PRESENTATION ON THE PORT OF RICHARDS BAY
Mr Brian Molefe
Group Chief Executive
07 December 2011
Overview of the Port of Richards Bay developments up to 2011

- **BREAK BULK** – 7.1 mtpa
- **DRY BULK** – 13 mtpa
- **BREAK BULK** – 7.1 mtpa
- **COAL** – 67.5 mtpa
- **LIQUIDS** – 1.2 mtpa
VOLUME OF CARGO PER SA PORT

- Richards Bay: 55%
- Durban: 20%
- Saldanha Bay: 14%
- Cape Town: 5%
- Port Elizabeth: 4%
- Mossel Bay: 1%
- East London: 1%
**TERMINAL OVERVIEW**

- Terminal handles mainly export commodities;
- Infrastructure includes a 55 km conveyor belt system;
- Provides both under-cover (shed) and open stack storage;
- Richards Bay is a 93% bulk operation of which 67% is conveyor belted and 26% shipped via skip – only 7% is pure Breakbulk;
- Financially & commercially stable with growth potential but equipment unreliability may be restrictive;
- There are some clear pockets of excellence, but ops performance is erratic due to equipment breakdowns;
- This has a negative impact on efficiency and terminal profit margins;
- Some environmental issues exists e.g. soil contamination, dust emissions, etc.
- Increasing number of safety incidents is a major concern and initiatives are in place e.g. safety league, PPE, Green Area meetings, Training etc.
CAPACITY VERSUS DEMAND (million ton per annum)

RICHARDS BAY - CURRENT LAYOUT

Break-bulk Terminal 8.0 mtpa
Dry Bulk Terminal
Imports: 9.6 mtpa
Mineral Exports: 11.5 - 14.0 mtpa
Woodchip Exports: 2.8 mtpa

PORT DEVELOPMENT FRAMEWORK PLAN 2008

Break-bulk Terminal

Bulk Imports


Other Import
Coking Coal
Alumina & Petcoke
Sulphur
Capacity

Bulk Exports


Other Export
Chrome
Magnetite
Coal / Anthracite
Containers
Other
Capacity

ECICS Expansion

Increased Chrome Stack

Woodchip excluded as 1 berth is sufficient for 7-yr demand
## CURRENT PERFORMANCE

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>2011/2012 YTD</th>
<th>2010/11</th>
<th>2009/10</th>
<th>2008/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons per hour (Ship loading)</td>
<td>699</td>
<td>664</td>
<td>592</td>
<td>651</td>
</tr>
<tr>
<td>Tons per hour (Ship unloading)</td>
<td>445</td>
<td>427</td>
<td>401</td>
<td>427</td>
</tr>
</tbody>
</table>
Rationalisation due to complexity of the business and similarities in operation, market demand and equipment type

SAFETY / ENVIRONMENT COMMUNICATION (CULTURE CHANGE)

PROCUREMENT
Richards Bay Coal Terminal (“RBCT”) @ Glance

- 1976: 2 Berths constructed for 26 mtpa coal over 10 years
- 2011: Increased capacity from 76 mtpa to 91 mtpa and 8 million ton stockpile

Terminal Size
- 6 berths of 1934 metres quay wall, 17.5 m draft
RBCT EXPORT COAL (74MT SAFELY) : VOLUME PERFORMANCE

RAMP UP VOLUMES 2011/12

Average weekly performance

<table>
<thead>
<tr>
<th>Month</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1.38</td>
<td>1.36</td>
<td>1.43</td>
<td>1.33</td>
<td>1.31</td>
<td>1.40</td>
<td>1.49</td>
<td>1.50</td>
<td>1.57</td>
<td>1.57</td>
<td>1.59</td>
<td>1.59</td>
</tr>
</tbody>
</table>

RAIL VOLUME PERFORMANCE (MT)

![Graph showing rail volume performance from April to March 2012.]

Comments:

- We are currently achieving on average 28 trains per day.
- Weekly tempo is 18% better than before the shut in June.
- 6.430mT was railed against a budget of 6.723, 4% behind October target.
- YTD railings shortfall improved by 1% from September to 6% behind target YTD.
RBCT EXPORT COAL (74MT SAFELY):
FOUR CRITICAL OPERATIONAL FOCUS AREAS

Interdependent initiatives (levers) across these focus areas must all succeed to achieve planned ramp-up

