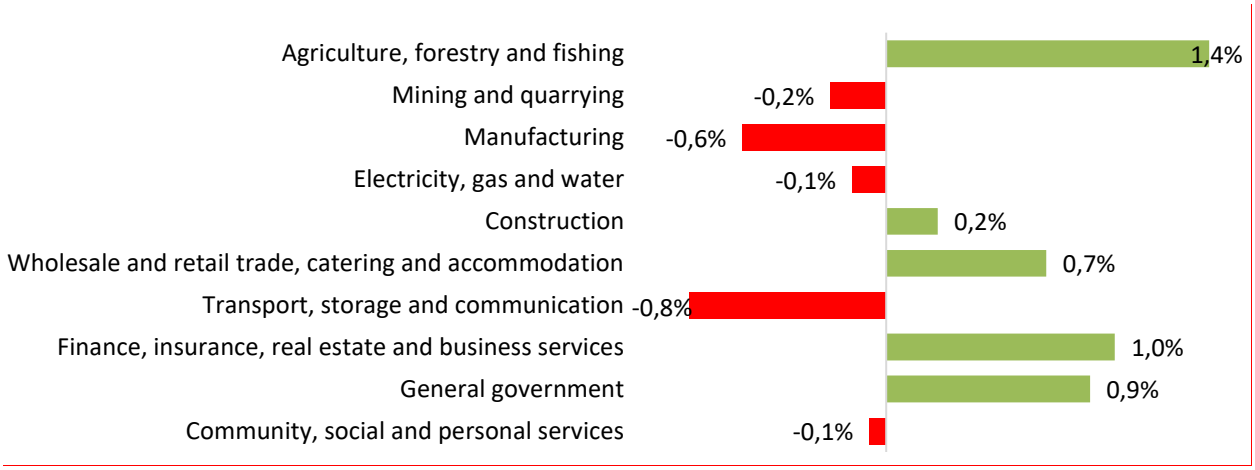


Source: Quantec Regional Standardised Data, 2024

The individual sector with the highest share of employment is the community, social and personal services sector. Other large employers in KZN are wholesale and retail trade, catering and accommodation and Finance, insurance, real estate and business services. The two sectors with the lowest share of employment are mining and quarrying and electricity, gas and water supply.

Figure 27 provided below illustrates the changes in employment across various sectors in KZN from 2010 to 2022.

Figure 27: Changes in employment per sector, KZN, 2010 - 2022



Source: Quantec Regional Standardised Data, 2024

Notably, there has been a significant reduction in employment within the Transport sector, as well as the Manufacturing sector. Conversely, the Agriculture sector, Finance and Government services sectors have emerged as the primary drivers of job creation during the same period. Wholesale and Retail trade is also an important labour absorber within the province.

Table 20: Employment by Industry

Industry	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Agriculture	6,6%	6,3%	6,7%	7,0%	6,7%	7,9%	7,6%	7,3%	7,1%	7,1%	7,2%	7,2%	7,5%
Mining and quarrying	0,4%	0,4%	0,5%	0,5%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%
Manufacturing	13,6%	13,2%	12,6%	12,5%	12,2%	11,8%	11,7%	11,6%	11,6%	11,5%	11,5%	11,4%	11,4%
Utilities	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%	0,4%
Construction	4,8%	5,1%	5,5%	5,5%	5,8%	5,7%	6,1%	6,1%	6,2%	5,8%	5,7%	5,4%	5,4%
Retail	21,1%	21,2%	21,4%	21,3%	21,3%	21,5%	21,6%	22,3%	22,4%	22,6%	21,7%	21,1%	22,2%
Transport	4,6%	4,8%	5,0%	5,1%	4,9%	5,0%	4,8%	4,9%	4,9%	4,9%	4,7%	4,3%	4,4%
Finance	16,0%	16,2%	16,0%	15,9%	16,0%	16,0%	16,0%	16,1%	16,4%	16,6%	17,2%	17,2%	17,1%
General government	6,6%	6,9%	6,9%	6,6%	6,9%	6,6%	7,0%	6,6%	6,7%	6,8%	7,2%	7,6%	7,3%
Community services	25,8%	25,4%	25,1%	25,3%	25,3%	24,7%	24,4%	24,4%	24,1%	24,0%	24,1%	25,0%	23,9%

Source: Stats SA, 2022

Most of the KZN population is employed in the Formal and informal sector (non-agricultural) (70,8%), followed by the Formal sector (non-agricultural) (17,0%).

Table 21: Employment by Sector, 2022

Labour Force	Number of Employed	Share % of Employed
Formal and informal sector (non-agricultural)	1 757 000	70,8%
Formal sector (non-agricultural)	423 000	17,0%
Informal sector (non-agricultural)	91 000	3,7%
Private households	210 000	8,5%
TOTAL	2 481 000	100,0%

Source: Stats SA, 2022

5.2.4 Household Income

Many households in KZN fall within the very low to low-income category (nearly 88% of households in the province) earning less than R153 600 on average per annum. This is a weighted average monthly income of about R6 826 per household. With an average household size of 4 persons per household, this may be related to the high poverty incidence within the province.

Table 22: Average annual household income, KZN, 2022

INCOME CATEGORY	ANNUAL INCOME	% HOUSEHOLDS
Very Low Income	No income	15.1%
	R1 - R4 800	4.9%
	R4 801 - R 9 600	8.6%
	R9 601 - R 19 200	19.4%
Low income	R19 201 - R 38 400	19.8%
	R38 401 - R 76 800	11.9%
	R76 801 - R153 600	8.3%
Emerging middle class	R153 601 - R307 200	6.3%
	R307 201 - R614 400	3.9%
Realised middle class	R614 401 - R1 228 800	1.2%
Emerging affluent	R1 228 801 - R2 457 600	0.4%
Affluent	R2 457 601 and more	0.2%
Weighted Average Monthly Income		

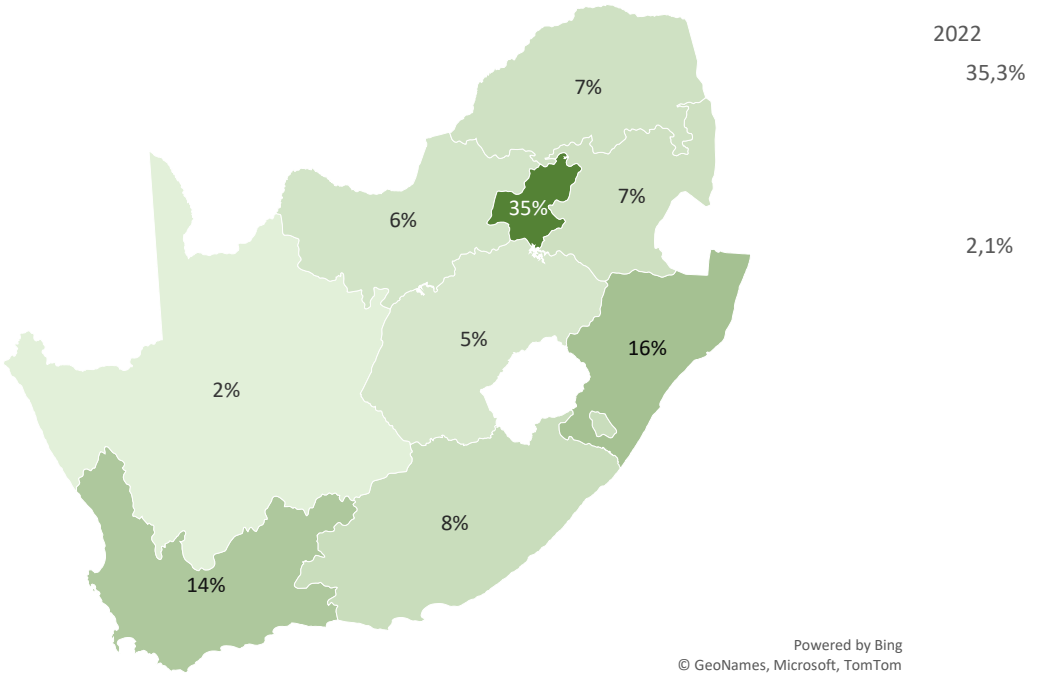
Source: Quantec Regional Standardised Data, 2024

Linked to this is the aspect of inequality which poses a significant threat to social cohesion in the province. Reducing inequality is, therefore, a persistent goal and a key step towards achieving spatial and social justice in the province.

