



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

URBAN MOBILITY DIRECTORATE

Draft Freight Management Strategy

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(Revised and updated from 2016)

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ABBREVIATIONS

ACSA	Airports Company South Africa
BRT	Bus Rapid Transit
CBD	Central Business District
CCT	City of Cape Town
CITP	Comprehensive Integrated Transport Plan
CTIA	Cape Town International Airport
DM	District Municipality
FMS	Freight Management Strategy
GCM	Greater Cape Metro
GHG	Greenhouse gas emissions
GPS	Global Positioning System
HAZMAT	Hazardous Materials
IDP	Integrated Development Plan
IPC	Intermodal Planning Committee
KSI	Killed or Seriously Injured
LSDF	Local Spatial Development Framework
LTAB	Land Transport Advisory Board
M&E	monitoring and evaluation
MSDF	Municipal spatial development framework
NaTIS	National administration Traffic Information System
NATMAP	National Transport Master Plan
NDP	National Development Plan
NIP	National Infrastructure Plan
NLTA	National Land Transport Act (Act 5 of 2009)
NLTSF	National Land Transport Strategic Framework
NRTA	National Road Traffic Act
NTACU	National Traffic Anti-Corruption Unit
PLTF	Provincial Land Transport Framework
PoCT	Port of Cape Town
RIMS	Road Incident Management System
RSIF	Regional Spatial Implementation Framework
RTMS	Road Transport Management System
SANRAL	South African National Roads Agency Limited
TDA	Transport and Urban Development Authority
TER	Transport Economic Regulator
TEU	Twenty-foot Equivalent Unit (a standard unit of volume used for cargo capacity)
TFR	Transnet Freight Rail
TNPA	Transnet National Ports Authority
TMC	Transport Management Centre
TOC	Train operating company
TPNM	Transport Planning and Network Management
TRIM	Transnet Rail Infrastructure Manager
UPD	Urban Planning and Design Department
WCFDM™	Western Cape Freight Demand Model
WCG	Western Cape Government
WIM	Weigh-in-motion

EXECUTIVE SUMMARY

The updated Freight Management Strategy (FMS) builds on the foundation laid by the 2016 FMS, responding to evolving challenges and opportunities in Cape Town's freight sector. It aligns with national, regional, and local goals, and reflects the City's commitment to enabling safe, efficient, and sustainable freight transport that supports economic growth and urban resilience.

Context and Strategic Imperative

Freight transport is a critical enabler of Cape Town's economy, facilitating trade, industry, and livelihoods. However, the city faces mounting challenges due to its growing reliance on road-based freight, declined rail usage, and competition for road space with other users. The 2016 FMS identified key issues, such as infrastructure strain, safety risks, and limited enforcement capacity, that remain relevant today.

The updated FMS addresses these persistent challenges while introducing new priorities, including:

- Integrated land-use planning
- Micro-freight sector management
- Enhanced compliance and regulation

While the strategy focuses primarily on road freight, reflecting the City's constitutional mandate, it also supports advocacy for modal shift to rail and collaboration with national and provincial entities. These include Transnet Rail Infrastructure Manager (TRIM), Transnet Freight Rail Operating Company (TFROC), Airports Company South Africa (ACSA), and the Transnet National Ports Authority (TNPA).

Vision

“Freight transport within Cape Town and its Functional Area is safe, efficient, and reliable serving the needs of the local and regional economy without compromising the access and mobility needs of fellow road and rail users, while operators understand and comply with regulations related to safety, the environment, asset preservation and the user-pays principle.”

This vision guides the development of strategic focus areas, informed by a regulatory review, a status quo assessment, and stakeholder engagement. An implementation plan and monitoring framework will translate the strategy into actionable steps with clear responsibilities and timelines.

Strategic Focus Areas:

1. **Safety**
Ensure the safety of all road users by reducing freight-related incidents through enabling increased vehicle roadworthiness standards, driver safety and improved public health.
2. **Efficiency and Reliability**
Improve the performance of freight movement through advocating for modal shift from road to rail, optimising freight routes, improving incident management, and targeting investment into infrastructure upgrades in key areas.
3. **Supporting Local & Regional Economic Growth**
Positioning freight as an enabler of inclusive and sustainable economic development, through a focus on land-use integration, economic efficiency, and system resilience.
4. **Compliance and Regulation**
Strengthen governance and accountability in the freight sector through effective

regulation, increased enforcement capacity, advocating for improved self-regulation, and supporting equitable cost distribution.

- **Lessons learnt from the 2016 FMS**

The 2016 FMS laid the foundation for freight planning in Cape Town, but implementation over time has revealed lessons for improvement in the update of the FMS:

1. **Strengthen data and monitoring systems**

There is a need to improve the City's capacity for freight data collection, analysis, and performance monitoring. Reliable data is essential for efficient freight planning and responsive management. It is important for the City to strengthen partnerships with the private sector, logistics operators, and other spheres of government and SOEs in order to access and share freight-related data.

2. **Improve resourcing for enforcement**

The City has a compliance framework for the freight sector which includes the transportation of dangerous goods, abnormal loads, route restrictions, signage requirements, and vehicle safety standards. However, enforcement of this framework is constrained by limited resources.

3. **Enhance implementation and monitoring**

Several interventions from the 2016 FMS were not implemented, underlining the need for a stronger focus on delivery, accountability, and interdepartmental coordination.

4. **Clarify institutional roles and partnerships**

Many actions identified in the previous FMS fall within provincial or national mandates. The updated FMS recognises this and emphasises the City's role in advocacy, facilitation, and collaboration, particularly with the Western Cape Government (WCG), which has appropriately taken the lead in some of these areas.

These insights will directly inform the updated FMS's focus on institutional capacity, evidence-based planning, realistic action plans, and targeted collaboration across all levels of government and the freight sector.

Key Objectives and focus areas of the Updated FMS

The updated FMS sets out a clear vision for a safe, efficient, and reliable freight transport system that supports Cape Town's local and regional economy while balancing the needs of other road users and the environment. Building on lessons from the 2016 strategy, the updated FMS focuses on four strategic areas: improving safety across the freight network, enhancing efficiency and reliability of freight movement, enabling inclusive economic growth through freight-sensitive planning, and strengthening compliance and regulation through coordinated governance and enforcement.

The strategy promotes a shift toward data-driven decision-making, intergovernmental collaboration, and proactive engagement with the private sector. It recognises emerging trends such as the rise of micro-freight and the need for modal shift to rail, while addressing long-standing challenges like infrastructure wear-and-tear, enforcement capacity, and institutional clarity. Each focus area is supported by targeted actions, measurable indicators, and a structured monitoring and evaluation framework to ensure accountability and adaptability over time.

Expected Outcomes

Expected outcomes include a measurable reduction in freight-related crashes and disruptions, improved flow and access to strategic hubs, and stronger alignment between freight infrastructure and land use. The strategy also envisions increased regulatory compliance, a shift toward more sustainable and efficient freight practices, and equitable cost-sharing among stakeholders. Ultimately, freight is positioned as a strategic enabler of Cape Town's development goals, contributing to a resilient, inclusive, and future-ready urban mobility system.

DRAFT

1 INTRODUCTION

1.1 Context of the FMS

The existing Freight management Strategy (FMS) for the City of Cape Town was developed in 2016 in response to the National Land Transport Act (NLTA) of 2009, the National Freight Logistics Strategy of 2005, and the Road Freight Strategy for South Africa of 2011. These national documents and the Comprehensive Integrated Transport Plan (CITP) (2023-2028) emphasise the need for local and regional freight strategies to support economic growth through the efficient, reliable, safe, and secure movement of freight¹.

This update of the 2016 FMS addresses legislative changes (especially with regard to the anticipated devolution of rail and the Rail White Paper); significant updates to the City's Integrated Development Plan (IDP) and CITP; and the changing nature of freight logistics. The purpose of this document is to:

- Satisfy the demands stemming from national guidance for a local freight management strategy;
- Provide guidance on the alignment of national and provincial legislation to local freight management;
- Outline City indicators for the measurement of freight transport such that bottlenecks and interventions might be easily identified.

1.2 Minimum Requirements

The minimum requirements for an FMS for a planning authority are as follows:

National Land Transport Act (NLTA), 2009:

1. **Legal Requirement:** The NLTA (Section 37) mandates local planning authorities to develop a comprehensive FMS that ensures safe, efficient, and sustainable movement of freight. This includes the requirement to plan specifically for the movement of dangerous substances as outlined in the Hazardous Substances Act, 1973.
2. **Coordination and Planning:** The Act emphasises the need for integrated planning across municipal boundaries, involving collaboration with provincial and national stakeholders through mechanisms such as the Intermodal Planning Committees (IPC) and Land Transport Advisory Boards (LTAB).
3. **Compliance and Enforcement:** The NLTA requires the establishment of regulatory frameworks and compliance mechanisms, particularly for dangerous goods and overloading, to ensure alignment with national safety standards.
4. **Dangerous Goods Road Plan:** The creation of a detailed hazardous goods movement plan is required.

Comprehensive Integrated Transport Plan (CITP) 2023-2028:

1. **Dangerous Goods and Abnormal Loads Road Plans:** Certain key routes must be classified as hazardous goods routes and routes for abnormal loads, and these routes must be demarcated and monitored by the City's incident management team, with the provision for appropriate response times in the event of an incident.

2. **Implications of the CIP planning approach:** It requires this FMS update to incorporate a flexible and adaptive planning approach, focusing on "planning in uncertainty," "incrementalism," and "triple access". The "planning in uncertainty" approach emphasises scenario-based planning, recognising that economic development levels and the formalisation of the freight sector could vary significantly. The FMS should focus on proposing adaptable actions rather than prescribing fixed outcomes, allowing for responsiveness to changes such as shifts to online shopping, advancements in freight technology, and potential modal shifts from road to rail. The "incremental" approach involves small, immediate actions where large solutions are not yet possible, which could benefit freight movement. Lastly, the "triple access" concept highlights the impact of digital connectivity on the freight supply chain, leading to more decentralised depots and micromobility solutions for last-mile deliveries. The CIP stresses the need for a deeper understanding of how these evolving patterns affect freight demand and movement.

1.3 Limitations of the FMS

1.3.1 Mandate Limitations

In accordance with Section 37 of the NLTA, planning authorities are required to develop a freight transport strategy. However, the City of Cape Town's mandate is limited to planning, implementing, coordinating, and ensuring the efficient operation of road-based freight within the metropolitan area. While the City plays a role in stakeholder engagement and advocacy, it does not have jurisdiction over provincial and national freight routes, rail freight planning and operations, port planning and operations, airport planning and operations, freight regulations, nor the private sector activity of freight production, demand, and movement.

Within the FMS, there is also minimal focus on pipelines, air cargo, and the Port of Cape Town (PoCT), as these fall under the jurisdiction of state-owned entities. However, the City actively collaborates with Transnet Freight Rail (TFR) to promote rail freight usage and with Airports Company South Africa (ACSA) on air freight matters. The City also actively works with the PoCT, a major generator of freight, to review development plans and explore strategies to reduce dependency on road-based freight².

1.3.2 Data Gaps in Last Mile Freight

Additionally, the movements and operational requirements of light delivery vehicles (LDVs), including courier services, are not well captured due to their integration within mixed traffic. The lack of data inhibits the City's understanding of and ability to plan for loading zones, congestion impacts and emissions associated with this growing segment of urban freight. While their loading and offloading needs are addressed through the City's Parking Policy (2020), there is a need for improved data collection and monitoring.

1.3.3 Emerging Technologies and Delivery innovations

Emerging technologies such as drone-based last-mile delivery are currently outside the scope of the FMS, given that aviation planning and regulation fall beyond the City's mandate under the NLTA. However, the City supports private sector innovation in this space and will monitor developments to ensure future integration aligns with broader urban mobility and sustainability goals.

1.4 Lessons learnt from the previous FMS

There is a need to improve the City's capacity for freight data collection, analysis, and performance monitoring. Reliable data is essential for efficient freight planning and responsive management. It is

important for the City to strengthen partnerships with the private sector, logistics operators, and other spheres of government and SOEs in order to access and share freight-related data.

1.4.1 Improve resourcing for enforcement

The City has a compliance framework for the freight sector which includes the transportation of dangerous goods, abnormal loads, route restrictions, signage requirements, and vehicle safety standards. However, enforcement of this framework is constrained by limited resources.

1.4.2 Enhance implementation and monitoring

Several interventions from the 2016 FMS were not implemented, underlining the need for a stronger focus on delivery, accountability, and interdepartmental coordination.

1.4.3 Clarify institutional roles and partnerships

Many actions identified in the previous FMS fall within provincial or national mandates. The updated FMS recognises this and emphasises the City's role in advocacy, facilitation, and collaboration, particularly with the Western Cape Government (WCG), which has appropriately taken the lead in some of these areas.

1.5 Vision

The vision for freight transport as stated in the 2016 FMS was based on the CIP vision of the time. This vision holds true and remains central to this FMS:

*"Freight transport within Cape Town and its Functional Area is **safe, efficient, and reliable** serving the needs of the **local and regional economy** without compromising the access and mobility needs of fellow road and rail users, while operators **understand and comply with regulations** related to **safety, the environment, asset preservation** and the **user-pays principle**."*

This Vision informs the desired end state within the Theory of Change of this FMS. In turn, the objectives, proposed targets, and examples of actions of the FMS align with this vision, ensuring a clear line of sight from planning to outcomes.

2 Problem Statement

Urban freight transport in Cape Town encompasses the movement of goods and materials into, out of, through, and within the metropolitan area. The current freight landscape is dominated by a heavy reliance on road-based transport, with a declined share of rail freight and rapid growth in road freight volumes, particularly bulk and containerised goods driven by fast-moving consumer demand.

This modal imbalance contributes to a range of urban challenges:

- Increased congestion on key corridors;
- Accelerated road infrastructure deterioration;
- Heightened safety risks, especially involving heavy vehicles and hazardous materials; and
- Rising emissions and environmental degradation.

Beyond road freight, Cape Town's urban freight system faces additional constraints related to:

- Underutilised rail infrastructure;
- Limited integration with port, airport, and pipeline networks; and
- Insufficient visibility of micro and last-mile freight flows, including courier and light delivery vehicles.

These challenges underscore the need for a coordinated, multimodal, and data-informed approach to freight planning that supports economic activity while mitigating negative externalities. The following sections outline the characteristics of Cape Town's freight system in more detail, providing the basis for targeted interventions.

