NATIONAL PORTS PLAN
2019 Update
Transnet National Ports Authority (TNPA) expresses their gratitude to authorities and organisations for their generous assistance and supply of information that formed the basis of this document. TNPA is grateful for the assistance of the Port Managers, Port Engineers, Port Planners, other TNPA officers for compiling this document.
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Furthermore, in so far as the development of ports in addition to the existing commercial ports are concerned, attention is drawn to the provisions of Section 10 of the National Ports Act 12 of 2005.

Please be guided accordingly.
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# Glossary

**Dry Bulk**
Cargo that is transported unpacked in large quantities. It refers to material in granular, particulate form, as a mass of relative small solids such as grain, coal, manganese, iron ore, etc.

**Boundary**
Boundary within port limits to demarcate port operational area.

**Break Bulk**
Cargo that is handled in packages such as boxes, crates, bags, drums, machine parts, sacks, or refrigerated cargos such as fruit or meat.

**Coastwise trade**
Movement of cargo and passengers by sea along the coastline, without crossing an ocean.

**Installed capacity**
The maximum throughput that could be achieved assuming acceptable levels of congestion, optimal operator efficiencies and current equipment selection.

**Latent capacity**
The difference between installed capacity and throughput.

**Port SEZ**
SEZ within port limits.

**Theoretical berth capacity**
The maximum throughput that could be achieved assuming acceptable levels of congestion, optimal operator efficiencies and optimal equipment selection.

**Throughput**
The actual flow of cargo through a terminal measured in tons per annum. In the case of container terminals, throughput is measured in twenty-foot equivalent units (TEUs) per annum, while motor vehicles are measured in Completely Built Units (CBUs).

**Transhipment**
The transfer of goods from one ship to another.

## Abbreviations and Acronyms

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<td>bbl</td>
<td>Barrel of oil</td>
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<td>CAPEX</td>
<td>Capital Expenditure</td>
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<td>CBD</td>
<td>Central Business District</td>
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<td>CBM</td>
<td>Catenary Buoy Mooring</td>
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<td>CBU</td>
<td>Completely Built Unit: A unit used to refer to automotive vehicles.</td>
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<td>CDC</td>
<td>Coega Development Corporation</td>
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<td>Durban Dig-Out Port</td>
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<td>DoE</td>
<td>Department of Energy</td>
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<td>Dwt</td>
<td>Deadweight tonnage: The carrying capacity of a ship, including the weight of cargo, fuel, crew, passengers and fresh water. Expressed in metric tons.</td>
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<td>FEL studies</td>
<td>Front End Loading studies: Transnet standard procedure for implementation of projects.</td>
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<td>MCBU</td>
<td>Million Completely Built Units</td>
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<td>m³pa</td>
<td>cubic metres per annum</td>
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<td>million kl</td>
<td>million kilolitres</td>
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<td>MPT</td>
<td>Multi-purpose Terminal</td>
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<tr>
<td>PDF/PDFP</td>
<td>Port Development Framework/Port Development Framework Plan</td>
</tr>
<tr>
<td>SBM</td>
<td>Single Buoy Mooring</td>
</tr>
<tr>
<td>SEZ</td>
<td>Special Economic Zone</td>
</tr>
<tr>
<td>SPM</td>
<td>Single Point Mooring</td>
</tr>
<tr>
<td>TEU</td>
<td>Twenty-foot Equivalent Unit: A unit used to refer to containers.</td>
</tr>
<tr>
<td>TNPA</td>
<td>Transnet National Ports Authority</td>
</tr>
<tr>
<td>ton</td>
<td>Metric system unit of mass equal to 1 000 kilograms</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>V&amp;A</td>
<td>Victoria &amp; Alfred Waterfront</td>
</tr>
</tbody>
</table>
## Colour Legend

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containers</td>
<td>Container cargo – import/export.</td>
</tr>
<tr>
<td>Break Bulk / MPT</td>
<td>General cargo to be loaded individually, e.g. bags, crates or wind turbines.</td>
</tr>
<tr>
<td>Liquid Bulk</td>
<td>Mainly import of crude oil, refined product, potentially Liquefied Natural Gas (LNG), phosphoric acid, vegetable oils, chemicals and LPG. This does not include buoy moorings (SBM, SPM or CBM).</td>
</tr>
<tr>
<td>Dry Bulk</td>
<td>Products exported/imported in large and unpackaged volumes, e.g. coal, iron-ore and manganese.</td>
</tr>
<tr>
<td>Automotive</td>
<td>Import/export of vehicles.</td>
</tr>
<tr>
<td>Maritime Engineering</td>
<td>Repair and refurbishment of vessels and rigs (heavy or light industrial activities). Potential ship-building activities.</td>
</tr>
<tr>
<td>Fishing</td>
<td>Facilities for fishing industry: Loading/offloading of products and processing.</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>Areas allocated in open or protected waters for aquaculture operations, e.g. fish or mussel farms.</td>
</tr>
<tr>
<td>Commercial Logistics</td>
<td>Logistical activities and facilities associated with import and export of goods, e.g. distribution centres, storage/warehouses, offices and trade facilities.</td>
</tr>
<tr>
<td>Open Space</td>
<td>Environmentally sensitive areas, natural recreational areas (e.g. Naval Island in Richards Bay), flooding areas and zones not earmarked for development.</td>
</tr>
<tr>
<td>TNPA Other</td>
<td>Areas associated with administrative activities in port (e.g. offices), road reserves, servitudes or areas reserved for further development.</td>
</tr>
<tr>
<td>Maritime Commercial</td>
<td>Port activities such as cruise liner terminals, recreational fishing, entertainment areas, waterfront development, residential development and retail areas.</td>
</tr>
<tr>
<td>IDZ/SEZ</td>
<td>Areas allocated for the Industrial Development Zone (IDZ) and Special Economic Zones (SEZ).</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

Introduction

The National Ports Act (2005) prescribes that the National Ports Authority is to prepare and periodically update a Port Development Framework Plan (PDFP) for each port. This process ensures that the development plans remain current, remain aligned with national policies and remain inclusive of changes in the ports’ environment. The creation of new capacity in the ports’ system results from the implementation of the Port Development Framework Plans.

The NPP was revised in 2014 and updated in 2015, 2016 and 2017. From 2018, this report contains the 2019 update of the National Ports Plan. The National Ports Plan will be updated every two years and revised every five years. This National Ports Plan includes developmental plans for the South African ports which includes Richards Bay, Durban, the proposed Durban Dig-Out Port, East London, Ngqura, Port Elizabeth, Mossel Bay, Cape Town, Saldanha Bay and Port Nolloth.

The following methodology was applied to update the NPP:

- Revision of the nationwide freight demand forecast;
- Freight demand forecast was developed per port;
- Port management was sensitised on the latest demand forecasts. This confirmed the current capacity and the latest commercial plans;
- Scenarios and port concepts were developed to handle the 2019 projected freight demand;
- An options analysis was conducted to determine the most suitable port concepts to meet future demand;
- Options were selected and prepared into high level Port Development Framework Plans (PDFPs);
- Port management was sensitised. Port management signed off on the Port Development Framework Plans.

For each PDFP the current (2019), short-term (2019 – 2028), medium-term (2029 – 2048) and long-term (beyond 2048) port layouts were updated. This included updating the list of projects and high level costings upon which the PDFPs were based.

The following issues were considered whilst updating the NPP:

- Opportunities and constraints identified in the 2017 National Ports Plan;
- Alignment with international trends previously identified;
- Alignment with national strategies and policies developed as part of the 2014 National Ports Plan project;
- City land use planning.
PDFP Review

The PDFPs were reviewed within the context of the latest cargo demand forecasts. As a result of this review the gazetted port limits, berths and precincts layouts, capacity assessment and finally the PDFPs were updated. Whilst the PDFPs have remained largely unchanged from the 2017 Update, notable changes that were made may be summarized as follows:

The provision of LNG import facilities, as part of the Department of Energy (DoE) gas-to-power programme, for Richards Bay, Ngqura and Saldanha Bay are new developments. The Richards Bay facility is planned for the short-term, whilst the Saldanha Bay and Ngqura facilities are is planned for the medium-term.

The Maritime Engineering and Maritime Commercial activities were updated as part of Operation Phakisa. New plans for Maritime Engineering include a floating dry dock facility in Richards Bay and increased land use in Saldanha Bay, Port Elizabeth, East London, Ngqura and Cape Town. New plans for Maritime Commercial facilities include expansion up the Buffalo River in East London, new waterfront development in Mossel Bay and improvements to cruise liner facilities at Durban and Port Elizabeth.

The latest demand forecasts indicate that cargo demand has generally declined since the 2017 update. This has resulted in non-critical projects being deferred. Notable projects that were deferred include the Liquid Bulk expansion in Durban and a portion of the manganese expansion at Ngqura.

Projects that were brought forward include the earlier development of the outer basin for container terminal in Cape Town in the medium-term and the LPG import facility that was recently completed in Saldanha Bay as well as the liquid bulk project in the Port of Ngqura.

Other minor changes to the PDFPs are mainly related to reprioritisation of land use and upgrades to road and rail infrastructure.

Port Development Implementation and Investment

The port development implementation and investment plans were based on the updated PDFPs, with detailed schedule and cost information obtained from the TNPA 10-year CAPEX budget (TNPA, 2018/19). The TNPA 10-year CAPEX budget did include information for some projects exceeding the 10-year time frame. However, for many projects exceeding the 10-year time frame high level estimates had to be made. In some cases, costings from the 2017 NPP were reused, while new estimates were made for new projects.

The following assumptions were made for estimating the costs for capital expenditure, where the capital expenditure was not available from the 10-year CAPEX budget:

- Cost estimates included the cost of breakwaters, quay walls, dredging, reclamation and surfacing.
- It was assumed that Preliminary and General Items (P&Gs) will be 30% in addition to base costs.
- A contingency allowance of 20%, in addition to base costs and P&G costs, were assumed.
Design and engineering costs of 7.5%, in addition to base costs, P&G costs and contingency, were assumed.

Items that were excluded include costs for material handling equipment, buildings, service craft, land acquisition, services, exchange rate adjustments, market adjustments and Value Added Tax.

A summary of the cost per cargo type is presented in the table below.

<table>
<thead>
<tr>
<th>Cargo type</th>
<th>Summary of costs per cargo type for all ports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capex Excl. VAT (million ZAR)</td>
</tr>
<tr>
<td></td>
<td>Short-term (2018 – 2028) Medium-term (2028 – 2048) Long Term (Beyond 2048) All</td>
</tr>
<tr>
<td>Containers</td>
<td>17 655 41 765 5 297</td>
</tr>
<tr>
<td>Dry Bulk</td>
<td>5 895</td>
</tr>
<tr>
<td>Break Bulk</td>
<td>4 313 9 116 14 050</td>
</tr>
<tr>
<td>Automotive</td>
<td>5 742</td>
</tr>
<tr>
<td>Liquid Bulk</td>
<td>12 168</td>
</tr>
<tr>
<td>Other</td>
<td>8 796 8 589 550</td>
</tr>
<tr>
<td>TOTAL</td>
<td>48 827 65 212 19 897</td>
</tr>
</tbody>
</table>

A summary of the cost per port for all cargo types is presented in the table below.

<table>
<thead>
<tr>
<th>Port</th>
<th>Summary of costs per port</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capex Excl. VAT (million ZAR)</td>
</tr>
<tr>
<td></td>
<td>Short-term (2018 – 2028) Medium-term (2028 – 2048) Long term (Beyond 2048) All</td>
</tr>
<tr>
<td>Richards Bay</td>
<td>2 499 5 077 14 600</td>
</tr>
<tr>
<td>Durban</td>
<td>21 003</td>
</tr>
<tr>
<td>Durban Dig-Out Port</td>
<td>- 37 750</td>
</tr>
<tr>
<td>East London</td>
<td>2 073</td>
</tr>
<tr>
<td>Ngqura</td>
<td>12 530</td>
</tr>
<tr>
<td>Port Elizabeth</td>
<td>245 4 374 5 297</td>
</tr>
<tr>
<td>Mossel Bay</td>
<td>150</td>
</tr>
<tr>
<td>Cape Town</td>
<td>3 5 383</td>
</tr>
<tr>
<td>Saldanha Bay</td>
<td>3 427 12 628</td>
</tr>
<tr>
<td>Port Nolloth</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>41 858 65 212 19 897</td>
</tr>
</tbody>
</table>

In the short-term the largest investment will occur in Ngqura and Durban. Notable projects at Ngqura includes converting the break bulk berths to one liquid bulk berth and two manganese berths. For Durban, several berth upgrade and deepening projects are planned.

In the medium-term the largest investment is planned for the first phase of the new Durban Dig-Out Port.

LNG import facilities are planned for Richards Bay, Ngqura and Saldanha Bay. The CAPEX for these projects will not be covered by TNPA.
NATIONAL PORTS PLAN

CHAPTER 1:

INTRODUCTION
1 INTRODUCTION

1.1 Project Background

The National Ports Act (2005) prescribes that the National Ports Authority is to prepare and periodically update a Port Development Framework Plan for each port. This process ensures that the development plans remain current, remain aligned with national policies and remain inclusive of changes in the ports’ environment. The creation of new capacity in the ports’ system results from the implementation of the Port Development Framework Plans.

The NPP was revised in 2014 and updated in 2015, 2016 and 2017. This report contains the 2019 update of the NPP for the following South African ports:

- Richards Bay;
- Durban (including proposed Durban dig-out port);
- East London;
- Ngqura;
- Port Elizabeth;
- Mossel Bay;
- Cape Town;
- Saldanha Bay; and
- Port Nolloth.

1.2 Methodology

The methodology applied to update the NPP is as follows:

- Revision of the nationwide freight demand forecast;
- Freight demand forecast was developed per port;
- Port management was sensitised on the latest demand forecasts. This confirmed the current capacity and the latest commercial plans;
- Scenarios and port concepts were developed to handle the 2019 projected freight demand;
- An options analysis was conducted to determine the most suitable port concepts to meet future demand;
- Options were selected and prepared into high level Port Development Framework Plans (PDFPs);
- Port management was sensitised. Port management signed off on the Port Development Framework Plans.
For each PDFP the current (2019), short-term (2019 – 2028), medium-term (2029 – 2048) and long-term (beyond 2048) port layouts were updated. This included updating the list of projects and high level costing, on which the PDFPs were based.