5.2.5 Economic Size, Growth and Performance

The economic review and outlook for the province should be understood within the context of the national and global economies. The South African economy has been experiencing a persistent downward trend with long-standing blockages to inclusive growth, consecutive quarters of economic contraction and a fragile global environment. The COVID-19 pandemic has also deepened this recession owing to disruptions in economic activity due to lockdown restrictions. In addition, load shedding has placed further structural constraints on the real economy and will further dampen the economic growth compound. As such the real economy in KZN has subsequently reflected a general stagnant trend over time with no significant increases in economic activity. However, the economy of KZN remains the second largest contributor to South Africa's economy behind Gauteng generating about 16% of the national output.

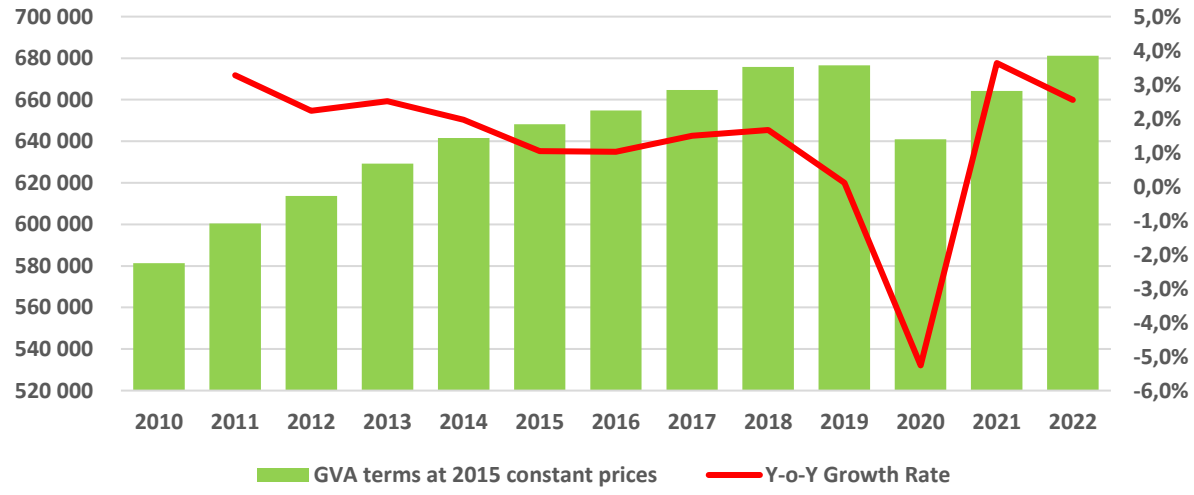
Figure 28: GVA Share Per Province, 2024



Source: Quantec Regional Standardised Data, 2024

In 2022, KZN's GVA at constant 2015 prices reached R954 billion, with a modest growth rate of 1.9%. KZN's economic growth has shown a gradual upward trend over the years before the COVID-19 pandemic through the province's economic recovery efforts. However, economic prospects remain dampened due to the external national and global economic conditions.

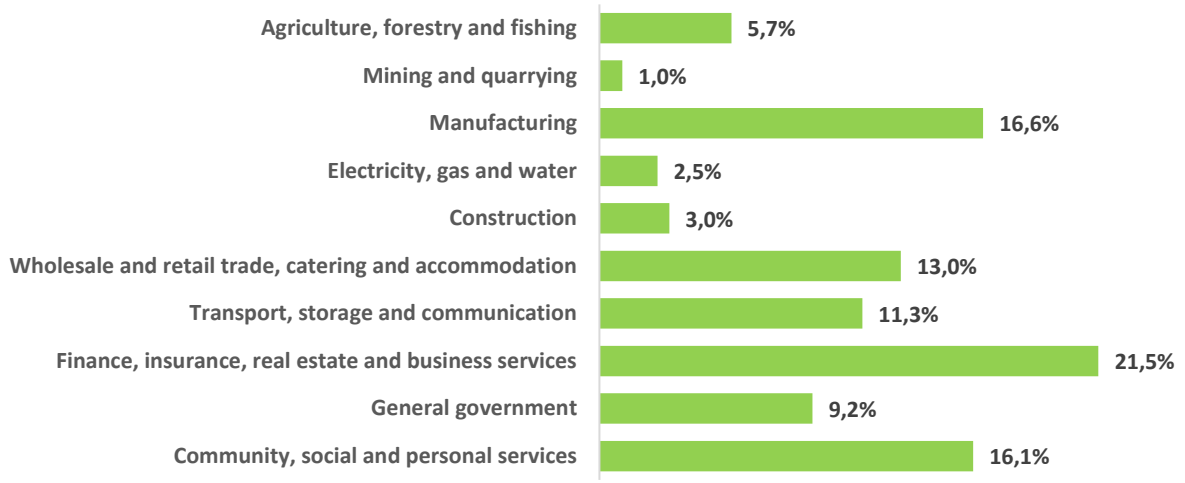
Figure 29: Economic size and growth of the KZN economy in GVA terms at 2015 constant prices, 2010 – 2022



Source: Quantec Regional Standardised Data, 2023

The economic base within the province is diverse and has seen a structural shift in output in recent years. KZN is moving towards becoming a knowledge-based service economy, with a greater focus on technology, e-commerce, financial and other services. The economy in KZN is driven mainly by the tertiary sector, which includes finance and business services, wholesale and retail trade, tourism and government services. Tertiary sector industries constitute nearly three-quarters of the KZN economy.

Figure 30: Structure of the KZN economy, 2022

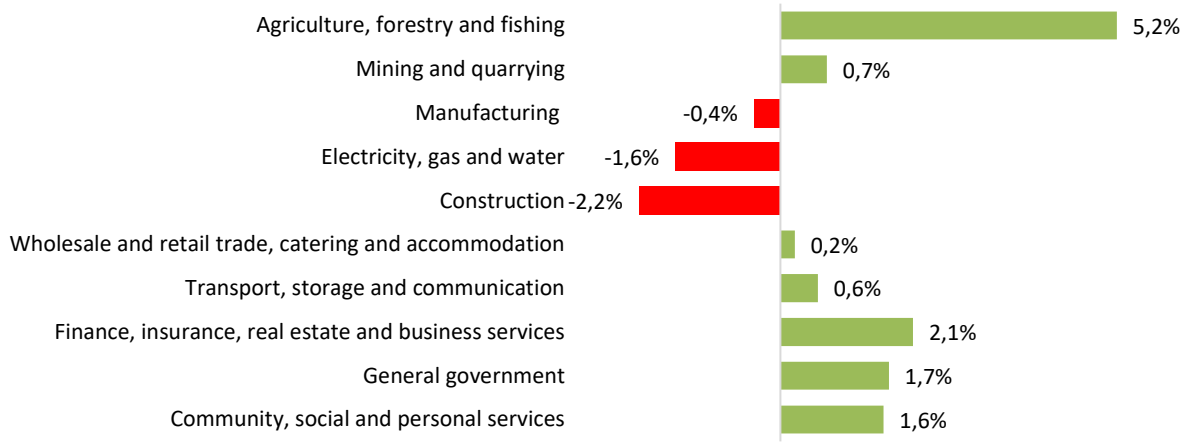


Source: Quantec Regional Standardised Data, 2023

The leading sectors in the KZN economy are finance, real estate and business services (21.5%), followed by manufacturing (16,6%), and community, social and personal services (16.1%) of KZN GVA. Another major sector in KZN is the wholesale and retail trade sector which makes up 13% of the province's economy. The smallest sector is the mining and quarrying sector which constitutes only 1% of the KZN economy.

The agriculture sector has exhibited the most rapid growth in GVA terms between 2010 and 2022 (5.2%). It is trailed by the finance, insurance, real estate, and business services sectors, which achieved a growth rate of 2.1% over the same period. In stark contrast, the construction, electricity, gas and water, and manufacturing sectors all witnessed negative compound annual growth rates throughout this timeframe. Particularly, the construction industry demonstrated the least favourable growth prospects during this period as shown in the Figure 31 below.

Figure 31: Compound Annual Growth Rate per sector in GVA terms, KZN, 2010 – 2022



Source: Quantec Regional Standardised Data, 2024

6 SOCIO-ECONOMIC IMPACT ASSESSMENT

The main purpose of a socioeconomic study is to conduct an effective evaluation and promote socioeconomic development. This chapter contains a discussion of the most significant implications identified during the analysis of the project background and current socioeconomic environment relating to the proposed development and associated infrastructure.

The socioeconomic impact analysis will determine and assess the impacts anticipated to be caused by the construction and operations of the proposed project.