2.1 Challenges and Issues

2.1.1 Growth and Dependence on Road Freight

In 2025, approximately 95% of Cape Town's exports were transported by road, primarily along the N1, N2, and N7 national corridors. In contrast, only 5% of exports moved by rail, reflecting a continued modal imbalance. The Port of Cape Town (PoCT), a critical freight hub, currently handles around 750,000 TEUs annually, with long-term plans to double this volume to 1.4 million TEUs, which will place additional pressure on the City's road infrastructure. The decline in rail freight's share can be traced back to the deregulation of freight rail in 1988, which led to a significant shift toward road-based transport. This policy change reduced the competitiveness of rail and contributed to the current over-reliance on road freight.

2.1.2 Negative Impacts of Urban Freight Transport Operations

While freight transport plays a vital role in supporting Cape Town's urban economy, its operations also generate significant negative impacts. These include increased traffic congestion, accelerated road infrastructure deterioration, heightened safety risks, and rising levels of air and noise pollution. In addition, challenges extend across other freight modes, including rail, port, airport, pipelines, and micro freight, highlighting the need for a more integrated and sustainable urban freight system.

2.1.2.1 Economic impacts / issues

	ECONOMIC IMPACTS / ISSUES
Road-based / related	1) <i>High road-based freight demand:</i> A significant portion / most of the freight (including waste) is transported by road thereby leading to:

	ECONOMIC IMPACTS / ISSUES
	<ul style="list-style-type: none"> a) road congestion (competes for road space with passenger transport); b) road infrastructure damage caused by crashes; c) greater infrastructure wear and tear due to weight and/or overloading / over-height); and d) increased road maintenance costs. <p>2) Crash hotspots related to poor driver responses to infrastructure challenges, i.e., M5/N1 intersection (Koeberg Interchange); Bottom of Ou Kaapseweg (Steenberg Rd) (enforcement signage, arrestor bed planned); Bottom of Sir Lowry's Pass (arrestor bed); and Marine Rd, Muizenberg: Atlantic Rd underpass under Southern rail line (warning signage).</p>
Rail-based / related	Freight-rail infrastructure has deteriorated: The current state of rail infrastructure, especially for intra-city freight movement, is poor and under-maintained, and been encroached on (e.g., Du Noon settlement on Atlantis–Chempet line), thereby pushing freight to road-based modes.
Port related	<ul style="list-style-type: none"> 1) Operational inefficiencies at the PoCT result in delays and increase logistical costs, challenges negatively affecting supply chain reliability and competitiveness, particularly for export-driven industries. 2) Slow recovery after port downtime delays the movement of goods, disrupts supply chains, and increases costs for businesses reliant on timely imports and exports, all of which translates into economic drag and broader reputational risks to the wider freight system. 3) PoCT downtime causes trucks to hold in the road space. Extended time in road space can also result in urban management issues caused by truck drivers (littering, public urination, etc). 4) Long-distance road-based freight movement to and from the PoCT competes with the needs of the city (e.g. local freight and people movement). 5) The PoCT's plans to significantly increase its container handling capacity could further strain the existing road network.
Airport related	<ul style="list-style-type: none"> 1) Road-based transport of fuel for air modes increases road congestion in proximity to the airport. 2) Growth in the freight movement associated with the airport will place additional pressure on the road network.
Pipeline related	Lack of a jet fuel pipeline to the Cape Town International airport (CTIA) results in 40-52 trucks delivering jet fuel daily. The reliance on road increases operational costs, increases supply chain vulnerabilities, and limits the airport's fuel delivery efficiency and scalability. This will constrain aviation growth in the long term.

	ECONOMIC IMPACTS / ISSUES
Freight transport system	<ol style="list-style-type: none"> 1) The limited co-ordination between road, rail, port, and air freight increase logistics costs and reduces overall system efficiency. 2) Lack of integrated freight planning across government spheres leads to duplicated efforts and missed opportunities for shared infrastructure. 3) Inadequate system resilience to disruptions (e.g., port downtime, rail failures) results in economic losses for businesses and reduced investor confidence. 4) Poor access to freight movement data hampers evidence-based decision-making, leading to inefficient infrastructure investments and planning delays. 5) Freight theft and vandalism increase operational costs and deter investment.
Micro-freight/ Light Delivery Vehicle Related	<ol style="list-style-type: none"> 1) Increased congestion costs caused by high volumes of LDVs during peak hours which heighten urban traffic congestion. This leads to longer travel times, reduced productivity, and increased fuel consumption. 2) LDVs often operate with low load factors (i.e., not fully loaded), resulting in inefficient use of infrastructure and higher per-unit transport costs. 3) Frequent stopping and offloading in undesignated areas disrupt traffic and pedestrian flow. 4) Some LDV operators may operate outside of the formal regulatory frameworks, leading to lost revenue from licensing and reduced oversight of safety and emissions standards. 5) The business model of LDVs, often driven by time-sensitive delivery pressures and informal employment structures, can lead to poor driver behaviour, including speeding, erratic lane changes, and disregard for traffic regulations. This increases safety risks for all road users and undermines public trust in urban freight operations.

2.1.2.2 Social impacts

	SOCIAL IMPACTS / ISSUES
Road-based / related	<ol style="list-style-type: none"> 1) Public health risks: emissions from freight vehicles contribute to poor air quality, increasing respiratory and cardiovascular health issues among residents. 2) Road safety hazards: freight-related crashes place additional strain on emergency services and impact vulnerable road users. 3) Traffic disruption: crashes and slow-moving freight vehicles cause delays, reduce productivity and increase travel stress and frustration. 4) Noise pollution: heavy vehicle operations generate persistent noise, negatively affecting quality of life especially in residential and educational neighbourhoods.

	SOCIAL IMPACTS / ISSUES
Micro-freight/ Light Delivery Vehicle Related	1) Illegal parking and offloading: LDVs often park or offload in undesignated areas, disrupting traffic flow, pedestrian safety, and universal accessibility.

2.1.2.3 Environmental impacts and issues

In general, freight movement, including rail, remains carbon-intensive. Road-based freight transport contributes significantly to the following in urban areas, including in Cape Town:

- 1) Air pollution and greenhouse gas emissions (GHG) emissions due to the use of non-renewable fossil-fuels.
- 2) Particulate matter from heavy vehicle use of road surfaces.
- 3) Crashes and incidents by road-based transportation of dangerous goods and waste pose health and safety risks as well as environmental risks.
- 4) Noise Pollution caused by heavy vehicles, air brakes, additional honking and increased motorbike usage for last mile delivery in residential areas.
- 5) Dysfunctional rail lines (e.g., Atlantis-Chempet) forfeit opportunities for sustainable waste-to-energy and low-carbon freight alternatives.

2.1.2.4 Additional challenges, impacts and issues

	OTHER CHALLENGES AND ISSUES
Road-based / related	<ol style="list-style-type: none"> 1) Compounding effect of urban congestion: increasing traffic exacerbates delays and inefficiencies in road-based freight movement, raising operational costs and reducing reliability. 2) Informalisation of the "trucking" sector: growth in informal heavy vehicle operations contributes to widespread non-compliance with safety, licensing, and environmental regulations. 3) Limited representation of small operators: small and emerging trucking companies often lack representation in the formal freight associations, reducing their access to support and industry standards. 4) Driver skills and behaviour: low levels of professional training and poor driving behaviour among freight drivers increase safety risks and contributes to road incidents. 5) Vehicle non-compliance: poor roadworthiness and lack of regulated licensing among freight vehicles heighten the risk of accidents, infrastructure damage, and environmental harm. 6) Enforcement constraints: inadequate municipal resources limit the ability to enforce freight regulations, including overloading, illegal parking and route

	OTHER CHALLENGES AND ISSUES
	compliance. Strengthening enforcement and promoting industry self-regulation are critical to improving safety and efficiency.
Rail-based / related	<p>1) <i>Policy uncertainty and governance gaps:</i> the pending finalisation of the National Rail Master Plan, which includes provisions for rail devolution, creates uncertainty regarding roles, responsibilities and investment decisions. This delays municipal and private sector involvement in rail freight development.</p> <p>2) <i>Organisational Restructuring of Transnet Freight Rail:</i> The restructuring of TFR into separate Infrastructure Management (TRIM) and the Transnet Freight Rail Operating Company (TFROC), introduces transitional challenges, affecting service continuity, stakeholder co-ordination and long-term planning.</p> <p>3) <i>Competing land use pressures:</i> Urban densification, residential expansion, and port-related development increasingly compete with industrial and rail corridor needs, constraining the availability of land for future rail freight infrastructure and limiting long-term planning flexibility.</p>
Port related	<i>Unresolved spatial tensions between the CBD and Port expansion:</i> both are experiencing pressure for expansion, yet their spatial needs are increasingly in conflict, creating several challenges such as planning uncertainty, land use conflicts.
Airport Related	<p>1) <i>Limited air cargo infrastructure capacity:</i> CTIA faces constraints in handling growing volumes of air freight, particularly in terms of warehousing, cold chain logistics and cargo holding facilities.</p> <p><i>Security and customs delays:</i> stringent security protocols and customs clearance processes, while necessary, can lead to delays in cargo movement, affecting supply chain efficiency.</p>
Pipeline related	<i>Lack of long-term, multi-criteria planning:</i> focus on short-term operational needs and financial cost considerations with limited attention to broader strategic criteria overlooks critical factors such as environmental sustainability, urban safety and risk mitigation, land use compatibility and spatial planning, resilience to climate and supply chain disruptions, and economic efficiency over the infrastructure lifecycle.
Freight system	<p>1) <i>Port expansion reliant on road transport:</i> expansion of container handling capacity at PoCT is largely dependent on road-based freight despite the presence of rail infrastructure, which will result in increased congestion, emissions and road maintenance costs, while undermining opportunities for sustainable intermodal freight solutions.</p> <p>2) <i>Land use conflicts and industrial relocation:</i> Freight governance is hindered by fragmented responsibilities across national, provincial, and municipal entities. The City has limited jurisdiction over key freight infrastructure and operations, reducing its ability to influence strategic decisions and coordinate effectively across the system.</p> <p>3) <i>Lack of Modal Integration:</i> Poor connectivity and coordination between freight modes, road, rail, port, and air, limit the efficiency of the overall system</p>

	OTHER CHALLENGES AND ISSUES
	<p>and increase reliance on single-mode transport, particularly road, which carries higher external costs.</p> <p>4) <i>Insufficient and unreliable freight data:</i> The absence of comprehensive, comparable data on freight flows, port and airport activities, and micro-freight movement constrains evidence-based planning, policy development, and performance monitoring.</p> <p>5) <i>Absence of long-term planning for freight villages and intermodal terminals:</i> There is a lack of strategic planning for freight villages and intermodal hubs that could consolidate logistics activities, reduce urban freight impacts, and support more efficient, multimodal freight operations.</p>
Micro-freight/ Light Delivery Vehicle Related	<p>1) <i>Regulatory gaps and modal conflict:</i> current legislation governing micro-mobility, including e-bikes and cargo bikes, does not adequately protect these vehicles from conflicts with larger motorised modes, creating safety risks for operators. Additionally, this limits the integration of micro-freight into the broader urban transport system.</p> <p>2) <i>Insufficient road space allocation:</i> Micro-freight and LDV are not sufficiently accommodated in existing road and curb space planning. This lack of dedicated infrastructure, such as loading zones, bike lanes and micro-hubs, hampers operational efficiency.</p>

3 REGULATORY CONTEXT

3.1 Introduction

The planning and management of freight transport in Cape Town is guided by a range of legislation, policies, strategies, and reports at the national, provincial, and local levels. These documents shape the City's FMS.

This scan is structured to provide a summary and analysis of:

- Key legislation and policies.
- National, provincial, and municipal plans that inform freight-related development.
- Strategic frameworks that shape long-term freight objectives.
- Operational and institutional reports.

The overview of legislation is structured in two tables, the first table providing an overview of key documents, and the second (section 3.2.1) dealing with key documents guiding the development of the FMS.

DRAFT

Table 3-1: Ecosystem summary of scanned documents

	National	Provincial	Local	State-owned Enterprises
Legislation	<ul style="list-style-type: none"> National Land Transport Act, 2009 (Act 5 of 2009) National Road Traffic Act, 1996 (Act 93 of 1996) Economic Regulation of Transport Act, 2024 (Act 6 of 2024) Carbon Tax Act, 2019 (Act 15 of 2019) National Ports Act, 2005 (Act 12 of 2005) Hazardous Substances Act, 1973 (Act 15 of 1973) 		<ul style="list-style-type: none"> Traffic by-law (2022) Streets, Public Places and the Prevention of Noise Nuisance by-law (2021, as amended) Air Quality by-law (2016, as amended) Parking by-law (2010) Municipal Planning By-law (2015, as amended) 	
Policies	<ul style="list-style-type: none"> White Paper on National Transport Policy (1996, updated 2021). White Paper on National Rail Policy, 2022 		<ul style="list-style-type: none"> Parking Policy (2020) 	
Plans & Guidelines	<ul style="list-style-type: none"> National Development Plan, 2030 National Infrastructure Plan, 2050 National Ports Plan, 2019 Transnet Port Development Framework Plans, 2022 		<ul style="list-style-type: none"> CCT Integrated Development Plan 2022-2027 CCT Comprehensive Integrated Transport Plan (CITP) 2023 – 2028 Cape Town Climate Change Action Plan, 2021 	ACSA Corporate Plan (2023/24 – 2025/26)
Strategies & Strategic Frameworks	<ul style="list-style-type: none"> National Land Transport Strategic Framework Roadmap for the Freight Logistics System in South Africa, 2023 Road Safety Strategy 2016 – 2030 	<ul style="list-style-type: none"> Western Cape Provincial Land Transport Framework (PLTF) Western Cape Government Freight Strategy, 2019 Western Cape Freight Demand Model (WCFDM) Greater Cape Metro Regional Spatial Implementation Framework (GCM RSIF) 	<ul style="list-style-type: none"> CCT Integrated Economic Growth Strategy, 2021 Bellville Central Business District: Local Spatial Development Framework, 2023 	
Reports			<ul style="list-style-type: none"> Belcon/Kraaicon Prefeasibility Study, 2023 	<ul style="list-style-type: none"> Transnet National Ports Authority Report, 2023 Transnet Freight Rail Network Statement, 2024 Transnet Freight Rail Report, 2024 ACSA Integrated Report, 2024

3.2 Scan of Regulatory Informants

3.2.1 Key Documents guiding Cape Town's Freight Management Strategy

The Key Documents guiding Cape Town's FMS refer to the most relevant documents guiding policy for the FMS. These documents are most relevant to the development of the FMS. They are discussed in more detail in the boxes below, and include:

