# APPENDIX L: SOCIO-ECONOMIC ASSESSMENT REPORT

# CONTRACT NUMBER: TNPA/2024/01/0002/53232

PROVISION OF PROFESSIONAL SERVICE FOR THE FEASIBILITY AND DETAILED DESIGN INCLUDING PROCUREMENT SUPPORT AND SUPERVISION FOR BAYHEAD AND LANGEBERG ROAD UPGRADE, AT THE PORT OF DURBAN

## A SOCIO-ECONOMIC IMPACT ASSESSMENT FOR THE FEASIBILITY AND DETAILED DESIGN OF THE BAYHEAD AND LANGEBERG ROAD UPGRADE AT THE PORT OF DURBAN

## 08 SEPTEMBER 2025


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**08 September 2025**

**SUBMITTED TO**

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# PROVISION OF PROFESSIONAL SERVICE FOR THE FEASIBILITY AND DETAILED DESIGN INCLUDING PROCUREMENT SUPPORT AND SUPERVISION FOR BAYHEAD AND LANGEBERG ROAD UPGRADE, AT THE PORT OF DURBAN

## FINAL SOCIO-ECONOMIC IMPACT ASSESSMENT REPORT

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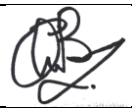
| Principal Author | Socio-Economic Specialist | Eugene de Beer |  | 08/09/2025 |
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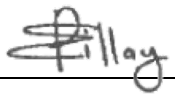
| Authorised by | Project Leader | Esmeralda Pillay |  | 08/09/2025 |

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# FINAL SOCIO-ECONOMIC IMPACT ASSESSMENT REPORT

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Project Number: TNPA/2024/01/0002/53232/RFP

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# EXECUTIVE SUMMARY

**Introduction, Purpose, and Approach**

The Socio-Economic Impact Assessment (SEIA) evaluates the proposed upgrade of Bayhead and Langeberg Roads at the Port of Durban, initiated by Transnet National Ports Authority (TNPA) to address severe traffic congestion on these critical access routes. This R900 million project spans the full lifecycle—planning, construction, and operations—assessing social and economic implications while proposing mitigations for adverse effects. The purpose is to ensure the upgrade supports sustainable development by identifying direct, indirect, and induced impacts on communities, employment, and the economy, in alignment with the National Environmental Management Act (NEMA) and Environmental Impact Assessment (EIA) regulations.

The approach is impartial and comprehensive, integrating municipal and port development plans such as the eThekwini Integrated Development Plan (IDP) and the National Ports Development Framework. These frameworks highlight the Port of Durban's role as the southern hemisphere's busiest port, handling increasing cargo volumes amid planned expansions. The assessment draws on 2011 and 2022 Census data updated with Quantec Regional Economic datasets for 2024, and economic modelling to establish a baseline. It evaluates how the upgrade will enhance logistics efficiency, reduce costs, and improve regional connectivity, while addressing worsening congestion that hampers economic growth and residents' quality of life.

**Project Description, Profile of the Surrounding Area, and Socio-Economic Area of Impact**

The project involves the feasibility study, detailed design, procurement support, and supervision for upgrading Bayhead and Langeberg Roads at the Port of Durban. These roads serve as primary access points for port operations, with the upgrade aimed at alleviating congestion through widened lanes, improved intersections, and enhanced infrastructure resilience. Valued at R900 million, the initiative includes construction over an estimated two-year period, focusing on sustainable materials and minimal environmental disruption. It aligns with TNPA's strategic objectives to support the port's expansion, handling over 60 million tons of cargo annually and facilitating trade for South Africa's economy.

The surrounding area is the Central Region of eThekwini Municipality, encompassing urban-industrial zones around the port, including residential, commercial, and logistics hubs. Spanning 87.20 km², it features high traffic volumes from heavy vehicles, impacting nearby communities like Bluff and Clairwood. The profile reveals a densely populated urban landscape with proximity to industrial activities, where port operations drive employment but also contribute to pollution and noise.

The Socio-Economic Area of Impact (AOI) covers the Central Region, with a population of 1,410,845 across 404,038 households, at a density of 3,268 persons/km² and average household size of 3.5. Demographically youthful, 31.3% are aged 0-19, 62.5% working age (20-64), and 6.1% seniors,

providing a strong labour pool. Functional literacy is 66.6% overall (81.2% for adults 20+), though varying by sub-region like Outer West at 61.2%, signalling needs for skills development.

Labor participation is high at 76.2% (above KZN's 52.5%), with an employment-to-population ratio of 44.2%. Unemployment stands at 26.8% officially (42.0% broadly), affecting 198,955 individuals. Formal sector jobs (83.5% of 1,219,557 total) are semi-skilled (47.7%), skilled (31.1%), and low-skilled (21.3%), dominated by tertiary sectors: wholesale/retail (24%), community services (22%), and finance (20%), with manufacturing at 14%. Household incomes show 9.3% with no income but a growing middle class (30.6% earning R266,511-R533,021 annually). eThekwini's GVA is R377,814 million, led by finance (24.9%), services (19.8%), and manufacturing (16.4%), with growth recovering to 1.8% post-2020 contraction.

**The Need for the Upgrade**

The upgrade is essential due to severe traffic congestion on Bayhead and Langeberg Roads, which serve as vital gateways to the Port of Durban, Africa's largest container port. Daily volumes exceed capacity, with heavy vehicles causing bottlenecks that delay cargo movement, increase logistics costs by up to 20%, and exacerbate emissions. This congestion hampers the port's efficiency, contributing to national supply chain disruptions amid rising trade demands from expansions like the Durban Container Terminal Pier 2.

Residents in surrounding areas may face reduced quality of life from noise, air pollution, and access restrictions, while economic losses mount—estimated at billions annually in delayed productivity. The eThekwini IDP identifies these roads as priority infrastructure, aligning with the National Ports Development Framework to support GDP growth. Post-COVID recovery has intensified pressures, with freight volumes rebounding but infrastructure lagging. Without intervention, congestion risks undermining the port's role in 60% of South Africa's container traffic, threatening jobs and regional connectivity.

**Identification of Socio-Economic Impacts**

The SEIA identifies a range of socio-economic impacts across the project lifecycle. In the construction phase (two years), direct impacts encompass job creation (e.g., 900 full-time equivalents) for local semi-skilled workers, boosting household incomes in high-unemployment areas (26.8% in AOI). Improved access will reduce commute times for port employees. Noise, dust, and traffic diversions pose minimal adverse social risks to nearby residents, commerce and industrial businesses.

Indirect impacts arise from supply chain demands, creating opportunities for local suppliers in materials and services, while induced effects include increased spending by workers on retail (24% of AOI jobs), stimulating community services (22%). Construction impacts overlap with ongoing port expansions, amplifying economic benefits with limited social inconveniences to residents and, commercial and industrial businesses and road users.

Operationally, direct benefits include decongested roads enhancing logistics efficiency, reducing costs and supporting GVA growth in finance (24.9%) and manufacturing (16.4%). Safer access improves resident mobility and health, lowering accident rates. Indirect operational impacts extend to regional trade, fostering business opportunities and employment retention although the number of employment opportunities created during operations is limited to the maintenance of the road infrastructure. No negative socio-economic impacts have been identified due to the operational phase of the project.

**Evaluation of the Impacts**

Impacts are evaluated using a significance matrix considering magnitude, extent, duration, frequency, and probability, rated low to high. Positive impacts score highly: construction jobs (high significance, medium-term); operational efficiency (high, permanent) boosts GVA by enhancing connectivity. Adverse impacts like construction inconvenience require no mitigations other adhering to the legislative and regulatory requirements for the upgrading of a road. Overall, benefits outweigh negatives, with net positive socio-economic value. Economic multipliers for the construction sector (R680 million investment over two years at constant values) illustrate ripple effects and indicated in the tables below. The direct, indirect and induced economic impacts during the construction and the operational phases are shown in the tables below.

Economic multiplier impacts during the construction phase over two years

| Economic Impact during the construction phase | Direct impact | Indirect impact | Induced impact | Total impact |
|---|---|---|---|---|
| Economic Production value impact in Rand | 680 000 000 | 1 187 488 733 | 901 151 008 | 2 768 639 741 |
| Gross geographic impact in Rand | 194 355 894 | 339 405 050 | 257 564 720 | 791 325 663 |
| Economic income impact in Rand | 92 713 097 | 161 905 526 | 122 865 442 | 377 484 064 |
| Full time equivalent employment during construction | 900 | 1 572 | 1 193 | 3 664 |
| Government income impact in Value Added Tax | | | | 81 319 986 |

Economic multiplier impacts per annum for 25 years of operation and maintenance activities

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| Economic Impact during the operational phase | Direct impact | Indirect impact | Induced impact | Total impact |
|---|---|---|---|---|
| Economic Production value impact in Rand per annum | 10 800 000 | 18 860 115 | 14 312 398 | 43 972 514 |

| Economic Impact during the operational phase | Direct impact | Indirect impact | Induced impact | Total impact |
|---|---|---|---|---|
| Gross geographic impact in Rand per annum | 3 086 829 | 5 390 551 | 4 090 734 | 12 568 113 |
| Economic income impact in Rand per annum | 1 472 502 | 2 571 441 | 1 951 392 | 5 995 335 |
| Full time equivalent employment per annum during operations | 15.0 | 26.3 | 19.9 | 61.2 |
| Government income impact in Value Added Tax | | | | 1 579 883 |

**Conclusions and Recommendations**

The SEIA concludes that the Bayhead and Langeberg Road upgrade will deliver substantial socio-economic benefits, significantly outweighing manageable adverse impacts. Key positives include 3,664 direct, indirect and induced construction jobs and sustained operational employment, contributing R2.77 billion in production value and R791 million in GVA, fostering inclusive growth in a region with high unemployment and a youthful demographic. Enhanced port efficiency will reduce logistics costs, support eThekwini's R5.1 billion capital budget, and align with national frameworks for resilient infrastructure. While construction disruptions pose medium-term risks to residents.

It is recommendations that the project proceed with implementation, prioritizing local procurement and skills programs for semi-skilled workers. Establish a community liaison forum for ongoing consultations, integrating environmental safeguards per NEMA.

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## ABBREVIATIONS

**AOI** - Area of Influence
**CAGR** - Compound Annual Growth Rate
**DCT** - Durban Container Terminal
**EIA** - Environmental Impact Assessment
**GIS** - Geographic Information System
**GDP** - Gross Domestic Product
**KZN** - KwaZulu-Natal
**LAP** - Local Area Plan

**LOS** - Levels of Service
**MPT** - Multi-purpose Terminal
**NEMA** - National Environmental Management Act
**QLFS** - Quarterly Labour Force Survey
**RCAMM** - Road Classification and Access Management Manual
**SEIA** - Socio-Economic Impact Assessment
**StatsSA** - Statistics South Africa
**TEUs** - Twenty-Foot Equivalent Units
**TNPA** – Transnet National Ports Authority

# 1 INTRODUCTION

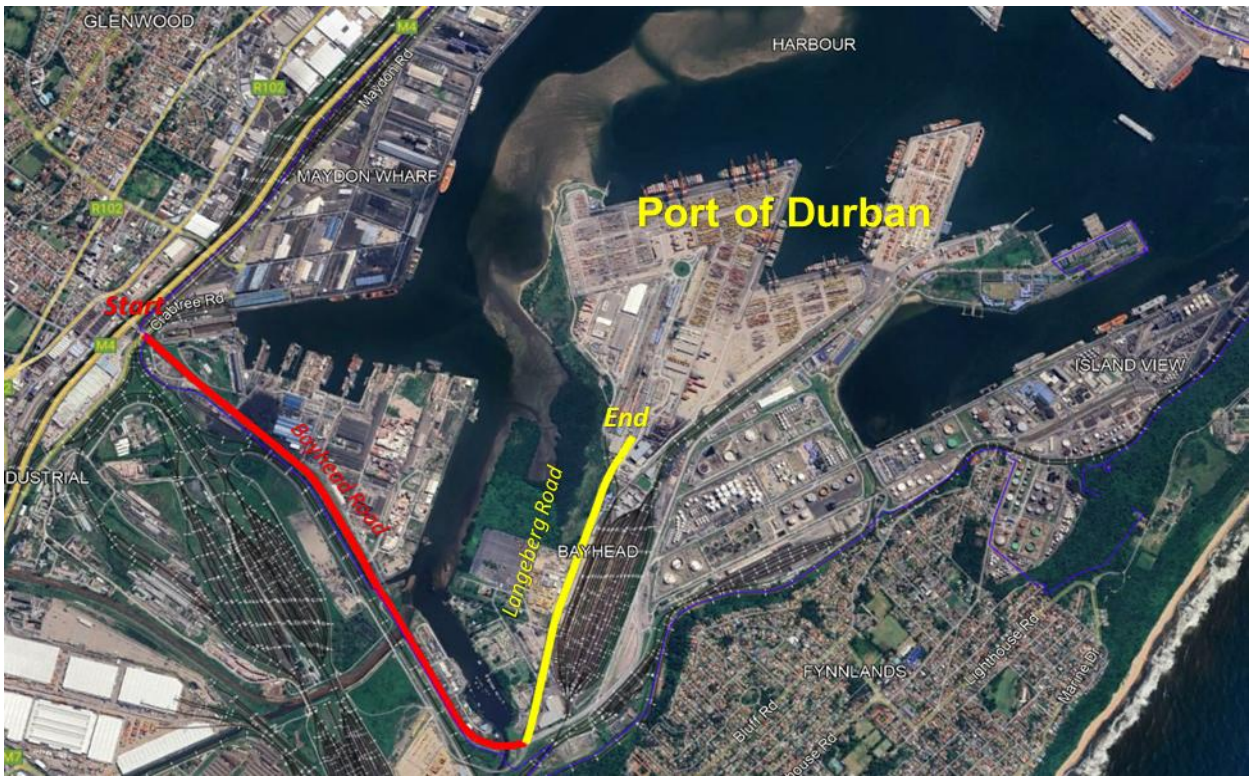
Transnet National Ports Authority (TNPA) identified the need to upgrade Bayhead and Langeberg Roads due to the congestion experienced on the roads. Figure 1 below shows a bird's eye view of the project's extent.

Bayhead and Langeberg Roads experience major traffic congestion and delays due to the high volume of heavy vehicles using the route to access the Bayhead Precinct, Durban Container Terminal (Piers 1 & 2) and Island View Precinct of the Port of Durban. The roads (particularly Bayhead Road) are generally in a poor condition and do not adequately accommodate pedestrian and vehicular movements. Considering the condition of these roads, the planned expansion of the container terminals and the development of the Bayhead Precinct, there is a need to upgrade Bayhead and Langeberg Roads, including robust pavement structures, widening of some bridges, improvements to pedestrian facilities and upgrading of associated aged infrastructure.

Key features of the upgrading project are:

- The estimated value is R900 million (excluding escalation, fees, and VAT).
- The timelines for the implementation of the project are expected to be:
    - Planning: - 16 months
    - Procurement: - 6 months
    - Construction: - 24 months.

*Figure 1: Upgrade of Bayhead and Langeberg Roads shown in red and yellow alignments*




Source: TNPA and Life Africa. Final Gap Analysis Review Report, February 2025.

## 1.1 PURPOSE OF THE SOCIO-ECONOMIC IMPACT ASSESSMENT

The purpose of this report is to conduct a socio-economic impact assessment (SEIA) of the proposed upgrading of Bayhead and Langeberg Roads. All positive and negative direct, indirect and cumulative social and economic impacts of the proposed project will be taken into consideration. Mitigations against negative impacts will be considered and recommendations formulated.

## 1.2 TERMS OF REFERENCE

The terms of reference to the project i.e., Contract Number: TNPA/2024/01/0002/53232 Provision of Professional Service for the feasibility and detailed design including procurement support and supervision for Bayhead and Langeberg Road upgrade, at the Port of Durban requires the preparation of a Socio-Economic Impact Report. No details on what is required for the Socio-Economic Impact Report or even the relevance of such a report is provided in the Terms of Reference.

## 1.3 APPROACH

The approach adopted in this research is to define a socio-economic impact assessment as the identification, analysis and evaluation of all positive and negative changes (impacts) that may affect people, communities, businesses, economic sectors or society at large at a local, regional and national scale during the full lifecycle of the intervention from planning, concept design, implementation (construction) and execution (operations) of all externally generated initiative whether of a legislative, policy, construction or operational nature.

The definition above is interpreted in its broadest meaning and account for the direct, indirect and cumulative impacts of the intended and unintended intervention for which mitigations against the negative impacts are identified.

The approach that Social Risk Research adopts is an impartial and objective assessment of the socio-economic impacts of the proposed project. Many of the social and economic impacts of a proposed development project are of a secondary nature following from the bio-physical or technical impacts. Thus, the research takes both the direct and indirect impacts of the project into account. The SEIA take the fully project cycle into account including planning, construction, operation, and decommissioning of the project as the scope requires.

The SEIA complies with the specialist requirements as indicated in the EIA Regulations and published in Government Notice No. 320 Government Gazette 43110 20 March 2020 and NEMA, 1998 (Act no. 107 OF 1998) and Notice 792 of 2012: Need and Desirability Guidelines in terms of the Environmental Impact Assessment Regulations, 2010.

## 1.4 METHODOLOGY

The following methodology was applied in completing the study.

### *1.4.1 Orientation*

The study started with gaining an understanding of the proposed project during various stages of its lifecycle and potentially affected environment. Review of data and maps provided for the project, as well as discussions with the project team, informed the delineation of the potential zone of influence

associated with each component of the project. The delineated zone of influence defined the spatial boundaries of the area to be included in the assessment and assisted in identifying likely impacted and receptor communities and economic activities, as well as other stakeholders of the project.

### *1.4.2 Policy review*

Relevant government policies and other strategic documents were gathered and reviewed to determine the alignment of the proposed project with the strategic plans of various government spheres and highlight any potential red flags, if such exist.