6.1 Impact Rating Methodology

Socio-Economic issues and potential impacts will be assessed using a recognised qualitative impact assessment methodology. The objective of the assessment of impacts is to identify and assess all the significant impacts that may arise from the activity. The process of evaluating the impacts of the project encompasses the following four activities:

1. Identification and assessment of potential impacts
2. Prediction of the nature, magnitude, extent and duration of potentially significant impacts
3. Identification of mitigation measures that could be implemented to reduce the severity or significance of the impacts of the activity
4. Evaluation of the significance of the impact after the mitigation measures have been implemented i.e. the significance of the residual impact.

The following Table 23 provides an overview of the assessment criteria used for the assessment of the identified impacts.

Table 23. Impact rating model overview

CRITERIA	SCORE 1	SCORE 2	SCORE 3	SCORE 4	SCORE 5
Impact Magnitude (M) The degree of alteration of the affected environmental receptor	**Very low**	**Low**	**Medium**	**High**	**Very high**
Impact Extent (E)	**Site:**	**Local:**	**Regional:**	**National:**	**International:**
The geographical extent of the impact on a given environmental receptor	Site only	Inside activity area	Outside activity area	National scope or level	Across borders or boundaries
Impact Reversibility (R) The ability of the environmental receptor to rehabilitate or restore after the activity has caused environmental change	**Reversible:** Recovery without rehabilitation		**Recoverable:** Recovery with rehabilitation		**Irreversible:** Not possible despite the action
Impact Duration (D)	**Immediate:**	**Short term:**	**Medium-term:**	**Long term:**	**Permanent:**
The length of permanence of the impact on the environmental receptor	On impact	0-5 years	5-15 years	Project life	Indefinite

CRITERIA	SCORE 1	SCORE 2	SCORE 3	SCORE 4	SCORE 5
Probability of Occurrence (P) The likelihood of an impact occurring in the absence of pertinent environmental management measures or mitigation	**Improbable**	**Low Probability**	**Probable**	**Highly Probably**	**Definite**
ENVIRONMENTAL SIGNIFICANCE = (MAGNITUDE + EXTENT + REVERSIBILITY + DURATION) x PROBABILITY					
TOTAL SCORE	**4 to 15**	**16 to 30**	**31 to 60**	**61 to 80**	**81 to 100**
ENVIRONMENTAL SIGNIFICANCE RATING	**Very low**	**Low**	**Moderate**	**High**	**Very High**

Based on impact significance criteria determined by DEAT, 1998

The Impact Rating Model Overview outlines the key criteria used to evaluate the significance of impacts arising from a proposed activity. Each criterion is described as follows:

- **Impact Magnitude (M):** This measures the degree of change caused by an activity, either to the physical environment or the Socio-Economic context. It ranges from *Very Low*, which signifies minor alterations with negligible consequences, to *Very High*, indicating substantial disruptions or transformative effects.
- **Impact Extent (E):** This criterion assesses the geographical reach of the impact. Impacts can be limited to the immediate site of activity (*Site only*), extend locally, affect a wider regional area, have national implications, or even reach an *international* scope across borders.
- **Impact Reversibility (R):** This evaluates whether the area or context affected by the activity can recover over time. Recovery may occur naturally (*Reversible*), require interventions such as rehabilitation (*Recoverable*), or be deemed *Irreversible* if restoration is not possible, leading to permanent consequences.
- **Impact Duration (D):** The time frame over which an impact persists is considered under this criterion. It ranges from *Immediate* (occurring only at the moment of the activity), *Short-term* (up to 5 years), *Medium-term* (5–15 years), and *Long-term* (the duration of the project lifecycle), to *Permanent* impacts that indefinitely affect the receptor.
- **Probability of Occurrence (P):** This criterion measures the likelihood of an impact occurring. The scale spans from *Improbable* (unlikely to occur) to *Definite* (certain to happen without intervention).

Table 24. Impact rating scoring

Criteria	Number of Points to Score				
	Score 1	Score 2	Score 3	Score 4	Score 5
Impact Magnitude (M)	Very low	Low	Medium	High	Very high
Impact Extent (E)	Site only	Local	Regional	National	International
Impact Reversibility (R)	Reversible		Recoverable		Irreversible
Impact Duration (D)	Immediate	Short Term	Medium-term	Long term	Permanent
Probability of Occurrence (P)	Improbable	Low	Medium	High	Definite

Each criterion in the impact assessment model is assigned a numeric score based on its level, ranging from 1 for the lowest severity (e.g., *Very Low*) to 5 for the highest severity (e.g., *Very High*). These scores for the criteria—*Impact Magnitude (M)*, *Impact Extent (E)*, *Impact Reversibility (R)*, and *Impact Duration (D)*—are summed together. The total is then multiplied by the score for *Probability of Occurrence (P)* to calculate the Significance (S) score.

For instance, if a project is assessed with a *Medium Magnitude* (score of 3), *Regional Extent* (score of 3), *Recoverable Reversibility* (score of 2), *Medium-term Duration* (score of 3), and a *High Probability* (score of 4), the calculation is as follows:

$S= (3+3+2+3)\times4=44$

This score of 44 places the impact in the **Moderate** category, indicating a significant effect that requires attention but may still be manageable with mitigation measures.

Table 25 uses a colour-coded system to visually represent impact severity, differentiating between **negative** and **positive** impacts.

Table 25. Impact rating scores colour codes.

Negative	Positive
Very Low	Very Low
Low	Low
Moderate	Moderate
High	High
Very High	Very High

Scores are categorised into five ranges:

- **Very Low (4-15):** Minimal impact
- **Low (16-30):** Manageable impact
- **Moderate (31-60):** Significant but manageable
- **High (61-80):** Serious impacts requiring robust mitigation
- **Very High (81-100):** Severe impacts, possibly unacceptable

Each range has a corresponding colour for easy identification, which helps in communicating the results effectively.

6.2 Impact Assessment

This section discusses the most significant socio-economic implications identified during the analysis of the project background and current socio-economic environment surrounding the proposed upgrade of the Maydon WharfBerth 5-11 and 15. The socio-economic impact analysis will determine the impact caused during the construction and operational phases of the proposed project.

6.3 Construction phase

This subsection discusses the socio-economic impacts during the construction phase of the proposed precinct. The construction phase encompasses the actual building process, as well as all related tasks such as landscaping, refurbishment, site clearance, and destruction. The following socio-economic impacts are likely to occur during the construction phase and are grouped into social impacts and economic impacts.

6.3.1 Temporary disruption of business activities at the Maydon Wharf Precinct

The temporary disruption of business activities at Maydon Wharf Berth 5-11 and 15 during the upgrade project will primarily affect businesses that rely on the berth for cargo handling, storage, and logistical operations. The disruption will occur as construction activities necessitate the partial or full closure of certain facilities, leading to delays in loading and unloading processes, reduced storage capacity, and potential logistical bottlenecks. Stakeholders directly impacted include shipping companies, freight forwarders, and ancillary service providers such as transport and warehousing firms. These disruptions could lead to temporary financial losses, increased operational costs, and strained timelines for businesses dependent on the berth's functionality. Effective communication phased construction scheduling, and temporary operational adjustments will be critical in mitigating the adverse impacts on these businesses.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Construction	Negative	High	3	2	1	3	5	45	N3 Moderate	1	2	1	3	3	21	N2 Low

Mitigations:

- Phased Construction Scheduling: Design the construction plan to occur in phases, allowing some berths or sections to remain operational while others undergo upgrades. This minimises the extent of disruptions at any given time.
- Stakeholder Engagement and Communication: Maintain transparent and regular communication with affected businesses to keep them informed about construction schedules, expected disruptions, and mitigation measures. This allows stakeholders to plan their operations effectively.
- Temporary Alternative Arrangements: Establish temporary operational facilities or utilise other berths within the Port of Durban to accommodate displaced activities. This could include reallocating vessels or redirecting cargo to nearby functional berths.
- Extended Operational Hours: Offer extended hours of operation during less active periods to handle backlogged activities and mitigate delays caused by construction.

6.3.2 Temporary Stimulation of the Regional and Local Economy

The construction activities are projected to temporarily boost the economy of the eThekwini Municipality and the KwaZulu-Natal region. Increased spending on construction materials, labour, and services is expected to contribute to regional Gross Value Added (GVA). The economic uplift will extend to businesses supplying goods and services to the project. The impact will be most pronounced during the construction phase, aligning with peak project activities, and will primarily affect businesses within the precinct and surrounding communities. While the stimulation is temporary, it holds potential for longer-term economic benefits if local businesses use this opportunity to expand their capabilities and workforce, thereby enhancing regional economic resilience.

Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Positive	Moderate	4	4	5	3	4	**64**	**P4 High**	5	4	5	3	5	**85**	**P5 Very High**

Enhancements:

- Prioritising Local Procurement: Actively engaging with local suppliers for construction materials, equipment, and services to ensure a significant portion of the expenditure remains within the eThekwini Municipality and KwaZulu-Natal region. This helps to bolster the capacity of regional businesses.

- Supporting Local Workforce Development: Providing skills development and training programs for local workers to equip them for opportunities created during the construction phase. This ensures that more individuals from the local communities benefit from the project, while also enhancing long-term employability.
- Encouraging Small and Medium Enterprises (SMEs): Establishing partnerships with local SMEs to integrate them into the project supply chain. This can include mentoring and providing support to help these businesses meet the project's quality and capacity requirements.

6.3.3 Temporary Employment Creation

eThekwini currently has an unemployment rate of 20.6% % which is lower than the provincial unemployment rate(32.6%). The project is expected to generate a significant number of temporary jobs across various skill levels, including skilled, semi-skilled, and unskilled labour. Employment will primarily benefit the local population, fostering skill development and offering experience in construction-related trades. Indirect employment in supporting sectors, such as logistics and catering, will also likely increase.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Construction	Positive	High	3	3	5	3	4	**56**	**P3 Moderate**	4	3	5	3	5	**75**	**P4 High**

Enhancements

- Local Hiring Policies: Establish and enforce policies that prioritise hiring from the local community, ensuring that residents directly benefit from the employment opportunities.
- Skills Development Programs: Introduce training initiatives to upskill the local workforce, particularly in construction-related trades. This enhances employability beyond the construction phase and contributes to long-term economic development
- Incentives for Contractors: Require contractors to allocate a percentage of their workforce to local hires as part of their contractual obligations, incentivising them to integrate local labour into their operations.
- Support for Indirect Employment: Facilitate the growth of ancillary businesses, such as catering, transportation, and equipment supply, by providing information and access to contracts related to the project.
- Capacity Building for SMEs: Offer workshops and support programs for small and medium enterprises (SMEs) to help them meet project demands, enabling them to provide goods and services and participate in the economic opportunities generated.

6.3.4 Temporary Increase in Household Income

The temporary increase in household income resulting from the Maydon Wharf berths upgrade project will positively affect workers and their families within eThekwini Municipality and surrounding areas. Construction workers, including those in direct employment on-site and individuals indirectly employed in supporting sectors like logistics, catering, and equipment supply, will experience improved financial stability due to wages earned during the construction phase. This boost in disposable income is anticipated to elevate living standards by enabling households to meet basic needs, invest in education, and access better healthcare. The economic uplift will primarily occur during the project's active construction period and will particularly benefit low-income families who rely on temporary employment opportunities for financial security

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Construction	Positive	High	3	3	5	3	4	**56**	**P3 Moderate**	4	3	5	3	4	**60**	**P3 Moderate**

Enhancements:

- Local Recruitment Policies: Prioritise hiring from the surrounding communities within eThekwini Municipality to ensure that economic benefits remain localised, directly uplifting the households most in need.
- Skills Training Initiatives: Provide pre-construction training programs for local workers to increase their employability, enabling them to secure higher-paying positions within the project and beyond.
- Fair Compensation Standards: Ensure that wages meet or exceed industry standards to maximise the financial benefits for workers and their households.
- Support for Small and Medium Enterprises (SMEs): Engage local suppliers and subcontractors to create indirect employment opportunities, thereby increasing household incomes in ancillary sectors

6.3.5 Temporary Increase in Production

The construction phase of the Maydon Wharf berths upgrade is expected to result in a temporary surge in production activities across various sectors. This increase will primarily benefit industries supplying construction materials, machinery, and associated services. Local manufacturers and suppliers within eThekwini Municipality and the KwaZulu-Natal region will experience heightened demand, creating opportunities to expand production capacities to meet

project requirements. The impact will extend to logistics providers, transportation companies, and ancillary businesses involved in supporting construction operations. This short-term boost in production will contribute to increased economic activity, enhanced business revenues, and temporary job creation in supply chain sectors, driving a ripple effect of economic benefits through the regional economy.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Construction	Positive	High	3	3	5	3	3	**42**	**P3 Moderate**	4	3	5	3	4	**60**	**P3 Moderate**

Enhancements:

- Prioritise Local Procurement: Source construction materials, machinery, and equipment from local suppliers to boost production within eThekwini and KwaZulu-Natal, thereby maximising regional economic benefits.
- Support Small and Medium Enterprises (SMEs): Engage local SMEs in the supply chain by providing technical assistance, contract opportunities, and capacity-building initiatives to enable their participation in the project.

6.3.6 Change to the Sense of Place

The construction phase will temporarily alter the local environment through increased noise, dust, and pollution from construction vehicles, machinery, and materials alongside the influx of workers. This shift may disrupt the local community's accustomed lifestyle and visual landscape; however, due to the industrial nature of the port, it is expected to be very limited.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Construction	Negative	High	3	3	3	3	3	**36**	**N3 Moderate**	1	1	1	3	3	**18**	**N2 Low**

Mitigations

- Noise Control: Implement soundproofing around construction zones to limit noise pollution.

- Minimise Construction Vehicle Movement: Reduce the number of construction vehicles by establishing dedicated transport routes for construction traffic. This will help limit congestion and the impact of heavy machinery and vehicles on the local environment.
- Staggered Working Hours: To minimise noise and disruptions during sensitive hours, such as early mornings or late evenings, construction activities can be scheduled to occur during off-peak hours. This will ensure that the local community's daily routines are less affected by construction activities.
- Effective Communication with Local Community: Proactively engage with stakeholders and businesses, informing them about the construction schedule, potential disruptions, and steps taken to mitigate impacts. Clear communication can help manage expectations and reduce community dissatisfaction.

6.4 Operational Phase

During the operation phase of the upgraded Maydon Wharf berth 5-11 and 15, several impacts are likely to arise. These impacts which are either social or economic are discussed and assessed below.

6.4.1 Local Economic Development

Local Economic Development during the operational phase of the Maydon Wharf berth upgrade will primarily stem from the enhanced cargo-handling capacity at the Port of Durban. As Maydon Wharf handles a larger volume of goods, trade-related activities such as warehousing, logistics, distribution, and customs services are expected to experience growth. This increased throughput will create a ripple effect, benefiting local businesses directly involved in these sectors and stimulating economic growth across KwaZulu-Natal. The operational phase will also likely enhance the competitiveness of the region by attracting more domestic and international businesses, thereby increasing job opportunities, fostering investments, and contributing to the overall Gross Value Added (GVA) in the region. This local economic stimulation will be driven by demand for goods and services, which, in turn, will have a positive impact on related industries such as transportation, retail, and manufacturing within eThekwini Municipality and the wider KwaZulu-Natal region.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Operational	Positive	-	4	3	5	5	4	**68**	**P4 High**						**0**	**#N/A**

6.4.2 Improved Trade Competitiveness

Improved Trade Competitiveness in the operational phase of the Maydon Wharf berths upgrade will arise from the enhanced infrastructure, which is expected to significantly improve the efficiency of cargo handling at the Port of Durban. The upgraded facilities will streamline operations by reducing turnaround times for ships, improving the speed and reliability of cargo processing, and enabling better logistics and transportation flow. As a result, the Port of Durban will become more competitive in regional and global markets, attracting both local and international trade. The increased efficiency and capacity will not only strengthen Durban's position as a key gateway for trade but also create a more favourable business environment, drawing further investments into the region. This will help the Port and KwaZulu-Natal maintain their competitive edge in the global supply chain, ultimately contributing to economic growth by fostering trade, improving connectivity, and enhancing the region's attractiveness as a logistics hub.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Operational	Positive	-	4	4	5	5	4	**72**	**P4 High**						**0**	**#N/A**

6.4.3 Employment Creation

Employment creation in the operational phase of the Maydon Wharf berths 5-11 and 15 upgrades will result from the need for operational staff and maintenance workers to support the day-to-day activities at the port. The upgrade will increase the scale and complexity of port operations, requiring a larger workforce to manage cargo handling, logistics coordination, and facility maintenance. This direct job creation will primarily benefit local communities, with long-term opportunities in a range of roles, including equipment operators, warehouse staff, and maintenance technicians. In addition to these direct positions, the upgraded infrastructure will stimulate indirect job creation in supporting sectors such as logistics, warehousing, and security. As businesses connected to the port grow in scale, the demand for services like transportation, customs clearing, and supply chain management is expected to rise, further enhancing employment opportunities across the region. The cumulative effect will contribute to a more robust labour market and support sustained economic development in KwaZulu-Natal.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	

Operational	Positive	-	2	3	5	5	3	**45**	**P3 Moderate**					**0**	**#N/A**

6.4.4 Pressure on Existing Infrastructure

Pressure on Existing Infrastructure during the operational phase of the Maydon Wharf berths 5-11 and 15 upgrade will arise from the increased cargo volumes generated by improved efficiency in the port's operations. As cargo handling capacity expands, there will likely be higher traffic volumes of both heavy trucks and rail transport in and around the port area. This intensified movement of goods will place additional pressure on the surrounding infrastructure, including local roads, rail networks, and utility services. The increased demand on transport routes could lead to congestion, delays, and potential degradation of road quality. Additionally, the strain on utility services such as water, electricity, and waste management systems may emerge as the upgraded port facilitates more business and trade activity. To manage this pressure effectively, ongoing investments in surrounding infrastructure will be essential, ensuring that transportation networks are upgraded, and service provision is optimised to meet the increased demand associated with higher operational throughput at the port.