The following were considered while updating the NPP:

- Opportunities and constraints identified in the previous National Ports Plans;
- Alignment with international trends previously identified;
- Alignment with national strategies and policies developed as part of the National Ports Plan project;
- City land use planning.

1.3 Report Structure

This report contains five (5) chapters and two (2) Annexures.

Chapter 1 outlines the introduction to the document and includes national cargo demand graphs.

Chapter 2 presents the review of the PDFP. In this chapter, the background, capacity analysis, strategic development overview and updates to the Port Development Framework Plans are provided for each port.

Chapter 3 presents the National Development Implementation Plan. In this chapter the project implementation is tabulated per cargo type and per port.

Chapter 4 presents the National Ports Infrastructure Investment Plan. In this chapter the capital investment cash flow is presented for the short and medium-term layouts. Detailed capital investment cash flow graphs are presented per cargo type and per port.

References are provided.

Annexure A and Annexure B presents the 2019 and 2017 PDFP layouts per port respectively.

1.4 National Overview

A national overview of the different cargo types with associated development is presented in Figures 1-2 to Figure 1-6. These graphs provide an understanding of the complementary nature of the handling of the different cargo types in each port.
Figure 1-1 National Container infrastructure development strategy
Figure 1-2 National Dry Bulk infrastructure development strategy
Figure 1-3 National Break Bulk infrastructure development strategy
Figure 1-4 National Liquid Bulk infrastructure development strategy
Figure 1-5 National Automotive infrastructure development strategy
Figure 1-6 National SBM/CMB/SPM infrastructure development strategy
NATIONAL PORTS PLAN

CHAPTER 2:

PORT DEVELOPMENT FRAMEWORK PLAN UPDATE
2 PDFP UPDATE

2.1 Introduction

This chapter provides per regional (eastern, central and western) and per port updates of the Port Development Framework Plans (PDFPs). For each port, a background, capacity analysis per cargo type and PDFPs are provided.

The background comprises the gazetted port limits, berths and precincts layout and a summary of the present port activities.

The capacity analysis provides the current and projected demand and capacity per cargo type. Two forecasts were used for the projected demand, i.e. the TNPA demand forecast and the Transnet Long Term Planning (LTPF) demand forecast. The TNPA forecasts are developed to be in line with client interaction and existing port activities. The TNPA forecast covers the short-term (10 years). The LTPF forecasts, which addresses the short- to long-term (30 years), are determined from a macro-economic point of view and include predictions based on past growth.

The PDFPs present the current, short-, medium- and long-term port layouts. For each port, the foreseen changes between the different port layouts are listed.
2.2 Eastern Region Overview

This region grouping (Figure 2-1) of the Port of Durban, the new Durban Dig-Out Port (DDOP) and the Port of Richards Bay, allow the rational and complementary allocation of cargo between these three ports.

In the Port of Richards Bay, the focus is mainly on coal export and other dry bulk handling while in the Port of Durban and the new DDOP, the focus will be on containers, automotive and liquid bulk handling.

Figure 2-2 to Figure 2-7 describes the national development strategy per region. This provides an understanding of the complementary nature of the ports per region.

Figure 2-1: Eastern Ports (Richards Bay, Durban and DDOP) location
Figure 2-2: Eastern Ports- Container infrastructure development strategy
Figure 2-3: Eastern Ports- Dry Bulk infrastructure development strategy
Figure 2-4: Eastern Ports- Break Bulk infrastructure development strategy
Figure 2-5: Eastern Ports- Automotive infrastructure development strategy
Figure 2-6: Eastern Ports- Liquid Bulk infrastructure development strategy
Figure 2-7: Eastern Ports- SBM/CMB/CPM infrastructure development strategy
2.2.1 Port of Richards Bay

2.2.1.1 Port Background

The Port of Richards Bay is one of the main dry bulk ports in South Africa. While serving the hinterlands of Northern KwaZulu-Natal, Gauteng and Mpumalanga, the port is the largest exporter of coal in South Africa. By tonnage, the port has the largest Dry Bulk terminal in South Africa and handles approximately 54% of South Africa’s total dry bulk cargo demand.

In general the port currently focuses on four major activities: exporting coal, dry bulk, break bulk and liquid bulk. Other services include bunkering, minor ship repairs and providing facilities for services and recreational craft. In addition to providing bulk facilities for the hinterland, the port plays an important role in the local economy of the City of uMhlatuze’s growing industrial base. The present port activities in the Port of Richards Bay are summarised in Table 2-1.

Figure 2-8 presents the 2010 gazetted port limits.

Figure 2-8: Richards Bay gazetted port limits (Government Gazette No. 32873 – January 2010)
Figure 2-9: Precincts and berth layout of the Port of Richards Bay

The port has three precincts, namely the South Dunes, Bayvue and Newark (Figure 2-9). The South Dunes precinct accommodates coal terminal and the liquid bulk terminal. Other dry bulk and multi-purpose operations are located in the Bayvue precinct, while the small craft harbour is located in the Newark precinct.

Table 2-1: Current port activities – Port of Richards Bay

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Containers</td>
<td>Deepsea imports and exports.</td>
</tr>
<tr>
<td></td>
<td>Break bulk</td>
<td>Export of pig iron and base metals.</td>
</tr>
<tr>
<td></td>
<td>Dry bulk</td>
<td>Export of coal, wood chips and petroleum coke. Import of alumina, petroleum coke, sulphur etc.</td>
</tr>
<tr>
<td></td>
<td>Liquid bulk</td>
<td>Import of fuel and import and export of chemicals.</td>
</tr>
<tr>
<td>Maritime services</td>
<td>Fishing industry</td>
<td>Support for fishing vessels.</td>
</tr>
<tr>
<td></td>
<td>Ship repair</td>
<td>Ad hoc repair works.</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Passenger terminal</td>
<td>Passenger vessels are accommodated at the ship repair quay or at berths in the Bayvue precinct.</td>
</tr>
</tbody>
</table>
Chapter 2, PDFP Update, pp 2-11

2.2.1.2 Strategic Port Development Plan

The Port of Richards Bay is South Africa’s premier bulk port. It was commissioned on the 1st of April 1976 for the purpose of exporting coal from the Mpumalanga province. It has since expanded and grown into other dry bulk cargoes, liquid bulk, and break bulk commodities. The Port of Richards Bay aspires “to be a premier dry bulk and liquid bulk port with diversification in other segments”. It desires to be a growing, effective, economic, efficient and integrated port. It intends to grow the business by investing in infrastructure and improving terminal and supply chain efficiencies. The Port of Richards Bay has reached the milestone in handling over 100 million tons of cargo during 2017/18. This truly positions the Port of Richards Bay as the bulk port of choice in the Southern African region.

Furthermore the signing of the MOU between uMhlathuze Municipality, Richards Bay Industrial Development Zone (RBIDZ) and Transnet National Ports Authority (TNPA) has ensured that the port is positioned to be a natural location for bulk handling capabilities. With the two phases of RBIDZ that are juxtaposed with first class industry while the deep-water Port of Richards Bay provides substantial volume for beneficiation opportunities for investments.

With strategic projects such as Richards bay Expansion Project, additional liquid bulk terminals and the upgrading of roads and services will see the port take advantage of the N2 Business corridor links to provinces such as Gauteng, Mpumalanga and Limpopo and further into East Africa.

2.2.1.3 Capacity Analysis

This section gives insight into the Port of Richards Bay’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current Capacities

The berth names and the current number of berths as well as the installed, theoretical and latent capacity are presented in Table 2-2. These are provided for each of the cargo types handled in the port.
Table 2-2: Capacity per cargo type – Port of Richards Bay

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>301, 302, 303, 304, 305, 306</td>
<td>6</td>
<td>80 306 062</td>
<td>91 000 000</td>
<td>110 000 000</td>
<td>10 693 938</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Dry Bulk</td>
<td>609, 701, 702, 703, 704, 801, 804</td>
<td>7</td>
<td>18 474 913</td>
<td>17 400 000</td>
<td>21 000 000</td>
<td>-1 074 913</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Break Bulk excl. containers (MPT)</td>
<td>606, 607, 608, 706, 707, 708</td>
<td>6</td>
<td>3 451 656</td>
<td>7 750 000</td>
<td>8 250 000</td>
<td>4 798 344</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Containers (MPT)</td>
<td>606, 607, 608, 706, 707, 708</td>
<td>6</td>
<td>13 363</td>
<td>50 000</td>
<td>50 000</td>
<td>36 637</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>208, 209</td>
<td>2</td>
<td>2 220 170</td>
<td>3 000 000</td>
<td>3 000 000</td>
<td>779 830</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

2 Approximately 3.5mton of the total coal volume, is handled at the dry bulk and break bulk berths. i.e. Approximately 77mton of coal is handled at the coal terminal.

3 Excess volumes were handled with increased berth occupancy which increases the vessel waiting time and this is not sustainable over a long period as it leads to vessel delays. Approximately 2.5mton of coal volume is handled at the dry bulk berths. Approximately 3mton of dry bulk volumes of rock phosphate, pig iron, titanium slag, chrome ore, salt and fertilizer are handled at the break bulk berths. i.e. Approximately 18mtons of cargo is handled at the dry bulk berths.

3 Due to the growth in vessel sizes, either 5 or 6 vessels can be accommodated at the break bulk berths. Approximately 3mton of dry bulk volumes of rock phosphate, pig iron, titanium slag, chrome ore, salt and fertilizer are handled at the break bulk berths. Approximately 1mton of coal volume is handled at the break bulk berths. Approximately 0.25mkl of pitch pencil and phosphoric acid is handled at the break bulk berths. Containers are handled at the break bulk berths. i.e. Approximately 7.75mtons of cargo is handled at the break bulk berths.

4 Containers are handled at the break bulk berths.

5 Approximately 0.25mkl of the 2.2mkl, which is the volume of pitch pencil and phosphoric acid is handled at the break bulk berths. i.e. Approximately 2mtons of cargo is handled at the liquid bulk berths.

**Berth Capacity versus Volume**

The capacity demand volume figures are presented below for each of the main commodities of the port. These main cargo types are coal, dry bulk, break bulk (MPT), containers (MPT) and liquid bulk.
**Coal**

The terminal currently makes use of six berths for cargo loading. Figure 2-10 presents the coal capacity versus demand.

The theoretical capacity of 110 million tons presented in the graph is derived from the 18.33 million tons capacity per berth for 6 berths. The current installed capacity is 91 million tons per annum and is lower than the theoretical capacity due to storage capacity and handling equipment constraints.

![COAL CAPACITY vs VOLUME](image)

*Figure 2-10: Future Demand Volume and Capacity - Richards Bay Coal Terminal*

The LTPF demand forecast indicates that the installed capacity will be exceeded by 2038. To improve the installed capacity to reach the theoretical capacity, additional ship loaders and stockpile areas are required.

Figure 2-10 illustrates that the demand forecast will not exceed the theoretical capacity by 2047. TNPA predictions assume a plateau of demand which is below the existing design capacity.

**Dry Bulk**

The Port of Richards Bay currently has 7 dry bulk berths. The current theoretical and installed capacity is 21 million tons per annum and 17.5 million tons per annum respectively.

The projected dry bulk capacity and demand is presented in Figure 2-11.
In the short-term scenario, there is insufficient capacity according to the TNPA forecast volume capacity. By 2024, the berth capacity will be increased from 21 million tons to 40.4 million tons due to the provision of two additional berths (Berth 802 and 803) and the conversion of berth 702 from an import berth to an export berth.

**Break Bulk/MPT**

At present there are 6 berths available for Break Bulk/MPT operations at the Bayvue precinct, which includes provision for handling phosphoric acid and pitch pencil at these berths. Container operations are also handled at the MPT berths. The current installed and theoretical capacity is 7.75 million tons per annum and 8.25 million tons per annum respectively.
According to the volume projection, no new berths are required by 2047. However, beyond 2047, due to the prediction of the LTPF demand forecast, it is advisable to plan ahead for an additional berth to provide additional break bulk (MPT) capacity.

Containers (MPT)

The berths available for container usage at the MPT have a theoretical and installed capacity of 50 000 TEUs per annum (Figure 2-13).
Figure 2-13 illustrates that both the LTPF and TNPA container volumes are very similar. According to the volume projection, no new berths are required by 2047.

**Liquid bulk**

The current two liquid bulk berths at the Port of Richards Bay has a combined capacity of 3 million kilolitres per annum. Figure 2-14 illustrates the future projection of LTPF demand and TNPA forecast volumes for liquid bulk.

![LIQUID BULK CAPACITY vs VOLUME](image)

*Figure 2-14: Future Demand Volume Capacity - Richards Bay Liquid Bulk*

The reason for the large discrepancy in LTPF demand forecast and TNPA volume projections is that the TNPA forecast takes into account the newly signed petroleum import customers and the LTPF demand does not. This is mainly due to the different sources of data that were utilised in formulating the forecasts.

By 2022, Berth 207 will be reserved as new LNG berth by means of a Floating Storage and Regasification Unit (FSRU) that will be permanently moored at Berth 207. During this time Berth 207 will not be available for any liquid bulk transfer. However, in the medium term a new LNG terminal would be required in the dig-out basin while Berth 207 would be used for liquid bulk.

Adopting the TNPA forecast for the next 10 years, it is clear that there will be a shortfall between the capacity and the demand. The TNPA forecast is being validated and if the demand requires additional capacity, this will be planned for.

2.2.1.4 **Port Development Framework Plans**

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of Richards Bay. Together with these plans, the foreseen changes between the different layouts are listed.
The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.

Current layout

The current layout of the Port of Richards Bay is presented in Figure 2-15.

Figure 2-15: Port of Richards Bay current layout
Short-term layout

The planned short-term port layout is shown in Figure 2-16.

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

a) At the South Dune Precinct TNPA other land changes to liquid bulk. Therefore the available liquid bulk land area increase from 76 ha to 110 ha.

b) A new LNG berth (Berth 207) becomes available.

c) A Floating Storage and Regasification Unit (FSRU) is indicated to be permanently moored at Berth 207.

d) Maritime engineering commences providing 2 ha land in the short-term for ship repairs.

e) At the back of the repair quay land area changes from commercial logistics to maritime commercial land area.

f) TNPA other land acquisition. Total proposed TNPA land areas increased from 1102 ha to 1979 ha.
g) Provision for two new dry bulk berths located at the finger-jetty.