### *1.4.3 Baseline profiling*

Following policy review, primary and secondary data were gathered as necessary to create the socio-economic profile of the delineated zone of influence. The baseline profile assisted in understanding the communities and economic activities that may be affected by the proposed project. Specific attention was paid to the socio-economic composition of the area affected by the project's footprint and its potential environmental effects, i.e. visual, noise, air pollution, etc.

### *1.4.4 Impact analysis and evaluation*

Derived from the review of the project and the recipient environment, a list of negative and positive socio-economic impacts that can ensue because of the proposed activity during various stages of its life cycle, was drawn up and analysed further. All the identified socio-economic impacts were assessed and categorised in line with the rating system.

### *1.4.5 Economic impact assessment*

There are various econometric models through which the economic impact of new developments can be determined. Relevant models include the Input-Output (IO), Social Accounting (SAM), Computable General Equilibrium (CGE) models. Input-Output (IO) models provide a detailed analysis of the flow of products and resources within a given economy and between that economy and the outside world. Better yet, such models can be used to estimate economic multipliers for specific industries variables. The multipliers, in turn, form the basis for economic impact analysis, where the contribution of specific industries to a local economy or the effects of a given policy, event or investment can be estimated in terms of jobs and income creation.

Social Accounting Models (SAMs) are an extension of input–output analysis and provide far greater detail about the relationships between sectors of the economy, social groups, and economic agents. It helps with the understanding of important interrelationships between structural features of an economy and the distribution of income and expenditure among household groups. This information is useful for making decisions about policies that affect things like income distribution and economic growth. The SAM breaks down households into different groups based on things like jobs and skills, so we can see how each group contributes to the economy. It's a helpful tool for keeping track of how well a country is doing economically and socially. (Statistics South Africa. , 2014)

Thus, to determine the economic impact of the project a Social Accounting Model is used. This model has been used in several TNPA Port related projects such as the assessment of the Richards Bay Port

Expansion, Socio-Economic Studies For The Durban Logistics Hub Programme and Boegoebaai Port Development Socio Economic Studies and Social Economic Benefit Report (Social Risk Research, 2024).

This technique involves the development of a base economic scenario model that allows the quantification of economic factors. That takes the following into consideration:

- Economic growth scenarios
- Direct, indirect, and induced economic impacts during construction and operational phases
- Economic Outputs – GVA, production, income, taxes and employment.

The costs, benefits and impact of the project is in the form of new investment which in this case, is the construction and operation of the new dry dock. The economic effects may be viewed in terms of:

- Value added
- Personal income (including wages)
- Business output (or sales volume)
- Wealth (including property values)
- Employment creation as decent and full-time equivalent jobs.

These measures are indicators of improvement in the economic well-being of residents which is a goal of investment projects. The impact assessment usually addresses the quantification of, inter alia:

- Capital projects
- Operational revenue stream
- Other relevant transaction flows
- Employment expenditure
- Operational expenditure
- Development spending.

### *1.4.6 Formulation of mitigation and enhancement measure*

Following the analysis and ranking of impacts, mitigation and enhancement measures, where applicable, were formulated whereby recommendations to reduce or eliminate the potential negative effects on the affected parties and enhance positive impacts were provided.

## 1.5 CONTEXTUAL PLANS AND POLICIES

The following plans, policies and reports are considered as part of the assessment of the socio-economic impacts of the upgrades of Bayhead and Langeberg Roads. The policies and plans are incorporated into the analysis in Section 2 of the report.

**Municipal Plans and Policies**

- eThekwini Spatial Development Framework, 2024
- eThekwini Integrated Development Plan, 2024
- eThekwini Integrated Freight and Logistics Strategic Framework and Action Plan, 2015
- Back of Port Local Area Plan, 2014
- eThekwini Municipality Industrial Land Study and Industrial Land Strategy Development, 2014
- Bluff Precinct Plan, 2022
- Clairwood Logistics Hub.

**Transnet and Port of Durban Plans and Studies**

- National Port Development Framework Plans, 2022 Update.

- Transnet. Port of Duban Master Plan. September 2024.
- Port of Durban Precinct Plans: Bayhead Park Precinct Plan Concept Report, 2021 (Arup).
- Island View, Bluff and Ambrose Park Precinct Plan, 2017 (WSP).
- Capacity Expansion Plans of the Durban Port Terminal and the Port of Ngqura, Presentation, 15 June 2022.
- Socio-Economic Studies for the Durban Logistics Hub Programme, Integrated Report, 2022.

## 1.6 REPORT OUTLINE

The report consists of the following main sections:

1 Introduction
2 The Project and Its Surroundings
3 Socio-Economic Area of Impact
4. Need for the Upgrades
5. Identifying Potential Socio-Economic Impacts
6. Impact Evaluation
7. Conclusions And Recommendation.

# 2 THE PROJECT AND ITS SURROUNDINGS

The Port of Durban is the busiest port in the southern hemisphere and is operated by the Transnet National Ports Authority (TNPA). The Port of Durban serves the KwaZulu-Natal province and the Gauteng region as well as the Southern African hinterland. The main commodities handled in the Port of Durban are containers, automotive, liquid bulk and dry bulk and break-bulk cargo. The Port of Durban currently consists of six precincts, as indicated in Figure 2 and Table 1.

*Figure 2 : Durban Port Precincts and Surrounding Areas*[1]


*Source: TNPA GIS Data; ESRI Satellite Data*

*Table 1: Port of Durban precincts and surrounding urban neighbourhoods*

| Fig. 2 Ref No. | Precincts/ Neighbourhoods | Description |
|---|---|---|
| **A** | **Bayhead** | Ship repair, boat building and engineering manufacturing businesses at the south-western end of the Port. |
| **B** | **Maydon Wharf** | Multi-cargo break-bulk and dry bulk operations along the western edge of the Port. |
| **C** | **Durban Container Terminal** | Container handling facilities (Pier 1 and 2) within the central southern part of the Port. |
| **D** | **Island View** | Sustained liquid bulk sector along the south-eastern edge of the Port. |
| **E** | **Point** | Well-developed cruise industry and auto industries along the north-eastern edge of the Port. |

[1] WSP and Urban Planning Design Services. Study of the Development of New Project Facility in the Port of Durban. November 2024.

| Fig. 2 Ref No. | Precincts/ Neighbourhoods | Description |
|---|---|---|
| F | **Victoria Embankment** | Small craft harbour and yacht basin at Victoria Embankment along the northern edge of the Port. |
| G | **Congella** | Industrial, logistics and mixed-use area |
| H | **Umbilo** | Predominantly residential area to the northwest of the Port. |
| I | **Bluff** | Predominantly residential area to the southeast of the Port. |
| J | **Durban Beachfront** | Recreational and tourism area to the northeast of the Port. |
| K | **Durban CBD** | Mixed use and commercial area to the north of the Port. |

Figure 3 shows the major land-uses in the vicinity of the proposed upgrading of Bayhead and Langeberg Roads. The port and its surrounding support areas may all be classified as light industrial areas. This means that the immediate environment within which the road upgrading will take place is part of the port environment busy with heavy vehicle traffic, warehousing, storage, commercial and light industrial activity. The residential areas of Umbilo and Bluff are close by and "shielded" from the intended road upgrade area by the light industrial and transport / logistic activities.

*Figure 3: Major land-uses of the port and surrounding areas*

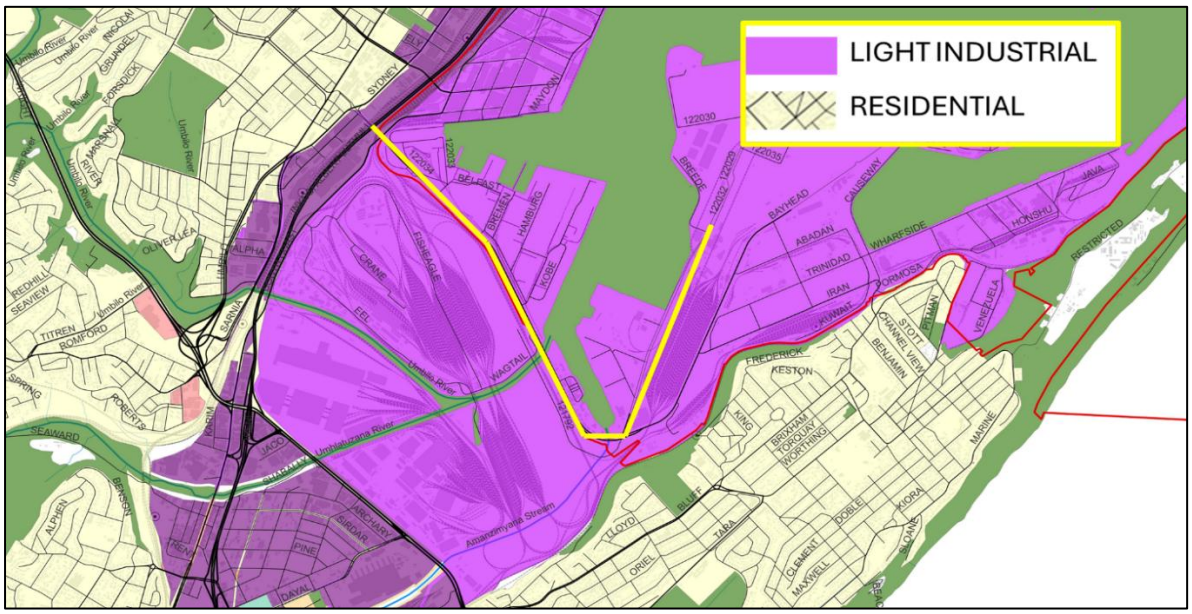
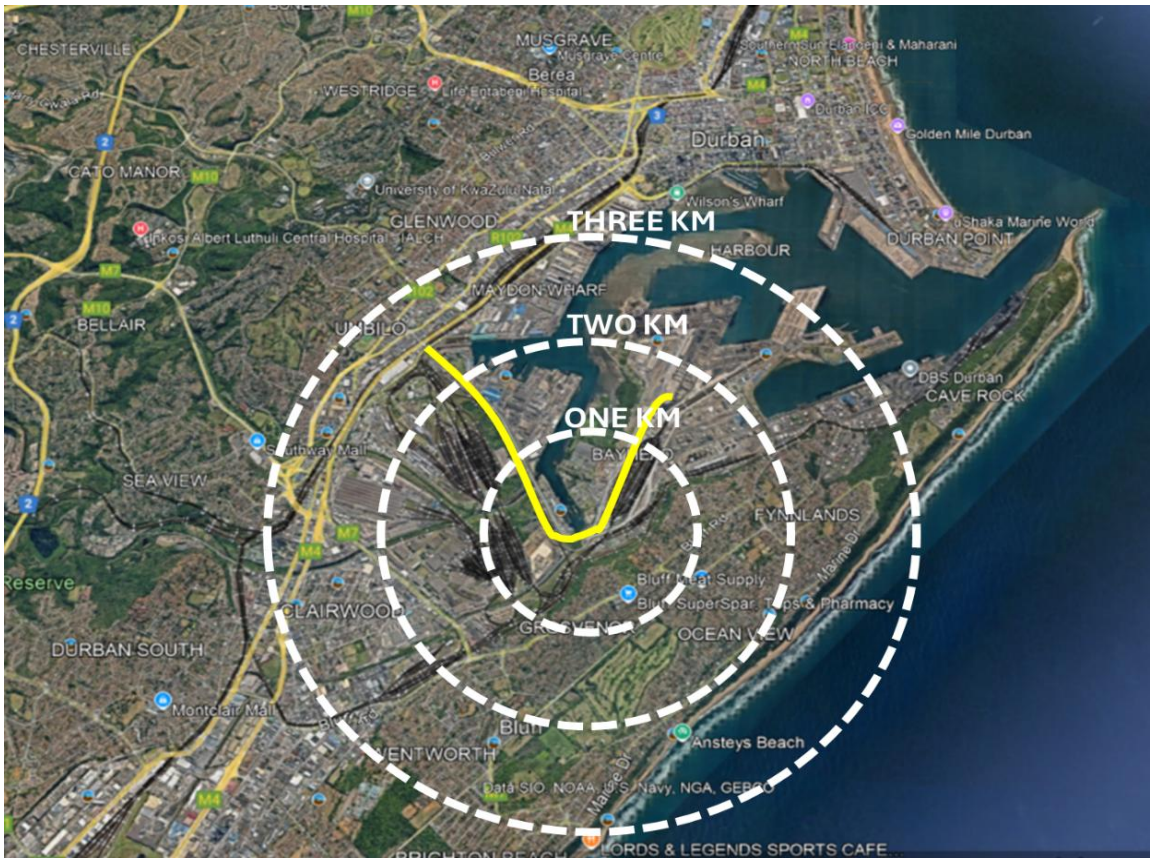



Figure 4 show the distances from the Bayhead and Langeberg Road junction. As described above, the proposed road upgrading area is surrounded by the port and its supporting industrial and logistics activities. The residential area of the Bruff is within one kilometre from the junction of Bayhead and Langeberg Road and has a western facing view across the harbour and its logistical, industrial and commercially related activities. Umbilo is on the west of the roads about one kilometre from the start point of the Bayhead upgrade area. Between Umbilo and Bayhead Road is Congella which is mainly a commercial and mixed-use strip of activities. Clairwood and the back-of-Port area is within two kilometres from Bayhead Road. In this case Clairwood and the back-of-port area is separated from

Bayhead Road by Ambrose Park which is a vast railway shunting area and thus shielded from any impacts from the Bayhead Road upgrade area.

*Figure 4: Approximate alignment and distances from the Bayhead and Langeberg Road junction*




## 2.1 Major Road Linkages

The Bayhead precinct has access from Bayhead Road, which is classified as a Class 3 Minor Arterial Road in terms of the South African Road Classification and Access Management Manual (RCAMM). Bayhead Road connects the precinct to South Coast Road, the M4 and the R102 in the west and the Durban Container Terminal precinct (via Langeberg Road), Island View precinct and Bluff area (via Iran Road) in the east. South Coast Road, the M4 and the R102 connect to the N2 via the M7 to the southwest of the precinct.

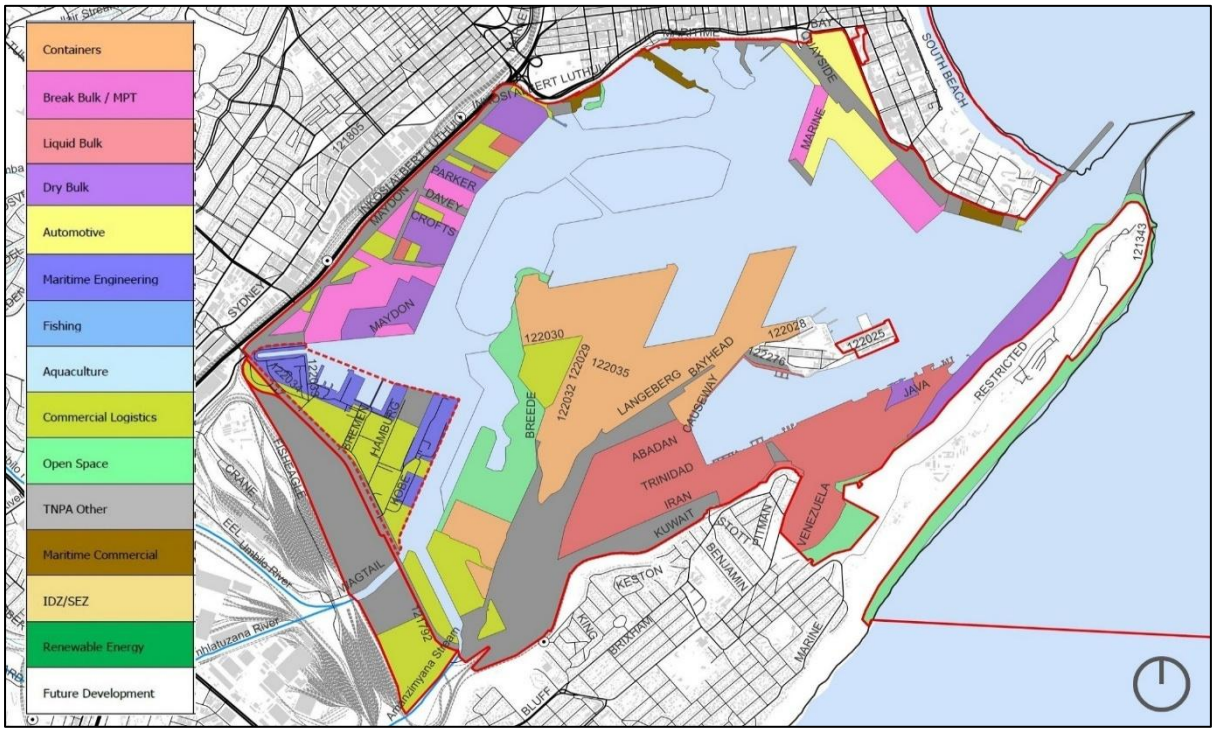
## 2.2 Land Uses in the Port of Durban

Figures 5 and 6 indicate the distribution of existing land uses within the Port of Durban. The key existing land uses are:

- Durban Container Terminal – Containers.
- Island View – liquid bulk
- Bayhead – Ship repair and engineering workshops
- Ambrose Park – TNPA Other and Commercial Logistics
- Grunter Gully – Commercial Logistics, TNPA Other and Containers
- Maydon Wharf – Dry Bulk, Break Bulk / MPT, TNPA Other and Commercial Logistics

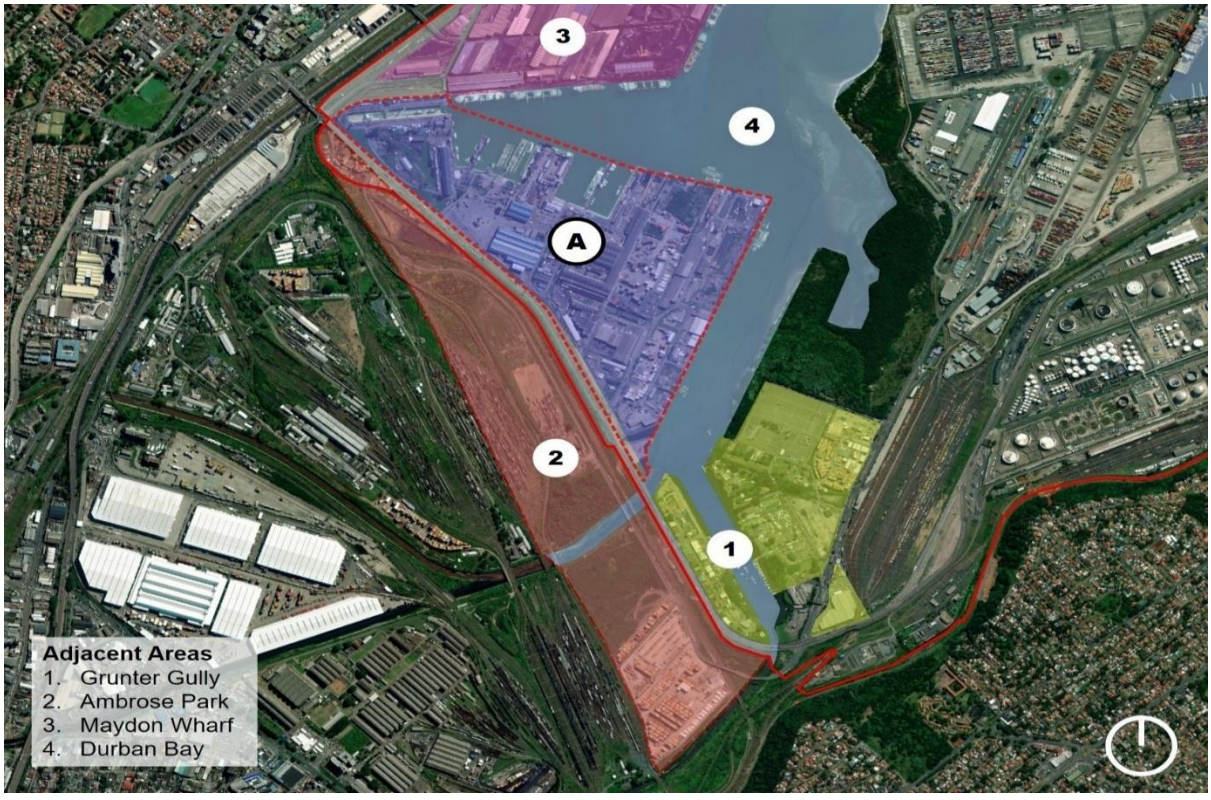
- Mangrove Swamps – Open Space.