Stage	**Character**	**Ease of Mitigation**	**Pre-Mitigation**							**Post-Mitigation**						
			(M+	**E+**	**R+**	**D)x**	**P=**	**S**		**(M+**	**E+**	**R+**	**D)x**	**P=**	**S**	
Operational	Negative	Moderate	3	3	3	4	3	**39**	**N3**	1	3	1	4	3	**27**	**N2**

Mitigations:

- Upgrading and Expanding Transportation Networks: Continuous investment in road and rail infrastructure surrounding the port is essential. This includes widening roads, improving rail connections, and constructing dedicated transport lanes for cargo movement. These measures can alleviate congestion and prevent delays caused by increased traffic volumes.
- Developing Alternative Routes: Creating alternative routes for cargo transportation can help divert traffic from heavily congested areas. This would also reduce the burden on key transport corridors, improving the overall flow of goods in and out of the port.
- Implementing Traffic Management Systems: Deploying advanced traffic management technologies, such as real-time monitoring, automated signals, and congestion-reducing systems, can optimise traffic flow and prevent bottlenecks at critical points

- Upgrading Utility Infrastructure: Proactively upgrading local utility services, including electricity, water, and waste management systems, will be necessary to meet the increased demand from businesses and the port's expanded operations. This could involve increasing capacity or expanding networks to ensure efficient service delivery.
- Strategic Phasing of Development: Implementing the upgrade in phases can prevent sudden surges in infrastructure demand. This approach allows for the gradual expansion of supporting infrastructure, ensuring that the necessary upgrades occur alongside the port's growing throughput.

6.4.5 Increased government revenue

The operational phase of the Maydon Wharf berths upgrade is expected to contribute positively to government revenue through multiple channels. As employment opportunities increase, individuals will contribute more to income tax through their wages, while businesses benefiting from the port's enhanced operations will generate higher corporate tax revenues. The expanded economic activities will also stimulate consumer spending, which will lead to greater value-added tax (VAT) collections. Additionally, businesses involved in the port's operations will contribute to other forms of taxation, including excise duties and property taxes, further boosting government income. The overall increase in economic activity driven by the upgraded infrastructure is likely to provide significant fiscal benefits to local and national government entities.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Operational	Positive	Moderate	3	3	5	4	3	**45**	**P3 Moderate**						**0**	**#N/A**

6.5 Cumulative Impacts

The assessment of cumulative impacts is a critical component of environmental analysis, as required by the Department of Environmental Affairs (DEA). Cumulative Impact refers to the combined effect of past, present, and reasonably foreseeable future activities associated with a project, including similar or diverse activities that may not individually appear significant but, when combined, can lead to a considerable overall impact. The cumulative impact assessment methodology aims to evaluate whether adding the proposed project to the specified location will elevate the area's overall environmental impact.

This assessment examines if the construction and operation of the proposed upgrades of the Maydon Wharf berth 5-11 and 15 will result in:

» An unacceptable risk to the environment or surrounding communities.

- An unacceptable loss of environmental quality, resources, or biodiversity.
- Complete or large-scale changes to the environment or the community's sense of place.
- An unacceptable increase in overall impact levels in the area.

The cumulative impact assessment results, presented below, illustrate the proposed project's combined effects alongside existing and anticipated activities in the vicinity.

6.5.1 Increased demand for utility and services

The cumulative impact of increased demand for utility services and infrastructure—arising from the Maydon Wharf berth 5-11 and 15 upgrades and other concurrent developments in eThekwini and KwaZulu-Natal—could strain regional capacity across multiple sectors. The amplified activity in freight handling, logistics, and industrial operations will likely escalate demands on water supply, electricity grids, waste management systems, roads, rail networks, and related supplementary services. This heightened usage may exceed current capacity, leading to service disruptions, infrastructure degradation, and potential inefficiencies in meeting operational and community needs. Stakeholders, including local governments, utility providers, businesses, and residents, will face challenges such as delays, increased maintenance costs, and reduced quality of services unless proactive measures are taken to enhance infrastructure resilience and resource management. The impact underscores the necessity for coordinated planning to balance economic growth with sustainable service delivery and infrastructure development.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Cumulative	Negative	Low	3	3	3	5	3	**42**	**N3**	1	3	1	5	2	**20**	**N2**

Mitigations

- Infrastructure Upgrades: Expand and modernise transport networks, including roads, railways, and port facilities, to accommodate increased capacity. Upgrade water supply systems, electricity grids, and waste management infrastructure to meet heightened demand.
- Integrated Planning and Coordination
- Develop a regional infrastructure master plan aligning all major developments to ensure balanced resource allocation.
- Establish a central coordination body to oversee the synchronisation of project timelines and mitigate cumulative pressures.

- Traffic and Logistics Management: Introduce intelligent traffic management systems to reduce congestion and optimise freight movement.

6.5.2 Enhanced Trade Competitiveness

The combined developments of the Maydon Wharf berth 5-11 and 15 upgrade, and other projects such as the Westown Industrial Precinct, the Cato Ridge Dry Port and the other port of Durban upgrades are anticipated to significantly enhance the region's trade competitiveness by improving logistical infrastructure. These improvements will facilitate faster and more efficient cargo handling and distribution, reducing operational bottlenecks and minimising transit delays. As a result, businesses operating within the logistics, export, and manufacturing sectors will benefit from reduced supply chain costs and enhanced reliability. This transformation is expected to position KwaZulu-Natal as a prominent trade hub in regional and international markets, attracting new investments and enabling businesses to expand their market reach. The cumulative impact will foster economic growth, benefiting private sector stakeholders, government revenues, and the broader community reliant on trade-driven economic activities.

Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
			(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Cumulative	Positive	Low	3	3	1	5	4	**48**	**P3**	4	5	1	5	4	**60**	**P3**

Enhancements:

- **I**nfrastructure Optimisation: Accelerate the completion of integrated transportation networks, including efficient rail systems and expanded roadways, to handle increased cargo volumes seamlessly. Establish multimodal logistics hubs to improve connectivity between ports, dry ports, and industrial zones.
- Technology Integration: Invest in advanced port and logistics technologies, such as automated cargo handling systems, digital inventory management, and real-time tracking solutions, to streamline operations. Adopt green logistics technologies to reduce the environmental footprint and align with global sustainability standards.
- Marketing and Positioning: Actively market KwaZulu-Natal as a global trade hub through targeted investment campaigns highlighting its enhanced logistical capabilities. Foster trade agreements and partnerships with regional and international markets to leverage the improved infrastructure.
- Sustainability Practices: Incorporate energy-efficient and eco-friendly practices in all logistics and industrial operations to meet international trade standards and attract environmentally conscious investors. Establish robust monitoring frameworks to ensure sustainable growth and compliance with environmental and social governance (ESG) criteria.

6.5.3 Strengthened Supply Chain Networks

The upgraded Maydon Wharf is expected to strengthen the supply chain, integrating multiple logistical and industrial facilities. This will create a robust and interconnected supply chain network. This synergy can attract additional investments, lower operational costs for businesses, and establish KwaZulu-Natal as a key logistics and industrial hub in Southern Africa

Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Positive	Low	3	3	1	5	3	**36**	**P3**	4	3	1	5	4	**52**	**P3**

Enhancements:

- Development of Integrated Infrastructure: Establish seamless connectivity between different logistical hubs such as ports, dry ports, industrial zones, and transport networks. This can include dedicated cargo rail links, upgraded road systems, and intermodal facilities that streamline goods movement across regions the development of smart infrastructure such as automated ports and digital supply chain management systems that improve cargo tracking, reduce operational bottlenecks, and increase overall efficiency.
- Implement smart solutions such as Internet of Things (IoT) devices, big data analytics, and artificial intelligence (AI) to optimise supply chain operations, predict demand, and reduce transit times. These technologies can help enhance efficiency, lower operational costs, and create a more competitive supply chain network

7 NEED AND DESIRABILITY ASSESSMENT

The "need and desirability" is considered as part of an EIA process, the content of the IDPs, SDFs, EMFs and other relevant plans, frameworks and strategies are taken into account when considering the merits of the proposed project's application for approval. An important aspect of looking at the need and desirability process is the ecological, social and economic impacts that will result because of the alignment or deviation of the proposed development to the strategies and plans of the government. As such, the EIA must specifically provide information on these impacts to be able to consider the merits of the project application. The "need and desirability" is therefore determined by benchmarking the proposed project against the interest as reflected in the IDP, SDF for Ray Nkonyeni, and as determined by the EIA and SEIA.