Medium-term layout

Figure 2-17 illustrates the planned port layout for the year 2029 to 2048.

![Image: Port of Richards Bay medium-term layout]

Figure 2-17: Port of Richards Bay medium-term layout

The following changes are predicted from the short-term to the medium-term port layout:

a) At the Bayvue Precinct TNPA other land area converts to break bulk. Available break bulk land area increase by 95 ha.

b) Dig-out at the Bayvue Precinct for the provision of two additional berths.

c) Dry bulk land area increase by an additional 5 ha for additional storage capacity next to the railway lines.

d) The LNG facility relocates. A new dig-out basin will be constructed next to the entrance channel of the port at the South Dunes Precinct.

e) Berth 207 converts to a liquid bulk berth.
f) Liquid Bulk storage area increases by 40 ha at the South Dune Precinct.

g) Maritime engineering increases: additional facilities at the repair quay together with the construction of a dry dock facility at Newark Precinct.

h) TNPA other land acquisition. Total proposed TNPA land areas increased from 1979 ha to 2350 ha.

Long-term layout

The planned long-term port layout beyond 2048 is shown in Figure 2-18.

Figure 2-18: Port of Richards Bay long-term layout

With reference to the medium term layout, the following changes are envisioned for the long-term layout at the Port of Richards Bay:

a) Additional quay length with two more berths at the South Dune Precinct next to the coal terminal.

b) Additional dig-out at the Bayvue Precinct for the provision of additional quay lengths and berths.

c) Dig-out inside the new proposed port limits for additional port activities.

d) TNPA land area between the break bulk (MPT) terminal and the proposed dry-dock, land to be converted to additional quay lengths and berths.
2.2.2 Port of Durban

2.2.2.1 Port Background

Port of Durban is the main container port on the South African coastline. While handling approximately 60% of South Africa’s container traffic, the port serves KwaZulu-Natal, the Gauteng region and a large portion of the Southern African hinterland. Together with containers the port also accommodates dry bulk, liquid bulk, automotive and break bulk. Other present port activities, include facilities for local fishing industry, ship-repair industries, visiting cruise liner vessels and recreational boating, are summarized in Table 2-3 below.

The Port of Durban is bounded by the city centre to the north, residential areas to the west and east, and industrial land to the south. Thus, the development of the Durban Dig-Out Port (DDOP) at the old airport site (11 km south of the existing port) is vital for future expansion.

The 2010 gazetted port limits are presented in Figure 2-19 with the precincts and layout of the port presented in Figure 2-20.

Figure 2-19: Durban gazetted port limits (Government Gazette No. 32873 –January 2010)
Figure 2-20: Precincts and berth layout of the Port of Durban

Table 2-3: Current port activities – Port of Durban

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Containers</td>
<td>Imports, exports and transhipment of containers.</td>
</tr>
<tr>
<td></td>
<td>Break bulk</td>
<td>Import of rice and steel products and export of citrus fruit, granite and paper products.</td>
</tr>
<tr>
<td></td>
<td>Dry bulk</td>
<td>Import of wheat and agricultural products and export of maize, manganese ore and wood chips.</td>
</tr>
<tr>
<td></td>
<td>Liquid bulk</td>
<td>Crude oil is mainly imported via the Durban SBM, while refined liquid bulk products, chemicals and edible oils are imported via Island View. Refined liquid bulk is exported coastwise from Island View.</td>
</tr>
<tr>
<td></td>
<td>Automotive</td>
<td>Import and export of automotive vehicles.</td>
</tr>
<tr>
<td>Maritime services</td>
<td>Fishing</td>
<td>Fishing trawlers are accommodated at the fishing jetty north of Maydon Wharf. The Fish Wharf is currently only used for commercial logistics.</td>
</tr>
<tr>
<td></td>
<td>Maritime engineering</td>
<td>Ship repair facilities include a graving dock and three floating docks.</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Maritime commercial</td>
<td>Visiting cruise liners are accommodated at Berth N at the T-Jetty. There are three marinas in the Port of Durban. The marinas accommodate yacht clubs and restaurants. Recreational activities include canoeing, fishing and bird watching at the Bayhead natural heritage site.</td>
</tr>
<tr>
<td></td>
<td>Bunker services</td>
<td>The port offers bunkering services.</td>
</tr>
</tbody>
</table>
Improvements to the throughput capacity of the existing precincts in the Port of Durban have been a priority in recent years. These projects include deepening and lengthening of the north quay at Berths 203 to 205, infilling at Pier 1, Maydon Wharf and Island View berth reconstruction and berth deepening and construction of a new passenger terminal. Long-term expansion is planned at the Durban Dig-Out Port.

2.2.2.2 Strategic Port Development Plan

The Port of Durban is the leading port in the SADC region and the premiere trade gateway between South-South trade, Far East trade, Europe & USA and East & West Africa regional trade. The Port of Durban is South Africa’s leading Multi-Cargo port focusing on Containers, Cars, Liquid Bulk and Cruise Industry. Strategic initiatives that supports the ports positioning includes the Durban Container Terminal Berth deepening project (203 to 205), Pier 1 Phase 2 Salisbury Island Infill, construction of the proposed Durban Dig Out Port, Upgrade of berths 1 and 4 at Island View and the provision of a dedicated cruise terminal.

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

2.2.2.3 Capacity Analysis

This section provides the Port of Durban’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current capacities

The berth names and the current number of berths as well as the installed, theoretical and latent capacity are presented in Table 2-4. These are provided for each of the cargo types handled in the port.
Table 2-4: Capacity per cargo type – Port of Durban

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth Number</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containers</td>
<td>105/106, 107, 108/109, 200/201, 202, 203, 204</td>
<td>7</td>
<td>2 770 004</td>
<td>2 900 000</td>
<td>2 900 000</td>
<td>129 996</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>Dry bulk</td>
<td>Bluff 1/2, 3, 4, IV3, MW1, MW2, MW5, MW6, MW8, MW10, MW11, MW12, MW14</td>
<td>13</td>
<td>10 883 278</td>
<td>16 000 000</td>
<td>16 000 000</td>
<td>5 116 722</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Break bulk</td>
<td>C, D, E O &amp; P MW 3, MW 4, MW 7, MW 9, MW 13, MW 15</td>
<td>11</td>
<td>2 462 042</td>
<td>2 800 000</td>
<td>2 800 000</td>
<td>337 958</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Automotive</td>
<td>G, M, Q/R</td>
<td>3</td>
<td>457 153</td>
<td>520 000</td>
<td>900 000</td>
<td>62 847</td>
<td>Units/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>IV2, IV4, IV5, IV6, IV7, IV8, IV9</td>
<td>7</td>
<td>12 401 735</td>
<td>22 000 000</td>
<td>39 000 000</td>
<td>9 598 265</td>
<td>Kilolitres/year</td>
</tr>
<tr>
<td>SBM import</td>
<td>SBM</td>
<td>1</td>
<td>16 028 061</td>
<td>24 000 000</td>
<td>24 000 000</td>
<td>7 971 939</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

1Includes 200 000 TEUs capacity handled at Point

**Berth Capacity versus Volume**

Below, for each of the main cargo types of the port the capacity demand volume figures are presented. These main cargo types are containers, dry bulk, break bulk, automotive and liquid bulk.

**Containers**

The Port of Durban has 7 dedicated container berths at the container terminals. Berth 205 is decommissioned due to the berth deepening project. The container terminals include Durban Container Terminal (DCT) and Pier 1. Containers are also handled at the MPT berths, at Point.

The current theoretical and installed capacity, presented in Figure 2-21, is 2.9 million TEUs per annum and comprise the following:

- Berth capacity at Pier 2 is 2.0 million TEUs per annum;
- Berth capacity at Pier 1 is 0.7 million TEUs per annum;
- Berth capacity at Point is 0.2 million TEUs per annum; and
The 10 year projections of LTPF demand and TNPA forecast for containers are similar (Figure 2-21). This implies confidence in future projections.

In 2018 the container berth capacity is dropped from 3.3 million TEUs per annum to 2.9 million TEUs per annum due to the berth deepening project at DCT. During this time the container demand will exceed container terminal capacity. The shortfall in container capacity will be accommodated by diverting the containers to the Port of Ngqura.

By 2023, however, the container berth capacity is anticipated to increase to 3.8 million TEUs per annum. This increase is based on the expected completion of the berth deepening (additional 0.4MTEU/a) and lengthening (additional 0.5 MTEU/a) project.

In 2027 the container berth capacity increases to 5.1 million TEUs per annum due to the expected completion of the first phase of the Salisbury Island Infill project, which adds 3 new berths.

In 2028 the container berth capacity increases to 5.5 million TEUs per annum due to an additional capacity of 0.4 million TEUs per annum becoming available. This increase occurs due to the expected completion of the second phase of the Salisbury Island Infill project.

The Durban Dig-Out Port Phase 1 is expected to be completed by 2037. The project should provide an additional 2.4 million TEUs per annum of capacity (4 new berths), increasing the total container capacity of the two combined ports to 7.9 million TEUs per annum.

By 2046, Phase 2 of the first phase of the proposed Dig-Out Port will be completed. This will increase the total berth capacity by an additional 2.4 million TEUs per annum (4 new berths). Hence, the total capacity of the two combined ports will be 10.3 million TEUs per annum.
Dry bulk

At present there are 13 dry bulk berths at the Port of Durban with a current theoretical and installed capacity of 16 million tons per annum (MTPA). These berths include three berths at the Bluff, one berth at Island View (IV3) and nine berths at Maydon Wharf. The projected dry bulk demand and capacity is presented in Figure 2-22.

The TNPA forecast drops from 2017 to 2018. This is due to the drop in manganese volumes.

Maydon Wharf (MW) Berth 1 was converted from a dedicated fishing berth to a multi-user berth which has increased the capacity to 16 MTPA.

During 2024, the capacity will reduce to 11 MTPA due to the berth reconstruction at Maydon Wharf Berth 5 and berth 6. A further decrease will take place due to the commencement of the Bluff berths 1 and berth 2 reconstruction project.

During 2024 to 2026, this shortfall in berth capacity will be accommodated at the MPT berths.

By 2026, MW berths 10 and 11 will be decommissioned to undergo reconstruction.

By 2026, the capacity gradually increases by 1 million tons. The reconstruction of the Bluff berths will be completed and therefore the capacity will increase to 12 MTPA.

A further increase to 17 MPTA will occur in 2027 due to the completion of the MW reconstruction Phase 2 (berth 10 and 11).

It should be noted that by 2035 the demand will exceed the capacity and at this stage additional capacity should be provided. However, the shortfall in capacity will be provided by the MW upgrades.
**Break Bulk**

Currently there are 11 MPT berths available at the Port of Durban that consists of six berths at Maydon Wharf and five berths at Point. The Maydon Wharf berths are also used for dry bulk and liquid bulk.

The theoretical and installed capacity of the break bulk berths is currently about 2.8 million tons per annum (MTPA). This reduced capacity is due to berth reconstruction currently in progress at Maydon Wharf.

Figure 2-23 presents the projected break bulk demand and capacity.

![Break Bulk Capaciy vs Volume](image)

*Figure 2-23: Future Demand Volume and Capacity- Durban Break Bulk Terminal*

The existing break bulk LTPF demand volume and TNPA forecast volume predictions have similar growth rates. However, the initial volume values differ.

The break bulk berth capacity is expected to increase up to 4.0 MTPA by 2021 due to N berth being used for Break bulk.

In 2024 the break bulk berth capacity is expected to decrease to about 3.0 MTPA due to the commencement of the Maydon Wharf Phase 2 reconstruction project. By 2028 the break bulk berth capacity is expected to recover to 4.0 MTPA due to the completion of the Maydon Wharf Phase 2 project.

In 2017 to 2019, the TNPA forecast drops due to the handling of ad hoc commodities.

**Automotive**

There are currently three automotive berths available in the Port of Durban, with a combined theoretical berth capacity of 0.9 million units per annum.
The installed capacity (0.52 million units per annum) is lower than the theoretical berth capacity, due to a limited number of parking bays. However, by 2023 the installed capacity is expected to increase to 0.72 million units per annum due to an increase in parking bays (additional 5000 parking bays).

The projected automotive demand and capacity is presented in Figure 2-24.

With a rapid demand growth, a fourth berth is required by 2033. A fifth berth will be required in 2043. However due to spatial constraints in the Port of Durban, this berth would be constructed at the proposed Durban Dig-out Port.

It is expected that the installed capacity will be exceeded by 2028 due to a limited number of parking bays. Further studies will be required to find a suitable solution to this expected capacity constraint.

**Liquid bulk**

The current theoretical capacity and installed capacity at the liquid bulk terminal in the Port of Durban is 39 million kilolitres per annum and 22 million kilolitres per annum respectively. This terminal consists of eight liquid bulk berths, of which, six are operational. These berths include Berth 2 and Berths 4 to 9 at Island View. Berth 10 is the bunker berth. Although it falls under Liquid Bulk, it does not contribute to the throughput. IV berth 1 and IV berth 5 is currently not being utilised.

IV berth 5 operationalises by 2020 and IV berth 1 operationalises by 2026.

The projected demand and capacity for Liquid Bulk is presented in Figure 2-25.
From 2017 to 2018, there is a drop in the TNPA forecast, this is due to more refined fuel that was imported in 2017.

In 2021, the capacity is reduced to 35 mkl due to the commencement of the reconstruction of IV berths 1 and 4.

There is a temporary reduction in theoretical capacity due to Berth 1 and Berth 4 reconstruction. By 2023, IV berth 4 reconstruction project will be completed, restoring the berth capacity to 37 mkl.

By 2026, the theoretical berth capacity is increased from 37 mkl to 39 mkl due to the completion of the IV berth 1 reconstruction project.

According to the demand, no further expansions projects are required.

IV berth 5 upgrade was completed in 2016, but to date no loading equipment has been installed by the port operators. Therefore, to support liquid bulk operations, IV berth 5 will operationalise by 2020.

**SBM**

Currently there is only one SBM available near the Port of Durban close to the Durban Dig-Out Port site. Based on the pipeline flow rates, the theoretical and installed capacity of the SBM is 24 million kilolitres per annum. The projected demand and capacity of the SBM, is presented in Figure 2-26.