**Operational simplification**
- Rolling stock utilisation
- Improved consistency

**Train efficiency**
- Increase throughput with same resources

**Resource co-ordination and availability**
- Improved operating consistency

**Customer Management**
- Improved consistency

- **Wagon standardisation**

- **Train top ups**

- **26 t/a**

- **Crew and loco availability**

- **Count down Yard processes**

- **Schedule and siding Co-ordination**

- **Available and reliable infrastructure**

- **Ability to load 100 J at 26t/a in 4 hrs**

**SAFETY**

- Introduction of various technologies that serves as early detection systems and rolling stock condition monitoring.
  - Hot Box detectors
  - In-Motion weigh bridges
  - Bearing monitoring
  - Speed profiling
  - Wheel measurement systems
  - Rail stress management
BCT EXPORT COAL (74MT SAFELY):
Progress on levers + Light Capital

- Ermelo improved from 1245 to 879 minutes. Total reduction in cycle time from 65 to 60 hrs. Richards bay achieved its target, but increase from 430 to 530 min, mainly due to the extended work by TCP on the departure area.
- The average wagons per set improved from 80 to 98 wagons.

- A new scheduling tool was developed to for planning trains to the 42 loading sites.

- The impact of locomotives on train delays improved from 25000 to 13000 minutes per month.
- Tolerance level is 7500 per month.

- Crew availability improved from 16 slots on the main line and 34 slots to the mines to 19 and 40 respectively.

- The impact of infrastructure on train delays improved to 7900 min in August, but deteriorated to 24000 min in October. Tolerance level is 11500 min per month.

- This lever focus on mines to load 100 ECP wagons with any locomotive type in 4 hrs at 26 t/axle. 60% mines can accommodate ECP, 71% can accommodate 19E locomotives.

- The impact of security related incidents on train delays improved and are sustained to well below tolerance of 4400 min.

- 400 new wagons build this year were build with ECP brake systems. 75% of the wagons we use is now ECP.

- 16x Diesels were fitted with slow speed. 40x 10E locomotives were fitted with slow speed. All 7E locomotives are ECP lead capable. 10E locomotives in progress and should be completed by Apr’12.

- Trichardt and Wonderfontein lines were upgraded from 20 to 26 t/axle. The impact of this is that the overall average load per train increased from 7700 to 8000 ton per train.
Bulk Liquid Berth @ Glance

- Capacity 1.1mtpa, with new berth capacity will increase to 2.4 mtpa

Terminal Size

- 2 berths of 600 metres quay wall
- Basin dredged to 14 metres
- 50 000 tonnes DWT vessels
30 Year Cargo Forecast

COAL EXPORTS REACHES 91 MTPA
PROPOSED SOUTH DUNES COAL

187,000 m² lease sites
14, 15 & 16

Servitude for services outside of RBCT area

Berth 307
Current Layout – Harbour Bound Industries 2010

- Navitrade
- Kusasa
- Shincel
- Skoonkaai Yard
- Bayview Yard
- Strang
- BHP Hillside Aluminium
- BHP Bayside Yard

Export Coal from Navitrade
Import Sulphur to Kusasa & Foskor
Current Layout - Harbour Bound Industries 2010
Export Wood chips from CTC, Mondi Silvercell & Shincel
Short Term - Fencing and Surfacing Plans

- BHP Hillside Aluminium
- Navitrade
- Foskor
- CTC & Mondi Silvercell Wood Chips
- Kusasa
- BHP Bayside Aluminium
- Skoonkaai Yard
- Bayview Yard
- Shincel Wood Chips
- BHP Bayside Aluminium
- Strang Rennies
- Bulk Cargo Stacking Areas

New surfaces
**Project 0:** Bayview Rail Yard Redesign & Construct

- Initial rail loop serving Chrome, Ferrochrome, Ferromanganese and other bulk freight

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**Expansion Details**

Description: A reconfigured yard for the DBT and MPT is required given the current yard is a bottleneck. Combined rail for GFB and coking coal constitutes the core of the project, with expansions for other commodities available as add-ons.

Additional rail has been developed modularly by commodity, and typically includes a dedicated loop and side yards for unloading and loading.

DBT coal costs figures allow for three separate loops to be built corresponding to each phase of expansion.

- **Total cost:**
  - R 1.1B (initial rail loop)
  - TNPA portion is R0.5B

- **Lead time:**
  - 5 years (initial rail loop only)
**Project 1: Magnetite Stream**

**Medium Term Plans**

**Expansion Details**

<table>
<thead>
<tr>
<th>Phase 1:</th>
<th>Total cost:</th>
<th>Lead time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+2.5 mtpa</td>
<td>R 1.4B TPT: R 1.4B TNP: R 0</td>
<td>4 years</td>
</tr>
</tbody>
</table>

*Description:* The magnetite investments are primarily for freeing up capacity for general freight through providing dedicated tipplers for each stream.