The feasibility and socio-economic viability of the proposed project should be considered within the context of justifiable economic development, measured against the broader societal short-term and long-term needs. While the viability considerations of the private developer might indicate if development is "do-able", the "need and desirability" will be determined by considering the broader community's needs and interests as reflected in an IDP, SDF and EMF for the area, and as determined by the EIA. While the importance of job creation and economic growth for South Africa cannot be denied, the Constitution calls for justifiable economic development. The specific needs of the broader community should therefore be considered together with the opportunity costs and distributional consequences to determine whether or not the development will result in the securing of ecological sustainable development and the promotion of justifiable social and economic development – in other words, to ensure that the development will be socially, economically and environmentally sustainable. The following questions will be addressed by the need and desirability analysis:

- Socio-economic context of the area based on strategic documents
- Spatial priorities relating to manufacturing
- Equitable impacts in the short and long term, as well as social and economically sustainable considerations
- Creation of temporary employment opportunities nearby or amongst the different communities
- Complimenting other uses in the area
- Consideration of locational factors that might favour the specific location
- Impact on the sense of history, sense of place, and heritage of the area and socio-cultural sensitivities
- Availability of labour relevant to take up the job opportunities from the development
- What potential tourism benefits and disbenefits will the project result in locally, regionally, and nationally
- The location of job opportunities versus the location of impacts
- Socio-economic impacts of the development based on the socio-economic context
- Based on the economic context, what will the benefits be to society and local communities

Table 26 The need for and desirability of the upgrade of the Maydon Wharf berth 5-11 and 15 is presented below.

Table 26: Need and Desirability Assessment

No.	Aspect	Comment
1.	**Socio-economic context of the area based on strategic documents.**	The Maydon Wharf berth 5-11 and 15 upgrade aligns with eThekwini Municipality's IDP and SDF, which prioritise economic growth and the enhancement of port infrastructure to support trade. The project addresses high unemployment and inequality by creating job opportunities and boosting regional economic activity.
2.	**Spatial Priorities Relating to Manufacturing**	The upgrade enhances the Durban-Gauteng logistics corridor, supporting the Provincial Growth and Development Strategy (PGDS). It complements regional plans by increasing capacity for handling breakbulk and bulk cargo, reinforcing Durban's role as a logistics and manufacturing hub.
3.	**Equitable impacts in the short and long term, as well as social and economically sustainable considerations**	In the short term, the construction phase will create temporary jobs and stimulate local businesses. Long-term benefits include permanent employment in logistics, warehousing, and port operations. The project contributes to sustainable urban development by optimising existing industrial land.
4.	**Creation of temporary employment opportunities nearby or amongst the different communities.**	The construction phase will generate numerous short-term jobs, with a focus on hiring local, semi-skilled, and unskilled labour. This provides income for disadvantaged groups and supports skills development initiatives for long-term employability.
5.	**Complimenting other uses in the area**	The project complements existing port activities and supports related industrial developments, such as the Cato Ridge Dry Port and logistics hubs in Hammarsdale. It enhances Durban's position as a key trade and industrial hub in Southern Africa.
6.	**Consideration of locational factors that might favour the specific location**	The strategic location of Maydon Wharf within the Port of Durban allows access to key transportation networks, including rail and road links. Its proximity to major trade routes strengthens its suitability for logistics and cargo handling.
7.	**Impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area**	The Maydon Wharf berth 5-11 and 15 has limited cultural or historical sensitivity. The industrial nature of the area minimises conflicts with heritage preservation. Community engagement will ensure any sociocultural concerns are addressed.
8.	**Availability of labour relevant to take up the job opportunities from the development of the project**	A significant pool of unskilled and semi-skilled labour is available locally, reducing commuting costs and supporting inclusive growth. Specialised skills can be developed through training partnerships with local institutions.

No.	Aspect	Comment
9.	**What potential tourism benefits and disbenefits will the project result in locally, regionally, and nationally?**	The development focuses on trade, logistics and warehousing and is not directly linked to tourism. However, its role in strengthening regional economic activities may have indirect benefits for the hospitality sector by attracting business travellers. Visual impacts and increased traffic will be managed to avoid detracting from nearby attractions.
10.	**The location of job opportunities versus the location of impacts**	Job opportunities are primarily localised, with construction and operational roles benefiting nearby communities. Regional impacts include economic growth and improved logistics infrastructure, which extend benefits beyond the immediate vicinity.
11.	**Socio-economic impacts of the development based on the socio-economic context**	The upgrade will generate significant socio-economic benefits, including job creation, improved trade efficiency, and local economic growth. It aligns with national and municipal development goals, addressing critical issues such as unemployment and inequality.
12.	**Based on the economic context, what will the benefits be to society in general and to the local communities?**	During the construction phase, the project will generate significant temporary employment opportunities across varying skill levels, with a particular focus on unskilled and semi-skilled workers from local communities. This short-term benefit is expected to provide immediate financial relief to households, boosting their disposable income. In the long term, the operational phase will sustain permanent jobs in logistics, warehousing, and port operations. The upgrade is expected to enhance the operational capacity and efficiency of the Port of Durban, solidifying its position as South Africa's busiest port and a key player in regional and global trade. These improvements are crucial for KwaZulu-Natal's economy, which depends heavily on logistics and trade. By optimising supply chains and reducing operational costs, the project will stimulate broader economic activities, attract investment, and increase the port's competitiveness in international markets. The construction and operational activities associated with the upgrade will create increased demand for local goods and services, benefiting suppliers, contractors, and service providers. This economic activity will generate a multiplier effect, supporting the growth of small and medium enterprises and fostering entrepreneurship. Ancillary industries such as transportation, security, and maintenance will also experience substantial growth,

No.	Aspect	Comment
		providing additional income streams for local businesses and communities. The upgrade will address high unemployment rates and income inequality, particularly benefiting historically disadvantaged groups. Through targeted hiring and local community development initiatives, the project will create inclusive economic opportunities, thereby addressing pressing socio-economic challenges in the region. The infrastructure improvements associated with the project will enhance local and regional connectivity, facilitating better movement of goods and people. The strategic integration of the port with other industrial hubs, such as Hammarsdale and Cato Ridge, will strengthen regional economic networks and attract further investments. These enhancements will improve logistical efficiency and contribute to the long-term growth of KwaZulu-Natal's economy. By increasing employment opportunities and improving household incomes, the project will reduce economic vulnerability and enhance the quality of life for many families. In summary, the Maydon Wharf berth 5-11 and 15 upgrade is poised to deliver extensive socio-economic benefits, addressing immediate local needs while contributing to broader regional and national development goals.

8 CONCLUSION

The upgrade of the Maydon Wharf berth 5-11 and 15 within the Port of Durban is a strategic infrastructure development aimed at addressing critical operational inefficiencies and enhancing the port's capacity to handle increasing cargo volumes. The socio-economic impacts during the construction phase are expected to be moderate, with the creation of temporary employment opportunities across various skill levels providing a short-term boost to the local economy. Additionally, increased demand for materials and services will stimulate the regional supply chain and contribute to business income and Gross Value Added (GVA). Challenges such as strain on local infrastructure and potential disruptions to the community's daily activities are anticipated during the construction phase but can be mitigated through proactive planning and stakeholder engagement.

During the operational phase, the upgraded Maydon Wharf berth 5-11 and 15 will strengthen Durban's position as a key trade and logistics hub, enhancing the port's competitiveness in regional and global markets. Long-term benefits include sustained employment in logistics and warehousing, improved trade efficiency, and strengthened local and regional economic networks. The development aligns with municipal and provincial strategic objectives, supporting sustainable urban development and inclusive economic growth.

Overall, while the upgrade poses some manageable challenges, it represents a critical investment in the future of South Africa's trade infrastructure. The project's capacity to foster economic resilience, reduce inequality, and contribute to regional development makes it a valuable asset for KwaZulu-Natal and the nation.