![LIQUID BULK CAPACITY vs VOLUME](image-url)
By 2033, the LTPF demand forecast is more than the available capacity of the SBM. However, no upgrades are planned, since no expansions are planned by the refineries, however the volumes can be accommodated within the current SBM capacity.

2.2.2.4 Port Development Framework Plans

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of Durban. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

The current layout of the Port of Durban and the Durban Dig-Out Port (DDOP) is presented in Figure 2-27 and Figure 2-28 respectively. The proposed DDOP, located at the old Durban international airport site, is intended to provide capacity to the Eastern region of the country when the Port of Durban runs out of port infrastructure capacity.

Figure 2-27: Port of Durban current layout
Figure 2-28: DDOP current layout
Short-term layout

The planned short-term Durban port layout is shown in Figure 2-29.

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

a) MW3, MW4 and MW7 changes from break bulk (MPT) berths to dry bulk. With these changes the back of quay area changes form break bulk to dry bulk land area.

b) At Maydon Warf the commercial logistics land area converts to dry bulk and break bulk.

c) Two break bulk berths at Point converts to maritime commercial for the development of a new passenger terminal.

d) Maritime commercial berths at the T-jetty converts to a break bulk berth.

e) Land acquisition at Salisbury Island land for the development of the container terminal in the medium term. TNPA total land area increase to 205 ha.
f) At Salisbury Island TNPA land area converts to container storage area. The planned Pier 1 infill Phase 1 and 2 (at Salisbury Island) will be constructed which would provide a quay length for three new container berths. Both these changes will increase the container stacking area to 233 ha.

g) Three deep water dry bulk berths are constructed at Bluff.

For the DDOP, from the current to short-term scenarios, no development are predicted (Figure 2-30).

Figure 2-30: DDOP short-term layout
Medium-term layout

Figure 2-31 and Figure 2-32 illustrates the planned port layout for the year 2029 to 2048 for the Port of Durban and the DDOP respectively.

Figure 2-31: Port of Durban medium-term layout

Changes predicted for the short-term to the medium-term layout for the port of Durban are as follow:

a) Fifteen berths at the MW precinct are converted to ten deep water berths, which is allocated for the handling of dry bulk and break bulk.

b) One TNPA other berth at Point converts to an automotive berth.

c) Acquire Ambrose Park Precinct to accommodate additional liquid bulk and commercial logistics.
With reference to the short-term layout, the following changes are foreseen in the medium-term layout at the DDOP:

1. Durban Dig-Out Port is constructed.
2. Eight new container berths to be constructed, together with the development of 141 ha of storage area.
3. One new automotive berth to be constructed. Total land area available for this terminal is 33 ha.
**Long-term layout**

The planned long-term port layout for Durban and the DDOP beyond 2048 is shown in Figure 2-33 and Figure 2-34 respectively.

![Figure 2-33: Port of Durban long-term layout](image)

The following change is envisioned for the long-term layout, with reference to the medium–term layout at the Port of Durban:

a) Three additional deep water berths to be constructed between the liquid bulk IV9 and IV10.
From the medium to long-term layout at DDOP, the following change is foreseen:

a) Extension of the dig-out area provide space for additional quay lengths to provide seven new berths.
2.3 Central Region Overview

The central ports (Figure 2-35) play a unique role in serving the Eastern Cape hinterland. Traditionally, the Port of Port Elizabeth handled most of the cargo in the region. With the Port of Ngqura becoming operational, the role of Port Elizabeth is changing from being the primary central port to one providing complementary services to Ngqura. In the short term, rationalisation of activities will see manganese exports and liquid bulk imports moved to the Port of Ngqura, while the Port of Port Elizabeth and East London will continue to handle significant volumes of containers and vehicles.

Figure 2-36 to Figure 2-40 describes the national development strategy per region. This provides an understanding of the complementary nature of the ports per region.
Figure 2-36: Eastern Ports- Container infrastructure development strategy
Figure 2-37: Eastern Ports- Dry bulk infrastructure development strategy
Figure 2-38: Eastern Ports - Break bulk infrastructure development strategy
Figure 2-39: Eastern Ports- Automotive infrastructure development strategy
Figure 2-40: Eastern Ports- Liquid bulk infrastructure development strategy
2.3.1 Port of East London

2.3.1.1 Port Background

With its main focus on the local automotive industry, the Port of East London is a well-established port that handles primarily industrial and agricultural cargoes and serves the Eastern Cape hinterland.

The port is situated at the mouth of the Buffalo River and is restricted by the steep riverbanks and rocky bed that characterises the river. These restrictions provide only limited opportunities for future port expansion.

The 2010 gazetted port limits are presented in Figure 2-41.

Figure 2-41: East London gazetted port limits (Government Gazette No. 32873 – January 2010)

The layout of the port indicating the precincts and berth numbers is presented in Figure 2-42.
Containers and break bulk cargoes are handled on the east bank, with dry bulk, liquid bulk and vehicles handled on the west bank of the river. The current port activities are summarised in Table 2-5.

Limited by its depth which in turn impacts on the viability of direct calls by the new age vessels, the Port of East London plans to construct a new port terminal and turning basin which will accommodate Panamax and neo-Panamax sized vessels.
Table 2-5: Current port activities – Port of East London

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Containers</td>
<td>Import of loaded containers and export of empties.</td>
</tr>
<tr>
<td></td>
<td>Break bulk</td>
<td>Export of livestock</td>
</tr>
<tr>
<td></td>
<td>Dry bulk</td>
<td>Import and export of grain.</td>
</tr>
<tr>
<td></td>
<td>Liquid bulk</td>
<td>Coastwise import of petroleum products.</td>
</tr>
<tr>
<td></td>
<td>Automotive</td>
<td>Import and export of vehicles.</td>
</tr>
<tr>
<td>Other services</td>
<td>Fishing</td>
<td>Privately operated. Three areas are open to the public for fishing.</td>
</tr>
<tr>
<td></td>
<td>Maritime engineering</td>
<td>Repair of support vessels and tugs are undertaken at the graving dock and repair quay.</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Maritime commercial</td>
<td>Cruise vessels are usually accommodated on the Eastern side of the river.</td>
</tr>
</tbody>
</table>

2.3.1.2 **Strategic Port Development Plan**

The Port of East London is in a developmental trajectory with planned integrated initiatives focusing in the medium to long term horizons for upgrading the port infrastructure.

As outlined in the medium term development plan, the port will embark on the Port Expansion Project to address logistical inefficiencies, provide cost effective shipping solutions and address safety imperatives.

The Port City is well positioned for stimulating growth in the automotive, manufacturing, agro-processing, green economy and artificial intelligence industries ushered by the 4th industrial revolution (4IR).

This is attested by the recent signing of a memorandum of understanding (MOU) between Buffalo City Metropolitan Municipality (BCMM), Transnet National Ports Authority (TNPA) and the East London Industrial Development Zone Company (ELIDZ) paving way for achieving integrated spatial planning and alignment of catalytic initiatives.

Other earmarked strategic port projects include: rehabilitation of Latimer’s landing Jetty to support waterfront development in line with smart people’s port concept and the rehabilitation of the break bulk quay.

The achieved infrastructure upgrades will lead to port global competitiveness and optimized growth with modern infrastructure for increased levels of operational efficiencies.

Moreover, the geographic situation of the port in the eastern node of the Eastern Cape Province remains a pedestal in unleashing economic growth opportunities and servicing the emerging sectors.

This will further entrench the Port of East London reputation as one of the most customer service-orientated ports in the country.
2.3.1.3 Capacity Analysis

This section gives insight into the Port of East London’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current capacities

Table 2-6 tabulated the berth names and the current number of berths as well as the installed capacity, theoretical capacity and latent capacity. These are provided for each of the cargo types handled in the port.

Table 2-6: Capacity per cargo type – Port of East London

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry bulk</td>
<td>S, T</td>
<td>2</td>
<td>83 733</td>
<td>984 000</td>
<td>2 000 000</td>
<td>900 267</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Containers¹</td>
<td>K/L, L/M</td>
<td>2</td>
<td>64 590</td>
<td>100 000</td>
<td>200 000</td>
<td>35 410</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>Break bulk²</td>
<td>F &amp; G, K/L, L/M</td>
<td>4</td>
<td>8 513</td>
<td>570 000</td>
<td>570 000</td>
<td>561 487</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Automotive</td>
<td>N, R</td>
<td>2</td>
<td>114 311</td>
<td>163 200</td>
<td>790 000</td>
<td>48 889</td>
<td>Units/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>TB</td>
<td>1</td>
<td>1 009 112</td>
<td>3 000 000</td>
<td>3 000 000</td>
<td>1 990 888</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

¹ Containers are handled at the Break Bulk / MPT berths.
² K/L & L/M is used for containers
Berth Capacity versus Volume

For each of the main cargo types of the port the capacity and demand volume figures are presented below. These main cargo types are dry bulk, containers (MPT), break bulk (MPT), automotive and liquid bulk.

**Dry bulk**

Currently there are two dry bulk berths available with a theoretical berth and installed capacity of 2 million tons per annum (MTPA) and 0.98 million tons per annum (MTPA) per berth respectively.

These capacities together with the forecast demand are presented in Figure 2-43.

\[\text{Figure 2-43: Future Demand Volume and Capacity - East London Dry Bulk Terminal}\]

The LTPF forecast demand is well below the required capacity over the long-term, and no capacity upgrades are planned over the assessed period.

**Containers (MPT)**

There are currently four MPT berths at the Port of East London. Two of which are effectively available for container handling. These two berths have a theoretical berth capacity of 0.2 million TEUs per annum, while the installed capacity is 0.1 million TEUs per annum respectively.

The projected container demand and capacity is presented in Figure 2-44.
TNPA forecast volumes drop between 2020 and 2021. Large volume of containerized traffic is automotive components. The reduced container volumes are resultant of MBSA vehicle model phase out and change-over in 2020 – 2021.

TNPA forecast increases from 2023. These volumes accounts for coal handled in skiptainers. The TNPA forecast and LTPF demand do not follow the same trend as the LTPF does not take the coal contract demand into account.

The current berth capacity is sufficient over the assessed period with the above in mind. However, the LTPF demand forecast and the TNPA forecast indicate that the installed capacity will be exceeded by 2023. Upgrades to the storage yard may be required at this time to alleviate the potential capacity constraint.

Figure 2-44: Future Demand Volume and Capacity- East London Containers (MPT) Terminal
**Break bulk (MPT)**

There are currently four MPT berths at the Port of East London where break bulk can be handled. The theoretical berth capacity and installed capacity for break bulk at the Port of East London is 0.57 million tons per annum (MTPA).

Figure 2-45 presents the total capacity and demand for break bulk in the Port of East London.

![Break Bulk (MPT) Capacity vs Volume](image)

*Figure 2-45: Future Demand Volume and Capacity- East London Break Bulk (MPT) Terminal*

The above figure shows a decrease in the break bulk demand over time due to more commodities becoming containerised. The current available capacity is sufficient over the assessed period.

**Automotive**

Two automotive berths are currently available at the Port of East London with a theoretical berth capacity of 0.79 million units per annum. The installed capacity in 2017 was 0.13 million units which was increased to 0.1632 million units per annum in 2018 due to the reconfiguration of the terminal, this equates to approximately 163 200 parking bays.

The projected automotive demand and capacity is illustrated in Figure 2-46.
The LTPF demand forecast shows that the theoretical capacity will be sufficient over the assessed period. However, although the reconfiguration will take place in the short-term, the installed capacity will still be exceeded. TNPA would need to re-evaluate the situation and ensure that the operator provides the required capacity at the appropriate time.

**Liquid bulk**

Figure 2-47 illustrates the installed and theoretical capacity of 3 million kilolitres per annum of the one liquid bulk berth presently available in the Port of East London.
The liquid bulk LTPF demand is projected to gradually increase over the next 30 years. However, the demand indicates that one liquid bulk berth in the Port of East London is sufficient to meet these demands.

### 2.3.1.4 Port Development Framework Plans

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of East London. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to March 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

The current layout of the Port of East London is presented in Figure 2-48.

Figure 2-48: Port of East London current layout
Short-term layout

The planned port layout for the year 2019 to 2028 is shown in Figure 2-49.

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

a) The existing automotive terminal will increase by 5ha.

b) With the new proposed port limits at the south-western side of the port, the liquid bulk land area increases from 2 ha to 25 ha due to land acquisition.

c) Due to the above new proposed land limits, the available commercial logistic area will increase to double its current available space.

d) At the waterfront TNPA other available land converts to maritime commercial. Reduction in maritime engineering land area is also foreseen due to this change.

e) The Marine and Manufacturing quay converts to maritime engineering.

f) Increase in the maritime commercial land area due to land acquisition at the back of the break bulk terminal extending the port to the north.
Medium-term layout

Figure 2-50 illustrates the planned port layout for the year 2029 to 2048.

Figure 2-50: Port of East London medium-term layout

The following changes are predicted from the short-term to the medium-term port layout:

a) Maritime commercial land area extends along the river (60 ha).

b) Extension of the southern breakwater.
**Long-term layout**

The planned port layout for the years beyond 2048 is shown in Figure 2-17.

For the long term layout at the Port of East London, the following changes are predicted:

a) Dry bulk will move from Berth T to Berth G. Berth G converts from break bulk to dry bulk.

b) Due to the above liquid bulk will move to the dry bulk terminal (Berth S & T).

c) The southern breakwater will be extended to accommodate two new deeper berths.

d) The port limits are extended for the replacement of Buffalo Bridge.
2.3.2 Port of Ngqura

2.3.2.1 Port Background

The Port of Ngqura is situated in Algoa Bay, about 20 km northeast of Port Elizabeth. Operations commenced in 2009, making it the latest port development in South Africa.

Currently the port handles mainly containers, but also occasional general cargo. Manganese and liquid bulk is planned for the short-term. The hinterland is the Nelson Mandela Bay Metro, Coega IDZ and the Eastern Cape interior. The manganese ore originates from the Northern Cape.

The port is moving towards becoming the primary central port, while the Port of Port Elizabeth is transitioning to providing complementary services to the Port of Ngqura.

The 2010 gazetted port limits are presented in Figure 2-52 and the layout of the port, indicating the precincts and berth layout, is presented in Figure 2-53.