- National Land Transport Act, 2009 (Act 5 of 2009)
- National Road Traffic, 1996 (Act 93 of 1996)
- Roadmap for the Freight Logistics System in SA, 2023
- Transnet Port Development Framework Plans, 2022
- WCG Freight Strategy, 2019
- CCT Comprehensive Integrated Transport Plan (CITP) 2023–2028
- CCT Integrated Development Plan (IDP) 2022–2027, including the MSDF

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Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
<p>National Land Transport Act, 2009³ (Act No. 5 of 200)</p>	<p>Governs all land transport, defines municipal powers in freight planning. Provides basis for regulatory enforcement and intermodal freight support. Section 37 mandates planning authorities to develop an FMS.</p>	<p><u>Section 36.(3):</u> Requires that "all integrated transport plans must include routes for the transporting of dangerous goods by road through their areas".</p>	<p>The creation of a detailed hazardous goods movement plan is required in terms of the NLTA</p>
		<p><u>Section 37 deals with freight transport:</u></p> <ul style="list-style-type: none"> • Mandates the development of a National Land Transport Strategic Framework, which guides land transport planning nationwide. • Provincial and municipal authorities are required to prepare their own transport frameworks, aligning with the national strategy while addressing local needs • Emphasises the need for effective regulation of freight operations to prevent damage to the road system and to achieve other objectives of the Act. • It promotes collaboration between planning authorities, the MEC, and registering authorities to regulate freight operations effectively. 	<ul style="list-style-type: none"> ○ This provision supports the City's efforts to regulate freight transport, ensuring that operations are conducted safely and sustainably. ○ The FMS should align with these requirements, ensuring that local freight operations are planned and managed by national and provincial guidelines.
		<p><u>Institutional Arrangements (Chapter 2)</u></p> <ul style="list-style-type: none"> • Outlines the responsibilities of various governmental bodies in land transport, including municipalities. • It establishes the framework for intergovernmental relations and the roles of planning authorities and advisory boards. 	<p>The establishment of structures like the Land Transport Advisory Board (LTAB) and Intermodal Planning Committees facilitates coordination among stakeholders in Cape Town's transport sector.</p>
		<p><u>Funding Arrangements (Chapter 3):</u> provides for the establishment of municipal land transport funds and outlines the provision of funds for land transport by the Minister and MECs.</p>	<p>These provisions enable the City to secure funding for transport infrastructure and services, supporting the development and maintenance of freight transport networks.</p>

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
		<p><u>Regulation of Road-Based Public Transport (Chapter 6):</u> While primarily focused on public transport, this chapter's provisions on operating licences and service contracts can inform the regulation of freight transport services.</p>	<p>While primarily focused on public transport, this chapter's provisions on operating licences and service contracts can inform the regulation of freight transport services.</p>
			<p>General implications:</p> <ul style="list-style-type: none"> ○ Integrated Planning: The NLTA's emphasis on integrated transport planning necessitates that Cape Town's freight strategies consider intermodal connections, land use, and environmental impacts. ○ Regulatory Compliance: Freight operators must adhere to the regulations set forth in the NLTA, ensuring that their operations do not harm the road infrastructure and are conducted efficiently. ○ Stakeholder Coordination: The Act's provisions on institutional arrangements highlight the importance of collaboration among various stakeholders, including government agencies, private sector entities, and the public, in managing freight transport. ○ Access to Funding: The availability of municipal land transport funds provides Cape Town with the financial resources needed to invest in and maintain freight transport infrastructure.

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
National Road Traffic Act 93 of 1996⁴	Regulates road safety, vehicle standards, and transportation of goods. It provides comprehensive guidelines for the movement of freight within South Africa.	<p><u>Section 74</u> – supports freight regulation enforcement by validating that traffic officers, vehicle inspectors, and licence examiners have the legal authority to act—even if formal proof is not immediately provided</p> <p><u>Sections 15–24 & Regulation 267</u> – Vehicle Registration and Licensing: Details the process and standards for registration and licensing, including freight vehicles.</p>	Freight vehicles are subject to enforcement actions like weighing, roadworthiness checks, and dangerous goods inspections. This clause strengthens the legal foundation for those enforcement actions in Cape Town.
		<u>Section 75</u> – Regulations made by the Minister:	
		(c), (d) – Width, height, length, mass, loading of vehicles	Crucial for regulating freight vehicle dimensions and overloading, which is a top concern in urban freight.
		(h) – Dangerous goods (classification, powers, transport conditions)	Critical for managing risks related to hazardous freight materials moving through Cape Town
		(i), (l), (m), (o) – Towing, brakes, silencers, construction, road protection	Supports the safety and infrastructure sustainability aspects of freight movement.
		(q), (r), (y), (z) – Rules of the road, accident reporting, freight vehicles carrying passengers, additional safety measures	These provisions help enforce behaviour and operational standards in freight logistics
		(q), (r), (y), (z) – Rules of the road, accident reporting, freight vehicles carrying passengers, additional safety measures	This allows the Department to issue freight-specific rules for urban areas like Cape Town's CBD or port precincts.
		(2) – Regulations can be tailored to specific categories, areas, and industries	This allows the Department to issue freight-specific rules for urban areas like Cape Town's CBD or port precincts
		<u>Section 76</u> – Incorporations of standards	<ul style="list-style-type: none"> ○ This section gives legal force to technical standards, such as: <ul style="list-style-type: none"> ▪ Load securing standards ▪ Axle weight regulations

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
			<ul style="list-style-type: none"> ▪ Vehicle lighting, brakes, and emissions ○ These standards ensure uniform safety and performance expectations for freight vehicles nationally and in municipalities like Cape Town.
		<p><u>Regulations under Chapter VI</u> – Fitness of vehicles: Covers roadworthiness, inspections, and standards for vehicles used on public roads, duties and registration of operators.</p>	<ul style="list-style-type: none"> ○ Supports accountability in freight operations. ○ Reinforces vehicle and operator fitness requirements. ○ Provides enforcement tools for local and provincial authorities. ○ Facilitates compliance with safety, environmental, and operational regulations. ○ Encourages professionalisation and regulation of freight transporters operating in Cape Town and surrounding regions.
		<p>Regulation 330A is titled "Offering and acceptance of goods on overloaded vehicle prohibited." It establishes legal responsibilities for both consignors (those offering goods for transport) and consignees (those receiving goods) to prevent the overloading of vehicles. The key provisions include:</p>	<ul style="list-style-type: none"> ○ Shared Responsibility: Both the sender and receiver of goods are legally obligated to prevent overloading, promoting a culture of compliance throughout the supply chain. ○ Documentation and Verification: Freight managers must ensure that proper documentation is obtained and verified, including payload declarations and load distribution information. ○ Operational Procedures: Companies may need to implement or update standard operating procedures to include checks for vehicle loading compliance before dispatch and upon receipt. ○ Training and Awareness: Staff involved in loading, dispatching, and receiving goods should be trained on the legal requirements

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
		<p><u>Regulation 234 and 235: Permissible Maximum Mass of Vehicles and Axle Units:</u> Specifies the maximum permissible mass for vehicles and their axle units. This regulation is crucial for freight operators as it ensures that vehicles do not exceed weight limits, which can lead to road damage and safety hazards.</p>	<p>and the importance of preventing overloading.</p> <ul style="list-style-type: none"> ○ Route Planning: Operators must plan routes considering weight restrictions on certain roads or bridges. ○ Vehicle Selection: Choosing the appropriate vehicle type and configuration is essential to comply with mass limits. ○ Load Distribution: Properly distributing cargo weight across the vehicle's axles is vital to adhere to axle load limits.
		<p><u>Part 3 (Regulations 221-230): Dimensions of vehicles:</u> stipulates the maximum dimensions for vehicles, including length, width, and height. This ensures that vehicles can safely navigate roads and infrastructure.</p>	<ul style="list-style-type: none"> ○ Infrastructure Compatibility: Ensuring vehicles can pass under bridges and through tunnels without issues ○ Urban Deliveries: Navigating narrow city streets requires adherence to width and length restrictions. ○ Permit Requirements: Oversized vehicles may require special permits and escorts, impacting delivery schedules and costs.
		<p><u>Regulation 266: Abnormal Loads:</u> pertains to the transportation of abnormal loads, which are vehicles or combinations of vehicles and loads that exceed the prescribed dimensions or mass limits set by the NRTA.</p>	<ul style="list-style-type: none"> ○ Route Planning: Freight operators must plan routes that accommodate the dimensions and weight of their loads, ensuring compliance with local infrastructure limitations. ○ Permit Acquisition: Before transporting oversized or overweight loads, operators must apply for and secure the necessary permits from the City of Cape Town's Transport and Urban Development Authority (TDA). ○ Safety Measures: Implementing safety protocols, including the use of escort vehicles

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
			and adherence to specified transport times, is essential to mitigate risks.
		<u>Regulation 246: Projections on Vehicles:</u> Goods or loads must not project beyond the vehicle's dimensions unless permitted. For any projections exceeding standard limits, operators must obtain an abnormal load permit.	Ensures that freight vehicles adhere to legal dimensions, preventing road hazards and potential fines.
		<u>Regulation 247: Transporting Workers in Goods Compartments:</u> When transporting workers in the goods compartment, the area must be enclosed to a height of at least 350mm for seated individuals and 900mm for standing individuals.	Ensures the safety of workers being transported, reducing the risk of accidents and injuries.
		<u>Regulation 246: Loading of Goods:</u> Goods must be loaded in a manner that prevents them from falling off or shifting during transit.	Proper loading ensures vehicle stability, reducing the risk of accidents caused by shifting loads. Adhering to these regulations helps operators avoid penalties and ensures the safe transportation of goods.
		<u>Regulation 330: Towing of Vehicles</u>	Ensures that towing operations are conducted safely, minimising risks of accidents.
		<u>Chapter VIII</u> emphasises the need for careful regulation and oversight when transporting dangerous goods. Deals with issues like: <ul style="list-style-type: none"> • Appointment of Inspectors (Section 55(1)); • Qualifications and Training (Section 55(1)(b)); • Powers and Duties (Section 55(2)); • Inspection Fees (Section 55(3)); 	<ul style="list-style-type: none"> ○ Freight companies and transport operators dealing with dangerous goods should expect that their operations may be subject to inspections by qualified inspectors. This means ensuring compliance with safety standards, vehicle requirements, and proper handling procedures for dangerous goods. ○ Companies should also be prepared to pay fees for inspections if required by the Minister.

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
			This could involve regular audits of their safety practices or operational processes related to hazardous goods transport.
		<u>Section 8: Application for registration of driving licence testing centre</u>	This section is critical for ensuring that drivers of freight vehicles, such as trucks and transport vehicles, have the necessary licensing for operating large vehicles, including professional driving permits (PDPs) for commercial drivers.
		<u>Sections 15-24</u> focus on the legal requirements for driver qualifications and vehicle registration, ensuring that freight vehicles and their operators in Cape Town are legally compliant.	These sections help authorities in Cape Town ensure that freight operators are following the necessary legal framework for both driver qualifications and vehicle registration.
		<u>Chapter 8 of the Regulations:</u> deals with the transportation of dangerous goods and specific requirements for freight vehicles. It covers issues like the type of cargo that can be transported, the necessary conditions for transporting certain goods, and the legal obligations of freight operators	<ul style="list-style-type: none"> o Ensures that freight vehicles are inspected and maintained to meet high safety standards, which is essential for reducing the risk of accidents and improving overall road safety in Cape Town. o Special cargo: For freight operators transporting dangerous or special goods (such as chemicals, explosives, or oversized equipment), Chapter 8 mandates the correct permits and handling procedures. This is particularly relevant for operations in Cape Town, which might involve port-based or cross-border transportation.
Roadmap for the Freight Logistics System in SA, 2023⁵	A national strategy developed to address inefficiencies, infrastructure deficits, and systemic	<u>Section 1.5 – Transforming the Logistics System in the Long-Term</u>	<ul style="list-style-type: none"> o The FMS should address the development of more intermodal terminals and the types of freight that should be earmarked for shifting to rail.

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
(Guidelines on National level)	reforms in South Africa's freight logistics system, with a strong emphasis on ports, rail, and modal shifts	<ul style="list-style-type: none"> ○ Focus on structural reforms like vertical separation in rail and greater private sector participation in ports and logistics. <p>Aligns with shifting Cape Town's freight flows toward more competitive and sustainable logistics solutions.</p> <p><u>Section 7 – A level playing field in Ports and Rail</u> The establishment of a National Ports Authority independent from port operations and an Infrastructure Manager independent from rail operation.</p> <p><u>Section 5 – Addressing the Immediate Crises</u> Short-term recovery plans for corridors, improved rail and port operations, and partnerships with the private sector for urgent upgrades.</p>	<ul style="list-style-type: none"> ○ The FMS should address the possible devolution of the port, and some rail devolution of feeder lines, in the future. ○ The FMS must anticipate a reformed governance model for port and rail access, emphasizing transparent, non-discriminatory access and competitive logistics services. ○ The FMS must integrate corridor recovery actions, particularly focused on the PoCT's performance and main freight routes.
Transnet Port Development Framework Plans, 2022⁶	Outlines Transnet National Ports Authority's (TNPA) strategic infrastructure and operational plans for South Africa's ports, including the PoCT. It details current capacities, future expansions, and integration with national logistics corridors to enhance trade efficiency and economic growth.	<p>The purpose of this document is to:</p> <ul style="list-style-type: none"> • Revise the nationwide freight demand forecast per port • Develop scenarios and port concepts to handle the projected freight demand • Conduct options analysis to determine the most suitable port concepts to meet future demand • Prepare and select options into high level Port Development Framework Plans (PDFPs) • Update port layouts. This included updating the list of projects and highlevel costings, on which the PDFPs were based. • Identify opportunities and constraints of previous Framework Plans • Align with national strategies and policies, spatial planning and land use management, 	<p>The Framework Plans are highly pertinent to Cape Town's FMS for several reasons:</p> <ul style="list-style-type: none"> ○ Infrastructure Enhancements: The document details planned expansions and upgrades to port facilities, which are crucial for accommodating increasing freight volumes and improving efficiency in cargo handling. ○ Intermodal Connectivity: Plans to improve rail and road connections to the port are essential for facilitating seamless movement of goods, reducing congestion, and promoting sustainable transport modes. ○ Economic Growth and Job Creation: The proposed developments are expected to stimulate economic activity in the region, leading to job creation and enhanced