8.1 Summary of Assessment

As per the above assessments of both construction and operational phase impacts, the findings reveal that if the upgrade of the Maydon Wharf berth 5-11 and 15 is undertaken it is expected to have moderate to high positive impacts while having moderate to low negative impacts. Table 27 below provides a summary of the impacts assessed in this report.

Table 27. Summary of Assessment

Category	Socio-economic impacts	Character	Significance Before Mitigation/Enhancement	Significance After Mitigation/Enhancement
Construction Phase	Temporary disruption of business activities at the Maydon Wharf Berth 5-11 and 15	-	Medium	Low 21
	Temporary Stimulation of the Regional and Local Economy	+	High 64	Very High 85
	Temporary Employment Creation	+	Moderate 56	High 75
	Temporary Increase in Household Income	+	Moderate 56	Moderate 60
	Temporary increase in Production	+	Moderate 42	Moderate 60
	Change to the Sense of Place	-	Moderate 36	Low 18
Operation Phase	Local Economic Development	+	High 68	N/A
	Improved Trade Competitiveness	+	High 72	N/A
	Employment Creation	+	Moderate 45	N/A
	Increased Pressure on Existing Infrastructure	-	Moderate 39	Low 27
	Increase in government revenues	+	Moderate 45	N/A
Cumulative Impacts	Increased demand for utility and services	-	Moderate 42	Low 20
	Enhanced Trade Competitiveness	+	Moderate 48	Moderate 60
	Strengthened Supply Chain Networks	+	Moderate 36	Moderate 52

8.2 Reasoned Opinion

Therefore, the EIA finds that there are no significantly adverse or unacceptable socioeconomic impacts at a large scale therefore the proposed project should therefore be considered for development. Application of the recommended mitigation measures will ensure that the negative impacts are minimised and that the distribution of the potential benefits of the project is more balanced. It is expected that there will be significant positive economic impacts for the upgrade of the Maydon Wharf berth 5-11 and 15, but also indirect positive impacts that will be regional. It is thereby the reasoned opinion of this SEIA that the proposed upgrade of the Maydon Wharf berth 5-11 and 15 should proceed.

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ANNEXURE II. SPECIALIST CVS

Tinotenda Makoni

Education:			
Rhodes University - 2014		B Com Accounting and Economics	
Rhodes University – 2015		B Com (Hons) Economics	
Rhodes University - 2019		M Com Economics	
Professional Membership:			
Economic Society of South Africa (ESSA)			
Language Proficiency:	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent

Work Experience:

Nov 2013 – Feb 2014	Clarity Eyecare Services LLC: General Clerk Intern (USA)
Nov 2015 – June 2018	Cotrace Freight Services (Pty) Ltd: Finance Intern (Zim)
Aug 2018 – Dec 2018	MMB Logistics (Pty) Ltd: Junior Financial Analyst (Zim)
April 2019 - Present	Urban-Econ Development Economists: Development Economist (SA)

Key Skills and Experience:

Tinotenda is a senior professional Development Economist at Urban-Econ since April 2019 and is currently the Branch Manager for KwaZulu Natal. She holds a Bachelor of Commerce degree in Accounting and Economics (majoring in economics) with Honours in Economics and a Master of Commerce in Economics from Rhodes University.

The combination of accounting and economics has allowed the development of a unique skill set including developing an analytical mindset and good problem-solving skills. Tinotenda has a high quantitative aptitude with the ability to handle and analyse complex data. The economic analysis techniques that Tinotenda is familiar with are economic impact assessment modelling, cost benefit analysis, input / output analysis, value-chain analysis, and assessments in relation to economic sector analysis, socioeconomic, demographic and household surveys.

She also specializes in strategy formulation, market feasibility studies including baseline surveys and market surveys, socio-economic impact assessment studies as well as economic development within urban and rural areas.

A Selection of 2019 to date Project Experiences

Project:	Durban ICC Business Plan
Year:	2023
Location:	Durban,
Client:	KwaZulu-Natal Durban ICC
Activities:	Compiled a comprehensive business plan, pertaining to the acquisition of the Nedbank Kingsmead building. The Durban ICC has intentions to expand its footprint in the city of eThekwini through the development of the Durban ICC

	precinct. Therefore, the purchase of the Nedbank Kingsmead building would be the first step towards the expansion and the development of the precinct. The business plan provided a comprehensive roadmap outlining the development concept, market feasibility and financial projections for the purchase of the Nedbank Kingsmead building.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**Socio Economic Impact Assessment of the Reconfiguration of Mhlathuze and Umgeni Water Boards** 2023 Kwa-Zulu Natal BSRI A socio-economic impact assessment of the reconfiguration of the Mhlathuze and Umgeni Water Boards. The study involved a situational analysis and baseline profiling of all the Water Supply Areas of the two water boards in order to inform the potential impacts of the amalgamation of the water boards into a single board.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**Feasibility Study for Dube SEZ Bonded Warehouse** 2023 KwaZulu Natal Dube Tradeport Determine the market feasibility and financial viability of a bonded warehouse establishment to be located at the Dube TradePort precinct in La Mercy, KwaZulu Natal. The assessment included a detailed analysis of the viability of a public bonded storage warehouse, customs compliance requirements, and benefit of the bonded warehouse to both DTP and its tenants. Moreover, a high-level market potential assessment of the proposed bonded warehouse including demand and supply was undertaken.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**TKZN Cruise Tourism Strategy** 2023 KwaZulu Natal Tourism KwaZulu Natal Developing a strategic guide for TKZN for the purpose of identifying opportunities to grow cruise tourism in KwaZulu-Natal, outline core activities that will deliver real outcomes from cruise tourism in KwaZulu-Natal, and to signal to the cruise industry that KwaZulu-Natal is taking a proactive approach to cruise tourism development and encouraging growth. The Strategy was developed using the two main research techniques i.e., desktop literature review of relevant policies and documentation and primary research with key stakeholders through workshops, telephonic interviews, and survey questionnaires.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**Jozini Human Settlement Sector Plan** 2023 Kwa-Zulu Natal Jozini Local Municipality Developed a comprehensive Housing Sector Plan in response to the human settlement issues facing the municipality. The strategic document is intended to inform and guide the municipality with allocating resources with respect to housing and its associated social infrastructure.

Project:	**SASA Comprehensive Small-scale Sugarcane Growers Survey**
Year:	2022
Location:	Kwa-Zulu Natal & Mpumalanga
Client:	SASA
Activities Performed	A comprehensive survey and baseline research of the small-scale sugarcane growers in KZN and Mpumalanga. Robust data collection on the challenges affecting small scale sugar growers to further the development of the Small-Scale Grower Master Plan.
Project:	**Economic Assessment of the Impact of Transnet's delays on PX Warehouse**
Year:	2022
Location:	Durban, Kwa-Zulu Natal
Client:	Newlyn Investments (PTY) LTD
Activities Performed	Objectively determine the business, economic, and other socioeconomic impacts that the Newlyn Group, stakeholders, and society suffered due to the delays caused by the actions of Transnet during 2021 on the development and commissioning of elements of the PX Warehouse facility**.** Used economic modelling and various financial accounting techniques.
Project:	**Research On Leveraging on Technology: Key Considerations to Grow the KZN Audio-Visual Sector**
Year:	2021
Location:	Durban, Kwa-Zulu Natal
Client:	KZN Film Commission (KZNFC)
Activities Performed	Conducting extensive primary and secondary research, literature review, critically assessing research findings and developing recommendations thereof to advise the client on gaps and opportunities within the market.
Project:	**Govan Mbeki Local Municipality Economic Profiling**
Year:	2021
Location:	Govan Mbeki Local Municipality, Mpumalanga
Client:	Govan Mbeki Local Municipality
Activities Performed	Developing a detailed economic profile for the municipality as part of its Spatial Development Framework through extensive data collection and applying various data analysis methods and reporting on findings.
Project:	**City of uMhlathuze Local Economic Development (LED) Strategy**
Year:	2021
Location:	uMhlathuze, Kwa-Zulu Natal
Client:	City of uMhlathuze Local Municipality
Activities Performed	Provided coordinated guidance to the municipality through developing a strategic framework for local economic development with a focus on economic transformation and job creation. The drafting of the strategy included developing an extensive situational analysis using primary and secondary research, stakeholder engagements through virtual webinars and online questionnaires.
Project:	**Etham College Market Feasibility Study**
Year:	2021
Location:	Hilton, Kwa-Zulu Natal