Figure 2-52: Ngqura gazetted port limits (Government Gazette No. 32873 –January 2010)
There are three precincts at the Port of Ngqura which comprises of the Western Precinct (which contains the container terminal), Central Precinct (dry bulk and general cargo handling precinct) and the Eastern Precinct (liquid bulk and LNG cargo). The admin craft basin is currently under construction at the root of the Eastern breakwater. The Dry Bulk and Liquid Bulk terminals are currently not operational. A summary of the current port activities is presented in Table 2-7.
Table 2-7: Current port activities – Port of Ngqura

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Liquid bulk</td>
<td>In detailed design phase. Operational by 2020.</td>
</tr>
<tr>
<td></td>
<td>Containers</td>
<td>Container operations comprise deep-sea trade, transhipment and coastwise movement of empties.</td>
</tr>
<tr>
<td></td>
<td>Break bulk</td>
<td>Break bulk berths are not available. There is currently no break bulk demand other than occasional construction project cargo. Adhoc break bulk cargo is currently being handled as a spin off to CDC. Investment and special projects. Import of clinker and export of cement is currently taking place.</td>
</tr>
<tr>
<td>Other services</td>
<td>Maritime engineering</td>
<td>Berth C101 is occasionally used for ship repairs (Oil rigs)</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Maritime commercial</td>
<td>There is a salt works within port boundaries.</td>
</tr>
<tr>
<td></td>
<td>Bunker services</td>
<td>Bunker fuel is provided by tanker trucks and bunker barges. Ship to ship bunkering operations are taking place at anchorage. There are two licensed operators</td>
</tr>
</tbody>
</table>

2.3.2.2 **Strategic Port Development Plan**

Port of Ngqura is strategically nestled between the Indian and Atlantic Ocean. Nelson Mandela Bay Municipality is said to contribute an impressive 31 percent toward the provincial GDP, in which significant weight is generated by the manufacturing sector. Located in close proximity to the Industrial Development Zone (IDZ), the strategy of the Port of Ngqura is strongly aligned to the IDZ and, with careful consideration to the ecology, intends to not only contribute effectively to the Eastern Cape Province, but to address job creation and inequality within South Africa. The Port of Ngqura strives to support and complement, as opposed to compete, with fellow African and SADC region ports.

The Port of Ngqura is a highly modernised, environmentally conscious deep-water transhipment hub that, owing to extensive business development opportunity, has been coined the ‘heartbeat’ of the South African economy. Offering a transit that is safe and time-efficient, the port is specifically geared to serve African (East, West), European and Asian trade routes. Initially designed to handle containerised cargo, the Port of Ngqura is expanding on dry bulk, break bulk, and liquid bulk opportunity.

Steering toward a multi-purpose terminal, additionally developments, such as the provision for Liquid Natural Gas (LNG), foresee the Port of Ngqura as an energy hub. Leading technological innovation is evident in the implementation of an Integrated Port Monitoring System (IMPS) and Automated Mooring System (AMS) that aim to enhance productivity, safety, and efficiency within the port.

2.3.2.3 **Capacity Analysis**

This section gives insight into the Port of Ngqura’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.
Current capacities

The berth names and the current number of berths as well as the installed capacity, theoretical capacity and latent capacity are presented in Table 2-8. These are provided for each of the cargo types handled in the port.

Table 2-8: Capacity per cargo type – Port of Ngqura

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containers</td>
<td>D100, D101, D102, D103</td>
<td>4</td>
<td>856 432</td>
<td>1 500 000</td>
<td>2 000 000</td>
<td>643 568</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>MPT</td>
<td>B100, C100, C101</td>
<td>3</td>
<td>125 835</td>
<td>2 750 000</td>
<td>6 000 000</td>
<td>2 624 165</td>
<td>Tons/year</td>
</tr>
</tbody>
</table>

\(^1\) installed capacity dropped from 1.5m TEU to 1.2m TEU in 2018 due to 2 ship loader cranes being deployed to Port of Durban - This is not reflected in the table above, as 2017 actuals are represented.

Berth Capacity versus Volume

The capacity demand volume figures are presented below for each of the main commodities of the port. These main commodities are containers, manganese, MPT and liquid bulk.
Containers

The Port of Ngqura operates four container berths at present with a current installed and theoretical berth capacity of 1.5 million TEUs per annum and 2 million TEUs per annum respectively.

Figure 2-54 presents the berth capacities together with the forecasted demand for the Port of Ngqura.

![CONTAINERS CAPACITY vs VOLUME](image)

**Figure 2-54: Future Demand Volume and Capacity - Ngqura Container Terminal**

TNPA forecast predicts a higher growth-rate of containers compared to that of the LTPF demand. However, it is still lower than the current berth theoretical capacity.

It is expected that the current installed capacity will be exceeded in the medium-term. TNPA would need to re-evaluate the situation and ensure that the operator provides the required capacity at the appropriate time.
**Manganese**

The projected manganese demand and capacity is presented in Figure 2-55.

![Figure 2-55: Future Demand Volume and Capacity- Ngqura Manganese Terminal](image)

The TNPA manganese volumes are higher than the LTPF demand volumes due to the port combining the volumes handled in various channels, i.e. Port of Port Elizabeth, Port of Saldanha Bay, Port of Richards Bay, Port of Durban and the Port of Cape Town, all utilising MPT handling manganese in break bulk method.

In 2021, Berth C100 will be used to handle manganese volumes, this berth will consist of a theoretical berth capacity of 11 mtpa.

In 2023, berth C101 will be used for manganese volumes.
**MPT**

The Port of Ngqura currently has three MPT berths. The current MPT installed capacity is 2.75 million tons per annum, the theoretical capacity is 6 million tons per annum and the projected MPT demand is presented in Figure 2-56.

![MPT Capacity vs Volume](image)

**Figure 2-56: Future Demand Volume and Capacity - Ngqura MPT Terminal**

In 2020, berth B100 will be converted to liquid bulk resulting in a decrease in capacity from 6mton to 4mton.

In 2021, C100 is being equipped to handle manganese. In 2023, C101 is converted to manganese berth. Between 2023 and 2026, there is insufficient capacity to handle MPT volumes, these excess volumes will be handled at berth D103. It is also suggested that the port fast tracks the A100 operationalization and B101 dredging.

By 2027, berth B100 will be changed back to MPT and liquid bulk will be relocated to a new berth, Berth A100, depending on the market intake.

**Liquid bulk**

New liquid bulk facilities are planned for the Port of Ngqura. The projected liquid bulk demand and capacity is presented in Figure 2-57.
Figure 2-57: Future Demand Volume and Capacity- Ngqura Manganese Terminal

Berth B100 will be reconfigured to temporarily handle liquid bulk in the short-term (2019). By 2027, Berth B100 will be changed back to MPT and liquid bulk will be relocated to a new berth, Berth A100.

**SPM**

Currently there are no SPM planned for the Port of Ngqura for the short-term or medium-term scenarios. However, this is still under consideration for the long-term (beyond 2048).

### 2.3.2.4 Port Development Framework Plans

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2046) Port Development Framework Plans (PDFPs) for the Port of Ngqura. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

Figure 2-58 illustrates the current layout of the Port of Ngqura.

Figure 2-58: Port of Ngqura current layout
Short-term layout

The planned port layout for the year 2019 to 2028 is shown in Figure 2-59.

Figure 2-59: Port of Ngqura short-term layout

The following changes are foreseen for the short-term layout:

a) Break bulk berth B100 converts to liquid bulk.

b) Break bulk berths C100 and C101 convert to dry bulk.

c) A portion of the TNPA other land (37 ha) being reassigned to liquid bulk.

d) Proposed port limits to change to accommodate the manganese stockyard (additional 88 ha storage for dry bulk).

e) Boundary line changes to proposed port limits.

f) TNPA “other” land (36 ha) being reassigned to commercial logistics (Port Logistic Park).

g) Liquid bulk terminal at the finger-jetty to be converted back to break bulk.

h) Liquid bulk move to a new berth, A100.
i) A new LNG berth to be constructed next to the eastern breakwater.


k) Dig out next to the finger-jetty provides additional quay lengths for two additional berths.

**Medium-term layout**

Illustrated in Figure 2-60 is the planned port layout for the year 2024 to 2046.

![Port of Ngqura medium-term layout](image)

The following changes are predicted from the short-term to the medium-term port layout:

a) TNPA other available land (145 ha) to be converted to liquid bulk and LNG storage facilities.
Long-term layout

Figure 2-61 and Figure 2-62 shown the planned port layout for the years beyond 2048 for the Port of Ngqura.

Figure 2-61: Port of Ngqura long-term layout (excl. the new SPM)
The following additional developments are envisioned for the long-term layout:

a) Extension of the eastern breakwater

b) Port expansion towards the north. Dig-out provides capacity for additional 14 berths.

c) Port expansion to the west. Dig-out provides capacity for additional 8 berths. This expansion includes land reclamation to provide additional quay lengths. TNPA other land area increased by 190 ha.

d) New Single Point Mooring (SPM) to be constructed.

Figure 2-62: Port of Ngqura long-term layout (incl. the new SPM)
2.3.3 Port of Port Elizabeth

2.3.3.1 Port Background

The Port of Port Elizabeth is located in the central region of South Africa and currently handles containers, manganese ore, liquid bulk, automotive, palletised fruit and general cargo. The demand for cargo handling refers to automotive and agricultural products in the Nelson Mandela Bay Metro the Eastern Cape interior and hinterland. Also included, are manganese exports from the Northern Cape, including imports of LPG and feedstock, imports of breakbulk cargoes comprising of cement, steel rails, plates and coils and refined petroleum products for regional consumption.

With the Port of Ngqura in operation, the role of Port Elizabeth is transitioning from being the primary central port to providing a premier automotive hub port and also a waterfront port with cruise services as well as complementary services to Ngqura. Already within the short-term, rationalisation of port activities will see manganese exports and liquid bulk imports and coastwise cargo being moved to the Port of Ngqura. The port also accommodates facilities for the local fishing and boat-repairs industries as well as for recreational boating. Table 2 10 summarize all current port activities. Figure 2-63 presents the 2010 gazetted port limits.

Figure 2-63: Port Elizabeth gazetted port limits (Government Gazette No. 32873 –January 2010)
The layout of the port, indicating the precincts and berth layout, is illustrated in Figure 2-64.

![Figure 2-64: Precincts and berth layout of the Port of Port Elizabeth](image)

The Charl Malan quay accommodates the container (Berth 102 and 103) and automotive terminals (Berth 100/101).

The MPT quay handles both the dry bulk and break bulk commodities. However, it should be noted that a secondary function of the MPT quay is to accommodate visiting cruise liners, fishing vessels and vessels seeking to lay up.

The fishing and ship-repair area includes two fishing jetties, two slipway lead-in jetties, 475 m of quay wall, two dry docking slipway cradles and three boat ramps/ slipways. The precinct includes a leisure-craft basin that occupies a large portion of the water area.

The manganese and liquid bulk are situated in the southern part of the port, but within the short-term, rationalisation of port activities will see manganese and liquid bulk being moved to the Port of Ngqura. However, currently manganese is exported via Berth 13, whilst liquid bulk is handled at Berth 15. The manganese terminal incorporates a range of material handling equipment, conveyors and ship-loaders.
Future plans includes commercially developing vacant Transnet land adjacent to the port and the Central Business District (CBD). The future plans for the port include the expansion of the container terminal, berth deepening and stack reconfiguring. Once the manganese and liquid bulk terminals are decommissioned, the automotive terminal will be relocated to that precinct. There are also plans for the development of land for recreational use.

Table 2-9: Current port activities – Port of Port Elizabeth

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers</td>
<td></td>
<td>Container operations comprise deep sea trade, transhipment and Coastwise.</td>
</tr>
<tr>
<td>Break bulk</td>
<td></td>
<td>Break bulk demand is driven by import of steel coils/plates, steel rails, agri products and cement and export of cement.</td>
</tr>
<tr>
<td>Manganese (Dry bulk)</td>
<td></td>
<td>Manganese ore is the main dry bulk export commodity and is handled at Berth 13. This commodity will be moving to the Port of Ngqura.</td>
</tr>
<tr>
<td>Dry bulk</td>
<td></td>
<td>Dry bulk is handled at the MPT terminal and includes wheat and fertilizer.</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td></td>
<td>Products include petroleum and petroleum gas imports (mostly coastwise). This operation will be moving to the Port of Ngqura.</td>
</tr>
<tr>
<td>Automotive</td>
<td></td>
<td>The port serves as an import and export facility for the automotive industry.</td>
</tr>
<tr>
<td>Other services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td></td>
<td>Fishing is the largest non-freight activity in the port. The port serves resident trawlers and accommodates fish processing plants and aquaculture.</td>
</tr>
<tr>
<td>Maritime engineering</td>
<td></td>
<td>Ship repair facilities cater primarily for repairs to the fishing trawlers. Planned upgrades will allow maintenance and repair of larger vessels.</td>
</tr>
<tr>
<td>Harbour services</td>
<td></td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td>Maritime commercial</td>
<td></td>
<td>Visiting cruise liners are presently accommodated at the MPT terminal. Vessels call at the port primarily for one-day city/safari excursions. Algoa Bay Yacht Club, angling and spearfishing clubs are accommodated in the port.</td>
</tr>
<tr>
<td>Bunker services</td>
<td></td>
<td>Bunkering for fishing trawlers is provided at a dedicated quay and is operated by licensed bunker suppliers companies. The port provides bunkers via a flexible hose and a fixed shore connection. Ship to ship bunkers taking place at Anchorage, operated by two license operators.</td>
</tr>
</tbody>
</table>

2.3.3.2 Strategic Port Development Plan

The Port’s strategic intent is driving economic growth and long term sustainability of the port through optimal use of strategic port infrastructure. Furthermore, Transnet remains focused on its primary strategy for the PoPE of positioning it as a world class Automotive Premier Hub for South Saharan Africa, this transformation affords the PoPE the innovative opportunity of diversifying its business model (and revenue streams) by developing a leisure and recreational precinct, commonly referred to as PoPE WATERFRONT. This development is perfectly aligned to the PoPE strategy of evolving in a “People Centric Smart Port”.

Following the ports marketing strategy, the ports value proposition is a geographically well position, customer centric, multi cargo port that prides itself on flexibility and service excellence. The ports operations...
strategy prides itself with port performance management, optimal use of port assets, integrated port management systems, safety and risk management.