*Figure 5 : Existing Land Uses in the Port of Durban*




*Source: TNPA GIS Data*

*Figure 6 : Bayhead Precinct and Adjacent Areas with Bayhead Road*




*Source: WSP; ESRI Satellite Data*

## 2.3 Bayhead Precinct[2]

The Bayhead Precinct is defined as the area bounded by Bayhead Road to the southwest, Maydon Wharf to the north, Durban Bay to the northeast and the Umlatuzana River and silt channel to the southeast. The Bayhead Precinct is known for land used for commercial logistics uses and ship repair facilities. As the ship repair/boat building precinct the Bayhead Precinct contain facilities for ship repair, boat building and engineering workshops and includes the Prince Edward Graving Dock, the Dormac floating docks, the SA Shipyards and various quays and berthing facilities. The Bayhead precinct is adjoined by the areas of Grunter Gully to the southeast, Ambrose Park to the southwest, Maydon Wharf to the north and Durban Bay to the northeast and east.

## 2.4 Grunter Gully

Grunter Gully is the area of land between Bayhead Road to the southwest, Durban Bay to the north and west, Langeberg Road to the east and the mangrove swamps to the north. Grunter Gully includes a mix of uses including warehousing and engineering services, the Bluff Yacht Club and leisure craft facilities, the Transnet Maritime School of Excellence and MSC warehousing and facilities. Grunter Gully is flanked by Bayhead precinct to the northwest, Ambrose Park to the southwest and Durban Container Precinct and Island View Precinct to the northeast.

## 2.5 Ambrose Park

Ambrose Park is a largely undeveloped land parcel located outside of the current Port boundaries adjacent to the Bayhead Park Precinct. The area has been identified as a potential location for commercial / logistics uses, truck staging and other support functions for the Port. Ambrose Park is flanked by Bayhead precinct to the north, Grunter Gully to the northeast and Bayhead rail yard to the southwest.

## 2.6 Island View

The Island View Precinct is the liquid bulk terminal and petro-chemical hub in the Port of Durban. Most of the land is occupied by terminal operators involved in the movement and storage of South Africa's petrol, diesel, chemicals, aviation fuel and vegetable oils. Access to Island view is obtained by the extension of Bayhead Road rather than Langeberg Road. The terminal is adversely affected by the congestion along Bayhead Road and will benefit from the proposed road upgrades.

## 2.7 Maydon Wharf

Maydon Wharf is the area between the Bayhead Precinct and the Victoria Embankment area to the north. The area has a range of existing industrial, commercial logistics and other uses and is a major break bulk and dry bulk handling precinct in the Port.

## 2.8 Bluff

The Bluff comprises of seven suburbs namely Brighton Beach, Grosvenor, King's Rest, Ocean View, Fynnland, Treasure Beach, and Wentworth. The Bluff is one of Durban's most prominent landmarks and host nature parks boasting birdlife and wildlife, and exciting attractions tourism and recreational

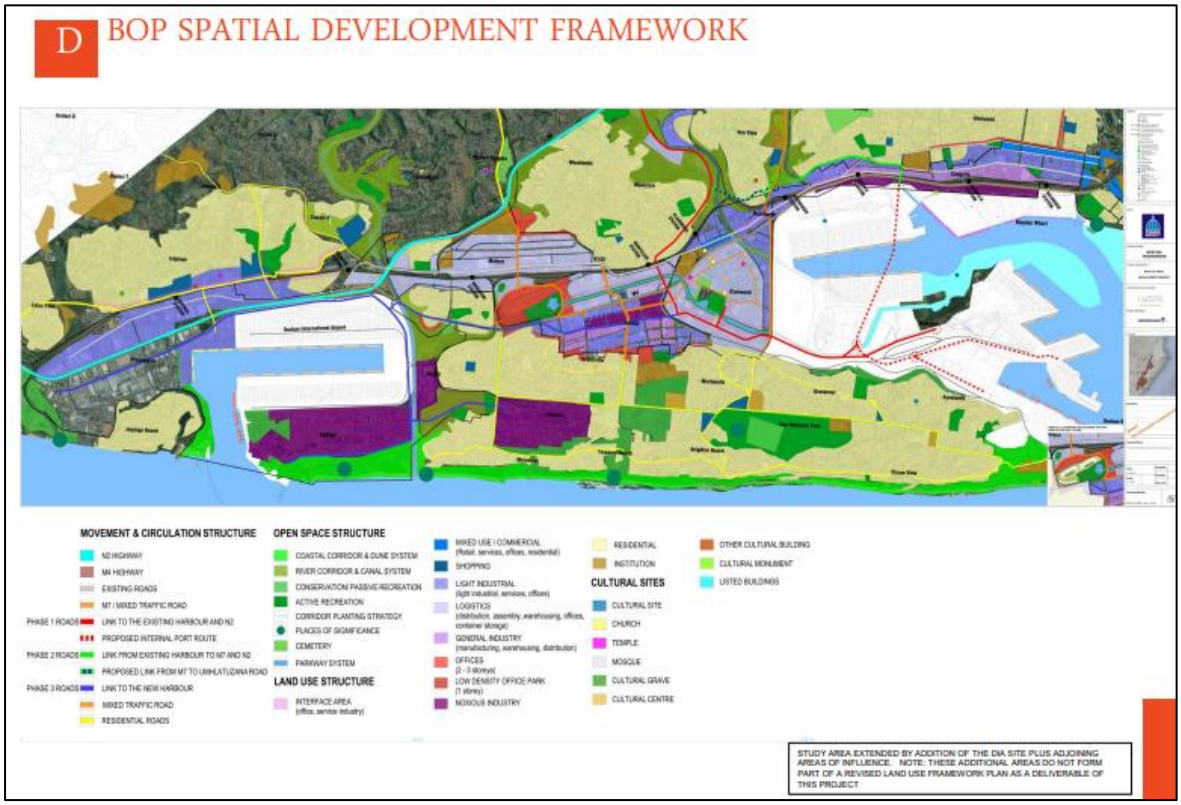
[2] WSP Study of the Development of New Project Facility in the Port of Durban Bayhead Precinct Development Framework Plan November 2024. and Urban Planning Design Services.

activities. Mainly a residential area, the mixture of residential homes and large industries in the basin creates a challenge for all those who live and work in the area. Air pollution, water pollution, overcrowding and litter are some of the problems that residents and industries need to deal with. There is no direct access from Bayhead and Langeberg Roads to the Bluff.

## 2.9 Back of Port area

The Back of Port Local Area Plan (LAP) was generated in 2014. Amongst others, the LAP recommended that the Clairwood area be rezoned from 'residential' to 'industrial' to better facilitate a transition toward a logistics hub. The factors motivating this transition were Clairwood's proximity to the port of Durban and that rezoning Clairwood would make moving freight into and out of the port easier.[3]

*Figure 7: Back of Port Framework Plan, 2014*




## 2.10 Durban Bay

Durban Bay is the large estuarine water body adjoining the north-eastern edge of the Bayhead precinct. Durban Bay is a significant environmental and biodiversity asset for the region and provides the vessel navigation channels for the Port of Durban operations.

## 2.11 Rail Network

The Bayhead Precinct is connected to the rail network via a rail line crossing Bayhead Road approximately mid-way between Bayhead Park Entrance A and B. From the Bayhead Road crossing,

[3]iAfrica April 5, 2023, and South African Freight News, 12 Aug 2022

the rail network extends along the western edge of the precinct, through the open space area along Clydebank Road and terminates at the south-eastern corner of the precinct before the Umhlatuzana River. There are also rail lines extending to the northwest of the precinct, which terminates to the west of Workshop 24, and extending along the edges of Bremen Road, Hamburg Road and Rotterdam Road. The rail network in the surrounding port area includes four rail yards (Bayhead, Maydon Wharf, Kings Rest and Point rail yards) and rail lines in Ambrose Park west of Bayhead Road and in Maydon Wharf north of the precinct.

## 2.12 Short-term layout plan - Port of Durban

The short-term future Port of Durban capital expansion plans are shown in Figure 8. Note that No. 4 on the list refers to the Bayhead and Langeberg Roads upgrade.

*Figure 8: Port of Durban Master Plan. September 2024*


Source: Transnet. Port of Duban Master Plan. September 2024

## 2.13 Summary of land-uses around Bayhead and Langeberg Roads

The following Figures 9 to 14 provides a summary of the major land-uses abutting onto Bayhead and Langeberg Roads that will benefit from the decongestion of the two roads. The following are important to note within the context of the socio-economic impacts that this project focuses on:

- Bayhead and Langeberg Roads are located central to the Port of Durban main functional areas such as the Bayhead precinct, Gunter Gully, Ambrose Park, Durban Container Terminal and the Liquid Bulk Terminal. All these areas will benefit from the upgrades of the roads and the decongestion of the road networks without any significant negative impacts.

*Figure 9: Bayhead Road intersection with South Coast Road buffered from Congella and Umbilo by commercial, light industrial and main roads*

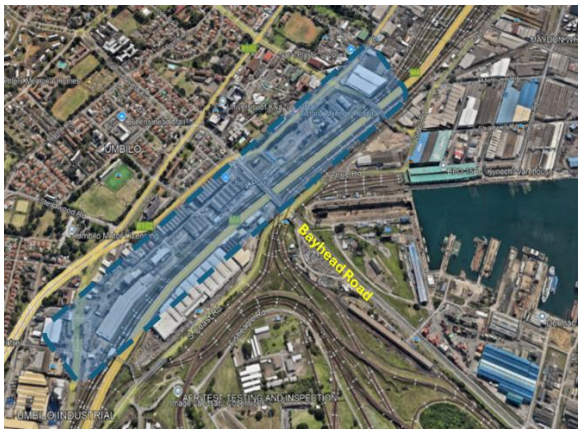



*Figure 10: Bayhead Road along the Bayhead Precinct, Gunter Gully and Ambrose Park*

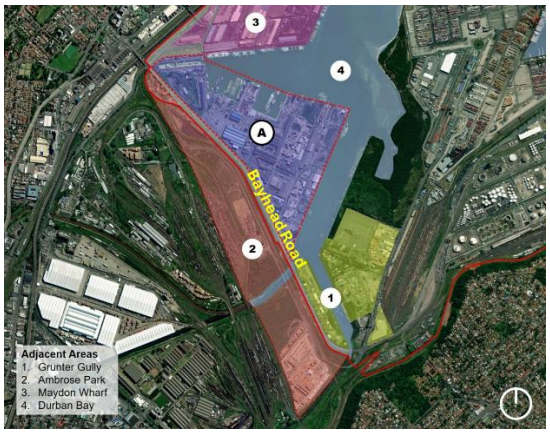



*Figure 11: Bayhead and Langeberg Road junction partly buffered from the Bluff by the rail network and warehouses*


*Figure 12: Langeberg Road leading to the Durban Container Terminal*


*Figure 13: Social facilities accessed from Langeberg Road*

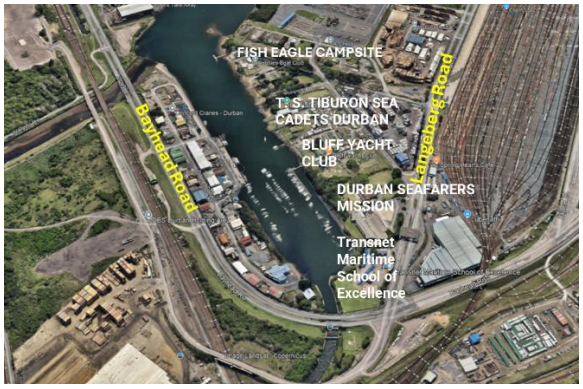



*Figure 14: View of the Bluff from Bayhead and Langeberg Road junction*

- The residential areas i.e., Congella, Umbilo, Clairwood and the Bluff, although located within 1 to 3 km from Bayhead and Langeberg Roads, are partially protected from the upgrade activities by the industrial, commercial, port and logistics activities that exist between the roads and them. The

term “protected” are used advisedly in this context since these neighbourhoods are under great pressure from the Port and its associated industrial and logistical activities. These conditions are however pre-existing and the additional contribution that the construction phase of the Bayhead and Langeberg Roads upgrades will bring about, is negligibly small. Once upgraded, all land-uses in the area including the residential areas will benefit from the decongestion of the road networks.

- The western slopes of the Bluff may experience some visual impact during the construction phase of the Bayhead and Langeberg Roads upgrades. However, the view that the Bluff has over the port and its hive of logistic activities is pre-existing. Thus, the impact of the road upgrades will be negligibly small compared to the nature and extent of the activities that are already taking place in the Port and surroundings daily.
- The social recreational and education facilities in Grunter Gully will benefit from the upgrade of the Bayhead and Langeberg Roads with little negative effects during the construction period which is no worse from the congestion being experienced already. Improved traffic management systems and signalling will have a positive impact on all land-uses.

# 3 SOCIO-ECONOMIC AREA OF IMPACT

The geographical region, referred to as the Area of Influence (AOI) for which the socio-economic baseline is determined, is grounded in the understanding that the land-uses and communities situated near the study area may undergo socio-economic changes stemming from both the construction and operational phases of the project. Table 2 and Figure 15 indicate the approximate AOI identified for this project. It should be noted that in socio-economic terms an area of influence is not a definitive area as trading and communication interactions are not constrained to boundaries.

*Table 2: Sub-places within the Area of Influence (AOI)*

| No. | Sub-Place Name | AREA ($KM^2$) |
|---|---|---|
| 1 | Bayhead | 12.07 |
| 2 | Bellair | 3.37 |
| 3 | Berea | 24.68 |
| 4 | Bluff | 21.68 |
| 5 | Carrington Heights | 0.93 |
| 6 | Clairwood | 2.76 |
| 7 | Congella | 3.10 |
| 8 | Fynnlands | 1.81 |
| 9 | Glenmore | 0.34 |
| 10 | Mobeni East | 3.73 |
| 11 | Mobeni West | 2.90 |
| 12 | Montclair | 3.83 |
| 13 | Mowat | 0.93 |
| 14 | Sea View | 3.26 |
| 15 | Woodlands | 1.80 |
| Total area | | 87.20 |

Source: Municipal Demarcation Board.

The area of influence defined for this study is related to but not confined to the boundaries established by the Municipal Demarcation Board. The statistical data that relates to these boundaries is the Central Region of the eThekwini Municipality. The area of influence is determined mainly by the distance of the communities and land-uses from the project area and includes those areas which may experience positive and negative impacts emanating from project.

The AOI in practice vary considerable between the social and economic impacts. The social impacts tend to be more restricted to the AOI as indicated and relates to communities that lives closer to the project area. The economic impacts of the upgrading of the roads extends well beyond the boundaries of the AOI and relates to those areas from where the contractors will draw their labour and also to the logistical benefits of the upgraded road which may extent to as far as Cato Ridge and beyond.

*Figure 15: Approximate delineation of the area of direct influence (Central Region of eThekwini)*


Source: Adjusted from Google Maps, 2025

## 3.1 SOCIO-ECONOMIC PROFILING OF THE RECIPIENT ENVIRONMENT

The purpose of this section is to provide a profile of the AOI. It is important to note that the area of influence of the economic impacts and systems in larger than that of the social impacts. Whereas most of the social impacts will be focussed on the areas around the Port of Durban and limited to those communities that will experience positive and negative social impacts due to the establishment of the project, the economic impacts often extend beyond the immediate environment to the rest of eThekwini and into the larger regional and provincial impacts.

### *3.1.1 Demographic characteristics of eThekwini and Sub-Regions, 2024*

Table 3 provides a comprehensive snapshot of demographic characteristics across eThekwini municipality and its sub-regions—AIO (Central), Outer West, North, and South—based on 2024 data from Quantec Standardised Regional Data. This analysis highlights key patterns in population distribution, density, household dynamics, and age structures, offering insights into urban planning, resource allocation, and socio-economic needs in this vibrant South African region.