Client: **Activities Performed**	EDINVEST Conducted a market analysis, market feasibility study and design for the proposed relocation of Etham College High School, a private school to be relocated in Hilton Pietermaritzburg from Nottingham Road in KZN. Applied various demand modelling techniques to determine demand and feasibility of the proposed school development.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**Social Long Term Trends Research** 2021 Durban, Kwa-Zulu Natal National Department of Planning, Monitoring and Evaluation Data collection and processing of large volumes of various national social data in order to establish long term national social trends as part of the development of the development of the Socio-Economic Impact Assessment System (SEIAS).
Project: **Year:** **Location:** **Client:** **Activities Performed**	**KZN Provincial Small-Town Socio-Economic Revitalization Strategy** 2020 Durban, Kwa-Zulu Natal KZN COGTA Developed a detailed strategy to give guidance to the recovery and revitalization of small towns in KZN focusing on both social and economic opportunities needed to revive them. The drafting of the strategy included developing an extensive situational analysis using primary and secondary research, stakeholder engagements, on site data collection and scenario testing to guide strategy development.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**KZN Provincial Rural and Township Economies Revitalization Strategy** 2020 Durban, Kwa-Zulu Natal KZN EDTEA and TIKZN Strategic development to give guidance to the recovery and revitalization of rural areas and townships in KZN focusing on enterprise development as a base to revitalize them. The drafting of the strategy included developing an extensive situational analysis using primary and secondary research, stakeholder engagements through virtual webinars and online questionnaires.
Project: **Year:** **Location:** **Client:** **Activities Performed**	**uShaka Marine World Socioeconomic Impact Assessment** 2020 Durban, Kwa-Zulu Natal uShaka Marine World Quantified the socio-economic impact of uShaka Marine World as part of its annual reporting to eThekwini Municipality. The assessment employed economic impact modelling using Input Output modelling and other data analysis techniques to quantify the social and economic impacts of uShaka on the broader eThekwini economy.
Project: **Year:** **Location:**	**Windsor Park Golf Course Redevelopment Market Feasibility Study** 2020 Durban, Kwa-Zulu Natal

Client:	Acqumen Pty Ltd
Activities Performed	Developed a high-level market feasibility assessment for the proposed development through market assessment of existing trends and opportunities; assessment of the feasibility of the development capturing the required supporting markets by testing the development concept through demand modelling techniques.
Project:	**Nseleni Floating Power Plant – Richards Bay Economic Impact Assessment**
Year:	2020
Location:	Richards Bay, Kwa-Zulu Natal
Client:	Anchor Energy Ltd
Activities Performed	Conducted an economic impact assessment for a proposed floating power plant development in the Richards Bay Harbor. Applied Input-Output Economic modelling to determine the economic impact of the power plant on the local, regional, and national economy.
Project:	**KZN Provincial Spatial Development Framework**
Year:	2020
Location:	Durban, Kwa-Zulu Natal
Client:	KZN COGTA
Activities Performed	Developed a detailed social and economic profile for the KZN province as part of the Provincial Spatial Development Framework through extensive data collection and applying various data analysis methods and GIS mapping to develop the profile.
Project:	**Kanzakana Shopping Centre Feasibility Study**
Year:	2019
Location:	Kanzakana, Kwa-Zulu Natal
Client:	Sibusiso Mncube
Activities Performed	Conducted a feasibility scoping for a proposed Kanzakana Shopping Centre. Developed a high-level market feasibility assessment for the proposed development through market assessment of existing trends and opportunities; assessment of the feasibility of the development capturing the required supporting markets by testing the development concept through demand modelling.
Project:	**eMondlo Commercial Centre Feasibility Study**
Year:	2019
Location:	eMondlo, Kwa-Zulu Natal
Client:	Ntokozo Kunene
Activities Performed	Developed a market feasibility assessment in terms of spatial and market catchment analysis; demographic and socio-economic profiling of the market catchment area; market segmentation; competitor supply analysis and potential Socio-Economic Impact assessment for a proposed commercial centre in eMondlo, KwaZulu Natal.
Project:	**SAS Panamax Floating Dock Market Feasibility Study**
Year:	2019
Location:	Durban, KwaZulu-Natal

Client: **Activities Performed:**	Southern African Shipyards (SAS) Compiled a comprehensively researched and analysed bankable feasibility study that reflects the commercial feasibility of a floating dock in the Durban Harbor to service Panamax vessels.
Project: **Year:** **Location:** **Client:** **Activities Performed:**	**Pietermaritzburg Canaan College Private High School Market Feasibility Study** 2019 Pietermaritzburg, KwaZulu-Natal EDINVEST Conducted a market analysis, concept refinement, market feasibility study and design for the proposed Canaan College High School, a private school to be located in Cleland Pietermaritzburg. Applied various demand modelling techniques to determine the feasibility of the proposed school development.
Project: **Year:** **Location:** **Client:** **Activities Performed:**	**eThekwini Blue Oceans Economy Framework** 2019 Durban, KwaZulu-Natal eThekwini Municipality Provided coordinated guidance to the municipality through developing a strategic framework for blue economy activities in eThekwini that will lead to local employment creation, income generation and investment and to ensure eThekwini municipality is a front runner in the broader national Operation Phakisa initiative

References:

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Stephen Karombe

Education:			
University of Witwatersrand 2023		M Com Economics	
Nelson Mandela University 2016		B Com (Hons) Economics	
Nelson Mandela University 2015		B Com Economics & Business Management	
Language Proficiency:	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent

Work Experience:

Feb 2013 – April 2023	Private Researcher & Academic Tutor
Mar 2022 – Mar 2023	Student Assistant/ Tutor: University of Witwatersrand (SEF)
April 2023 – April 2024	Economic Analyst / Researcher: Discover Thought
April 2024 - Present	Urban-Econ Development Economists: Junior Development Economist (SA)

Key Skills and Experience:

Stephen is a Junior Development Economist at Urban-Econ since April 2024. He holds a Bachelor of Commerce degree in Economics & Business Management (majoring in economics) and a Honours in Economics both from Nelson Mandela University. He also has a Master of Commerce in Economics from the University of Witwatersrand. Before Joining Urban-Econ, Stephen worked as an Economic analyst at Discover Thought, as an independent researcher and student assistant and tutor in the School of Economics and Finance (SEF) at the University of Witwatersrand. Stephen's academic and professional background has equipped him with the capacity to learn and develop research, collaborative, diversity, problem solving and communication skills enabling him to perform both qualitative and quantitative research.

A Selection of 2024 to date Project Experiences	
Project: Year: Location: Client: Position held: Activities performed:	Harry Gwala Investment Prospectus 2024 Harry Gwala, KwaZulu Natal **Harry Gwala Development Agency** Lead Researcher Situational analysis, Spatial Planning, SWOT Analysis, Policy Analysis, Industrial Sector analysis, Infrastructure Development. Investments Packaging, Feasibility studies, Social & economic impact assessment.
Project: Year: Location: Client: Project Features:	Somkhele Mine SEIA Update 2024 KwaZulu Natal MENCO Conducted a socio-economic impact assessment study to determine the impacts of the proposed Mine expansion in Mtubatuba.

Position held: Activities performed:	Researcher Urban -Econ Development Economists (Pty) Ltd was commissioned by MENCO to conduct and updated Socio-economic impact assessment on the expansion of the Somkhele Mine in Mtubatuba. The report identified and assessed the anticipated social and economic impacts of the proposed development. It then provided enhancement measures to enhance the positive impacts, and mitigation measures that could mitigate negative impacts. It further provided a specialist opinion on the need and desirability of the proposed development.
Project: Year: Location: Client: Position held: Activities performed:	**NPC Simuma Facility Upgrades SEIA** 2024 KwaZulu Natal SRK Consulting Researcher Urban -Econ Development Economists (Pty) Ltd was commissioned by SRK Consulting to conduct a Socio-economic impact assessment on the upgrade of the NPC Simuma Quarry in the Ray Nkonyeni Local Municipality. The report identified and assessed the anticipated social and economic impacts of the proposed upgrades. It then provided enhancement measures to enhance the positive impacts, and mitigation measures that could mitigate negative impacts. It further provided a specialist opinion on the need and desirability of the proposed development.
Project: **Year:** **Location:** **Client:** **Project Features:** **Position held:** **Activities Performed:**	**Nongoma SDF: Economic Assessment** 2024 Nongoma TPS Project Development Economic Assessment Lead Researcher Analysed the economic profile of the Nongoma Local Municipality (LM) in South Africa, including the Macro-Economic Profile, the Socio-Economic Profile, the Economic Profile, and the SWOT Analysis, each comprising several subsections to offer a comprehensive overview of the municipality's economic performance, social demographics, and developmental challenges.

Countries of Work Experience: South Africa

References:

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