The port strategy will enable growth in key commodities and will position the Port of Port Elizabeth as:

- A Premier Automotive Port
- A Container terminal complementing NCT
- A multi commodity Multi-Purpose Terminal
- A marine engineering hub focusing on boat and yacht building and vessel repairs
- A “Smart People’s Port” focusing on leisure, recreational and tourism activities.

“A sustainable World Class SMART People’s Port of choice”

2.3.3.3 Capacity Analysis

This section provides the Port of Port Elizabeth’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current capacities

Table 2-10 presents the berth names, the current number of berths, the installed capacities, the theoretical capacities as well as the latent capacities for all the cargo types handled in the port.
Table 2-10: Capacity per cargo type – Port of Port Elizabeth

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containers¹</td>
<td>102,103</td>
<td>2</td>
<td>233,263</td>
<td>400,000</td>
<td>600,000</td>
<td>1,668,377</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>Manganese</td>
<td>13/14</td>
<td>1</td>
<td>4,848,769</td>
<td>6,000,000</td>
<td>6,000,000</td>
<td>1,151,231</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Break Bulk (MPT)²</td>
<td>8,9,10</td>
<td>3</td>
<td>3,153,433</td>
<td>1,600,000</td>
<td>1,600,000</td>
<td>-1,553,433</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Automotive</td>
<td>100/101</td>
<td>1</td>
<td>108,745</td>
<td>150,000</td>
<td>410,000</td>
<td>41,255</td>
<td>Units/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>15</td>
<td>1</td>
<td>855,796</td>
<td>3,000,000</td>
<td>3,000,000</td>
<td>2,144,204</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

¹ A total of 53 000 skiptainers (manganese) were handled in 2017/18.
² A total of 2.8 million tons of manganese were handled in skips in 2017/18.

**Berth Capacity versus Volume**

The capacity demand volume figures are presented below for each of the main commodities of the port. These main commodities are containers, manganese, break bulk (MPT), automotive and liquid bulk.

**Containers**

The Port of Port Elizabeth has two container berths. Due to depth constraints, the port is frequented by smaller or partially laden container ships.

The current installed and theoretical berth capacity is 0.4 million TEUs per annum and 0.6 million TEUs per annum respectively. Figure 2-65 presents these capacities together with the demand forecast for the Port of Port Elizabeth.

![CONTAINERS CAPACITY vs VOLUME](image)

**Figure 2-65: Future Demand Volume and Capacity- Port Elizabeth Container Terminal**

A total of 53 000 skiptainers (manganese) were handled in 2017/18 at the PECT.
The LTPF demand volumes and TNPA demand forecast volumes for containers follow very similar paths. The automotive terminal is to be relocated to the vacant manganese site and part of the liquid bulk site. The proposed waterfront is to be developed on part of the liquid bulk site. Although the installed capacity is currently the limiting capacity, it remains higher than the current demand.

Manganese

At present, there is one manganese berth in the Port of Port Elizabeth. The current theoretical and installed capacity is 6 million tons per annum (MTPA).

The projected manganese demand and capacity is presented in Figure 2-66.

![Manganese Capacity vs Volume](image)

Figure 2-66: Future Demand Volume and Capacity- Port Elizabeth Manganese Terminal

In the short term the LTPF demand exceeds the capacity and the excess volumes will be exported through the various channels opened by Transnet i.e. Port of Ngqura, Port of Saldanha Bay, Port of Richard Bay, Port of Cape Town, Port of Durban all utilising the MPT’s handling manganese in break-bulk method. Based on the LTPF demand forecast, the manganese terminal will be moved to the Port of Ngqura by 2023/2024. The Port of Port Elizabeth also exports manganese using skip operations at the MPT berths and skiptainer operations at the PECT.

Break Bulk (MPT)

Currently there are 4 MPT berths, however due to the size of the vessels that are calling, only 3 vessels can be accommodated, effectively reducing the berths to 3. Dry bulk and break bulk cargo are handled at the MPT berths. Figure 2-67 illustrates the capacity and forecast demand of the Break Bulk terminal.
The Break bulk / MPT terminal has an installed and theoretical berth capacity of 1.6 million tons per annum. Manganese volumes were also handled in skips through the breakbulk MPT terminal. This breakbulk operation is temporary which resulted in increased capacities.

**Automotive**

There is one automotive berth (berth 100/101) at the Port of Port Elizabeth. The current installed and theoretical berth capacity is 0.15 million units per year and 0.41 million units per annum respectively. Together with the forecast demand, the capacities are presented in Figure 2-68.

![Figure 2-67: Future Demand Volume and Capacity- Port Elizabeth Break Bulk (MPT) Terminal](image-url)
Although the installed capacity is currently lower than the theoretical berth capacity it remains higher than the current demand. It is expected that the installed capacity will be exceeded by 2034 and further research would be required to address this capacity constraint after 2034. There is a port capacity study taking place and Port of Port Elizabeth will be included in the study.

Additional theoretical berth capacity is needed by 2046 which can be created by increasing the land area at the current automotive terminal and converting the manganese and a portion of the liquid bulk storage sites to automotive. At the manganese site and a portion of the liquid bulk storage sites, two new automotive berths will need to be developed in the medium-term.

**Liquid bulk**

There is one liquid bulk berth at the Port of Port Elizabeth. The current installed and theoretical berth capacity is 3 million kilolitres per year.

The projected liquid bulk demand and capacity is presented in Figure 2-69.
Figure 2-69: Future Demand Volume and Capacity - Port Elizabeth Liquid Bulk Terminal

The terminal is planned to be decommissioned by 2020 and the demand will be taken up by the Port of Ngqura.

2.3.3.4 Port Development Framework Plans

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of Port Elizabeth. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

The Port of Port Elizabeth’s current layout is illustrated in Figure 2-70.

Figure 2-70: Port of Port Elizabeth current layout
Short-term layout

The planned port layout for the year 2019 to 2028 is shown in Figure 2-71.

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

a) Decommissioning of the liquid bulk terminal. Land area converts to TNPA “other”.

b) Decommissioning of the manganese terminal. Land area converts to TNPA “other”.

c) Due to the new proposed port limits, additional break bulk storage area becomes available (4 ha) at the western side of the port.

d) Maritime engineering extends towards the southern side of the ports. This results in an additional 4 ha.

e) Maritime commercial area extends due to new proposed port limits providing additional land area (29 ha). This area is planned to be utilized for leisure and recreational marina development.
Medium-term layout

Figure 2-72 illustrated the planned port layout for the year 2029 to 2048.

Figure 2-72: Port of Port Elizabeth medium-term layout

The following changes are predicted from the short-term to the medium-term port layout:

a) The fishing berth at the MPT quay converts into an additional MPT berth.

b) The cruise liner berth (maritime commercial) moves to the decommissioned liquid bulk Berth 15.

c) The container terminal stacking yard decreases by 22 ha which results in additional automotive stacking yard together with one additional berth.

d) Automotive expands at the decommissioned manganese terminal resulting in 2 berths with additional 25 ha storage space.

e) At the back of the new automotive terminal 3 ha land area is set as side for commercial logistics.
f) Break bulk storage area extends backwards towards the new proposed port limit. This will increase the break bulk storage area with an additional 10 ha.

**Long-term layout**

The long-term layout is shown in Figure 2-73.

![Figure 2-73: Port of Port Elizabeth long-term layout](image)

Changes which are envisioned for the long-term layout are as follow:

a) Port extension to the northern side of the port providing additional quay lengths and fishing area.

b) Extension of the breakwater towards the north.
2.4 Western Region Overview

The western ports (Figure 2-74) have an important role to play in non-freight activities such as tourism and fishing. With regards to freight, it is expected that the Port of Cape Town will continue its existing role as primary container and general cargo for the Western Cape region, with Port of Saldanha Bay playing complementary role as the region’s primary dry bulk and liquid bulk port.

Figure 2-75 to Figure 2-79 describes the national development strategy per region. This provides an understanding of the complementary nature of the ports per region.

Figure 2-74: Western Ports (Mossel Bay, Cape Town, Saldanha Bay and Port Nolloth) location
Figure 2-75: Western Ports- Container infrastructure development strategy
Figure 2.76: Western Ports- Dry Bulk infrastructure development strategy
Figure 2-77: Western Ports- Break bulk infrastructure development strategy
Figure 2-78: Western Ports- Liquid Bulk infrastructure development strategy
Figure 2-79: Western Ports- SBM/CBM/SPM infrastructure development strategy
2.4.1 Port of Mossel Bay

2.4.1.1 Port Background

The Port of Mossel Bay is a relatively small port, handling limited freight which includes general cargo in the port and liquid bulk at buoy moorings in the bay. The port accommodates a local fishing fleet, serves the offshore oil and gas industry and is also home to recreational users. The majority of the vessels calling at the port are relatively small. There is also a small waterfront, and the port plans to commercially develop vacant Transnet land adjacent to the port and CBD.

The 2010 gazetted port limits are presented in Figure 2-80.

Figure 2-80: Mossel Bay gazetted port limits (Government Gazette No. 32873 –January 2010)

The layout of the port, indicating the precincts and berth layout, is presented in Figure 2-81.
Figure 2-81: Precincts and berth layout of the Port of Mossel Bay

There are three port precincts (Figure 2-81): Quay 4, the Vincent Jetty and the Low-level Wharf. The Vincent Jetty Precinct accommodates part of the fishing industry as well as the ship-repair industry. The Low-level Wharf Precinct accommodates part of the fishing industry and the harbour breakwater. The Quay 4 Precinct accommodates the break bulk (MPT) terminal, and includes storage facilities for use by the liquid bulk industry. Port expansion is planned on vacant Transnet land and in the CBD area adjacent to the port.

The port also provides support for the CBM and the SPM operations. Approximately 1.67 million kilo litres of liquid bulk was handled through the CBM and the SPM in 2017/2018. The locations of the offshore moorings are shown in Figure 2-81.
A summary of the current port activities is presented in Table 2-11.

**Table 2-11: Current port activities – Port of Mossel Bay**

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Break bulk</td>
<td>Mainly coastwise import and export operations, mainly offshore supply and</td>
</tr>
<tr>
<td></td>
<td>Liquid bulk</td>
<td>local fish industry.</td>
</tr>
<tr>
<td>Other services</td>
<td>Fishing</td>
<td>The port serves resident trawlers and accommodates fish processing plants.</td>
</tr>
<tr>
<td></td>
<td>Maritime engineering</td>
<td>There is a 200 t slipway facility, it caters primarily for repairs to fishing</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Maritime commercial</td>
<td>Cruise vessels anchor in the bay and passengers are ferried to shore. The port</td>
</tr>
<tr>
<td></td>
<td>Bunker services</td>
<td>Bunker fuel is provided by tanker trucks.</td>
</tr>
</tbody>
</table>
2.4.1.2 Strategic Port Development Plan

The Port of Mossel Bay is expanding its infrastructure to be the premier port for Southern Cape to support oil and gas exploration and to maximize the benefit of its geographical position. The improved infrastructure will enable Oil and Gas companies to use the Port of Mossel Bay as a logistics base for all oil and gas activities during exploration and extraction. The Port’s footprint will be increased by incorporating the adjacent Transnet Property into the Port. The Port will expand the utilization of the CBM and SPM for the import and export for petroleum products as well as LPG. The Port will continue to support the local fishing industry by ensuring that available land within Port limits is maximized for this industry.

The Port of Mossel Bay is positioning itself as the gateway to the Garden Route and providing improved facilities for Cruise liners and ensuring a good Port and City integration. This will be complemented by a waterfront development on the western side of the Port, however outside the Operational area of the Port. The Port will also rehabilitate its rail infrastructure to tap into the flow of cargo through the Garden Route and into the hinterland.

2.4.1.3 Capacity Analysis

This section gives insight into the Port of Mossel Bay’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current capacities

The berth names and the current number of berths as well as the installed capacity, theoretical capacity and latent capacity are presented in Table 2-12. These are provided for each of the cargo types handled in the port.

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPT</td>
<td>A,B,C</td>
<td>3</td>
<td>11 579</td>
<td>110 000</td>
<td>110 000</td>
<td>98 421</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>SPM, CBM</td>
<td>2</td>
<td>1 677 390</td>
<td>8 000 000</td>
<td>8 000 000</td>
<td>6 322 610</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

Berth Capacity versus Volume

The capacity demand volume figures are presented below for each of the main cargo types in the Port of Mossel Bay. These main cargo types are MPT and liquid bulk.
**MPT**

Currently there is one break bulk quay at the MPT with a theoretical berth capacity and installed capacity of 0.11 million tons per annum (MTPA).

The projected liquid bulk demand and capacity is presented in Figure 2-83.

Currently there is one break bulk quay at the MPT with a theoretical berth capacity and installed capacity of 0.11 million tons per annum (MTPA).

The projected liquid bulk demand and capacity is presented in Figure 2-83.

![MPT Capacity vs Volume](image)

**Figure 2-83: Future Demand Volume and Capacity - Mossel Bay MPT Terminal**

As illustrated the MPT terminal has sufficient capacity over the assessed period.

**Liquid bulk**

There are two offshore moorings in Mossel Bay, one CBM and one SPM. The current theoretical capacity and installed capacity for these two berths is 8 million kilolitres per annum.
Figure 2-84 presents the capacity and demand forecast for the liquid bulk terminal in the Port of Mossel Bay.

Figure 2-84: Future Demand Volume and Capacity- Mossel Bay Liquid Bulk Terminal

The LTPF demand forecasts indicate that the existing infrastructure has sufficient capacity over the assessed period.

2.4.1.4 Port Development Framework Plans

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of Mossel Bay. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to March 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

The current layout for the Port of Mossel Bay is presented in Figure 2-85.

Figure 2-85: Port of Mossel Bay current layout
Short-term layout

The planned short-term port layout is illustrated in Figure 2-86.

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

a) Break bulk storage area increases by 1 ha due to the new proposed port limits.

b) Due to the new proposed port limits, commercial logistics increases to 2 ha.

c) Maritime engineering activities expand.
Medium-term layout

The medium-term layout of the Port of Mossel Bay is presented in Figure 2-87.

Figure 2-87: Port of Mossel Bay medium-term layout

a) Port activities remain the same from the short into the medium term.
Long-term layout

The planned port layout beyond 2048 is shown in Figure 2-88.