Starting with total population, eThekwini boasts over 4.16 million residents, underscoring its status as a major urban hub. The sub-regions vary significantly: the North leads with nearly 1.39 million people, followed closely by AIO (Central) at 1.41 million, while Outer West is the smallest at 400,511. This

distribution reflects urban concentration, with the North and Central areas likely serving as economic engines, attracting migrants and supporting denser communities. The South, with 962,790 residents, and Outer West represent more peripheral zones, possibly with semi-rural elements.

The relatively high household density in the AOI indicates that the positive and negative direct socio-economic impacts will be concentrated to that area. This is because the AOI has a sufficiently large number of households, and by implication population, to meet the threshold requirements of the project in terms of its labour supply and support services. The direct social benefits will therefore mainly accrue to the AOI and not spill-over significantly to further outlying areas. This will assist in targeting interventions in a more focused way to meet the local socio-economic needs, ultimately supporting the long-term sustainability of the area's development.

*Table 3: Summary of comparable demographic information of the Area of Influence (Central Region), 2024*

| ETHEKWINI | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Total Population | 4 163 039 | 1 410 845 | 400 511 | 1 388 893 | 962 790 |
| Average household size | 3.7 | 3.5 | 4.2 | 3.5 | 3.9 |
| Number of households | 1 139 089 | 404 038 | 95 679 | 394 302 | 245 070 |
| Household density / Sq km | 450 | 936 | 136 | 654 | 310 |
| Population density / Sq km | 1 646 | 3 268 | 569 | 2 305 | 1 217 |
| Area (Square kilometre) | 2 529 | 432 | 703 | 603 | 791 |
| Population: Age 0 TO 19 | 1 351 445 | 442 122 | 149 949 | 427 840 | 331 535 |
| Population: Age 20 TO 64 | 2 556 277 | 882 175 | 226 130 | 873 081 | 574 892 |
| Population: Age 64 TO 80+ | 255 316 | 86 548 | 24 432 | 87 973 | 56 363 |

Source: Quantec Standardised Regional Data, accessed September 2025

Density metrics reveal stark contrasts in spatial organization. eThekwini's overall population density stands at 1,646 people per square kilometre across 2,529 km², but this masks intra-regional disparities. AIO (Central) is the most crowded at 3,268 per km² over just 432 km², indicating intense urbanization, high-rise developments, and potential strain on infrastructure like transport and housing. In contrast, Outer West's low density of 569 per km² across 703 km² suggests sprawling landscapes, with agricultural or natural reserves, offering breathing room but challenging service delivery. Household density follows suit, peaking in Central at 936 per km² and dipping to 136 in Outer West, which could imply larger plots or less intensive land use in outlying areas.

Household dynamics provide further distinction. The average household size is 3.7 across eThekwini, ranging from 3.5 in Central and North to 4.2 in Outer West. This variation might stem from cultural factors, economic pressures, or family structures—larger households in Outer West indicate extended families or rural traditions. Total households exceed 1.13 million, with North hosting the most at 394,302, aligning with its population lead.

Age demographics paint a youthful picture, with 1.35 million (32%) aged 0-19, signalling high demand for education and youth services. The working-age group (20-64) dominates at 2.55 million (61%), a boon for labour markets and a pressure point for employment creation. Seniors (64-80+) number

255,316 (6%), with proportional distribution across sub-regions, though absolute figures are highest in North. This aging segment, while small, will grow, necessitating healthcare and pension provisions.

Overall, the data illustrates eThekwini's dynamic mosaic: a densely packed core in Central contrasting with sparser peripheries like Outer West. These patterns suggest priorities for sustainable development—tackling overcrowding in urban hotspots while enhancing connectivity in outer areas. With a growing population, investments in infrastructure could mitigate inequalities, fostering inclusive growth in this diverse region.

### *3.1.2 Education Profile Analysis for eThekwini and Sub-Regions in 2024*

Table 4 presents a detailed overview of the education profile across eThekwini municipality and its sub-regions—AIO (Central), Outer West, North, and South—drawing from 2024 data in Quantec Standardised Regional Data. It focuses on functional literacy and illiteracy rates, distinguishing between the total population and adults aged 20+, providing valuable insights into educational attainment, workforce readiness, and potential socio-economic disparities in this key South African urban area.

*Table 4: Summary of the Education Profile, 2024*

| | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Total population | 4 163 039 | 1 410 845 | 400 511 | 1 388 893 | 962 790 |
| Adults 20+ years — Total | 2 803 473 | 967 450 | 248 881 | 959 267 | 627 875 |
| Total — Functionally illiterate | 1 223 838 | 396 408 | 142 586 | 392 680 | 292 165 |
| Adults 20+ years — Functionally illiterate | 366 114 | 116 010 | 46 102 | 122 894 | 81 107 |
| Total — Functional illiteracy rate (%) | 29.5 | 31.5 | 35.8 | 28.3 | 30.5 |
| Adults 20+ years — Functional illiteracy rate (%) | 13.1 | 13.1 | 18.5 | 12.8 | 12.9 |
| Total — Functionally literate | 2 750 812 | 938 341 | 244 256 | 935 454 | 632 761 |
| Adults 20+ years — Functionally literate | 2 278 616 | 785 795 | 191 405 | 785 545 | 515 871 |
| Total — Functional literacy rate (%) | 66.2 | 66.6 | 61.2 | 67.4 | 66.0 |
| Adults 20+ years — Functional literacy rate (%) | 81.3 | 81.2 | 76.9 | 81.9 | 82.2 |

Source: Quantec Standardised Regional Data, accessed September 2025

eThekwini's total population exceeds 4.16 million, with adults 20+ comprising about 2.80 million (67%), highlighting a mature demographic base. Functional literacy is defined here as the ability to engage effectively with written information in daily life, while illiteracy rates indicate barriers to such engagement. Overall, the municipality shows a functional literacy rate of 66.2% for the total population, rising to 81.3% among adults 20+. This suggests that while a majority are literate, nearly

one-third (29.5%) of the total population remains functionally illiterate, totalling 1.22 million people. Among adults, illiteracy drops to 13.1% (366,114 individuals), implying that challenges are more pronounced in younger cohorts, possibly due to ongoing education access issues.

Sub-regional variations reveal uneven development. Outer West stands out with the highest total functional illiteracy rate at 35.8% and the lowest literacy rate at 61.2%, affecting 142,586 people overall and 46,102 adults (18.5% adult illiteracy rate). This region's smaller population (400,511) and potentially rural characteristics may contribute to limited educational infrastructure, exacerbating inequalities. In contrast, the North exhibits the strongest performance, with a total literacy rate of 67.4% and the lowest adult illiteracy at 12.8% (122,894 adults illiterate out of 959,267). Its large population (1.39 million) and urban proximity likely support better schooling outcomes.

The AOI (Central Region) mirrors municipal averages closely, with 66.6% total literacy and 81.2% adult literacy, but its dense population (1.41 million) means a substantial illiterate group: 396,408 overall and 116,010 adults. The South follows suit at 66.0% total literacy, with slightly higher adult literacy (82.2%), though it has 292,165 functionally illiterate individuals in total.

These figures underscore eThekwini's progress in adult education, where over 80% literacy prevails, fostering economic participation. However, the higher illiteracy among the broader population signals urgent needs for youth interventions, such as improved schooling and vocational training. Outer West's lag points to targeted investments in peripheral areas to bridge gaps. Overall, enhancing literacy could drive productivity, reduce poverty, and support inclusive growth, aligning with national development goals.

### *3.1.3 Labour Profile in eThekwini in 2025*

The development at Durban Harbour offers significant economic growth and job creation potential. Understanding employment and income dynamics in the AOI, alongside comparative data from KwaZulu-Natal (KZN) and eThekwini, is essential for evaluating the project's socio-economic impacts. This analysis will evaluate labour force participation, employment, and income levels to guide strategic planning for the project. A summary of this profile is presented in the table below. The most recent labour data available is from the Quarterly Labour Force Survey (QLFS) for Q2 2025 (April to June 2025), published by Statistics South Africa. This represents the latest quarterly figures as of June 2025.

Table 5 presents key labour indicators for KwaZulu-Natal (KZN), eThekwini municipality, and the Area of Influence (AOI), based on the Labour Force Survey (LFS) for Q2 2025. The data emphasizes LFS's superiority over Quantec 2024 estimates for accuracy and recency, though AOI figures are extrapolated from eThekwini profiles due to LFS limitations. This snapshot reveals eThekwini's relatively robust labour market within the province, amid persistent unemployment challenges, offering insights for policy and economic planning.

*Table 5: Labour statistics for eThekwini, 2025 Q2*[4]

| Labour indicators | KZN | eThekwini | AOI (estimated) |
|---|---|---|---|
| Working-age population (15–64 years): | 7 732 000 | 2 714 000 | 622 080 |
| Labour force: | 4 058 000 | 2 067 000 | 473 780 |
| Employed | 2 702 000 | 1 199 000 | 274 824 |
| Unemployed (Official) | 1 356 000 | 868 000 | 198 955 |
| Not economically active: | 3 674 000 | 647 000 | 148 300 |
| Labour force participation rate: | 52,5% | 76,2% | 76,2% |
| Employment-to-population ratio: | 35,0% | 44,2% | 44,2% |
| Official (Narrow)[5] | 33,4% | 26,8% | 26,8% |
| Expanded (Broad)[6] | 47,9% | 42,0% | 42,0% |

Source: Labour Force Survey, 2025 Q2; AOI extrapolated from the eThekwini profile.

The working-age population (15-64 years) in KZN totals 7.73 million, with eThekwini accounting for about 35% at 2.71 million, and AOI at 622,080—roughly 23% of eThekwini's figure, reflecting its focused urban core. The labour force stands at 4.06 million provincially, with eThekwini contributing 2.07 million (51%) and AOI 473,780. Employment figures show 2.70 million jobs in KZN, including 1.20 million in eThekwini (44%) and 274,824 in AOI, indicating eThekwini's role as a job hub, likely driven by sectors like manufacturing, tourism, and services.

Unemployment remains a critical issue. Officially, KZN has 1.36 million unemployed, with eThekwini at 868,000 and AOI at 198,955. Not economically active individuals number 3.67 million in KZN, dropping sharply to 647,000 in eThekwini and 148,300 in AOI, suggesting higher engagement in urban settings.

Rates provide deeper context. eThekwini's labour force participation rate of 76.2% (mirrored in AOI) far exceeds KZN's 52.5%, signalling stronger workforce involvement, possibly due to urban opportunities and migration. The employment-to-population ratio is 44.2% for eThekwini and AOI, compared to KZN's 35.0%, highlighting better job absorption in the municipality.

Unemployment rates underscore disparities. The official (narrow) rate, counting only active jobseekers, is 33.4% in KZN but lower at 26.8% in eThekwini and AOI, indicating relatively better prospects. However, the expanded (broad) rate, including discouraged workers, climbs to 47.9% provincially and 42.0% in eThekwini/AOI, revealing hidden underutilization—many may subsist in informal economies without formal seeking.

[4] Note: the data from the Labour Forse Survey (LFS) is used in this table as it is the more accurate, comprehensive and it is more recent data than the Quantec 2024 information which is derived from the extrapolated 2022 census data. It is also noted that the Quantec data differs from the formal LFS data. However, the LFS data does not go beyond the eThekwini level so that the AOI profiles are, in this instance, derived from the Quantec eThekwini regional profiles.

[5] The official (narrow) unemployment rate includes only those actively seeking work in the past four weeks.

[6] The expanded (broad) unemployment rate includes discouraged work-seekers who want to work but have stopped actively looking for work. These workers often participate in the informal economy.

Overall, the data portrays eThekwini as a provincial bright spot with higher participation and lower unemployment than KZN averages, fostering economic vitality in AOI. Yet, broad unemployment near 42% signals structural issues like skills mismatches, youth joblessness, and informal sector vulnerabilities. Policymakers could prioritize skills training, entrepreneurship support, and infrastructure to sustain momentum, addressing inequalities for inclusive growth.

### *3.1.4 Labour Skills Levels in eThekwini in 2024*

Table 6 outlines the labour skills profile in eThekwini municipality and its sub-regions—Central, Outer West, North, and South—for 2024, sourced from Quantec Regional Economic Data. It details employment numbers across formal and informal sectors, with a focus on skill levels in the formal sector (skilled, semi-skilled, low-skilled), alongside percentage distributions. The data illuminates the workforce composition, economic maturity, and potential areas for skills development in one of South Africa's largest urban economies.

*Table 6: Labour Skills Levels in eThekwini, 2024*

| Indicators | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Employment: Total (Number) | 1 219 557 | 444 000 | 89 052 | 439 816 | 246 689 |
| Employment, formal sector: Total (Number) | 1 018 409 | 372 825 | 71 967 | 369 235 | 204 382 |
| Employment, formal sector: Skilled (Number) | 316 626 | 116 444 | 21 650 | 117 084 | 61 448 |
| Employment, formal sector: Semi-skilled (Number) | 485 341 | 179 192 | 30 629 | 178 024 | 97 496 |
| Employment, formal sector: Low skilled (Number) | 216 442 | 77 188 | 19 688 | 74 127 | 45 438 |
| Total — Employment: Informal (Number) | 201 148 | 71 175 | 17 086 | 70 581 | 42 306 |
| Employment, formal sector: Skilled (%) | 31.1 | 31.2 | 30.1 | 31.7 | 30.1 |
| Employment, formal sector: Semi-skilled (%) | 47.7 | 48.1 | 42.6 | 48.2 | 47.7 |
| Employment, formal sector: Low skilled (%) | 21.3 | 20.7 | 27.4 | 20.1 | 22.2 |

Source: Quantec Regional Economic Data, sourced September 2025

Total employment in eThekwini reaches 1,219,557, with the formal sector dominating at 1,018,409 (83.5%) and informal at 201,148 (16.5%). This high formalization rate suggests a structured economy driven by industries like manufacturing, services, and logistics. The Central and North regions lead in absolute employment, with 444,000 and 439,816 respectively, reflecting their urban density and commercial hubs. The South follows at 246,689, while Outer West lags at 89,052, likely due to its more rural or peri-urban character, which may limit job opportunities.

Within the formal sector, semi-skilled workers form the largest group at 485,341 (47.7%), indicating a workforce geared toward mid-level roles in sectors like construction, retail, and administration. Skilled workers total 316,626 (31.1%), pointing to a solid base of professionals in technical, managerial, or specialized fields. Low-skilled employment stands at 216,442 (21.3%), often in labour-intensive jobs. These proportions highlight eThekwini's transition toward a knowledge-based economy, though the significant semi- and low-skilled segments underscore vulnerabilities to automation and economic shifts. Percentages are relatively uniform, with semi-skilled ranging from 42.6% in Outer West to 48.2% in North, and skilled hovering around 30-32%. However, Outer West deviates with a higher low-skilled share (27.4%) and lower semi-skilled (42.6%), suggesting less diversified employment and greater reliance on basic labour, possibly in agriculture or small-scale enterprises. Central and North show balanced profiles, with skilled at 31.2% and 31.7%, aligning with their economic vibrancy. The South mirrors the municipal average closely.

Informal employment, at 16.5% overall, is highest in absolute terms in Central (71,175) and North (70,581), potentially absorbing migrants or those excluded from formal jobs. This sector's presence signals entrepreneurial activity but also precarity, with limited social protections.

Overall, the data portrays a resilient labour market with room for upskilling initiatives to boost skilled proportions, particularly in Outer West. Enhancing vocational training could reduce low-skilled dependency, foster inclusivity, and align with national goals for economic growth amid unemployment challenges.

### *3.1.5 Employment per economic sector in eThekwini in 2024*

Table 7 details employment distribution across Standard Industrial Classification (SIC) sectors in eThekwini municipality and its sub-regions—AIO (Central), Outer West, North, and South—for 2024, sourced from Quantec Regional Economic Data. With total employment at 1,219,557, the data underscores eThekwini's diverse economy, blending service-oriented dominance with manufacturing and primary activities, reflecting its role as a commercial and industrial powerhouse in South Africa.
The tertiary sector overwhelmingly leads, employing over 70% of the workforce. Wholesale and retail trade, catering, and accommodation tops the list at 291,898 jobs (24%), driven by tourism, consumer markets, and Durban's port-related trade. Community, social, and personal services follow at 267,185 (22%), encompassing education, health, and other essential services, highlighting investments in human capital. Finance, insurance, real estate, and business services add 249,556 (20%), signalling a maturing knowledge economy with professional hubs in urban centres.

*Table 7: Employment by economic sector in eThekwini, 2024*

| 2024 Employment per SIC Classification | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Agriculture, forestry and fishing [QSIC 1] | 19 963 | 4 495 | 4 034 | 6 689 | 4 745 |
| Mining and quarrying [QSIC 2] | 503 | 177 | 79 | 156 | 91 |
| Manufacturing [QSIC 3] | 165 624 | 60 556 | 12 545 | 57 336 | 35 187 |
| Electricity, gas and water [QSIC 4] | 4 218 | 1 655 | 330 | 1 435 | 798 |

| 2024 Employment per SIC Classification | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Construction [QSIC 5] | 70 794 | 25 869 | 5 625 | 24 948 | 14 352 |
| Wholesale and retail trade, catering and accommodation [QSIC 6] | 291 898 | 107 207 | 18 331 | 107 756 | 58 604 |
| Transport, storage and communication [QSIC 7] | 69 519 | 25 359 | 4 128 | 25 679 | 14 353 |
| Finance, insurance, real estate and business services [QSIC 8] | 249 556 | 91 661 | 17 960 | 92 270 | 47 665 |
| General government [QSIC 91] | 80 296 | 29 529 | 5 096 | 29 072 | 16 599 |
| Community, social and personal services [QSIC 92-96, 99] | 267 185 | 97 492 | 20 924 | 94 476 | 54 294 |
| Employment: Total (Number) All SIC Classification | 1 219 557 | 444 000 | 89 052 | 439 816 | 246 689 |

Source: Quantec Regional Economic Data, sourced September 2025

Primary sectors are minimal: agriculture, forestry, and fishing at 19,963 (1.6%), and mining at just 503 (<0.1%), reflecting urban land use priorities. Utilities (electricity, gas, water) are small at 4,218. Secondary industries contribute significantly, with manufacturing at 165,624 (14%), in automotive, chemicals, and textiles, supporting export-oriented growth. Construction employs 70,794 (6%), tied to infrastructure projects amid urbanization. Transport, storage, and communication at 69,519 (6%) benefits from logistical advantages, including the busiest port in Africa. General government roles total 80,296 (7%), indicating public sector stability.