*Capital costs at full expansion include:*
- A dedicated tippler
- Upgrades to the conveyor system
- An upgraded ship loader
- Applicable portion of rail yard redesign
**Project 2: Chrome Stream**

Medium Term Plans

Strang Rennies aluminium stockyard be moved from current location

**Expansion Details**

<table>
<thead>
<tr>
<th>Phase</th>
<th>MTPA</th>
<th>Total Cost</th>
<th>Lead Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>+1.4 mtpa</td>
<td>R 1.8B (TPT: R 1.8B, TNPA: R 0)</td>
<td>4 years</td>
</tr>
<tr>
<td>Phase 2</td>
<td>+2.1 mtpa</td>
<td>R 0.3B (TPT: R 0.3B, TNPA: R 0)</td>
<td>1 year</td>
</tr>
</tbody>
</table>

Description: Engineering has developed a system to increase the rate of ship loading through use of 40 ton skips, efficient skip loading facilities and faster mobile cranes. This system would decrease the need for additional berths.

Capital costs at full expansion include:
- A dedicated yard line and tippler
- Stockyard
- Trucks, skips and mobile cranes
- Conveyor system
- Applicable portion of rail yard redesign
**Project 3: Ferrochrome Stream**

**New position of Strang Rennies aluminium stockyard**

### Expansion Details

- **Phase 1:**
  - Total cost: R 2.5B
  - Lead time: 4 years
  - Description: Increased ferrochrome handling via 40 ton skips, efficient skip loading facilities and faster mobile cranes.

- **Phase 2:**
  - Total cost: R 0.1B
  - Lead time: 1 year
  - Description: Capital costs at full expansion include a dedicated yard line and tippler, stockyard, handling equipment, trucks, skips, mobile cranes, and applicable portion of rail yard redesign.

- **Phase 3:**
  - Total cost: R 0.8B
  - Lead time: 3 years
Project 4: Ferromanganese Stream

Medium Term Plans

Expansion Details

<table>
<thead>
<tr>
<th>Phase 1: +0.6 mtpa</th>
<th>Total cost: R 0.6B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- TPT: R 0.4B</td>
</tr>
<tr>
<td></td>
<td>- TNPA: R 0.2B</td>
</tr>
<tr>
<td></td>
<td>Lead time: 4 years</td>
</tr>
</tbody>
</table>

Description: engineering has developed a system to increase the rate of ship loading through use of 40 ton skips, efficient skip loading facilities and faster mobile cranes. This system will decrease the need for additional berths.

Capital costs at full expansion include:
- Handling equipment
- A dedicated yard line and tippler
- Stockyard
- Trucks, skips and mobile cranes
- Applicable portion of rail yard redesign
**Project 5: Non Priority GFB**

## Medium Term Plans

### Expansion Details

<table>
<thead>
<tr>
<th>Phase 1: +3.7 mtpa</th>
<th>Total cost:</th>
<th>Lead time:</th>
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<tbody>
<tr>
<td></td>
<td>R 0.6B</td>
<td>5 years</td>
</tr>
<tr>
<td></td>
<td>- TPT: R 0.6B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- TNPA: R 0.0</td>
<td></td>
</tr>
</tbody>
</table>

**Description:** GFB expansions are focused around more efficient ground handling.

- Capital costs at full expansion include:
  - Faster cranes to increase loading speeds, which will ultimately decrease the need for additional berths
  - Provision for stockpiling of small parcels of general freight (e.g., pig iron)
2019 Configuration

RAIL YARD UPGRADE
NEW RAIL LOOP

GFB
MAGNETITE
CHROME FERRO CHROME FERRO MANGANESE
Billiton Hillside

NAVITRADE

Billiton Bayside

Berth 606 backup area

RBCT Terminal 91 mtpa coal capacity

Proposed berth for additional 12 mtpa coal

South Dunes Coal Terminal

Dry Bulk (no coal)

Ship Repair

Proposed LNG Import berth

IDZ
**SWAZI LAND - LOTHAI R LINK**

System Design Capacity and Capital Cost

### Design capacity

<table>
<thead>
<tr>
<th>Section</th>
<th>Phase 1</th>
<th>Phase 2</th>
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</thead>
<tbody>
<tr>
<td>Davel - Phuzumoya</td>
<td>17Mtpa</td>
<td>35Mtpa</td>
</tr>
<tr>
<td>Phuzumoya - Golela</td>
<td>34Mtpa</td>
<td></td>
</tr>
<tr>
<td>Phuzumoya - Maputo</td>
<td>18Mtpa</td>
<td></td>
</tr>
</tbody>
</table>