Figure 2-88: Port of Mossel Bay long-term layout

The following changes are envisioned for the long-term layout:

a) Infill between Quay 4 and Quay 5 to provide additional quay length to accommodate an additional vessel.

b) Extension of the breakwater towards the north, including infill.

c) The existing maritime commercial at quay 5 relocates to a new proposed location on the northern side of the port.

d) An additional breakwater next to the new proposed marina.

e) Land reclamation next to Quay 4 to provide additional storage area and quay length.
2.4.2 Port of Cape Town

2.4.2.1 Port Background

The Port of Cape Town is an established port in the western region of South Africa. The port provides container, bulk and general cargo handling services to the Western Cape and its mostly agricultural hinterland. The port also provides ship repair services in the Western Cape maritime region and hosts local and foreign fishing fleets, passenger liners and other recreational users. A summary of the present activities in the port is presented in Table 2-13.

The Victoria and Alfred (V&A) Waterfront development falls outside port limits, but complements the commercial port by providing berthing for smaller recreational and fishing vessels. Figure 2-89 illustrates the 2010 gazetted port limits.

The Port of Cape Town will probably continue in its existing role as primary container and general cargo port for the Western Cape region, with the support of the Port of Saldanha Bay as the region’s primary dry bulk and liquid bulk port.

The layout of the port, including the berth numbers, is presented in Figure 2-90.

![Figure 2-89: Cape Town gazetted port limits (Government Gazette No. 32873 –January 2010)](image-url)
The port control building, maritime engineering activities (oil and gas support vessel refurbishment) and the FPT are located along South Arm road.

Located to the south and east of the Duncan Dock is the MPT, fishing berths, maritime engineering facilities and a small craft basin.

Towards the north and west of the Duncan Dock is the liquid bulk terminal.

The Ben Schoeman Dock is bounded by the Container Terminal to the North, the Elliot basin to the South and multiple user berths to the East.

Adjacent to the port is the V&A Waterfront which is a private mixed-use area. It includes retail, offices, residential and recreational facilities. Jetty No 1 in the Victoria Basin, Robinson Dry Dock and the Syncrolift next to the Alfred Basin are leased by TNPA.

Expansion is planned for the Container Terminal; this will accommodate larger vessels and allow for an increase in annual throughput. Other future expansion includes the development of the back-of-port commercial logistics area at the Culemborg site. Culemborg land is owned by Transnet Property.
### Table 2-13: Current port activities – Port of Cape Town

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freight traffic</strong></td>
<td></td>
</tr>
<tr>
<td>Containers</td>
<td>Container operations comprise deepsea trade, transhipment and coastwise operations. Approximately one third of trade is empties.</td>
</tr>
<tr>
<td>Break bulk</td>
<td>Transhipment of fish and export of fruit. Imports include steel, timber, sugar, pipes and agricultural general cargo.</td>
</tr>
<tr>
<td>Dry bulk</td>
<td>Import of wheat, maize and fertiliser.</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>Import of petroleum and petroleum products comprise 80% of trade. Other trade includes chemicals, vegetable oils, molasses and coastwise export of petrol.</td>
</tr>
<tr>
<td><strong>Other services</strong></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td>Commercial fishing is accommodated along South Arm road in the V&amp;A Waterfront. Cold storage facilities are located on the quay.</td>
</tr>
<tr>
<td>Maritime engineering</td>
<td>Ship repair facilities include dedicated repair quays, dry docks and a Syncrolift. Ship repairs focus on fishing vessels and service vessels for the oil and diamond mining industries.</td>
</tr>
<tr>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td>Maritime commercial</td>
<td>Visiting cruise liners are accommodated at the Duncan Dock, while cruise liner vessels less than 200 m in length are accommodated in the Victoria basin. Recreational boating is accommodated in the Royal Cape Yacht Club basin and the Elliot basin.</td>
</tr>
<tr>
<td>Bunker services</td>
<td>Bunkers are supplied by Joint Bunkering Services, a joint venture between various petroleum companies.</td>
</tr>
</tbody>
</table>

#### 2.4.2.2 Strategic Development Plan

The Port of Cape Town is the second biggest seaport in South Africa. The Port, being at the Southern tip of Africa, has led to it being strategically positioned to service vessels from the East or West. The port is world-renowned for the export of the deciduous fruit, perishable and frozen products. While fruit and fresh produce is Cape Town’s major export commodity, via reefer containers, fish products are also handled through its five cold stores located in the Port. Additional to this is the Container Terminal which is currently handling 1 000 000 capacity, it has therefore reached its capacity threshold hence the expansion project which is in phase 2 aimed at increasing capacity to 1,5million TEUs per annum. The berths (Ben Schoeman Dock) have been dredged and deepened to 15.5 meters allowing larger vessels to enter the Port.

General cargo is served by nine berths in the Duncan Dock Area which handles a wide range of cargo, which includes fresh fruit, timber, frozen fish, as part of the 60 different commodities handled. It possesses substantial ship repair facilities which adjoin the Robinson and Sturrock Graving Docks as well as the synchrolift facility.

Worldwide, there is a notable shift for ports to compete more on services they offer than traditional operations, therefore, for the Port of Cape Town is planning to improve its competitive edge but ensuring firstly that there is capacity ahead of demand, but growing other offerings such as maritime commercial activities. The Port of Cape Town seeks to continue enhancing its role in facilitating trade, in influencing growth through the provision of port infrastructure capacity and aligning its core activities to changing market dynamics.
2.4.2.3 **Capacity Analysis**

This section gives insight into the Port of Cape Town’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

**Current capacities**

The berth names, the current number of berths, the installed capacities, the theoretical capacities as well as the latent capacities for all the cargo types handled in the port are presented in Table 2-14.

### Table 2-14: Capacity per cargo type – Port of Cape Town

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containers</td>
<td>600/601, 602, 603/604</td>
<td>3</td>
<td>892 851</td>
<td>1 100 000</td>
<td>1 500 000</td>
<td>207 149</td>
<td>TEUs/year</td>
</tr>
<tr>
<td>Dry bulk¹</td>
<td>B/C, D, F, G, H, J</td>
<td>6</td>
<td>1 103 769</td>
<td>2 100 000</td>
<td>2 100 000</td>
<td>996 231</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Break bulk</td>
<td>B/C, D, F, G, H, J</td>
<td>6</td>
<td>383 443</td>
<td>1 500 000</td>
<td>1 500 000</td>
<td>1 116 557</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>Eastern Mole No.2, Tanker Basin No.1, Tanker Basin No.2</td>
<td>3</td>
<td>1 973 327</td>
<td>3 400 000</td>
<td>6 400 000</td>
<td>1 426 673</td>
<td>Kilolitres/year</td>
</tr>
</tbody>
</table>

¹Dry bulk is handled at the Break Bulk (MPT) berths.

**Berth Capacity versus Volume**

The capacity demand volume figures are presented below for each of the main cargo types of the port. The main cargo types are containers, dry bulk (MPT), break bulk (MPT) and liquid bulk.

**Containers**

There are currently three operational container berths in the Port of Cape Town. The current installed and theoretical berth capacity is approximately 1.1 million TEUs per annum and 1.5 million TEUs per annum respectively. However, to achieve a berth capacity of 1.5 MTEU, certain handling rates and crane rates must be achieved by the terminal operator and additional stacking space would also be required.

The projected container demand and capacity is presented in Figure 2-91.
The trend lines presented in Figure 2-91, representing the LTPF demand forecast and TNPA values are similar. Based on this forecast demand, two additional berth needs to be available by 2036.

**Dry bulk (MPT)**

Dry bulk is currently handled at the MPT berths with a current installed and theoretical berth capacity of 2.1 million tons per annum (MTPA).

Illustrated in Figure 2-92 is the dry bulk capacity and forecasted demand for the Port of Cape Town.
The projected dry bulk demand and capacity presented in Figure 2-92 indicates that existing capacity will be sufficient for the period under consideration. There is a decrease in TNPA forecasted volumes from 2017 to 2018, as the dry bulk volumes are stabilising due to the end of the drought programme.
**Break Bulk (MPT)**

There are six MPT berths which handle break bulk at the Port of Cape Town with the current installed and theoretical berth capacity is 1.5 million tons per annum (MTPA).

Figure 2-93 presents the projected break bulk demand and capacity.

![Break Bulk (MPT) Capacity vs Volume](image)

**Figure 2-93: Future Demand Volume and Capacity- Cape Town Break Bulk Terminal**

The figure above illustrates surplus capacity for the future volume demands. TNPA forecasted volumes are low due to containerisation of cargo.

**Liquid bulk**

Currently there are three liquid bulk berths available at the Port of Cape Town.

The projected liquid bulk demand and capacity is presented in Figure 2-94.
With a slow demand growth and a current installed and theoretical berth capacity of 3.4 million kilolitres and 6.4 million kilolitres respectively, Figure 2-94 shows that the existing capacity is sufficient.

The TNPA forecast and LTPF show a similar trend.

However, it is expected that liquid bulk Berth 1 will become operational soon to alleviate potential capacity constraints.

2.4.2.4 **Port Development Framework Plans**

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) of the Port of Cape Town. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.
Current layout

The current layout of the Port of Cape Town is illustrated in Figure 2-95.
Short-term layout

The short-term layout is shown in Figure 2-96.

Figure 2-96: Port of Cape Town short-term layout

From the current to short-term, only one additional liquid bulk berth is predicted.
Medium-term layout

The planned port layout for the year 2029 to 2048 is shown Figure 2-97.

![Port of Cape Town medium-term layout](image)

Figure 2-97: Port of Cape Town medium-term layout

The following changes are predicted from the short-term to the medium-term port layout:

a) Additional breakwater at the port entrance.

b) Maritime engineering reduces to 22 ha due to land area being converted to TNPA other at Berth A.

c) Infill at the Eliot Basin results in one additional container berth.

d) Expansion (wider quay) of the container terminal provides and additional container berth. Together with the Eliot Basin infill, the container stacking area will increase to 141 ha.
**Long-term layout**

Figure 2-98 illustrates the planned port layout beyond 2048.

![CAPE TOWN - LONG TERM LAYOUT - BEYOND 2048](image)

Figure 2-98: Port of Cape Town long-term layout

The following changes are envisioned for the long-term layout at the Port of Cape Town:

a) At the Multi-Purpose Terminal, maritime engineering berth converts to break bulk (MPT). This results in additional 4 ha MPT storage area.

b) Infill at the Royal Cape Yacht Club (Small Craft Basin) to provide additional area for maritime engineering.
2.4.3 Port of Saldanha Bay

2.4.3.1 Port Background

The Port of Saldanha Bay is situated on the West Coast of South Africa and forms part of the Western region together with the Ports of Cape Town and Mossel Bay. It is a natural deep water Port and can accommodate Very Large Crude Carriers (VLCCs) of up to 300 000 dwt.

The port handles two major commodities, namely iron ore (export) and crude oil (import). For this reason the Port of Saldanha Bay is identified as the primary dry bulk and liquid bulk for the Northern and Western Cape. The port handles approximately 70 million tons of cargo per annum of which approximately 86% is the export of iron ore.

The 2010 gazetted port limits are presented in Figure 2-99 and the layout of the port, indicating the precincts and berth layouts, is presented in Figure 2-100.

Figure 2-99: Saldanha Bay gazetted port limits (Government Gazette No. 32873 – January 2010)
Figure 2-100: Precincts and berth layout of the Port of Saldanha Bay

The Port of Saldanha Bay consists of a 3km long, man-made causeway which splits the Port into Big Bay on the eastern side and Small Bay on the west. The iron ore stockyard and the reclamation dam are located on the Big Bay coastline, whilst the Mossgas Quay is located on the Small Bay coastline.

The main jetty structure located at the end of the causeway, consists of the dry bulk and liquid bulk terminals. The Break Bulk Terminal and the Offshore Supply Base are located directly north of the dry bulk terminal, on the causeway which connects with the shore.

The Small Craft Harbour is located further westwards, and is connected to Marcus Island by means of an artificial breakwater. The Small Craft Harbour houses the port control tower and provides safe mooring facilities for the Port’s marine craft.

A Special Economic Zone (SEZ) has been declared in Saldanha Bay and construction is well underway for the establishment of infrastructure to stimulate economic development in and around the Port.

The Offshore supply base is one of the Operation Phakisa projects that has been completed successfully and is being prepared for commercial operations to commence.

The first dedicated LPG facility in the country is located in the Port of Saldanha Bay. The infrastructure includes a multi-buoy mooring (MBM), sub-sea as well as a land-based sub-surface pipeline, connected to a storage facility outside port limits. The construction of the facility was completed successfully and operations commenced in 2017.
Both the SEZ development and the Operation Phakisa projects are focused to jointly develop facilities for the maritime manufacturing and engineering industries.

A summary of the current port activities is presented in Table 2-15.

### Table 2-15: Current port activities – Port of Saldanha Bay

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Break bulk</td>
<td>Export of manganese, granite, mineral sands, metal and non-ferrous metal products. Imports include iron and steel products, ad hoc project cargo.</td>
</tr>
<tr>
<td></td>
<td>Dry bulk</td>
<td>The Dry Bulk Terminal is dedicated to the export of iron ore, originating exclusively from the Northern Cape.</td>
</tr>
<tr>
<td></td>
<td>Liquid bulk</td>
<td>Crude oil imports are destined for the Milnerton refinery as well as storage of strategic reserves for the spot market. LPG imports.</td>
</tr>
<tr>
<td>Other services</td>
<td>Fishing</td>
<td>Aquaculture (oysters and mussels) are accommodated inside the port. Fishing operations do not fall within port limits, but are based at the Sea Harvest quay and Government Jetty in Small Bay.</td>
</tr>
<tr>
<td></td>
<td>Maritime engineering</td>
<td>The port accommodates semi-submersible and jack up rigs on an ad hoc basis.</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>Related to port operations and cargo handling.</td>
</tr>
<tr>
<td></td>
<td>Maritime commercial</td>
<td>Maritime commercial activities are not well-developed within the Port.</td>
</tr>
</tbody>
</table>

#### 2.4.3.2 Strategic Port Development Plan

Africa’s Top Rated Dry Bulk Port and Southern Africa’s Oil & Gas Service Hub operating with reliable logistics connectivity and excellent efficiency. The Port is the #1 Iron Ore Export Harbour and Deepest Natural Port in Africa with prime Oil and Gas Service Infrastructure enabled by the creation of a dedicated Special Economic Zone.