Sub-regional patterns reveal economic specialization. Central and North dominate absolutes, with 444,000 and 439,816 jobs respectively, mirroring their population densities. Both excel in trade (107,207 and 107,756), finance (91,661 and 92,270), and manufacturing (60,556 and 57,336), as urban cores host corporate and industrial zones. The South, at 246,689 jobs, follows suit but at a smaller scale. Outer West, with only 89,052 employed, shows relative strength in agriculture (4,034, or 20% of municipal total) and mining, suggesting rural-agricultural leanings, while lagging in services (e.g., trade at 18,331).

These distributions highlight eThekwini's service-led growth, with potential for job creation in high-value sectors like finance and transport. However, Outer West's underrepresentation signals regional imbalances, necessitating targeted development to leverage agriculture or eco-tourism. Amid national unemployment, diversifying into green industries could enhance resilience and inclusivity.

The AOI's household income distribution is distinct from KZN and eThekwini. Notably, 9.3% of AOI households report no income, slightly higher than eThekwini's 9.2% and significantly higher than KZN's 5.4%, indicating economic vulnerability. Conversely, only 0.9% of AOI households earn between R1 and R8,328 annually, the lowest of the three areas. The AOI has fewer households in the R16,658 to R66,628 income brackets, at 6.3% and 6.7%, compared to eThekwini and KZN. However, a remarkable 30.6% of households fall within the R266,511 to R533,021 range, marking a significant low emerging middle-class presence, surpassing eThekwini (11.9%) and KZN (9.8%). A summary of household income levels is presented in the table below.

*Table 8: Household Income Profile, 2024*

| Annual Household Income | KZN | ETHEKWINI | AOI | |
|---|---|---|---|---|
| No income | 5.4% | 9.2% | 9.3% | Very Low Income |
| R1 - R8 328 | 1.7% | 2.3% | 0.9% | |
| R8 329 - R16 657 | 2.4% | 2.0% | 1.6% | |
| R16 658 - R33 314 | 17.4% | 10.0% | 6.3% | |
| R33 315 - R66 628 | 23.4% | 14.2% | 6.7% | Low Income |
| R66 629 - R133 255 | 11.8% | 10.9% | 10.6% | |
| R133 256 - R266 510 | 8.5% | 9.6% | 15.9% | |
| R266 511 - R533 021 | 9.8% | 11.9% | 30.6% | Low emerging middle-class |
| R533 022 - R1 066 042 | 13.8% | 18.3% | 12.1% | Emerging middle class |
| R1 066 043 - R2 132 084 | 4.9% | 9.8% | 0.6% | Realized middle class |
| R2 132 085 - R4 264 168 | 0.5% | 1.1% | 1.4% | Emerging affluent |
| R4 264 169 and more | 0.4% | 0.6% | 3.9% | Affluent and wealthy |

Source: Derived from Quantec Regional Economic Data.

While the AOI has fewer households in middle income categories (R266 511 to R2 132 084), it leads in the R4,264,169 and above category, with 3.9% classified as affluent. The AOI's income profile indicates a varied economic landscape, with many moving into the low emerging middle-class. The high percentage of households with no income highlights the need for socio-economic interventions in the AOI.

## 3.2 ECONOMIC PROFILE

Economic statistics for profiling the economy is not available at the sub-place level, rendering it difficult to accurately determine the statistics for the AOI. To create a profile that closely approximates the characteristics of the AOI, economic data from the eThekwini Central Planning Region have been utilised. It is important to acknowledge that the Central Planning Region encompasses a significantly larger area than the AOI. The leading national economic indicators driving the South African economic in 2024 are shown in the table below. The national economic growth has decelerated in recent years, slowing to an estimated 0.7% in 2017, negative rates during the Covid-19 2020 period and is slowly recovering to 1.8% in 2024. Unemployment, poverty, and inequality in South Africa are amongst the highest in the world and remains a national a challenge.

*Table 9: Leading economic indicators*

| LEADING ECONOMIC INDICATORS | INDICATOR | PERIOD |
|---|---|---|
| Real GDP growth rate % pa | 1.8 | Jun-24 |
| Gross saving as % of GDP | 14.1 | Jun-24 |
| Foreign Debt as % of GDP | 41.5 | Jun-23 |
| National government balance as % of GDP (Fiscal year) | -6.0 | Dec-23 |

Source: Reserve Bank of South Africa, 2025

Analysing the Gross Value Added (GVA) contribution by sector offers insights into the region's key economic drivers and highlights potential areas for growth and development. The following figure illustrates the relative GVA contributions made by the ten major economic sectors in eThekwini.

Table 10 presents eThekwini's GDP contributions by sector and region for 2024, expressed in percentages and absolute values (R millions) at 2015 constant prices, sourced from Quantec Regional Economic Data in September 2025. The data covers eThekwini overall and sub-regions: AOI (Central), Outer West, North, and South, highlighting economic structures through tables and a bar graph.

*Table 10: eThekwini GDP contribution per sector and per region, % 2024 in 2015 constant values*

| | ETHEKWINI | AOI (CENTRAL) | OUTER WEST | NORTH | SOUTH |
|---|---|---|---|---|---|
| Agriculture, forestry and fishing [QSIC 1] | 1.3 | 0.9 | 2.9 | 1.2 | 1.4 |
| Mining and quarrying [QSIC 2] | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 |
| Manufacturing [QSIC 3] | 16.4 | 16.1 | 17.7 | 15.3 | 18.3 |
| Electricity, gas and water [QSIC 4] | 2.1 | 2.4 | 2.2 | 2.0 | 1.9 |
| Construction [QSIC 5] | 2.8 | 2.8 | 3.2 | 2.6 | 3.2 |
| Wholesale and retail trade, catering and accommodation [QSIC 6] | 13.5 | 13.5 | 11.9 | 13.9 | 13.2 |
| Transport, storage and communication [QSIC 7] | 11.9 | 12.1 | 9.2 | 12.2 | 12.2 |
| Finance, insurance, real estate and business services [QSIC 8] | 24.9 | 24.7 | 27.3 | 25.9 | 22.5 |
| General government [QSIC 91] | 7.2 | 7.4 | 5.9 | 7.2 | 7.3 |
| Community, social and personal services [QSIC 92-96, 99] | 19.8 | 19.9 | 19.5 | 19.6 | 19.9 |
| eThekwini (ETH) — Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Quantec Regional Economic Data, sourced September 2025

In percentage terms, the finance, insurance, real estate, and business services sector dominates at 24.9% of eThekwini's total GDP, followed by community, social, and personal services at 19.8%, and manufacturing at 16.4%. This underscores a service-oriented economy, with tertiary sectors comprising over 70% of output. Primary sectors like agriculture (1.3%) and mining (0.1%) are minimal, while secondary sectors such as manufacturing and construction (2.8%) play supporting roles. Wholesale and retail trade (13.5%) and transport (11.9%) reflect trade and logistics strengths.

Regional variations show Outer West with higher agriculture (2.9%) and finance (27.3%), but lower transport (9.2%), suggesting a mix of rural and financial activities. North leads in finance (25.9%) and wholesale (13.9%), while South emphasizes manufacturing (18.3%) and construction (3.2%). Central closely aligns with municipal averages, with slight elevations in utilities (2.4%) and government (7.4%).

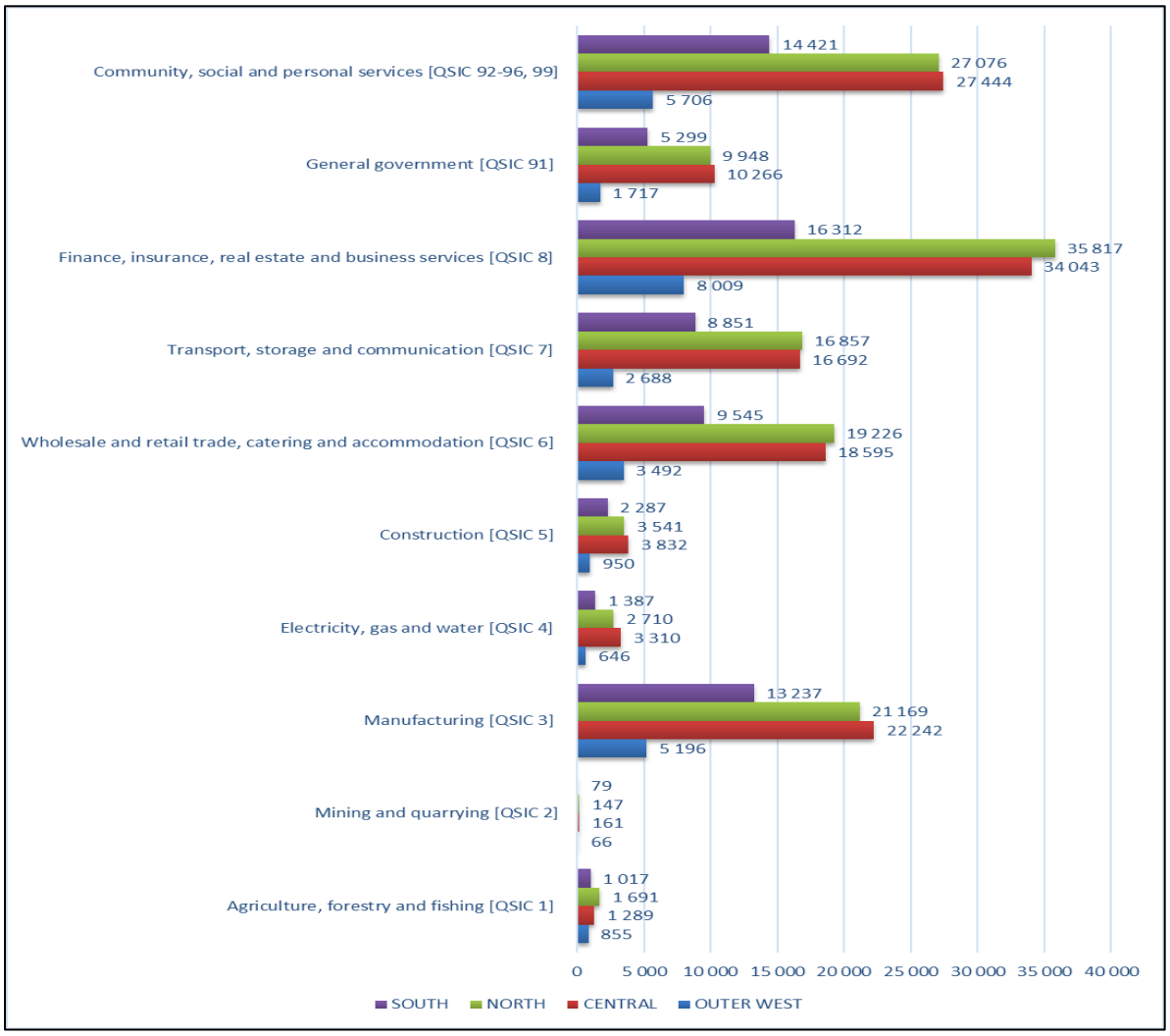
Absolute figures total R377,814 million for eThekwini, with North contributing the most at R138,181 million, followed by Central (R137,875 million), South (R72,433 million), and Outer West (R29,325

million). Finance tops absolutes at R94,180 million overall, with North at R35,817 million. Community services follow at R74,647 million, and manufacturing at R61,844 million, where Central (R22,242 million) and North (R21,169 million) dominate. Smaller sectors like mining (R454 million) are negligible.

The bar graph visually compares these absolutes across sectors, with horizontal bars for each region and total. It illustrates North and Central's outsized roles in finance (R35,817 and R34,043 million) and community services (R27,076 and R27,444 million), while Outer West lags across most, except in finance (R8,009 million). This visualization emphasizes sectoral imbalances, with totals in orange bars highlighting eThekwini's aggregate scale.

Overall, the data reveals a finance-driven economy with regional specializations: urban cores in Central and North fuelling services and industry, while Outer West remains peripheral. These patterns indicate opportunities for balanced growth through sector diversification.

*Figure 16: eThekwini GDP contribution per sector and per region, Rand million 2024 in 2015 constant values*

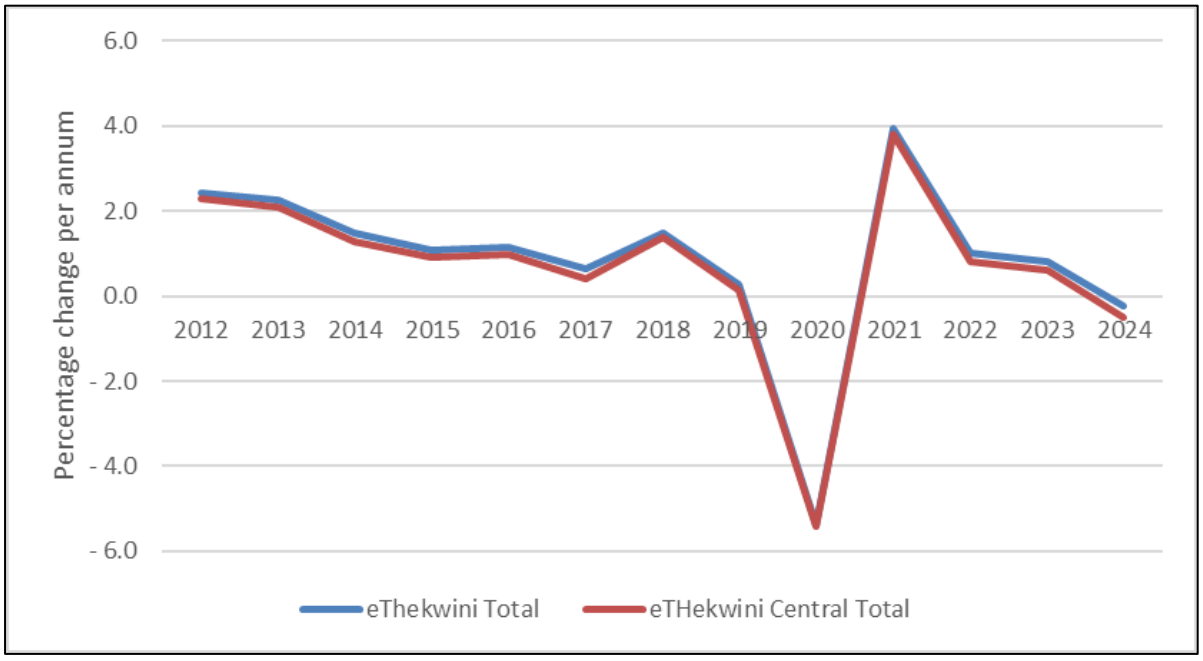



Source: Quantec Standardized Regional Data, sourced September 2025

The figure below provides a comparison of the indication of the year-on-year growth in GVA for eThekwini Municipality and eThekwini Central Region District Municipality. The analysis of Gross Value Added (GVA) growth rates from 2012 to 2024 reveals a fluctuating economic landscape for eThekwini Municipality, and the eThekwini Central Region. The data indicate periods of moderate growth, stagnation, and economic contraction, with notable impacts from the global economic downturn in 2020.

The GVA trends suggest that the eThekwini Central Region and the broader municipality have faced economic challenges, especially during the pandemic, but have shown resilience with a modest recovery. By attracting maritime business and creating employment opportunities, the project may significantly contribute to bolstering the local economy and sustaining the positive momentum observed in the post-pandemic recovery period. Furthermore, consistent investment in such infrastructure can help buffer against future economic shocks, promoting long-term economic resilience and positioning the eThekwini region as a key player in the maritime industry.

*Figure 17: Year-on-year change in GVA, 2012 – 2024*




Source: Quantec Standardized Regional, Sourced September 2025

The project capital value of R 680 million should be considered in relation to the capital budget of the eThekwini municipality with a value of R5.1 billion in 2024 / 25. The capital budget decreased from R6.9 billion in 2020/21 to R5.1 billion in 2024/25, a reduction of approximately 26%. This reflects economic recovery post-COVID, with 2020/21 budgets higher due to stimulus needs, while 2024/25 focuses on sustainable infrastructure spending. The 2020/21 budget was tabled during lockdown, with measures to cushion residents, while 2024/25 addresses water crises and tariff adjustments, as seen in recent news.

*Table 11: Summary of eThekwini Municipality's Fixed Capital Budget*

| Financial Year | Capital Budget (R Billion) | Context |
|---|---|---|
| 2020/21 | 6.9 | Tabled during COVID-19, high spending for service delivery. |
| 2024/25 | 5.1 | Projected, focuses on infrastructure, lower due to economic recovery. |

Source: eThekwini Municipality's Fixed Capital Budget

## 3.3. SUMMARY

The Area of Influence (AOI) for the Bayhead and Langeberg Road upgrade encompasses the Central Region of eThekwini Municipality, covering 87.20 km² with a population of 1,410,845 and 404,038 households, yielding a high density of 3,268 persons/km² and an average household size of 3.5. The demographic profile reveals a youthful structure, with 31.3% aged 0-19, 62.5% working age (20-64), and 6.1% seniors, supporting a robust labour pool. Educationally, functional literacy stands at 66.6% overall and 81.2% for adults 20+, though Outer West lags at 61.2%, indicating needs for youth interventions.