### Davel to Nsese (Richards Bay)

1. Davel to Lothair (108km) : R2.2bn
   - Davel – Breyten
   - Breyten – Buhrmanskop
   - Buhrmanskop – Lothair

2. Lothair to Sidvokodvo (146km) : R7.3bn
   - Lothair – Border : R1.8bn
   - Border – Sidvokodvo : R5.5bn

3. Sidvokodvo to Richards Bay (345km) : R4.6bn
   - Sidvokodvo – Phuzumoya
   - Phuzumoya – Golela
   - Golela – Nsese (Richards Bay)

### Davel to Beluluane (Maputo)

4. Phuzumoya to Maputo (154km) : R1.8bn
   - Phuzumoya – Mpaka
   - Mpaka – Siweni
   - Siweni – Beluluane (Maputo)
## 7 YEAR CAPITAL INVESTMENT PLAN (TNPA)

<table>
<thead>
<tr>
<th>Port of Richards Bay</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>17/18</th>
<th>18/19</th>
<th>7yr</th>
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<tbody>
<tr>
<td>Expansion</td>
<td>54.3</td>
<td>154.0</td>
<td>540.2</td>
<td>197.8</td>
<td>223.0</td>
<td>298.7</td>
<td>466.9</td>
<td>1,889.7</td>
<td>3,770.3</td>
</tr>
<tr>
<td>Replacement</td>
<td>75.8</td>
<td>67.7</td>
<td>175.4</td>
<td>162.9</td>
<td>234.8</td>
<td>269.0</td>
<td>555.4</td>
<td>405.0</td>
<td>1,870.1</td>
</tr>
<tr>
<td>Total</td>
<td>130.2</td>
<td>221.7</td>
<td>715.6</td>
<td>360.7</td>
<td>457.8</td>
<td>567.7</td>
<td>1,022.3</td>
<td>2,294.7</td>
<td>5,540.4</td>
</tr>
</tbody>
</table>

*Note: Rm denotes 'Rand', the South African currency.*
## 7 YEAR CAPITAL INVESTMENT: MAJOR PROJECTS: (TNPA)