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
		<p>port growth strategies and latest market trends in the maritime logistics supply chain.</p> <p><u>Chapter 2, section 2.4.2</u> discusses the PoCT's current port activities, provides a strategic development plan and capacity analysis i.t.o. freight. Short, medium and long term structural plans are provided.</p>	<p>competitiveness of Cape Town as a logistics hub.</p> <ul style="list-style-type: none"> o Environmental Considerations: The framework includes measures to mitigate environmental impacts, aligning with sustainable development goals and supporting Cape Town's commitment to environmental stewardship.
<p>WCG Freight Strategy, 2019⁷</p>	<p>Provincial strategy on freight flows, challenges, and infrastructure needs in the Western Cape.</p>	<p><u>Section 4.3 – Freight Planning, Coordination and Institutional Arrangements</u> – Highlights the lack of coordination between spheres of government and freight stakeholders.</p>	<ul style="list-style-type: none"> o The FMS must promote the establishment of formal platforms for joint planning, strengthen institutional capacity, and align with provincial and national freight priorities.
		<p><u>Section 4.4 – Freight Demand Management</u> - Aimed at optimising freight movement to reduce congestion, improve efficiency and minimise environmental impacts.</p>	<ul style="list-style-type: none"> o Aligning with provincial goals by implementing measures that manage freight demand, reduce congestion, and promote sustainable transport modes.
		<p><u>Section 4.5 – Modal Rebalancing</u> - Addresses the heavy reliance on road freight and identifies opportunities for shifting appropriate loads to rail.</p>	<ul style="list-style-type: none"> o The FMS must support the development of intermodal terminals, safeguard rail-linked land uses and support the safeguarding of rail services, and advocate for rail use for specific freight types.
		<p><u>Section 4.6 – Freight Infrastructure Condition and Capacity</u> - Identifies deterioration of road and rail networks and limited port capacity as major constraints.</p>	<ul style="list-style-type: none"> o CCT must prioritise strategic corridor upgrades, coordinate with Transnet and SANRAL, and integrate freight infrastructure planning with land use.
		<p><u>Section 4.7 – Freight Traffic Management</u> - Discusses safety risks and infrastructure strain from overloading and non-compliance.</p>	<ul style="list-style-type: none"> o The FMS should address the management of freight corridors, enforce overloading controls, and incorporate incentive-based compliance frameworks like RTMS.

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
		<u>Section 4.8 – Technology and Innovation</u> - Advocates for leveraging freight tech to improve system efficiency and reduce environmental impacts.	<ul style="list-style-type: none"> ○ Collaboration with industry leaders, private sector and operators on smart logistics innovations.
		<u>Section 4.9 – Data & Information Management</u> - Notes fragmented and outdated freight data systems limit planning accuracy.	<ul style="list-style-type: none"> ○ The FMS should address data management to enable data-driven strategy development and monitoring within CCT and also in collaboration with WCG and SANRAL.
CCT Integrated Development Plan (IDP) 2022–2027⁸	City's overarching five-year strategic framework, outlining priorities, objectives, and programs across all sectors, including economic development, infrastructure, mobility, and governance.	While the IDP does not explicitly discuss freight, it establishes the foundational goals and objectives that inform and align with the FMS Chapter 5: Implementation Plan discusses the following objectives that indirectly affect freight: <ul style="list-style-type: none"> • OBJ 1: Increased jobs and investment in the Cape Town economy • OBJ 5: Effective law enforcement to make communities safer • OBJ 6: Strengthen partnerships for safer communities • OBJ 12: A sustainable transport system that is integrated, efficient and provides safe and affordable travel options for all • OBJ 13: Safe and quality roads for pedestrians, cyclists and vehicles • OBJ 15: A more spatially integrated and inclusive city 	<ul style="list-style-type: none"> ○ Obj 1 Economic growth: <ul style="list-style-type: none"> ▪ Focuses on infrastructure investment and support for the logistics sector. ▪ Mentions enabling the movement of goods as part of a functioning urban economy. ▪ Emphasis on economic nodes, corridors, and mobility — which underpin freight flows. ○ Obj 12 & 13 Transport: <ul style="list-style-type: none"> ▪ Explicitly outlines City goals for promoting public transport and NMT; road capacity enhancement; travel demand management; and improved road safety for all users. ▪ Supports freight-friendly planning, even if freight isn't mentioned by name ○ Obj 15 Spatially Integrated and Inclusive City: While not explicit about freight movement, spatial integration would include locating freight nodes (employment opportunities) close to the labour force, and reducing the trip length of freight movement

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
Municipal Spatial Development Framework	A spatial plan which gives effect to the IDP and provides explicit spatial strategies	Section 5.1 – MSDF spatial strategy 1: Plan for economic growth, and improve access to economic opportunities	The spatial transformation areas guide the type of development in each. Industrial development is promoted in the urban inner core spatial transformation area.
CCT Comprehensive Integrated Transport Plan (CITP) 2023–2028⁹ (Mandated by NLTA)	Cape Town's statutory transport planning tool, covers all modes including freight.	<u>Section 3.5 – Freight Transport</u> – As part of the “Needs Assessment” chapter, describes the main centres attracting or generating freight, and the major freight routes. It draws on the 2016 FMS to describe the major problems, and describes the routes maps for dangerous goods and abnormal loads.	While it informs the FMS, this section needs to be informed by the updated FMS. In a future update of the CITP
		<u>Section 10 – Freight Transport Strategy</u> – Outlines the strategic direction for freight transport management in Cape Town. This includes alignment with provincial and national freight strategies, the City's own freight management framework, planning for abnormal loads and hazardous goods, and the long-term vision for shifting freight back to rail to improve sustainability and reduce road congestion, as well as planning for the port, the airport, and freight corridor planning.	The updated FMS should build on existing national and provincial freight policies while tailoring interventions to Cape Town's specific urban and economic context. It should incorporate adaptive planning frameworks to account for future uncertainty, focus on environmental sustainability, and propose phased implementation plans for long-term modal shifts and operational improvements.
		<u>Section 10.3 - CCT FMS (2016)</u> - Outlines 11 focus areas addressing freight safety, emissions, congestion, demand, and rail.	Forms the backbone of Cape Town's freight planning approach.
		<u>Section 10.4- Abnormal loads</u> – Describes abnormal loads and provides map that shows movement of oversized vehicles, primarily via N1, N2, N7.	Essential for industrial connectivity and managing road asset preservation. Maintain and upgrade abnormal load network; promote off-peak transport.
		<u>Section 10.5 – Dangerous Goods road plan</u> - Notes lack of designated routes for hazardous materials transport. Provides map showing routes	Addresses safety and compliance issues within Cape Town.

Document	Brief Description	Relevant Sections (with Descriptions)	Implications for CCT (Relevance to FMS)
Key Documents			
		frequently being used to transport dangerous goods.	Identify, demarcate, and monitor dangerous goods routes.
		<u>Section 10.6.1 – Road-to-Rail Planning</u> – Aligns City's plans with Transnet and TNPA for freight efficiency.	Targets reduced truck congestion and infrastructure sustainability in Cape Town. Supports TNPA's proposed capital improvements, and aligns port rail capacity with intermodal terminal (Belcon).
		<u>Section 10.6.2 - Port-Related Planning</u> - Aligns City's plans with Transnet and National Ports Authority for freight efficiency.	Port is major freight generator, key to Cape Town's economy. Align planning with National Ports Plan; enhance coordination.
		<u>Section 10.6.3 - Back-of-Port Planning</u> - Integrates land use around port with logistics needs.	Aims to manage freight and urban development conflicts. Coordinate between City, TNPA, and TFR for land use and logistics planning
		<u>Section 10.7 - Planning for Uncertainty</u> - Addresses emerging challenges like online shopping, tech shifts, and rail viability.	Recognizes evolving freight patterns in Cape Town. Use scenario planning and flexible freight demand modelling.
		<u>Section 10.8 – Components of the Review of the FMS</u> – Outlines critical updates to the 2016 FMS, including gap analysis, the need for better integration with provincial and national freight plans, and a strengthened monitoring and evaluation framework. Emphasises the use of new data tools and models to assess freight performance and risks to infrastructure.	The FMS should address shifts in freight demand, last-mile delivery & micro-freight and port efficiency issues. It must also integrate a stronger monitoring framework using improved data tools, ensure institutional alignment, and support evidence-based policy updates to guide future freight planning and infrastructure investment.

4 STRATEGIC FOCUS AREAS

4.1 Planning Approach

The CIP 2023-2028 identifies three paradigm shifts that inform the City's approach to transport planning. This FMS aligns with these principles:

4.1.1 *The Triple Access System*

This system encompasses physical mobility, spatial proximity, and digital connectivity. The principle is relevant to the freight sector in terms of land-use planning, technology and e-commerce, and last-mile deliveries by LDVs and micro-freight vehicles. These factors may influence the cost of transporting goods, competition of freight vehicles with other road users, and the environmental impact of moving freight.

4.1.2 *The Incremental Approach*

This approach seeks to drive rapid incremental improvement through a framework that guides all improvements in the same direction. It is a resilient approach to embrace multiple solutions according to what options are most appropriate in the short, medium and long term.

4.1.3 *Planning for Uncertainty*

Maintaining reliable access and economic growth during crises requires not only resilient transport infrastructure but also resilient decision-making. By combining long-term strategic resilience ("planning under deep uncertainty") with short-term, step-by-step action ("incremental approach"), the City can adapt to changing circumstances. For freight, this approach keeps goods moving when disruptions occur - such as changing demand, infrastructure problems, or unexpected events. By planning for uncertainty with multiple, flexible strategies, the freight sector can manage interruptions and remain reliable in both the short and long term.

4.2 Strategic Focus Areas

1. **Safety**

Ensure the safety of all road users by reducing freight-related incidents through enabling increased vehicle roadworthiness standards, driver safety and improved public health.

2. **Efficiency & Reliability**

Improve the performance of freight movement through advocating for modal shift from road to rail, optimising freight routes, improving incident management, and targeting investment into infrastructure upgrades in key areas.

3. **Supporting Local & Regional Economic Growth**

Positioning freight as an enabler of inclusive and sustainable economic development, through a focus on land-use integration, economic efficiency, and system resilience.

4. **Compliance & Regulation**

Strengthen governance and accountability in the freight sector through effective regulation, increased enforcement capacity, advocating for improved self-regulation, and supporting equitable cost distribution.

4.3 Theory of Change

This FMS employs a Theory of Change to articulate a clear “line of sight” from relevant inputs and problem statement to the revised freight objectives (summarised into their 4 focus areas in the table below). This approach enables a better understanding of how each intervention (activity and its intended outcome) contributes to the desired end state (impact).

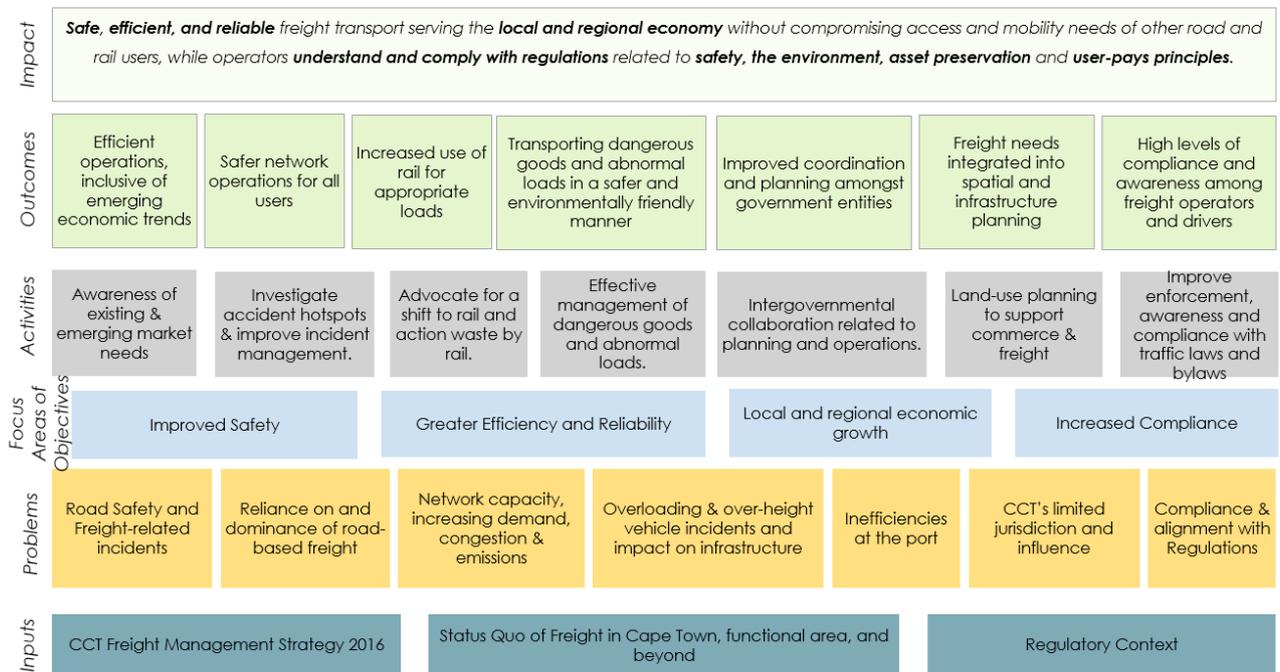
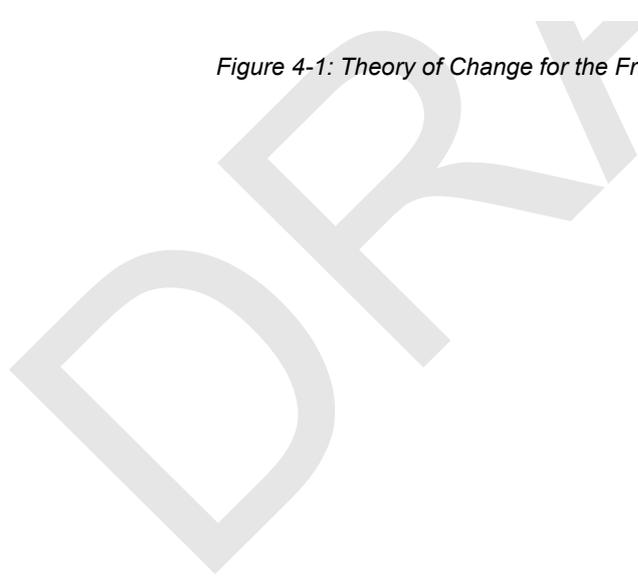


Figure 4-1: Theory of Change for the Freight Management Strategy



5 IMPLEMENTING THE STRATEGY

The success of the FMS requires an implementation plan that translates the vision and objectives into actions to meet the targets. The implementation plan will detail how to go about achieving these objectives, and who is responsible, as well as an idea of priorities and timelines. This section provides a summary of what will be included in the Implementation Plan and gives examples of actions identified to realise the objectives. The Implementation Plan will be structured around the four strategic focus areas detailed above, namely Safety, Efficiency and Reliability, Supporting Local and Regional Economic Growth, and Compliance and Regulation.