Labour dynamics show a participation rate of 76.2%, surpassing KZN's 52.5%, with an employment-to-population ratio of 44.2%. Official unemployment is 26.8%, rising to 42.0% broadly, affecting 198,955 in the AOI. Skills in the formal sector (83.5% of 1,219,557 jobs) are semi-skilled dominant (47.7%), followed by skilled (31.1%) and low-skilled (21.3%). Employment is tertiary-led: wholesale/retail (24%), community services (22%), and finance (20%), with manufacturing at 14%. Household incomes highlight vulnerability (9.3% no income) but a strong emerging middle class (30.6% earning R266,511-R533,021 annually).

Economically, eThekwini's GVA totals R377,814 million, driven by finance (24.9%), services (19.8%), and manufacturing (16.4%). Regional variations show Central aligning with averages, while Outer West emphasizes agriculture (2.9%). GVA growth fluctuated from 2012-2024, contracting in 2020 but recovering to 1.8% nationally. The R680 million project aligns with eThekwini's R5.1 billion 2024/25 capital budget, aiding post-COVID resilience and sectoral balance.

# 4. NEED FOR THE UPGRADES

The upgrade of the roads is explored in terms of the findings of the specialist report dealing with the traffic impact of the current and future projections of traffic demand and in terms of the desirability for the upgrades as expounded in the media.

## 4.1. TRAFFIC IMPACT ASSESSMENT [7]

Transnet SOC Ltd commissioned Fulcrum Development Consultants (Pty) Ltd, through LA Eng, to conduct a Traffic Impact Assessment (TIA) as part of the Bayhead Road Widening Project under contract TNPA/2024/01/0002/53232. The project, detailed in the report dated February 7, 2025, aims to mitigate congestion, upgrade aging infrastructure, and support Transnet's ambitious expansion plans to establish the Port of Durban as South Africa's main Container Hub.

Transnet's port expansion strategy is driven by the need to accommodate, amongst others, increasing container volumes. The current throughput at DCT is 2.5 million Twenty-foot Equivalent Units (TEUs) per annum, with plans to scale this to 6.8 million TEUs by 2050. Additionally, the Point Terminal is set to transition into a container terminal, targeting 1.5 million TEUs, while Maydon Wharf is expected to handle 1.2 million TEUs by 2051, culminating in a total port capacity of 8.5 million TEUs. The TIA focuses on Project 1: adding an additional lane along Bayhead Road from South Coast Road to Langeberg Road. This upgrade is critical to alleviating congestion caused by DCT operations and staging areas, where trucks exit onto Langeberg Road for Pier 2. The project also addresses infrastructure deterioration, ensuring the port maintains high operational efficiency and minimal disruptions in its value chain.

The study reports that Transnet's internal studies over the past few years have indicated that the Durban Port area currently experiences a significant amount of congestion throughout the day consisting of mainly truck traffic. This congestion is thought to be occurring due to the operations of the Durban Container Terminal (DCT) and its staging areas. The existing truck traffic travels along Bayhead Road, with the traffic going to Pier 2 container terminal exiting onto Langeberg Road. Figure 18 show the scope of work area defined for the traffic impact study.

The study area included into the assessment extends from the Umbilo Road in the west, to Iran Road to the East and from Rick Turner Road to the north and south along South Coast Road to the Bridge Port Access Road. Key Roads included in this study area are:

- Bayhead Road
- Sydney Road
- Umbilo Road
- Langeberg Road
- South Coast Road
- Rick Turner
- Maydon Rd
- Belfast Rd
- Rotterdam Rd
- Iran Road
- Bypass Rd.

[7] Fulcrum Development Consultants. Provision Of Professional Service for The Feasibility and Detailed Design Including Procurement Support and Supervision for Bayhead And Langeberg Road Upgrade, At The Port Of Durban. Traffic Impact Assessment. 7 February 2025.

*Figure 18: The traffic impact assessment study area extent*


Source: Traffic Impact Assessment, 2025.

The TIA integrates findings from Transnet's internal studies, which highlight significant daytime congestion, particularly from truck traffic. The report emphasizes the need for traffic studies to identify viable solutions for congestion and infrastructure upgrades. By aligning with Transnet's vision, the TIA ensures that proposed interventions support the port's long-term growth while addressing immediate operational challenges. The involvement of key stakeholders, including the eThekwini Municipality Transport Authority (ETA), underscores the collaborative approach to enhancing the port's infrastructure.

### *4.1.1. Extent of the Study*

The study area was defined through a consultation with ETA on November 7, 2024, to ensure a comprehensive assessment of the impacts of Transnet's expansion on the regional road network. While the tender specifically targets the upgrade of Bayhead Road from South Coast Road to Langeberg Road, the TIA adopts a broader scope to capture the interconnected traffic dynamics affected by increased port activity. The study area extends from Umbilo Road in the west to Iran Road in the east, and from Rick Turner Road in the north to the Bridge Port Access Road along South Coast Road in the south.

Key roads included in the analysis are Bayhead Road, Sydney Road, Umbilo Road, Langeberg Road, South Coast Road, Rick Turner Road, Maydon Road, Belfast Road, Rotterdam Road, Iran Road, and

Bypass Road. This expanded scope ensures that the TIA accounts for the ripple effects of port-related traffic on surrounding infrastructure. A visual representation of the study area extents accompanies the report, providing clarity on the geographical boundaries and key intersections analysed. This collaborative approach with ETA ensures that the TIA aligns with municipal planning objectives while addressing Transnet's operational needs.

### *4.1.2. Background Information*

The TIA draws on a robust foundation of data and prior studies to contextualize the proposed road upgrades. Road classification and ownership were established using eThekwini Municipality's online GIS, confirming that all roads within the study area fall under municipal jurisdiction. This information is crucial for coordinating infrastructure improvements and ensuring regulatory compliance. Several previous studies inform the TIA's analysis:

- **eThekwini Transnet Integrated Freight Transport Systems Plan (2016):** This study focused on the second port access road, proposing upgrades such as additional lanes on Solomon Mahlangu M7, Sydney Road, and South Coast Road, as well as localized widening at the Bayhead Road and Langeberg Road intersection. These recommendations provide a baseline for the TIA's infrastructure proposals.
- **Transnet Entrance Plazas Technical Note (2024):** Conducted by Fulcrum Development Consultants, this study assessed the capacity and configuration of seven new entrance plaza gates, three of which serve DCT. It highlighted the need for a second port entrance by 2039 to accommodate projected traffic increases, informing the TIA's long-term recommendations.
- **Maydon Wharf De-proclamation TIA (2020):** Conducted by Gibb Engineering and Architecture, this study evaluated the impact of restricting Maydon Road to port-related traffic, recommending upgrades at the Umbilo Road and Fairmond Road intersection to support this closure.
- **South Coast Road Upgrade Conceptual Design (ETA):** This design proposes upgrading South Coast Road to a four-lane dual carriageway (2+2) between Bayhead Road and Edwin Swales Drive, which the TIA incorporates into its analysis.

These studies collectively underscore the need for coordinated infrastructure improvements to address congestion and support future growth. The TIA also considers Transnet's mode share model, developed by Arup (Pty) Ltd, which evaluates landside TEU movements under various scenarios. Scenario 1, assuming a slight increase in road demand with enhanced rail capacity, is adopted as the worst-case scenario for road traffic, ensuring conservative planning.

### *4.1.3. 2025 Base Year Volumes*

Traffic counts were conducted on November 19, 2024, at 17 intersections within the study area, except for the Bayhead Road intersections with Belfast Road and Rotterdam Road, where earlier 2024 data were utilized. The 17 intersections are:

- Intersections 1, South Coast Road / Bridge Port Access
- Intersection 2 South Coast Road / Eel Rd

- Intersection 3 Umbilo Rd/Sarnia Rd/Sydney Rd
- Intersection 4 Sydney Rd/Fairmond Rd
- Intersection 5 Umbilo Rd/Fairmond Rd/Hilier Rd
- Intersection 6 Umbilo Road and Glastonbury Road
- Intersection 7 Sydney Rd/Glastonbury Rd/Bayhead Rd
- Intersection 8 Umbilo Road and Rick Turner Road
- Intersection 9 Sydney Road and Rick Turner Road
- Intersection 10 Maydon Rd/Rick Turner Rd
- Intersection 11 Bayhead Rd/South Coast Rd/Maydon Rd
- Intersection 12 Bayhead Road and Bypass Road
- Intersection 13 Bayhead Rd/Belfast Rd
- Intersection 14 Bayhead Rd/Rotterdam Rd
- Intersection 15 Bayhead Rd/Trawlers Wharf Rd
- Intersection 16 Bayhead Road and Langeberg Road
- Intersection 17 Bayhead Road and Iran Road.

The 12-hour classified counts captured peak hour volumes. Volumes were converted to Passenger Car Units (PCUs) using factors of 3 for trucks and 2 for buses, with traffic along Bayhead Road and Glastonbury Road balanced in both directions between Umbilo Road and Langeberg Road.

The base year analysis reveals that most intersections operate at acceptable Levels of Service (LOS), except for four critical intersections:

- Intersection 1 (South Coast Road and Bridge Port Access Road): Delays on the north approach during the PM peak hour, reflecting high traffic volumes entering the port area.
- Intersection 11 (Bayhead Road, South Coast Road, and Maydon Road): Delays on the west approach across all peak hours, indicating significant congestion at this key junction.
- Intersection 12 (Bayhead Road and Bypass Road): Delays on the east and south approaches, highlighting capacity constraints.
- Intersection 16 (Bayhead Road and Langeberg Road): Delays during AM and PM peak hours, driven by heavy truck traffic to DCT.

These findings establish a baseline for evaluating future scenarios and underscore the urgent need for infrastructure upgrades to address existing congestion.

**a) Demand Forecast**

The TIA adopts a conservative demand forecast based on Scenario 1 from Transnet's Container Forecast Model, which assumes a slight increase in road demand with enhanced rail capacity. Unlike Transnet's model, which projects rail modal shares increasing from 14% in 2020 to 23% in 2032 and 30% in 2036, the TIA maintains a constant 14% rail share (Low Rail Scenario) to reflect a worst-case scenario for road traffic. This approach ensures that infrastructure recommendations are robust enough to handle maximum road demand.

Growth factors applied to 2025 base year volumes are:

- Cars, buses, and minibus taxis: A 2% annual growth rate, reflecting steady non-freight traffic increases.
- Trucks: A net increase of 21% by 2032 (3.0 million TEUs at DCT) and 64% by 2036 (4.2 million TEUs at DCT), based on maintaining the 14% rail modal share.

These projections account for the significant increase in truck traffic expected from DCT's expansion, providing a clear framework for assessing infrastructure needs.

**b) Scenario Assessment**

The TIA evaluates four scenarios to assess the impacts of Transnet's expansion and proposed upgrades:

- Base Year 2025 (2.3 million TEUs at DCT): Reflects current conditions with no entrance gates or road upgrades.
- Scenario 1 (2032, Low Rail Share with Entrance Gates, 3.0 million TEUs): Includes new entrance gates at Bayhead Road, Bypass Road, and Iran Road, but no Bayhead or South Coast Road upgrades. 50% of inbound traffic to Langeberg Road and eastward is reassigned to Bypass Road, based on the Transnet Entrance Plazas study.
- Scenario 2 (2032, Low Rail Share without Entrance Gates, 3.0 million TEUs): Excludes entrance gates and road upgrades, with no traffic reassignment, representing a baseline future scenario.
- Scenario 3 (2036, Low Rail Share with Entrance Gates, 4.2 million TEUs): Incorporates entrance gates, Bayhead Road widening to a 3+3 cross-section, and South Coast Road upgrade to a 2+2 cross-section, reflecting proposed infrastructure improvements.

These scenarios integrate traffic growth, gate configurations, and infrastructure upgrades to evaluate their effectiveness in managing congestion and supporting port operations.

### *4.1.4. Findings*

**a) Base Year 2025**

The base year analysis confirms delays at Intersections 1, 11, 12, and 16, highlighting immediate infrastructure challenges at key port access points. These delays are driven by high truck volumes and insufficient road capacity, necessitating targeted interventions.

**b) Scenario 1 (2032, Low Rail Share with Entrance Gates)**

Delays persist at Intersections 1 and 11, with minor delays at:

- Intersection 6 (Umbilo Road and Glastonbury Road): Resolvable with signal timing adjustments.
- Intersection 8 (Umbilo Road and Rick Turner Road): Addressable through signal timing tweaks.
- Intersection 9 (Sydney Road and Rick Turner Road): Mitigated by converting a through lane to a shared through-and-right lane.

Larger delays occur at:

- Intersection 12 (Bayhead Road and Bypass Road): Requires signalization, a 100m right turn lane on the west approach, and an additional south departure lane to address safety and capacity issues.
- Intersection 16 (Bayhead Road and Langeberg Road): Delays mitigated by signal timing adjustments.
- Intersection 17 (Bayhead Road and Iran Road): Addressed by signalizing the intersection.

Localized widening at Intersection 11 is deferred in favour of broader Bayhead and South Coast Road upgrades, which are more effective in addressing systemic congestion.

**c) Scenario 2 (2032, Low Rail Share without Entrance Gates)**

This scenario mirrors Scenario 1, except for Intersections 12 and 16:

- Intersection 12: Requires signalization only, as the absence of entrance gates eliminates the need for localized widening.
- Intersection 16: Delays addressed through signal timing adjustments, consistent with Scenario 1.

Other upgrades from Scenario 1, such as signal and lane adjustments at Intersections 6, 8, and 9, remain applicable.

**d) Scenario 3 (2036, Low Rail Share with Entrance Gates)**

The proposed Bayhead Road (3+3) and South Coast Road (2+2) upgrades effectively accommodate the increased traffic demand, resolving delays at Intersections 1 and 11. Specific interventions include:

- Intersection 12: A 100m right turn lane on the west approach and an additional south departure lane.
- Intersection 16: Extensive reconfigurations, including a 300m departure lane on the north, two dedicated right turn lanes from the north, a 100m shared through-and-left lane, a 75m short through lane from the east, and converting a west through lane to a through-and-left lane.
- Intersection 5 (Umbilo Road and Fairmond Road): Localized widening, as recommended by the Gibb Maydon Wharf study.

Signal timing and lane marking adjustments are also required at selected intersections along Umbilo Road and Sydney Road. Beyond 2036, the report recommends implementing a second port access, as Intersections 11 and 12 will approach capacity.

### *4.1.5. Conclusion and Recommendations*

The TIA confirms that congestion at key intersections in 2025 necessitates immediate action, with delays evident at Intersections 1, 11, 12, and 16. For 2032, Scenarios 1 and 2 demonstrate that signal timing adjustments, lane reconfigurations, and localized widenings can mitigate delays, with Scenario 1 benefiting from entrance gates that redistribute traffic. By 2036, Scenario 3 highlights the critical

role of Bayhead and South Coast Road upgrades in accommodating 4.2 million TEUs, supported by targeted intersection improvements.

**Recommendations:**

a) Short-term (2025–2032):
   - Implement signal timing adjustments at Intersections 6, 8, 9, 16, and 17.
   - Signalize Intersections 12 and 17.
   - Defer localized widening at Intersection 11 in favour of broader road upgrades.

b) Medium-term (2036):
   - Construct additional lanes on Bayhead Road (3+3) and South Coast Road (2+2).
   - Implement specific upgrades at Intersections 12, 16, and 5, including lane reconfigurations and localized widening.
   - Adjust signal timings and lane markings at selected intersections along Umbilo Road and Sydney Road.

c) Long-term (post-2036):
   - Plan and implement a second port access to address capacity constraints at Intersections 11 and 12, ensuring the port's infrastructure keeps pace with projected TEU growth.

These recommendations provide a phased approach to enhancing the Port of Durban's infrastructure, ensuring it can handle increased container traffic while maintaining operational efficiency and supporting South Africa's economic growth.

## 4.2. MEDIA REPORTS

Several reports and studies over the past few years indicated that the road systems surrounding the Port of Durban is experiencing significant congestion throughout the day with special reference to Bayhead and Langeberg Roads Road. The congestion is thought to be occurring mainly due to the operations of the Durban Container Terminal (DCT) and its staging areas.

Table 12 lists some of the media reports about the congestions and the concerns of residents, employees and truck and logistic companies. Important is that the congestions and delays are having economic and social impact in terms of time delays and frustrations and inconveniences on all land-users – residential, industrial, commercial, port and trucking / transport operators and activities.