The port, situated on the West Coast of South Africa handles two major commodities, namely iron ore (export) and crude oil (import). For this reason the Port of Saldanha Bay is identified as the primary dry bulk and liquid bulk port for the Northern and Western Cape. The port handles close to 70 million tons of cargo per annum of which approximately 86 % is the export of iron ore.

Strategic initiatives that supports the port’s positioning includes the phase 2 iron ore expansion berth construction project. Oil and gas strategic initiatives includes the reconfiguration of the oil jetty, offshore supply base, mossgas jetty marine manufacturing facility and the provision of one new berth for ship repair facilities. The oil and gas strategic initiatives are specifically aligned to the establishment of the Saldanha Bay IDZ. The Strategic Intent for the future is to leverage the port’s Competitive advantages of Customer Efficiency, Location and Depth to attain success, by focusing on the following opportunities: (1) Grow & diversify existing commodities, to become an (2) Energy Supply services port and finally to position the port as a (3) Gateway to the Southern African (SADC) and Sub-Saharan Africa.
2.4.3.3 Capacity Analysis

This section gives insight into the Port of Saldanha Bay’s current and future capacity requirements for the period 2019 to 2048. Berth upgrades are planned to ensure that sufficient berth capacity exists at all times.

Current capacities

Table 2-16 tabulated the berth names and the current number of berths as well as the installed capacity, theoretical capacity and latent capacity. These are provided for each of the cargo types handled in port.

Table 2-16: Capacity per cargo type – Port of Saldanha Bay

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Berth</th>
<th>Number of Berths</th>
<th>Actual Volume 2017/2018</th>
<th>Installed Berth Capacity</th>
<th>Theoretical Berth Capacity</th>
<th>Latent Berth Capacity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore</td>
<td>101, 102</td>
<td>2</td>
<td>58 162 639</td>
<td>60 000 000</td>
<td>60 000 000</td>
<td>1 837 361</td>
<td>Tons/year</td>
</tr>
<tr>
<td>MPT</td>
<td>201, 202, 203, 204</td>
<td>4</td>
<td>7 534 629</td>
<td>8 000 000</td>
<td>8 000 000</td>
<td>465 371</td>
<td>Tons/year</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>103</td>
<td>1</td>
<td>8 433 090</td>
<td>25 000 000</td>
<td>25 000 000</td>
<td>16 566 910</td>
<td>Kilolitres/year</td>
</tr>
<tr>
<td>LPG</td>
<td>MBM</td>
<td>1</td>
<td>26 951</td>
<td>720 000</td>
<td>720 000</td>
<td>693 049</td>
<td>Tons/year</td>
</tr>
</tbody>
</table>

2.4.3.4 Berth Capacity versus Volume

The capacity demand volume figures are presented below for each of the main cargo types of the port. These main cargo types are iron ore, break bulk (MPT), and liquid bulk.

Iron ore

At present, there are two iron ore berths operational in the Port. The current installed and theoretical capacity is 60 million tons per annum (mtpa), respectively.

The projected iron ore demand and capacity is presented in Figure 2-101.
The iron ore refurbishment project that is currently underway, contributes to the variance in the demand for iron ore as reflected in the TNPA forecast. The project includes various important equipment maintenance and replacement of critical components to meet volume commitments.

According to the demand forecast, the volume demand will remain constant and in line with the installed capacity until additional capacity is created in the form of an additional tippler, stacker-reclaimers and a third iron ore berth.

However, the LTPF demand forecast indicates that the iron ore terminal is currently operating at capacity, and will continue to do so over the short to medium-term. The capacity will increase in the medium-term (2029) by constructing an additional berth and upgrading the corresponding equipment.

**Break Bulk (MPT)**

There are currently four Multi-Purpose berths in the Port of Saldanha Bay at which break bulk and dry bulk commodities, including small volumes of iron ore, are handled. The current installed and theoretical berth capacity of these four berths is 8 million tons per annum (mtpa).

Figure 2-102 illustrates the capacity and forecast demand of Break Bulk (MPT) at the Port of Saldanha Bay.
Figure 2-102: Demand Volume and Capacity- Saldanha Bay Break Bulk (MPT) Terminal

Break bulk volumes declines since 2017 due to a reduction in the demand as illustrated in Figure 2-102.

The Port of Saldanha Bay commenced with the export of manganese through the Multi-Purpose Terminal in 2013 and will continue to do so until the manganese terminal in the Port of Ngqura is commissioned.

One additional break bulk berth will be constructed by 2044 which will increase the theoretical capacity with at least 2 million tonnes per annum.

Smaller capacity increases in the short term includes the possible deepening of berth 201 as well as the implementation of more efficient loading methods in the form of mobile ship loaders, in an effort to increase capacity incrementally.

**Liquid bulk**

The Port of Saldanha Bay currently has one operational liquid bulk berth with a current installed and theoretical berth capacity of 25 million kilolitres per annum. The berth is equipped to handle crude oil only. Figure 2-103 presents the capacity and the demand forecast.
The figure above indicates that the capacity is well beyond the demand volumes. The volumes handled is subject to global market forces in the crude oil industry which causes cyclical fluctuations in the demand. Planned developments include the reconfiguration of the oil jetty to accommodate smaller vessels, in an endeavour to optimise utilisation of the infrastructure.

The other liquid bulk berth consists of a multi-buoy mooring (MBM) which was constructed for the handling of LPG. The LPG storage terminal is located outside the port boundary and is privately operated. Figure 2-104 presents the capacity and demand forecast for the LPG.
2.4.3.5 **Port Development Framework Plans**

This section provides the updated current (2019), short- (2019-2028), medium- (2029-2048) and long-term (beyond 2048) Port Development Framework Plans (PDFPs) for the Port of Saldanha Bay. Together with these plans, the foreseen changes between the different layouts are listed.

The information includes all updates to October 2018. Tabulated on these layouts are the land use area of the port’s main activities and cargo types. Each activity or cargo type is colour-coded and indicated in the legend. A description of each colour in the legend is presented in the Glossary.

![Image of LPG Capacity vs Volume graph](image)

*Figure 2-104 Demand Volume and Capacity- Saldanha Bay LPG*
Current layout

The Port of Saldanha Bay’s current layout is illustrated in Figure 2-105.

Figure 2-105: Port of Saldanha Bay current layout
Short-term layout

The planned port layout for the year 2019 to 2028 is shown in Figure 2-106.

- Figure 2-106: Port of Saldanha Bay short-term layout

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

a) New liquid Bulk storage areas. These areas are located within the port limits and within the new proposed ports limits. The total area of the proposed liquid bulk is 197 ha.

b) LNG gas to power FSRU structure connected to the new LNG facilities.

c) Operationalizing the eastern side of the oil jetty (liquid bulk terminal).

d) Expansion of the commercial logistics area (Port Logistics Park) to 17 ha.

e) Maritime manufacturing and engineering area increase towards the east by 55ha as part of the SEZ / IDZ development.

f) The General Maintenance Quay converts to an Offshore Supply Base and is included in the Customs Cleared Area (CCA).
Medium-term layout

The medium-term layout is illustrated in Figure 2-107.

![Figure 2-107: Port of Saldanha Bay medium-term layout](image)

The following changes are predicted from the short-term to the medium-term port layout:

a) Land reclamation next to the current iron ore stockyard for the construction of new LNG facilities (long term) / increase of iron ore stockpile area.

b) LNG gas to power FSRU structure connected to the new LNG facilities.

c) The old Mossgas Quay converts to maritime engineering berth together with additional maritime engineering berths as provision for a dedicated facilities for rig and ship repair.

d) One additional maritime engineering berth for ship repairs adjacent (southern side) to the break bulk (MPT) berths.

e) One additional dry bulk berth adjacent (south) of the new ship repair berth.

f) Break Bulk (MPT) extension towards the north providing one additional Break Bulk (MPT) berth at the Break Bulk terminal.
Long-term layout

The long-term layout is shown in Figure 2-108.

Changes which are envisioned for the long-term layout are as follow:

a) New proposed land-based LNG storage area inside the port limits.

b) Decommissioning of the MBM and subsequent replacement with fixed LNG berths (eastern side of the port).

c) Expansion of the Offshore Supply Base.
2.4.4 Port of Port Nolloth

2.4.4.1 Port Background

The Port of Port Nolloth is located in the North-Western region of South Africa. The commercial activities at the port are limited to the transfer of parts and supplies to vessels carrying out offshore mining. The present activities in the port is presented in Table 2-17. The harbour is considered to be of strategic importance, since it is also the only harbour in the Northern Cape. This redevelopment is limited to the reconstruction of the jetty due to its current poor condition. The intention is to continue the use of the infrastructure for the same purpose as at present. Ongoing structural repairs to the infrastructure are required to extend the life of the facilities. This port is envisaged to be used for maritime commercial and maritime engineering activities, aqua-culture activities will also be investigated in this port.

The port’s current infrastructure capacity is sufficient to meet the current cargo demand.

The 2010 gazetted port limits are presented in Figure 2-109.

Figure 2-109: Port Nolloth gazetted port limits (Government Gazette No. 32873 – January 2010)
The layout of the Port of Port Nolloth is presented in Figure 2-110.

![Figure 2-110: Layout of the Port of Port Nolloth](image)

### Table 2-17: Current port activities – Port of Port Nolloth

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of operation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight traffic</td>
<td>Transport/Supply</td>
<td>Supply vessels are stationed at the port. The main function is to transport supply provisions (e.g. food, steel and fuel) to offshore mining fleet and prospecting vessels. The main TNPA jetty is used for these operations.</td>
</tr>
<tr>
<td>Other services</td>
<td>Fishing</td>
<td>Fishing activities are accommodated at the municipal and TNPA jetties in the Ovenstone Basin.</td>
</tr>
<tr>
<td></td>
<td>Ship repair</td>
<td>Currently no ship repair facilities are available, apart from a disused slipway south of the main TNPA jetty.</td>
</tr>
<tr>
<td></td>
<td>Harbour services</td>
<td>No harbour services are available, except for navigation aids.</td>
</tr>
</tbody>
</table>
2.4.4.2 Port Development Framework Plans

The current layout is provided and presented in Figure 2-111. No expansion is envisaged for the port in the foreseeable future.

Figure 2-111: Port of Port Nolloth current layout
2.4.4.3 **Proposed Port of Boegoebaai**

TNPA is investigating the opportunity for the development of a commercial port at Boegoebaai, approximately 60 km north of Port Nolloth and approximately 20 km south of Alexander Bay (Figure 2-112).

![Proposed Port of Boegoebaai](image)

**Figure 2-112: Proposed commercial port location at Boegoebaai (Source: Google Earth)**

Previously a concept design for the proposed Port of Boegoebaai was completed. This proposed long-term layout of the Port of Boegoebaai is presented in Figure 2-113.
Figure 2-113: Long-term layout of the proposed Port of Boegoebai (PRDW, 2015)
NATIONAL PORTS PLAN

CHAPTER 3

REFERENCES
3 REFERENCES


TNPA. (2017, March 29). Approved CAPEX 2016_17_PRDW. Durban: TNPA.

** Images used on cover page (Durban)
NATIONAL PORTS PLAN

ANNEXURE A

2019 PDFP
EAST LONDON - CURRENT LAYOUT

NATIONAL PORTS PLAN 2019

Annexure A, Scenario Analysis, pp A-13
Annexure A, Scenario Analysis, pp A-19
Annexure A, Scenario Analysis, pp A-34
NATIONAL PORTS PLAN

ANNEXURE B

2017 PDFP
ANNEXURE B – 2017 PDFP
DURBAN - CURRENT LAYOUT

NATIONAL PORTS PLAN 2017

Annexure B, Scenario Analysis, pp B-5
DURBAN - LONG TERM LAYOUT - BEYOND 2046

NATIONAL PORTS PLAN 2017

NOTE: AREAS IN HECTARES

- PORT LIMITS
- PROPOSED PORT LIMITS
- ROADS
- RAILWAY LINES

NATIONAL PORTS PLAN 2019

Annexure B, Scenario Analysis, pp B-8
DURBAN DIG OUT PORT - SHORT TERM LAYOUT - 2023

NOTE: AREAS IN HECTARES

TNPA BOUNDARY
EAST LONDON - MEDIUM TERM LAYOUT - 2046

- BREAK BULK / MPT
- DRY BULK
- LIQUID BULK
- AUTOMOTIVE
- MARITIME ENGINEERING
- COM. LOGISTICS
- MARITIME COM.
- OPEN SPACE
- TNPA OTHER
- TOTAL HECTARES

NOTE: AREAS IN HECTARES

PORT LIMITS
PROPOSED PORT LIMITS
ROADS
RAILWAY LINES

NATIONAL PORTS PLAN 2017

Annexure B, Scenario Analysis, pp B-15
NGQURA - MEDIUM TERM LAYOUT - 2046

PORT LIMITS

PROPOSED PORT LIMITS

ROADS

RAILWAY LINES

CONVEYORS

NOTE: AREAS IN HECTARES

85 CONTAINERS
17 BREAK BULK / MPT
91 DRY BULK
182 LIQUID BULK
50 COM. LOGISTICS
275 OPEN SPACE
113 MARITIME COMMERCIAL
540 TNPA OTHER
664 SEZ (INSIDE PORT LIMITS)
2017 TOTAL
2017 SEZ

0 1000

metres

NATIONAL PORTS PLAN 2017

Annexure B, Scenario Analysis, pp B-19
MOSEL BAY - LONG TERM LAYOUT - BEYOND 2046

NATIONAL PORTS PLAN 2017

Annexure B, Scenario Analysis, pp B-29
NATIONAL PORTS PLAN 2019

CAPE TOWN - MEDIUM TERM LAYOUT - 2046

NOTES: AREAS IN HECTARES

CONTAINERS 141
BREAK BULK / MPT 27
DRY BULK 0
LIQUID BULK 13
FISHING 0.7
MARITIME ENGINEERING 22
COMM. LOGISTICS 184
MARITIME COM. 5
OPEN SPACE 8
TNPA OTHER 70
TOTAL 471

NATIONAL PORTS PLAN 2017

Annexure B, Scenario Analysis, pp B-32