<table>
<thead>
<tr>
<th>MAJOR PROJECTS</th>
<th>Status</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of Additional Bulk Liquid Berthing Capacity (Feasibility &amp; Execution)</td>
<td>Scour protection in progress, budget will be spend</td>
<td>343,052,250</td>
</tr>
<tr>
<td>Provision of 2 replacement tugs Rcb</td>
<td>Completed, capitolised</td>
<td>329,050,238</td>
</tr>
<tr>
<td>Acquisition of Two Tugs (Vulindlela) Rcb</td>
<td>Orders to be placed, managed by HQ</td>
<td>228,622,000</td>
</tr>
<tr>
<td>Bayvue rail yard expansion - Outcome from ECICS feasibility</td>
<td>FEL 1 and FEL 2 review in progress, submission compiled by Transnet Group</td>
<td>550,000,000</td>
</tr>
<tr>
<td>Upgrade power supply at Harbour West</td>
<td>Feasibility in progress</td>
<td>104,357,771</td>
</tr>
<tr>
<td>Provision of additional berthing capacity for MPT - berths 709 to 711 (700m quaywall)</td>
<td>Capacity building</td>
<td>2,162,572,000</td>
</tr>
<tr>
<td>Replace helicopter Phase 2 - 12 year replacement cycle</td>
<td>Fleet plan</td>
<td>117,660,000</td>
</tr>
<tr>
<td>Deepening berth at Small Craft to -14 m CD with associated works</td>
<td>Deepen from 7.5m to 12m</td>
<td>777,000,000</td>
</tr>
<tr>
<td>Provision of additional DBT Export berthing capacity - Berth 802 / 3</td>
<td>Capacity building</td>
<td>2,477,679,000</td>
</tr>
<tr>
<td>Land acquisition for future port development</td>
<td>Securing land for future port development</td>
<td>96,191,677</td>
</tr>
<tr>
<td>Construct Common User berth 307 - Coal other than RBCT</td>
<td>Capacity building</td>
<td>700,000,000</td>
</tr>
<tr>
<td>Facility for Liquefied Natural Gas - LNG</td>
<td>Aligned with the Energy 2010 masterplan</td>
<td>984,257,700</td>
</tr>
<tr>
<td>Replace 1 tug</td>
<td>Fleet plan</td>
<td>339,200,000</td>
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</table>
## Top 10 Capital Projects
### 7-Year Plan: (TPT)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Richards Bay – ECICS 2020 Expansion</td>
<td>1</td>
<td>RBYDBT</td>
<td>10</td>
<td>20</td>
<td>148</td>
<td>1 000</td>
<td>2 350</td>
<td>2 148</td>
<td>1 913</td>
<td>7 587</td>
</tr>
<tr>
<td>Richards Bay - Sustaining Capital</td>
<td>2</td>
<td>RBYDBT, RBYMPT</td>
<td>261</td>
<td>1 593</td>
<td>1 240</td>
<td>465</td>
<td>583</td>
<td>227</td>
<td>137</td>
<td>4 512</td>
</tr>
<tr>
<td>Saldanha Iron Ore Terminal Expansion (60 to 80mtpa)</td>
<td>3</td>
<td>SALIOT</td>
<td>20</td>
<td>205</td>
<td>1 030</td>
<td>1 950</td>
<td>900</td>
<td>0</td>
<td>0</td>
<td>4 275</td>
</tr>
<tr>
<td>Ngqura Manganese Terminal (2 berths)</td>
<td>4</td>
<td>NGQURA</td>
<td>0</td>
<td>30</td>
<td>500</td>
<td>1 475</td>
<td>1 960</td>
<td>0</td>
<td>0</td>
<td>3 930</td>
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<tr>
<td>Pier 1 Phase 2 Salisbury Island Infill</td>
<td>5</td>
<td>PIER 1</td>
<td>0</td>
<td>0</td>
<td>840</td>
<td>1 506</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 446</td>
</tr>
<tr>
<td>Straddle Carrier Fleet Replacement</td>
<td>6</td>
<td>DCT</td>
<td>0</td>
<td>323</td>
<td>520</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 489</td>
</tr>
<tr>
<td>DCT Cargo Handling Equipment – post berth deepening</td>
<td>7</td>
<td>DCT</td>
<td>0</td>
<td>0</td>
<td>729</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 149</td>
</tr>
<tr>
<td>Ngqura Container Terminal Phase 2A</td>
<td>8</td>
<td>NGQURA</td>
<td>200</td>
<td>287</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 097</td>
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<tr>
<td>Ngqura Container Terminal Phase 2B</td>
<td>9</td>
<td>NGQURA</td>
<td>0</td>
<td>0</td>
<td>258</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>808</td>
</tr>
<tr>
<td>x7 tandem lift STS Cranes for DCT Pier 2</td>
<td>10</td>
<td>DCT</td>
<td>516</td>
<td>516</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>516</td>
</tr>
<tr>
<td>Other Projects (#200)</td>
<td></td>
<td>Various</td>
<td>1 379</td>
<td>1 379</td>
<td>338</td>
<td>991</td>
<td>694</td>
<td>87</td>
<td>691</td>
<td>5 022</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>2 387</strong></td>
<td><strong>4 091</strong></td>
<td><strong>3 665</strong></td>
<td><strong>7 683</strong></td>
<td><strong>9 546</strong></td>
<td><strong>2 719</strong></td>
<td><strong>2 741</strong></td>
<td><strong>32 831</strong></td>
</tr>
<tr>
<td>Project Title</td>
<td>Total ETC 7 Year Plan</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>1 ECICS</td>
<td>7 587</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2 Sustaining the Assets (Asset Audit outcomes)</td>
<td>993</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3 Quayside Equipment Replacement (x3) Unloaders</td>
<td>450</td>
<td></td>
<td></td>
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<td></td>
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<td>4 Open Storage Area C&amp;D West Development</td>
<td>315</td>
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<tr>
<td>5 Surfacing &amp; Fencing of 606 Backup Area</td>
<td>300</td>
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<td>6 Surfacing of Triangle area</td>
<td>300</td>
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<td>7 Replace forklifts</td>
<td>229</td>
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<td>8 Surfacing of E&amp;F East</td>
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<td>9 Quayside Equipment Replacement (x2)</td>
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<td>10 Tippler Replacement</td>
<td>180</td>
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<td>11 1 high capacity loader</td>
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<td>12 Upgrading of Fire Systems Phase 3</td>
<td>137</td>
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<td>13 Replace haulers</td>
<td>129</td>
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<td>14 GP 1 &amp; 2 Rail Beam Refurbishment</td>
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<td>15 Others (#49 Projects)</td>
<td>1 108</td>
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<td><strong>Total</strong></td>
<td><strong>12 427</strong></td>
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</table>

7 Year Plan (Rm)

- Replacement: 3,685
- Expansion: 8,742

**7 Year Plan (Rm)**
- Replacement: 45%
- Expansion: 26%
- Performance Improvement: 7%
- Safety Critical: 6%
- Refurbishment: 16%

RICHARDS BAY INVESTMENT PLAN: (TPT)
THANK YOU