The following sections describe per aspect, the approach to achieving the objectives and targets. Examples of actions are listed to demonstrate the type of actions that could be developed in the Implementation Plan.

The various types of actions available to CCT will be identified, depending on the level of control it has. For example, in some cases CCT will be continuing an existing action; or initiating a new action; or simply investigating a potential action. In other cases, it may only be in a position to influence or advocate for actions from other entities.

The IDP 2022-2027 illustrates this as follows:

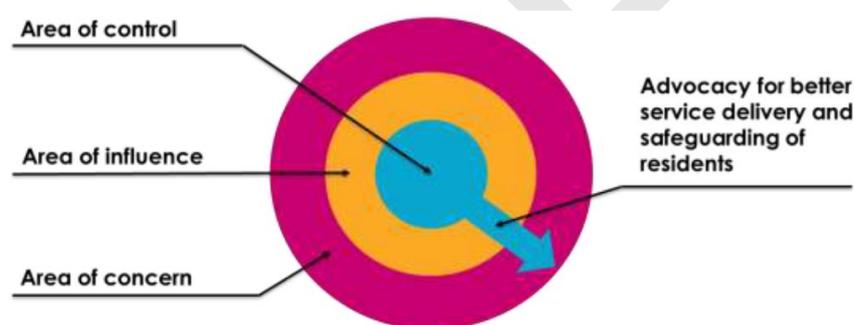


Figure 5-1: Areas of control, influence and concern (IDP, 2022: p24)

5.1 Safety

5.1.1 Objective

Ensure the safety of all road users by reducing freight-related incidents, improving vehicle standards and addressing risks in the freight eco-system.

5.1.2 Strategic Rational

Road safety is a complex, multi-faceted challenge that requires a holistic, system-wide approach, from network-level planning to site-specific interventions. While heavy vehicle crashes are less frequent than those involving light vehicles, their consequences are disproportionately severe and often result in significant infrastructure damage, traffic disruptions and loss of life.

Other Urban Mobility strategic documents provide broader frameworks for addressing safety across all transport modes. The FMS aligns with these strategic documents but specifically focusses on freight-related safety concerns, including the growing prevalence of LDVs and micro-freight operations in busy urban centres, which introduces new risks in dense urban environments.

5.1.3 Scope

5.1.3.1 Crash reduction

- 5.1.3.1.1. Identify and mitigate high-risk corridors and intersections with frequent freight-related incidents;
- 5.1.3.1.2. Implement targeted infrastructure upgrades such as improved signage, traffic calming measures, and intersection redesigns; and
- 5.1.3.1.3. Use crash data analytics to inform proactive interventions.

5.1.3.2 Vehicle Roadworthiness

- 5.1.3.2.1. Strengthen inspection regimes for freight vehicles, particularly those transporting hazardous materials;
- 5.1.3.2.2. Promote fleet renewal and maintenance standards to reduce mechanical failures; and
- 5.1.3.2.3. Collaborate with national and provincial authorities to align vehicle safety standards and enforcement.

5.1.3.3 Driver Safety and Training

- 5.1.3.3.1. Engage logistics companies and industry bodies to enhance driver training, focussing on defensive driving, fatigue management and compliance; and
- 5.1.3.3.2. Encourage adoption of technology for driver monitoring and support.

5.1.3.4 Public health and vulnerable road users

- 5.1.3.4.1. Address the disproportionate risks freight vehicles pose to pedestrians and cyclists, especially in mixed-use and high-density areas; and
- 5.1.3.4.2. Integrate freight safety considerations into urban design, including safe crossings, protected cycle lanes and buffer zones.

5.1.3.5 LDV and micro-freight safety

- 5.1.3.5.1. Recognise and respond to the rise of LVDs and micro-freight vehicles used for last-mile deliveries;
- 5.1.3.5.2. Assess operational patterns, safety risks, and infrastructure needs specific to micro-freight; and
- 5.1.3.5.3. Develop appropriate regulatory and design responses to ensure safe integration into the urban mobility and freight systems.

5.1.4 Illustrative Actions

5.1.4.1 Crash Hotspot Mitigation

- 5.1.4.1.1. Conduct targeted investigations at locations with high freight-related crash rates; and
- 5.1.4.1.2. Implement engineering and enforcement solutions tailored to each site.

5.1.4.2 Ou Kaapseweg Monitoring

5.1.4.2.1. Evaluate the effectiveness of existing compulsory stop measures; and

5.1.4.2.2. Use findings to inform similar interventions elsewhere.

5.1.4.3 LDV and Micro-freight baseline study

5.1.4.3.1. Engage with logistics and delivery service stakeholders to collect and analyse data on LDV and micro-freight operations, vehicle types and safety incidents; and

5.1.4.3.2. Update datasets regularly to inform policy and infrastructure planning.

5.1.4.4 Development Controls for LDV and micro-freight

5.1.4.4.1. Integrate LDV and micro-freight parking and loading requirements into land-use planning and building approval requirements; and

5.1.4.4.2. Ensure consignor responsibilities are addressed in the development applications and approvals process.

5.1.4.5 Safety and Security workforce development

5.1.4.5.1. Conduct a skills and capacity gap analysis in partnership with the Safety and Security directorate; and

5.1.4.5.2. Update the Workplace Skills Plan according to the outcomes, ensuring alignment with freight-specific enforcement and monitoring needs.

5.1.5 Indicators

Objective	Proposed Target	Example of Indicator
Improved road safety for all users by addressing accidents involving freight vehicles.	Halve the number of KSI (Killed or Seriously Injured) crashes involving freight vehicles by 2030.	Number and location of crashes and KSI crashes of freight vehicles.
CCT understands the safety needs of micro-freight operators within the city.	Establish baseline data relevant to micro-freight operations by 2028.	The extent of data in the CCT's use on micro-freight from industry and authorities.
The Parking Policy addresses the need for micro-freight parking and the role of the consignor.	Mechanisms are in place to ensure that new developments address micro-freight needs as per policy directive 13 of the CCT's Parking Policy.	The Parking Policy is implemented to address the need for micro-freight.
Increased capacity to monitor and enforce compliance of freight vehicles and drivers.	The Road Haulage Unit is fully capacitated in order to give effect to this FMS.	Number of people in, and increase in resourcing of, the Road Haulage Unit.

5.2 Efficiency and Reliability

5.2.1 Objective

Improve the predictability, performance and resilience of freight movement across Cape Town by optimising modal choices, infrastructure and operation coordination.

5.2.2 Strategic Rationale

An efficient and reliable freight system is essential for economic competitiveness, environmental sustainability and urban functionality. Freight movement must be predictable, cost-effective, efficient and minimally disruptive to other transport modes and urban life. This requires:

- 5.2.2.1 **Modal Optimisation**, especially shifting bulk and long-distance freight from road to rail;
- 5.2.2.2 **Strategic infrastructure planning**, including freight corridors and inland terminals;
- 5.2.2.3 **Incident management systems** to reduce delays and secondary crashes; and
- 5.2.2.4 **Intergovernmental coordination** to align investment and operational standards.

Rail is currently underutilised despite being the most efficient mode for long-haul freight. The City must actively continue to advocate for rail revitalisation and support as best as possible through land-use planning, infrastructure access (e.g. Belcon) and partnerships with Transnet, PRASA, and other key stakeholders.

5.2.3 Scope

5.2.3.1 Modal Shift

- 5.2.3.1.1. Promote rail and intermodal freight solutions to reduce road congestion;
- 5.2.3.1.2. Support rail operators through City levers to restore and expand rail freight services; and
- 5.2.3.1.3. Facilitate relocation of informal settlements from rail reserves to enable service restoration (e.g. Atlantis-Chempet line).

5.2.3.2 Route Optimisation

- 5.2.3.2.1. Designate and maintain strategic freight routes with appropriate signage, infrastructure standards, and time-of-day access controls; and
- 5.2.3.2.2. Ensure City road upgrades are targeted and support freight access to key nodes like Belcon and future inland ports.

5.2.3.3 Incident Management

- 5.2.3.3.1. Develop and implement a Freight Incident Management Plan to improve response times and reduce network disruptions;
- 5.2.3.3.2. Co-ordinate with WCG and SANRAL for incident protocols on provincial and national roads; and

- 5.2.3.3.3. Promote proactive enforcement to reduce mechanical failures, spills and dangerous goods incidents.

5.2.3.4 Infrastructure Performance

- 5.2.3.4.1. Support the planning for freight-priority corridors, loading zones, and inland dry ports;
- 5.2.3.4.2. Support the development of inland terminals such as Kraaicon in partnership with the WCG and Transnet; and
- 5.2.3.4.3. Align land-use planning with freight infrastructure needs to ensure long-term efficiency.

5.2.4 Illustrative Actions

5.2.4.1 Rail support system

- 5.2.4.1.1. Support rail owners and operators to encourage a fully functional rail system; and
- 5.2.4.1.2. Facilitate access to Belcon and other strategic terminals for all freight modes.

5.2.4.2 Rail reserve clearance

- 5.2.4.2.1. Coordinate intergovernmental efforts to relocate informal settlements from rail reserves.

5.2.4.3 Inland terminal development

- 5.2.4.3.1. Support WCG in finalising the location and development of the Kraaicon Inland terminal.

5.2.4.4 Freight incident management plan

- 5.2.4.4.1. Develop and implement a plan for rapid response and clearance of freight-related incidents; and
- 5.2.4.4.2. Include protocols for hazardous materials and breakdowns.

5.2.4.5 Port coordination mechanism

- 5.2.4.5.1. Establish or engage with an existing intergovernmental working group to improve planning and operational efficiency at the PoCT.

5.2.4.6 Skill Development

- 5.2.4.6.1. Review and update the Urban Mobility Directorate's workforce skills plan to align with FMS implementation needs.

5.2.5 Indicators

Objective	Proposed Target	Example of Indicator
<p>Increased rail modal share, particularly for port and waste freight movements.</p>	<p>Fully functional rail infrastructure and operations.</p> <p>All relevant CCT policies should support and encourage freight movement by rail.</p> <p>No settlements on rail lines hindering freight movements.</p> <p>The Atlantis- Chempet line is reopened to support the Atlantis SEZ, and the Vissershok landfill.</p>	<p>Percentage of the rail network that is operational.</p> <p>Number of CCT policies and plans that explicitly promote freight rail.</p> <p>% Completion of a process plan towards clearing all rail lines in the metro.</p> <p>% completion of a process plan towards making the Atlantis- Chempet rail line operational.</p>
<p>The CCT encourages the use of intermodal terminals to alleviate congestion at the port and to improve logistics efficiency.</p>	<p>Initiatives that increase intermodal terminal usage.</p> <p>An efficient road network serving the access needs of freight vehicles to and from inland ports.</p>	<p>Number of intermodal terminal container movements.</p> <p>CCT participates fully in WCG process to establish a freight village with an intermodal terminal.</p> <p>The road networks supporting intermodal terminals are meeting the freight demand.</p>
<p>Reduced delays and disruptions due to freight related crashes and breakdowns.</p>	<p>Improve response to and clearance times of freight-related incidents by 10% by 2030.</p>	<p>Incident response and clearance times.</p>
<p>Improved port-related efficiency through intergovernmental collaboration related to planning, operations, and access to the Port.</p>	<p>The freight subcommittee is effective in aligning port planning and operations with CCT planning.</p>	<p>Number of working group meetings or interactions with the port, the freight subcommittee, and other stakeholders.</p>
<p>Improved capacity to give effect to this FMS and to undertake freight transport planning and management.</p>	<p>Measures taken to address those areas where additional skills and capacity are needed.</p>	<p>Resources dedicated to planning for freight operations.</p>

5.3 Supporting local and regional economic growth

5.3.1 Objective

Position freight as an enabler of inclusive and sustainable economic development by aligning infrastructure, land-use and operations with the needs of Cape Town's evolving economy.

5.3.2 Strategic Rational

Freight transport is a backbone of Cape Town's and the region's economy, connecting producers, consumers, and markets across the region and beyond. Efficient freight systems support industrial productivity, reduce costs for businesses and enable access to global trade networks. However, this requires:

- 5.3.2.1. **Strategic land-use planning** to protect and develop freight-supportive zones;
- 5.3.2.2. **Modal optimisation**, especially rail;
- 5.3.2.3. **Intergovernmental co-ordination** to align infrastructure investments and operational decisions; and
- 5.3.2.4. **Skills development** to ensure the workforce can support and grow the freight sector.

The City must continue to support and advocate for the devolution of freight rail operations, enabling more responsive and locally-tailored services. Inland terminals like Kraaicon and hubs like Belcon are critical assets that must be integrated into spatial and transport planning.

5.3.3 Scope

5.3.3.1 Land-use integration

- 5.3.3.1.1. Align freight infrastructure with industrial zones, logistics hubs, and port access;
- 5.3.3.1.2. Protect and plan for future freight-supportive land uses, including inland terminals; and
- 5.3.3.1.3. Integrate freight needs into zoning, development approvals, and spatial frameworks.

5.3.3.2 Economic Efficiency

- 5.3.3.2.1. Promote efficient modal choices and operational practices through education and incentives; and
- 5.3.3.2.2. Support after-hour operations and digital scheduling to reduce bottlenecks.

5.3.3.3 Resilience and Adaptability

- 5.3.3.3.1. Build capacity to respond to supply chain disruptions, climate risks and economic shocks; and
- 5.3.3.3.2. Ensure the City can adapt to changing demand, technologies and global trends in freight systems.

5.3.3.4 Job creation and skills development

- 5.3.3.4.1. Support freight-related employment through targeted training; and

- 5.3.3.4.2. Align City skills development initiatives with freight sector needs, including enforcement, logistics and planning.

5.3.4 *Illustrative Actions*

5.3.4.1 Spatial Planning for freight

- 5.3.4.1.1. Develop and maintain spatial and land-use plans that support freight and logistics needs; and
- 5.3.4.1.2. Identify and protect land for future infrastructure including the proposed Kraaicon inland terminal.