*Table 12: A selected summary of media reports about the traffic congestions experienced on Bayhead and Langeberg Roads.*

| DATES | SOURCE | SUMMARY OF CONTENT |
|---|---|---|
| **1 Nov 2008** | Sabinet | New forum tackles Bayhead congestion: KwaZulu-Natal. While high-level talks have been proposed between Transnet group chief executive Maria Ramos, the new Minister of Public Enterprises, Brigitte Mabandla, and city officials to discuss congestion within the Port of Durban, local port authorities have also recently begun a process of engagement |

| DATES | SOURCE | SUMMARY OF CONTENT |
|---|---|---|
| | | with maritime freight representatives to tackle congestion along the much-maligned Bayhead Road. |
| **27 November 2019** | Polity, A Creamer Media publication | Port of Durban addressing Bayhead truck congestion. Transnet National Ports Authority (TNPA) at the Port of Durban is addressing serious truck traffic congestion in the Bayhead Precinct of the Port of Durban which began on Tuesday, 26 November and has continued overnight and into the morning of Wednesday, 27 November. 2029. Blockades at the Durban Container Terminals limit access to both Bayhead and Langeberg roads. This impacts the receiving of trucks and landside operations, disrupts economic activity, frustrates neighbouring communities and threatens jobs. Transnet has been working closely with industry bodies to address valid issues raised but appeals for transport companies to engage through the appropriate channels to remain up-to-date on ongoing mitigation measures implemented by Transnet and the progress thereof. |
| **27 November 2019** | Sowetan Live and Times Live | Traffic congestion at Durban port ahead of calls for shutdown. Thousands of Durban motorists have been affected by a go-slow by members of the trucking fraternity at the port of Durban.<br><br>In a media statement on Wednesday, Transnet National Ports Authority (TNPA) said it was addressing serious truck traffic congestion in the Bayhead precinct of the port, which began on Tuesday.<br><br>Transnet said it was also aware of a social media message, allegedly by transport companies, calling for a boycott of the Durban harbour and urging truckers to park at their depots from 6am on Thursday until 6pm on Monday. |
| **11 August 2020** | Times Live | Durbanites caught in Bayhead traffic nightmare: Transnet to act. Congestion entering SA's busiest port has been a long-standing issue which has seen the communities of the Bluff and Umbilo severely affected. |
| **20 August 2020** | East Coast Radio | Bayhead traffic congestion cleared. Transnet says congestion along routes in the vicinity of Bayhead, south of Durban, has been sorted out. |
| **June 17, 2020** | South African Business | Measures to ease congestion at Durban Port. Working jointly with Transnet National Ports Authority in developing additional road capacity in and out of the Port of Durban by exploring the possibility of a potential second access road to the Durban Container Terminals and increasing road capacity |

| DATES | SOURCE | SUMMARY OF CONTENT |
|---|---|---|
| | | on Bayhead Road. eThekwini Mayor Councillor Mxolisi Kaunda outlined other interventions including the Metro Police being permanently stationed at the Bayhead Langeberg Road intersection to manage traffic congestion and any violations of traffic legislation and municipal by-laws. "Road maintenance on Bayhead Road, Khangela Bridge, Sydney Road and Umbilo Road have been carried out, including the recent painting of road markings. |
| **11th August 2020** | Creamer Media's Engineering News | TNPA works to quickly resolve congestion problems at Durban port following incidents. Transnet National Ports Authority (TNPA) reports that the Durban Bayhead Precinct had been affected by severe truck traffic congestion on August 10, after a truck capsized along Bayhead Road. As a longer-term solution, we are motivating through the Port of Durban Decongestion Task Team for all terminals to have a booking system that will give port users full visibility of cargo handling equipment deployed and truck volumes so that they can plan when and when not to send vehicles to the port," explains Durban port GM Moshe Motlohi. |
| **21 May 2020** | South African Freight News | African News Agency (ANA) reports that frustrations over traffic jams caused by trucks have reached boiling point with residents.<br><br>At a time when Transnet appears to be pulling out all the stops to deal with land-side congestion at the Port of Durban, where kilometre-long truck queues into the terminal have basically become the norm, residents of Africa's busiest port city have demanded that heavy rigs be removed from certain areas.<br><br>With no amenities catering for drivers during delays lasting for days on Bayhead Road, and industry executives exposing the resulting human rights violations to which truck drivers are exposed, Durban residents have warned that it can't go on like that. |
| **7 Jan 2022** | Forwarding African Transport Services | Major congestion at South African Ports, primarily Durban. Congestion at the ports of Durban and Cape Town is causing frustration for transporters and other port users who have called on Transnet Port Terminals (TPT) management to take urgent action as staff shortages and equipment breakdowns continued to impact operations at both ports this week. |
| **April 5, 2023** | iAfrica | The Consequences of Re-Zoning in Clairwood. The rapid industrialisation brought to Clairwood has left it dangerous |

| DATES | SOURCE | SUMMARY OF CONTENT |
|---|---|---|
| | | and in a state of decay. The influx of companies came about as part of an economic development plan intending to capitalise on Clairwood's proximity to the harbour. |
| **August 20 2024** | IOL | Plan to end port congestion woes. Serious truck traffic congestion, especially in the Bayhead precinct of the Port of Durban, has plagued residents for years, with trucks adding to the peak-hour traffic incidents and worsening traffic jams. Transnet faced major challenges last year with truck congestion and container backlogs at the Port of Durban severely impacting the economy, but the state entity has been able to make progress with the truck booking system and an improvement in efficiency at the key harbour. Serious truck traffic congestion, especially in the Bayhead precinct of the Port of Durban, has plagued residents for years, with trucks adding to the peak-hour traffic incidents and worsening traffic jams. Motlohi said that they were looking at having staging areas for trucks to park at Cato Ridge before they would be allowed to leave at a scheduled time for the Durban port. |

*Figure 19: Trucks queue for kilometres on Bayhead Road in Durban*

Source: South African Freight News, 21 May 2020

# 5. IDENTIFYING POTENTIAL SOCIO-ECONOMIC IMPACTS

## 5.1. CONSTRUCTION PHASE

Large scale infrastructure projects such as the upgrading of Bayhead and Langeberg Roads have positive and negative impacts during the construction and operational phases on local communities and economies. The project is located within the operating and activity zones of the Port of Durban and the surrounding commercial, industrial and logistics areas.

The construction phase of the upgrading of Bayhead and Langeberg Roads is expected to last about 24 months. During this period, it is to be expected that there will be some (further) disruption of the traffic flows and temporary increases in congestion. Given the port, industrial, commercial and logistics environment within which the upgrade will take place it is expected that the impact of the upgrade will be minimal.

The construction phase is therefore anticipated to have a very low impact, if any, on the surrounding population, communities and economic activities. The positive impacts on the construction phase are likely to exceed the negative impacts due to the increase in the direct, indirect and induced employment opportunities, impact on unemployment of the area and the increase in business activity and increases in income and value add to the economy.

The benefits of the relief of traffic congestion after the 24-month construction period in terms of time savings, efficiencies, cost reduction of delays in waiting time for docking and the convenience to residents, is likely to exceed the negative impacts of construction.

Traffic Management during construction will be a key mitigating factor and will form a critical aspect of the planning process with stakeholder interface required to obtain buy-in to avoid reputational damage.

## 5.2. OPERATIONAL PHASE

After the construction phase, the upgraded roads are likely to benefit the road users and the surrounding businesses and communities for a period exceeding 10 to 20 years. Therefore, the project is likely to have a positive impact on employment and demographics of the AOI.

Based on the current levels of congestion and negative impacts of delays in accessing to the port, costs of waiting times in long trucking ques and convenience and frustration level, the relief that the upgraded roads will bring is likely to be highly positive.

The permanent employment opportunities created during the operational phase is likely to be small. Infrastructure facilities such as roads are low employment creators and mainly in the maintenance of the road surfaces and maintenance of the verges and sidewalks. Thus, although the impact of the upgraded roads is likely to be positive its value will be relatively low.

## 5.3. ECONOMIC IMPACT ASSESSMENT

### *5.3.1. Determining The Economic Impact*

For the economic impacts analysis, the impacts are derived from the activities directly related to the establishment and operation of the upgrade activities and the subsequent maintenance of the road. This focused approach is achieved by accounting for the direct capital and operating costs associated with the construction and operation of the road upgrade. The capital and operating costs represent the new economic injections into the local and regional economy which triggers further indirect and induced multiplier economic impacts.

Thus, the economic impacts as applied in this analysis refer to the effects on the change in the level of economic activity brought about by the establishment and operation of the new road upgrade and directly associated activities. The Social Accounting Matrix model (SAM) referred to in Section 1.4 is a class of general equilibrium macroeconomic model that is used to measure the multiplier effects of an intervention, the road upgrade in this instance, on the local or regional economy. These models reflect the interdependencies of the economic sectors by generating data on multipliers and leakages. The multipliers show that the impact of a new injection into the economy is larger than the direct impacts associated with that activity. The Social Accounting Matrix therefore also models the social impacts as measured by new employment creation and the impacts on dependants and the broader society.

The model differentiates between the direct, indirect and induced impact of an exogenous intervention into the economy. The aspects that will be included in the model are the change in potential new business development, contribution to the Gross Value Add, employment creation, household and government income. The impacts are measured in term of the following:

- Direct impacts correspond to economic impacts generated by the construction and operation of the road upgrade.
- Indirect impacts correspond to the effects on the suppliers of goods and services to develop and operate the road upgrade. The indirect impacts typically refer to the direct backward and forward linkages created in the economy by the new injection of funds such as the construction activities. The manufacturing of steel to supply to the construction of the road upgrade is an example of an indirect impact.
- Induced impacts refer to the broader economic effects that result from the spending of income generated by direct and indirect impacts. This includes increased consumer spending in the local economy, job creation in related industries, and overall economic growth in the region surrounding the port.

### *5.3.2. Capital (Capex) Economic Input Costs*

The capital and operating costs of the road upgrade represent the new demand created in the economy which triggers the multiplier effects, the following costs are included in the calculation of input capital expenditures (Capex) which takes place during the construction phase of the project:

- An estimate of direct material and labour in the construction of the road upgrade at present day 2025 values,
- Professional fees,
- Plant and equipment and
- Contingencies.

The following costs are excluded in the input CAPEX as they do not represent economic flows but are financial / accounting flows:

- Value added tax (VAT),
- Depreciation,
- Financing costs, and
- Multi-year escalations of the capital cost.

The following economic input are used in the model for the construction phase:

a) **CAPEX**: The current estimated present day construction cost is R900m (excluding VAT but including contingencies of 10% or R 680m excluding contingencies and escalation.

b) **Construction labour**: Local labour targets for road projects in SA is estimated at 6% of the award value: 6% of R680m = R40.8m. Assuming a labour rate of R675/day based on an average wage of R60 / hr x 1.25 (contractor's overheads) = R75/hr x 9 hours. This equates to 60 444 man-days, or 115 full time workers per month over a two-year construction period.

c) **Management and key personnel**: The Principal Contractor's own Management Team and Key Labour, and the Management Teams and Key Labour for the SMMES are estimated as follows:

(i) For the Principal Contractor:

| **Principal Contractor** | |
|---|---|
| Contracts Director | 1 |
| Contracts Manager | 2 |
| Site Engineers | 3 |
| Technical Assistant | 3 |
| Layer Foreman Senior | 1 |
| Layer Foreman Junior | 2 |
| Milling Foreman Senior | 1 |
| Milling Foreman Junior | 1 |
| Drainage Foreman | 2 |
| Earthworks Foreman | 1 |
| Surveyor Senior | 1 |
| Surveyor Junior | 1 |
| Concrete Foreman | 2 |
| Concrete hands | 6 |
| Steel fixers | 8 |
| Clerk | 2 |
| Survey | 2 |
| Laboratory | 8 |
| Watchmen | 10 |

| **Principal Contractor** | |
|---|---|
| Flagmen | 4 |
| Tallymen | 4 |
| Cooks & Cleaners | 2 |
| Store & Yard Labour | 3 |
| **Total** | **70** |

(ii) For the SMMEs, the table below for estimated Management Staff and Key Labour assumes that the Employer sets aside 30% of the CAPEX value of the Works to be undertaken by SMMEs, this would amount to 30% of R680m = R204m. The above labour allowance of R40,8m would also be included in the R300m (i.e. there is no double dipping on the labour component). Works to be undertaken by SMMEs with associated values and number of SMMEs per task are indicated in the table below:

*Table 13: Estimating the SMME employment during construction*

| Task | CIDB Grade CE | Value of Works (Rms) | No. of Companies | Est. Management / company | Total Management | Est. Key Labour / company | Total Key Labour |
|---|---|---|---|---|---|---|---|
| Construction Plant | 2 | R15m | 5 | 3 | 15 | 4 | 20 |
| Traffic Accommodation | 6 | R20m | 2 | 3 | 6 | 3 | 6 |
| Construction of kerbs and channels | 3 | R9m | 6 | 2 | 12 | 2 | 12 |
| Stormwater structures | 2 | R6m | 4 | 2 | 8 | 1 | 4 |
| Concrete barriers | 4 | R14m | 3 | 3 | 9 | 2 | 6 |
| Sidewalks | 3 | R6m | 4 | 2 | 8 | 1 | 4 |
| Asphalt base EME | 6 | R95m | 2 | 3 | 6 | 2 | 4 |
| Asphalt wearing course | 6 | R35m | 1 | 3 | 3 | 2 | 2 |
| Road signage | 2 | R1m | 3 | 2 | 6 | 1 | 3 |
| Finishing and Landscaping | 1 | R3m | 6 | 1 | 6 | 0 | 0 |
| Totals | | **R204m** | **36** | | **79** | | **61** |

**d) Total full-time labour during the construction phase**

*Table 14: Total employment during construction phase*

| Labour Compliments | Construction related jobs |
|---|---|
| 6% Labour | 690 jobs |
| Principal Contractor's Management Team and Key Personnel | 70 jobs |
| SMMEs Management Team and Key Personnel | 79+61=140 |
| Total construction jobs created | **900** |

### *5.3.3. Operating (OPEX) Economic Input Costs*

The operating costs of the new economic activity is usually not known accurately during the design stage of new projects. Both the Capex and the Opex costs are high-level estimates generated by the

road design team. The operating costs are usually derived from other information such as the number of employment opportunities that may be created during the operations of the new activity. This "backward engineering" approach is used in this model to overcome the shortcoming of not having detail information about the operating costs of the dry dock. By using the likely employment figures the economic impacts of the operational phase are determined. Like in the case of the capital cost driven model, financial charges, value added tax and escalation of costs are excluded from the model. The operating model therefore also reflects the economic impact in present day values.

Operation and Maintenance costs are usually 1,5% of the CAPEX value of the works per annum or around 30% over the design life of the road. This amount to around R270m over the road life cycle of 25 years or R10.8m per annum. For operating and maintenance costs over a period of 25-year design life, there would normally be interventions at:

- 5 years – light rehabilitation – overlay with patches
- 15 years – light rehabilitation – mill and replace
- 20 years – overlay.

For annual costs, around 0.5% per annum or R3.375m or R280k per month is estimated for a maintenance team. The TNPA maintenance teams are in-house and cover the entire Port, so there are no new jobs generated on the 0.5% level. The rehabilitation interventions at 5, 15 and 20 years will be projects in themselves and may either be done inhouse or tendered.

### *5.3.4. Economic Multiplier Impact*

The direct, indirect and induced economic impacts during the construction phase and during the operational phase are shown in the tables below.

*Table 15: Construction sector multipliers per indicator*

| Multipliers for the Construction sector | Direct | Indirect | Induced | Total |
|---|---|---|---|---|
| Production multiplier per R 1 investment | 1.000000000 | 1.746306961 | 1.32522207 | 4.071529031 |
| GDP multiplier per R 1 investment | 0.285817491 | 0.499125073 | 0.378771647 | 1.163714211 |
| Income multiplier per R 1 investment | 0.136342789 | 0.238096362 | 0.180684473 | 0.555123624 |
| EMPLOYMENT per R 1 M expenditure | 1.392143861 | 2.431110514 | 1.844899769 | 5.668154144 |

*Table 16: Economic multiplier impacts during the construction phase over two years*

| Economic Impact during the construction phase | Direct impact | Indirect impact | Induced impact | Total impact |
|---|---|---|---|---|
| Economic Production value impact in Rand | 680 000 000 | 1 187 488 733 | 901 151 008 | 2 768 639 741 |
| Gross geographic impact in Rand | 194 355 894 | 339 405 050 | 257 564 720 | 791 325 663 |

| | | | | |
|---|---|---|---|---|
| Economic income impact in Rand | 92 713 097 | 161 905 526 | 122 865 442 | 377 484 064 |
| Full time equivalent employment during construction | 900 | 1 572 | 1 193 | 3 664 |
| Government income impact in Value Added Tax | | | | 81 319 986 |

*Table 17: Economic multiplier impacts per annum for 25 years of operation and maintenance activities excluding major road overhaul maintenance.*

| Economic Impact during the operational phase | Direct impact | Indirect impact | Induced impact | Total impact |
|---|---|---|---|---|
| Economic Production value impact in Rand per annum | 10 800 000 | 18 860 115 | 14 312 398 | 43 972 514 |
| Gross geographic impact in Rand per annum | 3 086 829 | 5 390 551 | 4 090 734 | 12 568 113 |
| Economic income impact in Rand per annum | 1 472 502 | 2 571 441 | 1 951 392 | 5 995 335 |
| Full time equivalent employment per annum during operations | 15.0 | 26.3 | 19.9 | 61.2 |
| Government income impact in Value Added Tax | | | | 1 579 883 |

## 5.4. SOCIAL IMPACT CONSIDERATIONS

The following social factors is considered:

*Table 18: Other socio-economic considerations*

| Social Topic | Impact Considerations |
|---|---|
| **Lifestyle and livelihood:** | The upgrading of the roads will, through the employment and economic activity, lead to a general improvement in the lifestyle of the community. Although it is not possible to fully attribute it only to the presence of this development, jobs and business opportunities to be created will allow people to afford improved lifestyles. |
| **Health and welfare considerations:** | The upgrading of the roads will have no significant direct impact on the health and welfare of the recipient communities. Regarding the health impact, diseases are prevalent in South Africa and in the province including the occurrence of TB and HIV/Aids in the community. However, the worsening or improvement of this cannot be linked directly to the project. Normal workplace health and safety standards must be applied during the construction and operational phases. |

| Social Topic | Impact Considerations |
|---|---|
| **Informal settlements, population displacement and re-settlement:** | Few informal settlements or shacks are known to exist immediately in and around the project area and it is unlikely that the project will contribute directly to the further growth or decline of informal settlements. The project is to be constructed within the existing road alignment, and no relocations or displacements of people will take place due to the project 's establishment and operations. |
| **Noise, dust and associated impacts** | Noise, dust and associated impacts are often associated with the construction phase of large-scale infrastructure projects. In many construction projects there are increases in noise and dust which may cause a nuisance and even health impact for people working and residing in proximity of the project. The nature of the noise and dust may be elevated when construction equipment such as jack hammers, earth moving and blasting, equipment are used. The additional negative impact of the project is considered to be small given the nature and extent of the existing commercial, industrial and logistics activities in the area. |
| **The number of vehicles, in particular, heavy-duty vehicles** | The road network in the Bayhead area is currently congested with traffic to and from the port. The increase in heavy duty construction vehicles will places an additional burden on the road network during the construction phase. It may lead to additional inconveniences and road safety issues for other road users. Is expected however expected to relatively insignificant provided the required road safety standards are applied. |
| **Sense of place impacts** | A change in the sense of place is often associated with large scale infrastructure projects. However, it is unlikely that the project will have any impact on the sense of place of the communities and road uses during construction and operations. The road upgrade is unlikely to contribute further to the already existing visual intrusion that the current road has. |
| **Impacts on household income and poverty levels** | Most of the employment opportunities available during the construction and operational phases will be sourced from the local eThekwini labour force. Some of the tasks will be semi-skilled, skilled and professional and may need to be recruited from outside the AOI. This may lead to an overall improvement in employment levels, greater household incomes and a further reduction in poverty levels in the area. The employment of people by the project will have a positive impact on the income and poverty levels of the AOI. |
| **Skills and entrepreneurship development impacts Training and Capacity Building** | The project may contribute during construction to the training and capacity building for its employees as part of the skills development programmes. Training and capacity building programmes will be introduced by the repair and maintenance operator companies to under that those tasks effectively and efficiently. Such an up skilling |

| Social Topic | Impact Considerations |
|---|---|
| | of the personnel will spread out further to the households and communities within which workers live. |
| **Women and youth development** | The involvement of women and youth into the mainstream economy is a priority economic and social development focus area in South Africa. It is anticipated that the upgrading project will not have a direct impact on the involvement and development of women, youth and disadvantage groups and individuals. It is important that the use of women and youth in the employment of staff on the project be encouraged |
| **Entrepreneurship and business development** | Regarding entrepreneurship and business development, the repair and maintenance activities creates opportunities for new business creation including entrepreneurship development and enterprise establishment. Related to enterprise establishment are supplier development opportunities. |
| **Security impacts** | An increase in criminal activity at personal, household and business levels are often associated with large infrastructure development projects. The presence of (temporary) construction workers, job seekers and criminal opportunists lead to safety and security risks. It is assessed that the construction and operation of the project is unlikely to lead to a significant increase in the existing levels of crime and safety in the AOI. This is mainly because the project is located within an existing area of industrial and port activity where active policing and security services are provided. It will be important to maintain security services and liaise with and integrate such services into the existing security services and SAPS. |
| **Human rights, culture and vulnerable communities** | There are no identified characteristics of the project which, during its construction and operational phases, will infringe on human rights and the cultural or religious practices of the communities. No violation of women, youth, disabled or other vulnerable group's human rights is expected during the establishment and operation of the project. Regarding cultural values, it should be noted that the AOI is an urban area with mixed cultural profiles. The project will not impact on cultural and traditional practices or diversity of communities. |
| **Increased property values** | It is unlikely that there will be any significant improvement or decrease in property values in the port or any of the surrounding neighbourhood areas due to the upgrading of the roads. |
| **Increased government revenue** | Government will have a slight increase in Vat and company income tax due to the expenditure and profits of the construction contractors. It will however not be significant. |

## 5.5. SUMMARY CONCLUSION

The impacts during the construction phase are likely to be of a low impact level due to the short and temporary nature of the impacts on the existing port, industrial, commercial and logistics environment within which the project is locate. The impacts during the construction phase will stop after about 24 months when the upgrading of the project is completed.