5.3.4.2 Transport Modelling

- 5.3.4.2.1. Periodically update the City's transport model to include freight generators and attractors (e.g. waste facilities, industrial zones).

5.3.4.3 Rail Devolution support

- 5.3.4.3.1. Continue to participate in initiatives to devolve freight rail operations to regional authorities for more responsive service delivery.

5.3.4.4 Rail Siding Management

- 5.3.4.4.1. Maintain a database of City-owned rail sidings and secure their protection through leasing, land-use controls, and infrastructure safeguarding.

5.3.4.5 Intergovernmental co-ordination

- 5.3.4.5.1. Maintain and improve freight working groups to align planning, land use and modal choices, especially around strategic assets like Kraaicon.

5.3.4.6 Port Engagement

- 5.3.4.6.1. Use the intergovernmental Planning Committee (IPC) to engage with port stakeholders to improve operational efficiencies including truck queuing and processing times.

5.3.4.7 After-hours Operations

- 5.3.4.7.1. Support PoCT initiatives to address backlogs by promoting uptake of after-hours slots and digital scheduling systems.

5.3.4.8 CTIA Freight Impact Management

- 5.3.4.8.1. Request the implementation of a transport management plan for the CTIA to address current and projected airfreight and fuel related road impacts.

5.3.5 Indicators

Objective	Proposed Target	Example of Indicator
Land-use planning supports freight and logistics operations.	Availability of appropriate spatial plans considering all logistical needs.	Approved municipal and district Spatial Development Frameworks across the city which support efficient freight movement.
Improved planning information for the management of freight movement.	Freight is included in the CCT's transport modelling, including current and future landfill sites and waste transfer stations	Percentage freight data included in the model.
Rail is a cost-effective and reliable mode for more freight movements.	A significant shift of container freight onto rail.	Percentage modal share of rail freight versus road freight for port freight, and waste freight, respectively.
The devolution of freight rail (or parts thereof) to address regional economic needs.	To identify practical opportunities for freight rail devolution by 2027.	Length of rail network within the CCT area which is being utilised for freight purposes.
Continued protection and maintenance of rail sidings for future use.	All rail sidings are available for use.	CCT-owned sidings are still protected and maintained for freight rail use.
Enhanced intergovernmental collaboration to optimise freight-related land use and modal choices.	The freight and land-use subcommittees of the IPC are effective in coordinating planning and data sharing related to freight and land-use strategies.	Number of IPC freight and land-use subcommittee meetings per annum.
CCT supports the improvement of the efficiency of port operations.	Continue to support, and influence where possible, the port in its planning and operations.	CCT is involved in the WCG's Programme Management Unit (PMU) w.r.t. port efficiencies.
CCT drives maximising the benefits of, and minimising the disbenefits of, the proximity and expansion needs of the port and the CBD.	Use IPC subcommittees to resolve conflicts.	Number of meetings per annum with the PoCT.
Minimal negative impact of increased airfreight on road system.	CTIA develops a transport management plan to accommodate future growth in freight movement and fuel needs.	% implementation of a CTIA transport management plan is in place which supports the CCT's broader economic, environmental and social goals.

5.4 Compliance and regulation

5.4.1 Objective

Strengthen governance and accountability in the freight sector through effective regulation, enforcement and stakeholder collaboration, while promoting environmental responsibility and equitable contribution to infrastructure use.

5.4.2 Strategic Rational

Compliance in the freight sector is essential for ensuring safety, protecting infrastructure, reducing environmental harm and maintaining public trust. While the City has limited jurisdiction over many regulatory functions related to freight, it plays a critical role in enabling enforcement, facilitating industry awareness, and advocating for policy alignment across spheres of government.

This focus area addresses four key dimensions of compliance: road safety, environmental impact, asset preservation and the user-pays principle. It also promotes self-regulation through industry-led schemes and seeks to clarify institutional roles to improve coordination and delivery.

5.4.3 Scope

5.4.3.1 Enforcement Capacity

- 5.4.3.1.1. Improve resource allocation for monitoring and compliance, including dangerous goods, overloading, and route restrictions;
- 5.4.3.1.2. Strengthen partnerships with SAPS, National Traffic Anti-Corruption Unit (NTACU), and Home Affairs to address corruption and fraud in licensing and testing; and
- 5.4.3.1.3. Use technology (e.g. WIM, CCTV, automated enforcement) to enhance monitoring and reduce overloading.

5.4.3.2 Self-regulation and industry codes

- 5.4.3.2.1. Promote voluntary compliance through schemes like the Road Transport Management System (RTMS);
- 5.4.3.2.2. Develop incentives for RTMS certification, including its use by City contractors; and
- 5.4.3.2.3. Encourage industry-led standards for safety, environmental performance, and ethical operations.

5.4.3.3 Equitable Cost Distribution

- 5.4.3.3.1. Advocate for freight cost recovery mechanisms aligned with infrastructure impact, such as license fees, fuel levies and mass-distance charges; and
- 5.4.3.3.2. Support WCG efforts to reform heavy vehicle licensing to better reflect maintenance costs.

5.4.4 Illustrative Actions

5.4.4.1 Road Safety Compliance

- 5.4.4.1.1. Initiate random audits of driving licence test centre transactions using national administration traffic information system (NaTIS) logs;
- 5.4.4.1.2. Expand CCTV coverage and retain footage for 90 days for investigations;
- 5.4.4.1.3. Partner with SAPS, NTACU, and Home Affairs to authenticate identity documents and arrest offenders;
- 5.4.4.1.4. Launch a public whistleblowing platform for reporting corruption;
- 5.4.4.1.5. Conduct regular ethics and anti-fraud training for licensing centre staff;
- 5.4.4.1.6. Increase policing of fraudulent roadworthy testing garages;
- 5.4.4.1.7. Promote compliance with NRTA through targeted campaigns;
- 5.4.4.1.8. Improve enforcement of overloading violations using WIM systems;
- 5.4.4.1.9. Implement automated over-height enforcement systems with prosecutorial approvals;
- 5.4.4.1.10. Collect and collate infringements related to abnormal loads and dangerous goods;
- 5.4.4.1.11. Develop a Dangerous Goods Management Plan, including a mapped network of approved routes; and
- 5.4.4.1.12. Implement the Abnormal Loads Plan and raise awareness among freight forwarders, particularly of overheight loads.

5.4.4.2 Environmental Compliance

- 5.4.4.2.1. Strengthen monitoring and enforcement of freight vehicle emissions;
- 5.4.4.2.2. Ensure compliance with National Ambient Air Quality Standards;
- 5.4.4.2.3. Promote adoption of green energy alternatives in the freight sector; and
- 5.4.4.2.4. Enhance training for RIMS personnel on HAZMAT spill responses.

5.4.4.3 Asset Preservation

- 5.4.4.3.1. Implement WIM and over-height monitoring systems on strategic roads;
- 5.4.4.3.2. Monitor informal parking around freight-sensitive areas and support targeted enforcement;
- 5.4.4.3.3. Collaborate across directorates to identify and develop well-located truck stops and holding areas; and
- 5.4.4.3.4. Support intergovernmental efforts to protect rail infrastructure from encroachment.

5.4.4.4 User-pay principle

- 5.4.4.4.1. Support WCG initiatives to reform heavy vehicle license fees; and

5.4.4.4.2. Investigate freight cost recovery mechanisms, including fuel levies and mass-distance charges.

5.4.5 Indicators

5.4.5.1 Road Safety Compliance

Objective	Proposed Target	Example of Indicator
Compliant and efficient freight vehicle licensing and driver licencing centres and processes.	Maintain compliant and corruption-free vehicle and driver licensing centres.	Number of reported corruption-related incidents at vehicle and driver licencing centres annually, with an aim of reducing by 50% in 5 years.
Vehicle and driver compliance with regulations to enhance road safety.	A reduction in the number of unroadworthy vehicles and unlicensed drivers of 20% by 2030.	% of inspected freight vehicles which are unroadworthy. % of inspected heavy vehicle drivers who are unlicensed.
Reduced prevalence of overloaded and over-height vehicles.	A 20% reduction in recorded overloaded vehicles and a 50% reduction in over-height vehicle incidents by 2030.	Overloading statistics from WIM and weighbridges.
Improved safe and controlled movement of dangerous goods.	Full adherence by transporters to regulations at all times. A demarcated route network and management plans for dangerous goods.	Number of incidents related to dangerous goods and dangerous goods vehicles. A Dangerous Goods Management Plan, including a Route Map.
Improved safe and controlled movement of abnormal loads.	Zero crashes related to abnormal load movement.	Number of crashes involving abnormal loads.
The registration and safe movement of all abnormal freight.	Full compliance with regulations for the movement of abnormal loads, and all abnormal loads are registered as such.	Number of applications related to route and permit requirements of abnormal or dangerous goods.

Objective	Proposed Target	Example of Indicator
Greater industry-led compliance and self-regulation.	<p>Support the WCG system for increased self-regulation through its support for the Road Transport Management System (RTMS) and similar initiatives.</p> <p>RTMS compliance by CCT vendors is known.</p> <p>The small-scale truckers are organised and willing to engage with the authorities.</p>	<p>Number of Road Transport Management System (RTMS) (or similar) certified vehicles as a percentage of total freight vehicles.</p> <p>Number of RTMS-certified transport vendors on CCT's database.</p>

5.4.5.2 Environmental Compliance

Objective	Proposed Target	Example of Indicator
Reduced impact of freight-related emissions on local air pollution.	<p>Ensure compliance with South Africa's National Air Quality Standards for the nitrogen dioxide ambient air quality monitoring taking place at pre-identified Transport-related monitoring sites.</p>	<p>NO₂ measurements at transport-related monitoring sites.</p>
A shift of freight movement toward more sustainable transport modes.	<p>Relevant stakeholders shift from road to rail freight.</p> <p>Advocate for, and support initiatives using green energy where appropriate.</p>	<p>Be an active member of the WCG's Freight Rail Support Framework working group.</p>
Reduced environmental impacts from freight-related crashes	<p>All relevant Road Incident Management System (RIMS) personnel are to be continuously trained to handle 1) avoid and 2) mitigate all hazardous materials (HAZMAT) spills.</p>	<p>Number of training engagements for RIMS personnel in the avoidance and mitigation of HAZMAT spills.</p>

5.4.5.3 Asset Preservation

Objective	Proposed Target	Example of Indicator
Minimised infrastructure damage caused by freight transport.	A 20% reduction in overloading through improved enforcement and WIM systems by 2030.	Number of overloaded vehicles as a percentage of heavy vehicle volume and measurements.
	50% reduction in over-height vehicle incidents by 2030.	Number of over-height vehicle incidents.
	Reduced informal parking on road reserves at the port and in industrial areas.	Number of freight vehicles parked in the road reserve outside the port and in industrial areas.
A well-functioning and protected freight rail network.	Assist, support, and influence initiatives to keep the rail reserve free from settlement through intergovernmental collaboration by 2028.	Number of interactions with stakeholders related to rail infrastructure preservation.

5.4.5.4 User-pay principle

Objective	Proposed Target	Example of Indicator
Fair cost distribution aligned with freight impact on infrastructure.	Support WCG in the continuous assessment of heavy vehicle license fees.	The level of involvement of CCT in support of investigating heavy vehicle licensing fees.
	A feasibility study of a provincial/metropolitan fuel levy and a mass-distance charge as a cost recovery measure exists.	The level of involvement of CCT in support of developing a feasibility study.

6 MONITORING AND EVALUATION

The successful implementation of the FMS depends on coordinated action across multiple City directorates. To ensure accountability, responsiveness, and strategic alignment, a structured Monitoring and Evaluation (M&E) approach is essential.

6.1 Purpose of the M&E Framework

The M&E Framework, developed as a companion document to the FMS and its implementation plan, will provide a systematic method for tracking progress, assessing effectiveness, and informing decision-making. It links the FMS's vision, objectives, targets, and indicators to practical tools for performance review and adaptive management.

6.2 Key Functions of the M&E Framework

- 6.2.1. **Performance Tracking** Monitor implementation progress using defined indicators across all four strategic focus areas;
- 6.2.2. **Accountability**
Clarify departmental responsibilities and reporting lines for each action and indicator;
- 6.2.3. **Adaptive Management**
Enable timely adjustments to priorities, actions, or resource allocations based on evidence and feedback; and
- 6.2.4. **Strategic Alignment**
Ensure continued coherence with broader City strategies, including the Road Safety Strategy, and Parking Policy.

6.3 Core Components

The M&E Framework will include:

- 6.3.1. **Indicator Sets** for each strategic focus area (Safety, Efficiency & Reliability, Economic Growth, Compliance & Regulation);
- 6.3.2. **Baseline Data Requirements** to support meaningful measurement and comparison;
- 6.3.3. **Target Timeframes** for short-, medium-, and long-term outcomes;
- 6.3.4. Departmental Roles and Responsibilities, mapped to each indicator and action; and
- 6.3.5. **Reporting Mechanisms**, including dashboards, annual reviews, and interdepartmental coordination platforms

6.4 Governance and Oversight

Oversight of the M&E process will be led by the Urban Mobility Directorate, in collaboration with relevant departments such as Safety & Security, Spatial Planning & Environment, Economic Growth, and IS&T. Regular reporting will be integrated into existing performance management systems and reviewed through interdepartmental forums.

6.5 Integration with Broader City Systems

The M&E Framework will align with:

- 6.5.1. The City's **Integrated Development Plan (IDP)** and **Service Delivery and Budget Implementation Plan (SDBIP)**;
- 6.5.2. The CIP and other mobility-related performance tools; and
- 6.5.3. The Digital Strategy and Data Strategy, particularly in relation to freight data systems and real-time monitoring.

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7 Annexure A: Situational Analysis

7.1 Introduction

Urban freight transport includes all movements of goods and materials into, out of, through, or within the urban area. Freight movement is a key enabler of economic growth (both in the city and region), facilitating the movement of goods that support trade, industry, and local livelihoods. The functionality of freight transport determines the economic competitiveness of a city, it impacts its liveability and the well-being of its residents, and it is an important source of employment.

Imports and exports can either be measured by volume, tonnage, or value, or simply number of trucks on a road section. Freight movement is best measured by volume or tonnage, but the data below draws on a variety of measurements, which makes comparisons across modes difficult. Much of freight movement data is also at a provincial level, and is not measured at a municipal level, as freight movements are not impacted by municipal boundaries.

Note that the focus is on the freight heavy vehicles, with a growing attention on micro-freight used for last mile deliveries. As light delivery vehicles are not easily distinguished from other passenger vehicles, problems associated with them are not specifically addressed here.

7.2 Imports and Exports

The major exports through the port are agricultural products and processed foods from the hinterland, including fruit (35%) and beverages (15%); with fruit having both a winter and summer peak season. Some manganese from the hinterland is still exported through the Port of Cape Town, as well as manufactured goods such as clothes. Fresh fruit is a major export commodity in the refrigerated container (reefer) sector, and exports account for most of the 58.9% of tonnage of containerised trade from the Port of Cape Town.

The major import through the Port of Cape Town by tonnage is liquid petroleum fuels), followed by maize (though this varies), wheat and fertilizer. By value, the table below shows the major export products from Cape Town as being refined petroleum, citrus and grapes (recognising that petroleum does not originate in the city or its region, it can be assumed that some exports originate as imports. By value, the major export markets are currently Namibia, the USA, China and the Netherlands.

Cape Town Exports, 2024

RANK	PRODUCT	VALUE 2024, R BN	SHARE %	RANK	EXPORT DESTINATION	VALUE 2024, R BN
1	Refined petroleum	17.1	13.4%	1	Namibia	11.14
2	Citrus	9.2	7.3%	2	United States	9.05
3	Grapes	6.4	5.0%	3	China	8.54
4	Apples, pears and quinces	5.1	4.0%	4	Netherlands	7.34
5	Antiques of an age exceeding 100 years	4.0	3.2%	5	Botswana	6.95
6	Chromium	3.6	2.9%	6	United Kingdom	6.27
7	Articles of jewellery	2.9	2.3%	7	Eswatini	3.99
8	Coal	2.6	2.1%	8	United Arab Emirates	3.93
9	Fish fillets and other fish meat	2.6	2.0%	9	Lesotho	3.75
10	Engine parts	2.4	1.9%	10	Mozambique	3.72



CITY OF CAPE TOWN
ISIREKO SASEKAPA
STAD KAAPSTAD

Quantec, 2025

Figure 7-1: Major Export commodities and destinations from Cape Town

7.3 Internal Freight Movement

Internally, freight movement is depicted through a model which divides the metropolitan area plus Stellenbosch into roughly 11 districts, plus the Port of Cape Town. The west coast region (Paarden Eiland to Blaauwberg) accounts for most of the freight movement by tonnage, with the major product being stone and bricks. The second highest commodity based on tonnage is processed food. Municipal waste is the third highest commodity transported by road. It is notable that more waste was delivered to the Vissershok and Coastal landfill sites between 2019 and 2022 than tonnage of all freight delivered to the Simonstown and the Strand districts in that same period (source: WCFDM™, 2025). Diesel and petrol are also among the highest commodities transported by road within Cape Town.

The maps below show the districts of origin and destination of freight movement (all modes) by tonnage (source: WCFDM, 2025). Due to the size of the districts, the Port of Cape Town is not depicted as the major origin/destination. It is interesting to note that freight tonnage origins and destinations are fairly balanced (excluding waste).

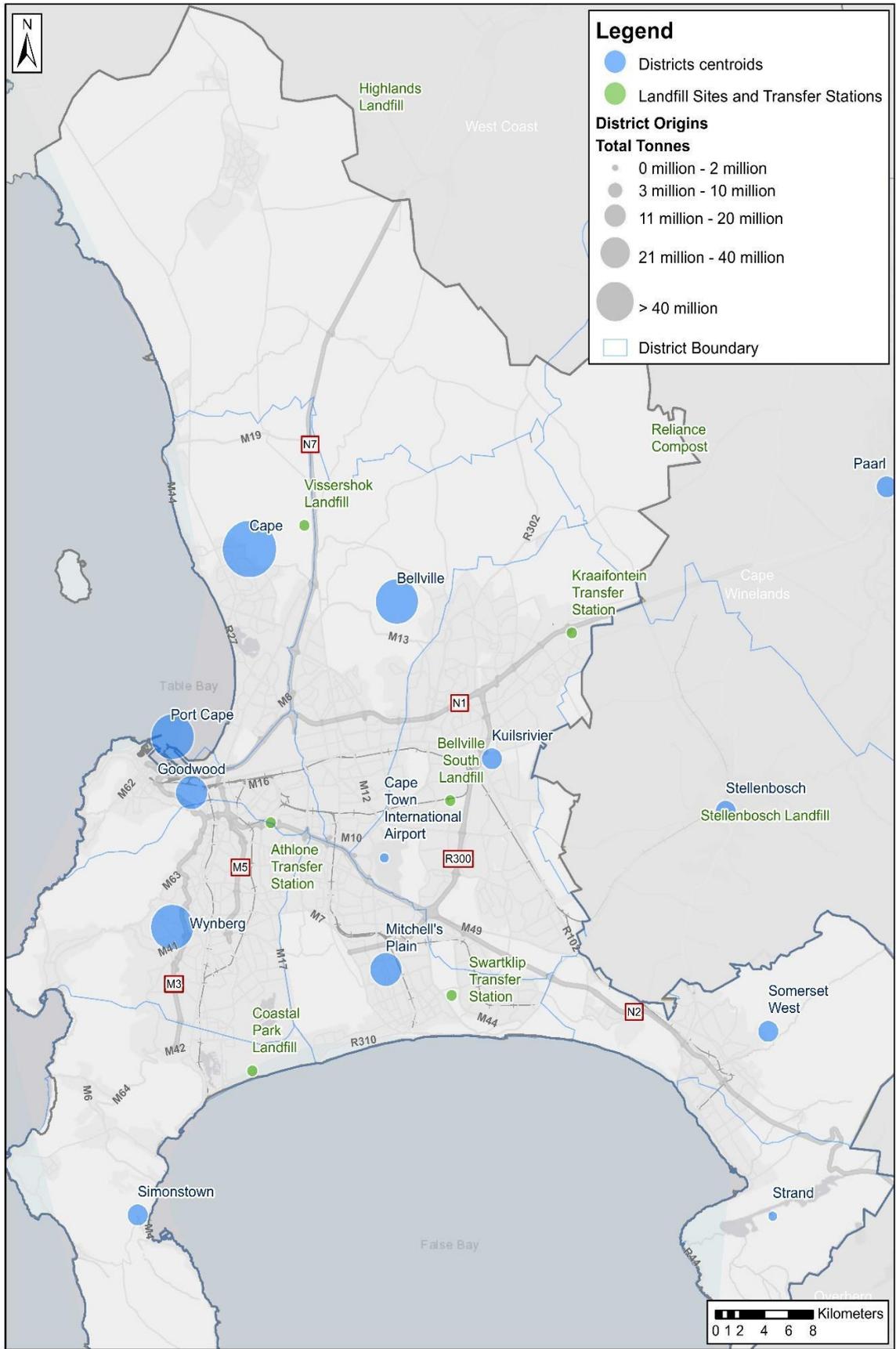


Figure 7-2: Districts of origin and destination of freight movement (all modes) by tonnage (Source: WCFDM, 2025)

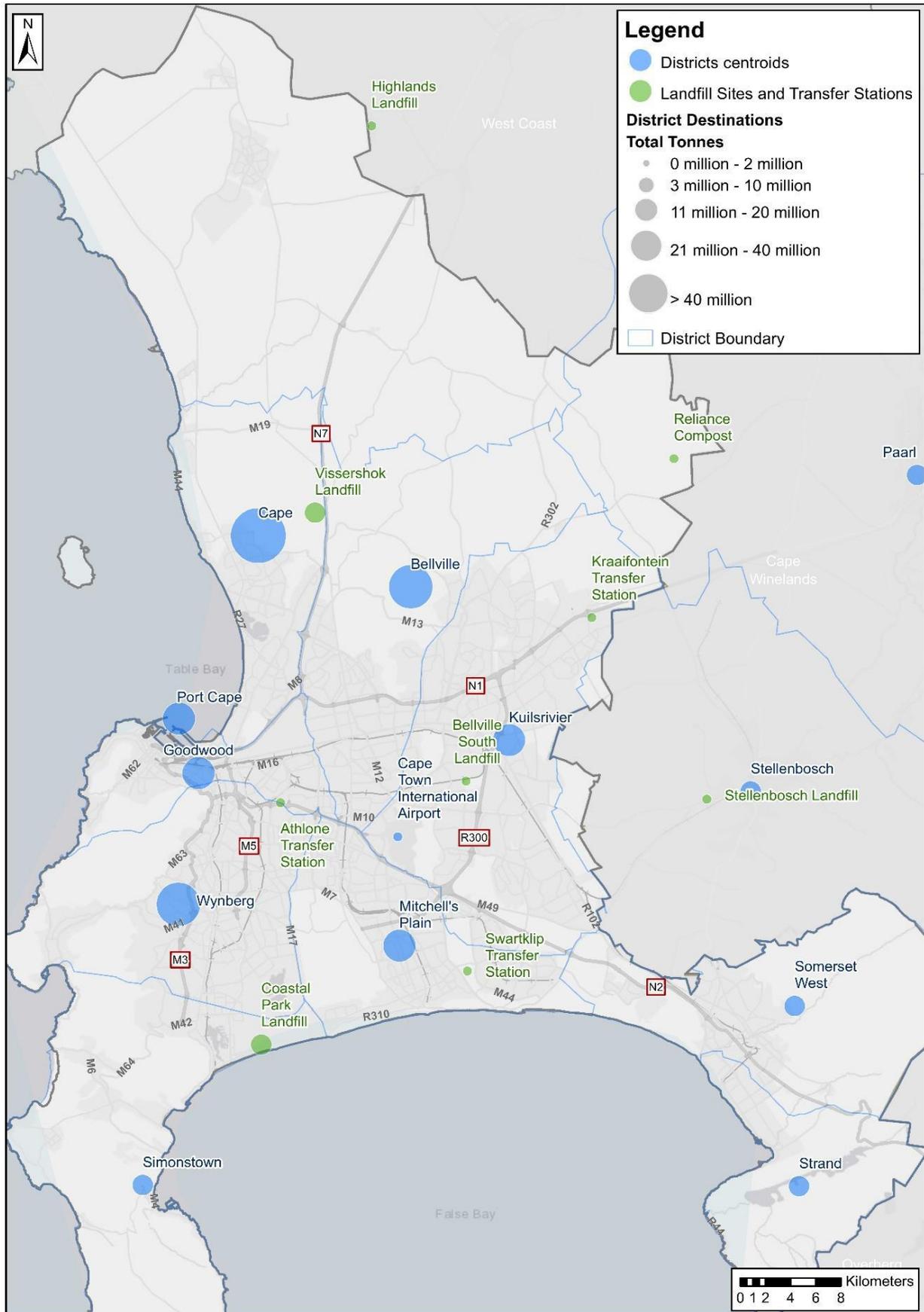


Figure 7-3: Districts of origin and destination of freight movement (all modes) by tonnage (Source: WCFDM, 2025)

7.4 Rail-based Freight Transport

7.4.1 Rail-based Freight Infrastructure

Despite its strategic potential, rail freight infrastructure in the city has been significantly underutilised due to a combination of infrastructure degradation, operational inefficiencies, and institutional constraints. The network infrastructure is in place for inter-city movement, but is underutilised, and some cases needs rehabilitation.

For internal movement, only the northern line from the Port of Cape Town to Bellcon (N1 corridor) is operational. The Atlantis-Chempet line is dysfunctional at this stage. The Atlantis-Chempet line is the most critical for reinstatement, because it has the potential to support the special economic zone in Atlantis, and it could be used to move solid waste (see below).

Several local spur lines in and around the industrial areas are owned and maintained by the City, such as in Atlantis, Epping and Sacks Circle. Industrialists, who are not using rail services, are in many cases pressurising the City to sell the land they are on for their own use. The map below shows the rail infrastructure in and beyond the municipal area.

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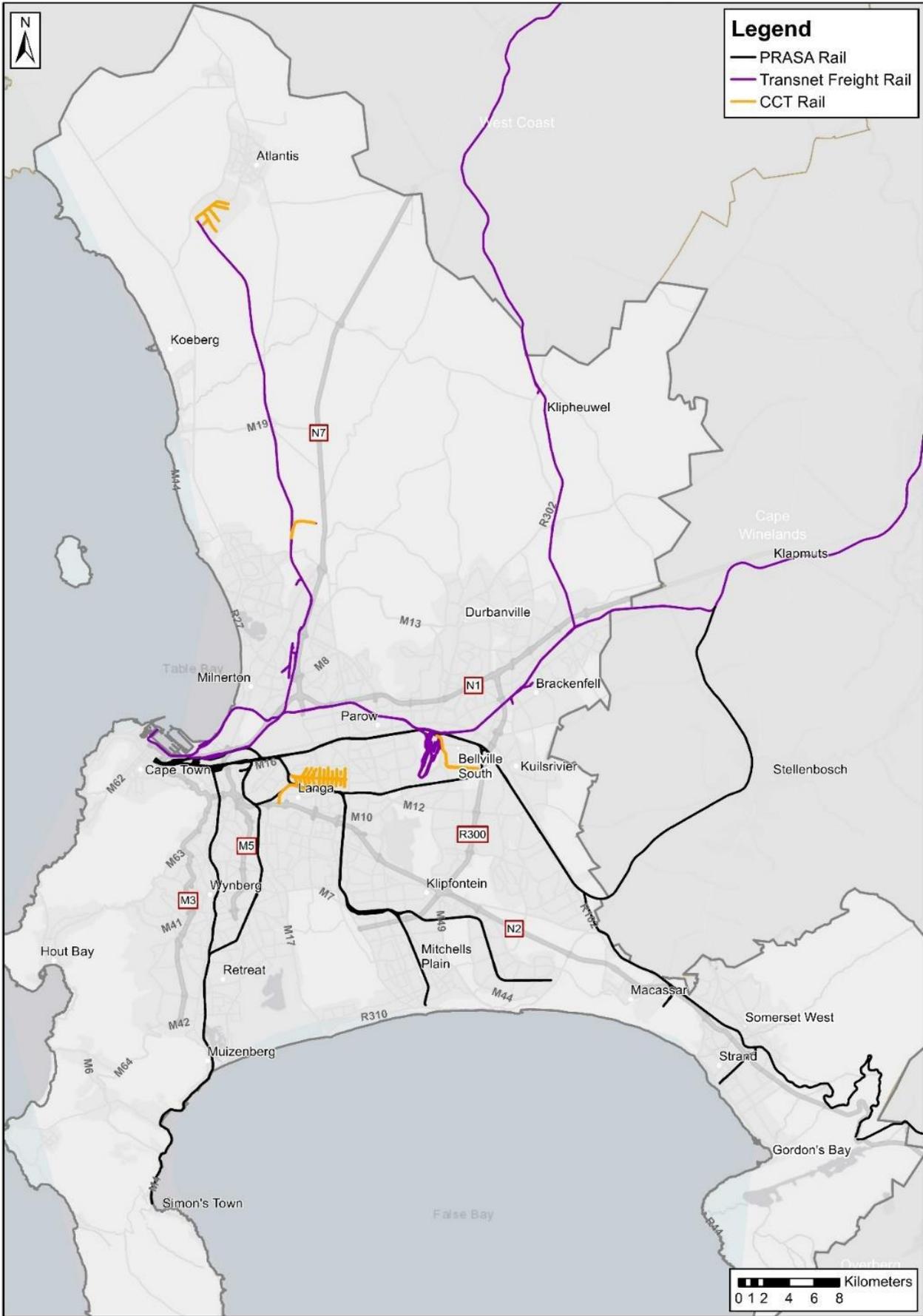


Figure 7-4: Rail lines and sidings in and around Cape Town (Source: CCT, 2025, unpublished)

7.4.2 Demand and Operations

The total tonnage transported by rail to and from the port is low compared to that moved by road. In 2022, only 5% of all exports arrived by rail while a mere 1% of the imports were transported by rail. (CCT, unpublished)

There is currently only one service operated privately under concession through (the old) Transnet Freight Rail. Maersk provides an intermodal terminus and moves about three (3) trains (of 30-40 container wagons each) per day on the northern line between Belcon and the port.