The operational impacts will last for more than 30 years and therefore scores higher than the construction phase impacts. No negative direct socio-economic impacts have been identified during the operational phase. The positive impacts of the project far exceed any negative impacts. In summary, the following impact have been identified.

### *5.5.1. Negative During Construction*

- Inconvenience for road users during the short 24-month period of construction.
- Normal / usual noise and dust impacts associated with road upgrade project during construction will occur. The impacts will be of a temporary nature and will inconvenience the traffic that will direct benefit from the upgrades. No communities or businesses nor the economy will experience negative impacts who will not benefit from the upgrades. Neighbourhood residential areas are too far away to be able to distinguish between the negative impacts of the road upgrade during construction and the ambient port and industrial activities, noise and dust.
- Some increase in crime, safety and security may be experience but is likely to be small.

No mitigations for the socio-economic impacts are identified other than that the prescribed legislative and regulatory stipulations for the upgrading of the roads must be adhered to.

### *5.5.2. Positive Impacts During Construction and Operations*

- Direct and significant economic improvements in transport and logistic efficiencies to and from the port and likely increased efficiencies in import and export activities when there is no longer congestion on Bayhead and Langeberg Roads.
- Traffic safety and convenience improvement for the residents and other road users in the surrounding areas for the roads.
- Direct construction employment for 24-months.
- Limited maintenance and up-keeping employment will be created during the long-term operations of the roads.
- Business and household multiplier income creation due to the employment and investment of the project.
- Economic multiplier impacts on economic production outputs of suppliers of tools, equipment and materials.
- GDP impact in terms of the net value add due to the impacts of increase economic activity in the form of road construction and upgrading work
- The short-term negative inconvenience impacts that will be experienced are far exceeded by the long term positive social and economic impacts

# 6. IMPACT EVALUATION

To evaluate the socio-economic impacts a methodology is used by which the positive and negative impacts are scored in terms of predetermined criteria. The criteria typically used in most assessment includes the nature, magnitude, extend, duration, frequency and probability of the impacts. The combined assessment is expressed as a significance of impact score. In this approach the following designated to each of the criteria:

- **Nature of impact**; Is the impact of a positive or negative nature compared to the goal or objective or standard of expected impact.
- **Magnitude** of the impact refers to the size of the impact measured in terms of the item being measured such as the value of the impact or measured against a predetermine standard such as in the case of noise impacts measured in decibels.
- **Extent** of the impact refers to the geographical area being impacted such as locally, regionally or nationally.
- **Frequency** shows how often impacts occur such as daily, monthly or annually.
- **Duration** assesses how long an impact lasts, crucial for temporary versus permanent effects.
- **Probability** estimates the likelihood of an impact being realised.
- **Significant** is the result of the preceding criteria determined by giving a greater weighting to the probability criteria.

The evaluation of the social impacts is based on the assessment criteria and scores as shown in the following table.

*Table 19: Evaluation criteria and scores*

| Criteria | Point scores | | | | |
|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** |
| **Impact Magnitude (M)** | Very low | Low | Medium | High | Very high |
| **Impact Extent (E)** | Site only | Local | Regional | National | International |
| **Impact Frequency (F)** | Infrequently | Annually | Bi-annually | Monthly | Daily |
| **Impact Duration (D)** | Immediate | Short Term | Medium term | Long term | Permanent |
| **Impact Probability (P)** | Improbable | Low | Medium | High | Definite |
| **Significance (S) is equal to:**<br>**Lowest possible score is:**<br>**Highest possible score is:** | (M+E+F+D) x P<br>(1+1+1+1) x 1 = 4<br>(5+5+5+5) x 5 = 100 | | | | |

The positive and negative social impacts of the project during construction and operation is evaluated in the table overleaf.

*Table 20: The Significance rating of the impact assessment*

| Nature of impact = Positive | | |
|---|---|---|
| Code | Significance Rating | Significance score |
| P1 | P1 - Very Low | 4-15 |
| P2 | P2 - Low | 16-30 |
| P3 | P3 - Moderate | 31-60 |
| P4 | P4 - High | 61-80 |
| P5 | P5 - Very High | 81-100 |
| **Nature of Impact = Negative** | | |
| **Code** | **Significance Rating** | **Significance score** |
| **N1** | **N1 - Very Low** | **4-15** |
| **N2** | **N2 - Low** | **16-30** |
| **N3** | **N3 - Moderate** | **31-60** |
| **N4** | **N4 - High** | **61-80** |
| **N5** | **N5 - Very High** | **81-100** |

Table 21 presents a systematic evaluation of six key socio-economic impacts associated with the Bayhead and Langeberg Road upgrade project at the Port of Durban. The assessment is framed within the project's lifecycle, distinguishing between the construction phase (approximately 24 months) and the operational phase (expected to span over 30 years).

The nature of each impact is classified as positive or negative, with ease of mitigation noted as "Easy" or "Moderate." Overall, the table highlights that positive impacts, particularly in the operational phase, dominate with high significance, while negative impacts are confined to construction and rated low, reflecting the project's alignment with industrial port activities and minimal disruption to residential areas. This supports the report's conclusion that long-term benefits outweigh short-term drawbacks, with no fatal flaws identified.

**Positive Economic and Social Impacts**

Four of the six impacts are positive, underscoring the project's potential to drive economic growth, efficiency, and community well-being. These are distributed across both phases but are most pronounced in operations.

- **Impact 1 (Economic: Transport and Logistic Efficiencies Improvements into and from the Port – Operations Phase)**: This impact receives the highest possible rating (P5 - Very High significance, S=100), with maximum scores across all criteria (M=5, E=5, F=5, D=5, P=5).
  It reflects the core value of the R680 million upgrade, which aims to alleviate severe congestion caused by heavy truck traffic accessing key port precincts like the Durban Container Terminal and Island View. By widening roads, improving pavement, and enhancing infrastructure, the project will enable smoother import/export flows, reduce delays, and lower logistics costs. The very high magnitude and extent indicate broad regional and national benefits, such as boosted trade efficiency and economic connectivity for KwaZulu-Natal and beyond. Its continuous frequency and permanent duration emphasize long-term sustainability, with definite probability due to the project's design alignment with port expansion plans (e.g., increasing container throughput to 8.5

million TEUs by 2051). Mitigation is easy, involving standard traffic management, making this a flagship positive outcome that justifies the project's urgency.

- **Impact 2 (Economic: Employment, Income Generation, and Skills Development – Construction Phase)**: Rated P3 - Moderate significance (S=50), with scores of M=2, E=2, F=4, D=2, P=5.
  This highlights temporary but reliable job creation during the 24-month construction period, including direct roles for local semi-skilled workers (e.g., labour targets at 6% of contract value, equating to about 115 full-time workers monthly) and opportunities for SMMEs (small, medium, and micro enterprises). The moderate rating stems from its limited magnitude and extent (primarily local to the Area of Influence, or AOI, with a population of 985,273 and high unemployment, short duration, but high frequency and definite probability. Easy mitigation through targeted training programs could enhance skills transfer, contributing to reduced unemployment in a youthful, working-age demographic (71.1% aged 15-64).

- **Impact 3 (Social: Traffic Safety and Convenience Improvement – Operations Phase)**: With a P4 - High significance rating (S=75) and scores of M=4, E=3, F=4, D=4, P=5, this impact addresses enhanced road safety and user convenience post-construction.
  Features like bridge widening, pedestrian facilities, and a potential 3-in/3-out lane configuration will reduce accident risks and frustrations from current queues, benefiting port users, logistics operators, and nearby residents in areas like Umbilo and The Bluff. The high magnitude and regional extent reflect improvements in quality of life and operational efficiency, with frequent and long-term effects that are virtually certain to occur. Easy mitigation via ongoing maintenance ensures sustained benefits.

- **Impact 4 (Economic: Economic Multiplier Impacts – Construction Phase)**: Also rated P3 - Moderate (S=55), with M=2, E=3, F=3, D=3, P=5.
  This captures indirect and induced effects from the project's capital injection, such as increased business for suppliers of materials, equipment, and services, leading to broader income generation and GDP contributions. Using a Social Accounting Matrix (SAM) model, these multipliers (e.g., on production, taxes, and household income) extend regionally, with moderate frequency and duration tied to the construction timeline. The definite probability underscores reliable economic ripple effects, easily mitigated through local procurement preferences.

**Negative Social Impacts**

The two negative impacts are both in the construction phase, rated low in significance, indicating they are manageable and do not pose major risks in the industrial context, where residential areas are buffered by logistics and port activities.

- **Impact 5 (Social: Inconveniences During Construction – Construction Phase)**: Rated N2 - Low significance (S=20), with minimal scores (M=1, E=1, F=1, D=1, P=5).
  This encompasses temporary disruptions like additional congestion, noise, and dust, affecting primarily port and industrial users rather than distant residential suburbs (e.g., Clairwood or Congella, separated by rail yards). The low magnitude, site-specific extent, rare frequency, and short duration minimize overall effects, though the definite probability calls for proactive traffic management. Easy mitigation, such as scheduling work during off-peak hours and dust

suppression, ensures these inconveniences are short-lived and outweighed by post-construction gains.

- **Impact 6 (Social: Increase in Crime, Safety, and Security – Construction Phase)**: Similarly rated N2 - Low (S=16), with M=1, E=1, F=1, D=1, P=4.
  This anticipates minor risks from increased site activity, such as petty theft or safety incidents, but scores reflect very low severity and localized, infrequent occurrence over the short term. The high (but not definite) probability accounts for urban port dynamics, with moderate mitigation difficulty suggesting needs for enhanced security measures like fencing or patrols. In the AOI's context of existing industrial pressures, this impact is negligible and ceases post-construction.

In summary, Table 21 illustrates a significant net positive socio-economic profile for the project, with operational benefits (e.g., Impacts 1 and 3) achieving high to very high significance through efficiency and safety gains, while construction-related positives (Impacts 2 and 4) provide moderate economic boosts. Negative impacts (5 and 6) are low and transient, easily addressed via standard protocols. This quantitative framework reinforces the report's recommendation to proceed urgently, aligning with municipal plans (e.g., eThekwini Integrated Development Plan) and port strategies to foster sustainable growth without significant adverse effects. Table 21 appears on the following page.

*Table 21: Evaluation of socio-economic impacts*

| Impact number | Dimension of impact | Description of impact | Phase of the project | Nature of impact | Ease of Mitigation | EVALUATION OF THE IMPACT | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | M | E | F | D | P | S | Rating |
| **Impact 1:** | Economic | Transport and logistic efficiencies improvements into and from the port | Operations | Positive | Easy | 5 | 5 | 5 | 5 | 5 | **100** | **P5** |
| | | | | | **Significance** | **P5 - Very High** | | | | | | |
| **Impact 2:** | Economic | Employment, income generation and skills development | Construction | Positive | Easy | 2 | 2 | 4 | 2 | 5 | **50** | **P3** |
| | | | | | **Significance** | **P3 - Moderate** | | | | | | |
| **Impact 3:** | Social | Traffic safety and convenience improvement | Operations | Positive | Easy | 4 | 3 | 4 | 4 | 5 | **75** | **P4** |
| | | | | | **Significance** | **P4 -High** | | | | | | |
| **Impact 4:** | Economic | Economic multiplier impacts | Construction | Positive | Easy | 2 | 3 | 3 | 3 | 5 | **55** | **P3** |
| | | | | | **Significance** | **P3 - Moderate** | | | | | | |
| **Impact 5:** | Social | Inconveniences during construction | Construction | Negative | Easy | 1 | 1 | 1 | 1 | 5 | **20** | **N2** |
| | | | | | **Significance** | **N2 - Low** | | | | | | |
| **Impact 6:** | Social | increase in crime, safety and security | Construction | Negative | Moderate | 1 | 1 | 1 | 1 | 4 | **16** | **N2** |
| | | | | | **Significance** | **N2 - Low** | | | | | | |

# 7. CONCLUSIONS AND RECOMMENDATION

## 7.1. NEEDS AND DESIRABILITY

The need for the upgrading of Bayhead and Langeberg Roads has long been identified. A point has been reached where all stakeholders at national (importers and exporters and transport and logistic companies) and local businesses and residents have been calling for the upgrading of the roads. Further delays in the upgrading of the roads will worsen the ability of exporters and importers to operate effectively and a loss of foreign earnings are likely to take place leading to negative national economic impacts. The levels of inconvenience and road safety have reached a point that further delays in the upgrading of the roads will lead to significant negative socio-economic disbenefits.

The desirability of the road upgrades has been proven by the call for the upgrading from local residential communities, workers in the harbour, businesses and industries that make use of the roads and other stakeholders such as the Municipality and the Chambers of Commerce. There is both a strong need and desirability that the roads must be upgraded. The positive benefits of the proposed upgrading of the roads far exceeds the negative impacts during the construction and operational phases.

## 7.2. CONCLUSION STATEMENT

No fatal socio-economic flaws have been identified related to the proposed upgrading project. To the contrary, a further delay in the upgrading of the roads will lead to social and economic negative effects. The need for and desirability of the upgrading of the roads are high and the assessed negative impacts are low and only for the duration of the construction period.

No mitigations for the socio-economic impacts are identified other than that the prescribed legislative and regulatory stipulations for the upgrading of the roads must be adhered to.

It is therefore recommended that, from a socio-economic perspective, the proposed upgrading of the Bayhead and Langeberg Roads should continue as a matter of urgency.

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Youth Explorer Labour Market Data

# SPECIALIST DECLARATION

forestry, fisheries
& the environment

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Forestry, Fisheries and the Environment
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# SPECIALIST DECLARATION FORM – AUGUST 2023

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

**REPORT TITLE**
**A SOCIO-ECONOMIC IMPACT ASSESSMENT FOR THE FEASIBILITY AND DETAILED DESIGN OF THE BAYHEAD AND LANGEBERG ROAD UPGRADE AT THE PORT OF DURBAN**

**Kindly note the following:**

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.dffe.gov.za/documents/forms.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with '*the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020)*', where applicable.

## 1. SPECIALIST INFORMATION

| | |
|---|---|
| Title of Specialist Assessment | **A SOCIO-ECONOMIC IMPACT ASSESSMENT FOR THE FEASIBILITY AND DETAILED DESIGN OF THE BAYHEAD AND LANGEBERG ROAD UPGRADE AT THE PORT OF DURBAN** |
| Specialist Company Name | SOCIAL RISK RESEARCH PTY LTD |
| Specialist Name | EUGENE DE BEER |
| Specialist Identity Number | 5401145059080 |
| Specialist Qualifications: | BSc (T&R PLANNING; MBL |
| Professional affiliation/registration: | ESSA; SAPI; IAIASA |
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| Telephone | 0827793821 |
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| E-mail | EUGENE@SOCIALRISKRESEARCH.COM |

## 2. DECLARATION BY THE SPECIALIST

I, EUGENE DE BEER declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. "the Protocols") and in Government Notice No. 1150 of 30 October 2020.
- 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; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.

Signature of the Specialist

SOCIAL RISK RESEARCH PTY LTD

Name of Company:

09 Feb 2026

Date

## 3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, _ EUGENE DE BEER_____, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

SOCIAL RISK RESEARCH PTY LTD

Name of Company

09 FEBRUARY 2026

Date

7236418-1
C.J. MOJAKI

Click or tap here to enter text.

Signature of the Commissioner of Oaths

2026-02-09

Click or tap to enter a date.

Date

SUID-AFRIKAANSE POLISIEDIENS
SUPPORT
09 FEB 2026
KLEINMOND
SOUTH AFRICAN POLICE SERVICE