There is a demand for the mass removal of waste out of the city to landfill sites. Regrettably, the rail service from the Athlone Waste Transfer Station to Vissershok landfill site ceased operations in 2018 when the line was encroached on by settlers at DuNoon. There is an urgent operational need to reinstate this line, as not only is it much more expensive to move the waste by road, but the services also cannot keep up with the demand.

There is a significant opportunity to increase the use of rail for long-distance freight, particularly for Goods, Freight, and Bulk (GFB) freight, according to the Western Cape Government's freight demand model.

7.5 Road-based Freight Transport

7.5.1 Infrastructure

The freight road network is a network of roads, including freeways and arterial routes, connecting the Port of Cape Town to the city and the surrounding region, shared with all other forms of road-based transport. Freight vehicle movement is mainly concentrated on the three (3) major freight corridors: N1, N2 and N7, and their links to major industrial areas and the port.

A system of weighbridges on national roads, and weight-in-motion sensors on freight routes in the city, monitor overloading and other transgressions. Through enforcement commensurate with the resources at hand, overloading is not a significant or growing problem (averaging 3-6% of vehicles measured). However, even this small percentage has significant implications for road infrastructure. If 5% of trucks are marginally overloaded, the design life of a road could be reduced by as much as 20%. (CCT, 2025, unpublished)

The City does not provide truck stops or staging areas, but the need for truck parking areas in industrial areas has been identified. This is especially pressing outside the port, where trucks park informally despite regular enforcement there. There have been calls recently for the City to provide a truck stop, and the WCG is promulgating a guide to encourage municipality to approve privately provided facilities.

7.5.2 Operations

The map below shows the relative number of freight vehicles on the road network (sourced from tracker data).

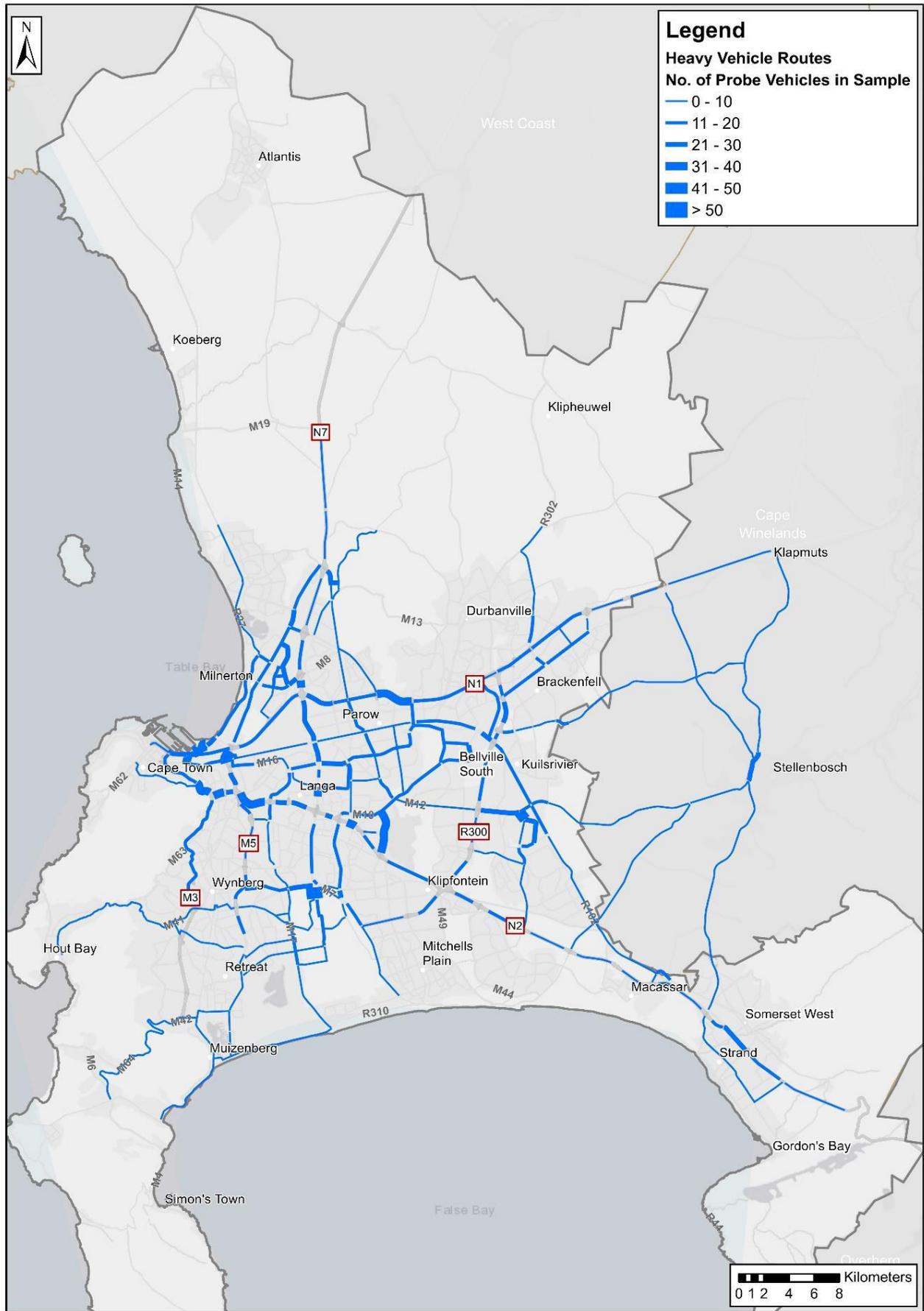


Figure 7-5: Figure 5 Key freight routes (source: CCT, 2025, unpublished)

Trucks are affected by general congestion along many road sections of the main freight routes, especially during the morning peak period. Conversely, the significant number of freight vehicles on the road network pose challenges to road infrastructure and other road users, most acutely felt when these vehicles are involved in, or cause, crashes, blocking general traffic, and damaging infrastructure, including bridges. Trucks stopping, and breaking down, in lanes and on shoulders of freeways have significant implications for the travelling public: these incidents have been on the rise since 2020.

The City's Road Haulage Unit is responsible for enforcement of moving and stationary violations of heavy vehicles but is constrained in its operations by its limited capacity.

7.5.3 Road Safety

There are between 20 and 30 truck crashes per month on the freeways in Cape Town: on average these involve three serious injuries or fatalities per month. A concerning trend is the steady monthly increase in the number of crashes since 2020. (CCT, 2025, unpublished)

A higher density of crashes is observed along both the N1 and N2 west of the R300, i.e. within the urban centre. Clearance times for these crashes vary from one hour to more than 2.5 hours, which has significant implications for the travelling public. The leading causes of crashes are driver behaviour: unsafe lane changes, insufficient following distance and bypassing too close.

7.6 Pipelines

There are very few pipelines in Cape Town. Pipelines are under the management of Transnet Pipelines. The major one for unrefined and refined petroleum products, is between the port and Astron refinery in Milnerton. There is also a pipeline to Saldanha Bay.

7.7 Freight Facilities / Nodes

The existence of major freight interchanges, namely the seaport and airport, in Cape Town are major generators of freight transport. The below subsections examine the Port of Cape Town, Cape Town International Airport and other freight transport facilities /nodes.

7.7.1 Port of Cape Town

7.7.1.1 Infrastructure and capacity

Port of Cape Town (the port) is a multi-purpose seaport with container, bulk, and breakbulk terminals, handling a wide variety of cargo. The port is the largest single origin and destination of freight in the city, followed by the various industrial areas. It currently handles 750 000 TEUs (containers); 1 million tonnes of dry bulk; 459 000 tonnes of break bulk; and 5.9kl of liquid bulk annually, servicing imports and exports, as well as local industries: fishing and boat repairs. Cruise ships are also accommodated in growing numbers through the summer season. (source: TNPA). The port is the major point of exit for export fruit to Europe, Asia and the Middle East.

The port needs to expand its capacity for handling containers, which requires its expansion into Paarden Eiland for a truck staging facility, and into Culemborg for back-of-port facilities (it also has plans for internal efficiencies to handle increased volumes). (source: TNPA)

Some industries directly related to the maritime economy are in Cape Town, and close to the port, such as luxury yacht building.

7.7.1.2 Operations

The port struggles with inefficiencies caused by external factors, particularly weather-related down-time at the port. It also struggles with internal inefficiencies related to a lack of timely capital investment and maintenance; managing container movement into and out of the port; and human resource deficiencies. The measures to catch up the delays after down-time are currently not effective, such as open the port 24/7, because very few transporters are using the port after hours, because of the unavailability of related services after hours.

Further, in the current world of just-in-time (JIT) production processes, importers and exporters (local and regional) businesses need reliability and predictability of shipments, as much as they need on-time shipments and predictable cost of shipments. This is over-and-above fresh produce which is time-sensitive, which is a significant export product in Cape Town.

7.7.2 Other Freight Transport Facilities

- 1) **Cape Town Container Terminal (CTCT):** A specialized terminal for handling containerized cargo, with ongoing upgrades to increase capacity and efficiency. Ongoing investments in the CTCT aim to increase capacity and improve handling efficiency.
- 2) **Intermodal Terminals:** Facilities such as Belcon, which allow for the seamless transfer of goods between different modes of transport.
- 3) **Warehouses and Distribution Centres:** Privately owned facilities that support the storage and distribution of goods.

7.7.3 Cape Town International Airport

Air cargo volumes are determined by passenger travel patterns, with cargo carried as “belly-freight” in passenger planes. CTIA has seen a surge in airfreight, with the total value of goods airfreighted out of Cape Town increasing significantly since 2018 (Freight News, 26 November 2024). However, airfreight is generally limited to goods that have a high value-to-weight ratio, are low volume and time-sensitive.

The CTIA plans for an industrial park in the north-east corner of their property, and an additional runway to increase capacity, which will have local impacts on traffic. The CTIA is looking for business expansion opportunities, and is promoting the idea of an aerotropolis, where the host city orientates its land uses and infrastructure around the airport in a symbiotic relationship.

The private sector is working on plans for a new airport (the “Winelands airport”, which would also offer a mix of passenger and cargo services, if approved as planned. This would have local impacts on traffic in the Cape Town, Stellenbosch and Drakenstein municipal areas, which would need to be mitigated.

7.8 Infrastructure Ecosystem for Logistics

The Institutional Mapping of the Western Cape Logistics Ecosystem report (WCG, 2025)¹⁰ illustrates the full freight infrastructure ecosystem in the diagram below. Roads, rail, weighbridges, back of port facilities, seaports, airports and border posts (all outlined in red in the diagram) are all the responsibility of different spheres of government, and SOEs. Pipelines, cold store and packhouses, and distribution centres are in private ownership and control. Logistics companies therefore rely heavily on government to ensure seamless logistics as goods pass through this system, not including the related regulatory system such as customs and excise; SARS; and the various health and safety controls by different government departments.



Figure 7-6: Land Freight Logistics Ecosystem Networks, Modes and Nodes (source: WCG, 2025, adapted)

Private sector transporters, freight forwarders and other logistics service providers are responsible for moving goods for customers. This sector is highly varied, from large companies to formal companies, to multiple informal and owner-operators (30% of the sector accessing the port).

Warehousing is also in private hands and is generally located in industrial areas and the airport.

The growing demand for e-commerce is changing the established role-players in the movement of products to consumers, with the emergence of distribution centres and either light vehicles or micro-freight vehicles delivering the last mile.

7.9 Spatial distribution of freight land uses

The concentration of warehousing facilities near the port, main junctions, and arterial roads suggests that accessibility is a key factor in land use decisions, impacting freight movement. Some of these are under pressure to be rezoned to more high-value land uses and need to be protected. The need for integrated land use and transport planning is crucial for addressing issues like congestion and ensuring efficient freight flow.

REFERENCES

- ¹ Comprehensive Integrated Transport Plan 2023-2028, City of Cape Town, 25 May 2023
- ² City of Cape Town Freight Management Strategy, 2016
- ³ National Land Transport Act, 2009 (Act 5 of 2009)
- ⁴ National Road Traffic Act 1996 (Act 93 of 1996)
- ⁵ Government of South Africa. 2023. *Roadmap for the Freight Logistics System in South Africa*. Available at: <https://www.transport.gov.za/wp-content/uploads/2023/02/Roadmap-for-the-Freight-Logistics-System-in-South-Africa-FINAL-FOR-RELEASE.pdf> (Accessed: 25 April 2025).
- ⁶ Transnet. Port Development Framework Plans 2022 Update.
- ⁷ Western Cape Government. 2019 *Western Cape Freight Strategy*.
- ⁸ City of Cape Town. Five-Year Integrated Development Plan July 2022 – June 2027
- ⁹ City of Cape Town. Urban Mobility Directorate. Comprehensive Integrated Transport Plan. 2023-2028
- ¹⁰ Western Cape Government. Institutional Mapping of the Western Cape Logistics Ecosystem, March 2025