PROPOSED E/F SLAB EXPANSION, PORT OF RICHARDS BAY
Revised Final Basic Assessment Report

September 2013
Revised: 2015/09/30
Public
# Quality Management

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<th>Issue 1</th>
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<tr>
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<td>Kelly Taylor</td>
<td>Kelly Taylor</td>
<td>Danielle Michel</td>
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<td>Hilary Konigkramer</td>
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PROPOSED E/F SLAB EXPANSION, PORT OF RICHARDS BAY

Revised Final Basic Assessment Report

2015/09/30

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Executive Summary

PLEASE NOTE: The final Basic Assessment Report (BAR) for the Proposed E/F Slab project was distributed to stakeholders for comment from 13 September 2013 to 4 October 2013. The Final BAR was submitted to the Department of Environmental Affairs (DEA) in November 2013.

During the DEA’s decision making process, concerns were raised by stakeholders regarding the impact of the proposed expansion on air quality within the context of broader Richards Bay Port emissions. Subsequently the proponent, Transnet Port Terminals (TPT), engaged with the relevant stakeholders to determine a way forward in response to the concerns raised.

TPT subsequently appointed WSP Environmental (WSP) to undertake the following process (July 2014):

- Discussion with relevant stakeholders;
- Collection of emissions data from the port and other industries in the greater port area;
- Development of a cumulative model (using CALPUFF); and
- Modelling and assessment of the cumulative impact of the E/F slab on the port

This report constitutes the revised Final BAR. This differs from the 2013 Final BAR, as the operational air quality discussion and impact assessment has been updated to reflect the cumulative model. These changes have been highlighted in red text throughout the report, and the revised Air Quality Impact Assessment Report has been attached in Appendix D. No other changes have been made to the report.

INTRODUCTION TO PROJECT

Transnet Port Terminals Richards Bay Terminal is located within the uMhlathuze Local Municipality (UTHungulu District Municipality). To facilitate South Africa’s growing economy and the associated increase in demand for a vast range of commodities, Transnet Port Terminals (TPT) wish to ensure that their operational capacity meets this demand by expanding on storage areas within the Dry Bulk Terminal (DBT). This requires the construction of a new storage slab to be called Slab E & F East (E/F Slab) in the currently vacant piece of land immediately south of storage Slab C & D East.

The proposed slab will be used for the storage of dry bulk cargo such as chrome, magnetite and coal, and will be suitably engineered with the use of G-blocks, or similar material, underlain by an impervious membrane. The proposed slab is proposed to be 20 000m² in size, and will have a maximum stockpile capacity of approximately 200 kt. Current storage areas within the DBT have a capacity to store 400 kt of cargo, as such this project represents a 50% increase in storage capacity. The estimated throughput capacity is 2 million tons per annum, dependent on the density of the cargo. Cargo is proposed to be brought in via rail, road truck and conveyor and stacked by payloader onto the storage slab until transfer via conveyor belts onto ships for export. Associated infrastructure includes a stormwater management system, dust suppression mechanisms, high mast lighting and conveyors.

The proposed construction is subject to environmental authorisation by the Department of Environmental Affairs (DEA) in terms of the Environmental Impact Assessment (EIA) Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended. In addition, the project requires an amendment to the existing Air Emissions License in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).

PROPOSED ACTIVITIES AND LEGAL CONTEXT

WSP has undertaken a review of the NEMA EIA Regulations (GN R543, 544, 545 and 546 of 18 July 2010) and confirmed that there are listed activities in terms of GN R544 applicable to the construction of the proposed E/F Slab. As such a basic assessment procedure is required to obtain environmental authorisation prior to commencement of the project.
CONSIDERATION OF ALTERNATIVES

The selected site for the proposed activity is located at the E/F Slab at the DBT, within the Port of Richards Bay, UMhlathuze Local Municipality. The site is bordered by the existing C/D open storage slabs to the north; and sheds, offices and the quayside to the south. The DBT extends west and east of the proposed site. The site has been historically disturbed and no longer represents natural conditions. The vegetation present on site comprises predominantly of secondary (alien or pioneering) species. This portion of land is currently undeveloped within the Port boundary. It is ideally situated in terms of serving the surrounding cargo owners and complementing the surrounding land use within the Port. For these reasons, no further site alternatives have been considered in this assessment.

The preferred process or technology for the construction of the proposed slab is the use of G-blocks underlain by an impervious membrane. The proposed slab will be used for the storage of dry bulk cargo such as chrome, magnetite and coal. Cargo is proposed to be brought in via road truck and conveyor and stacked / reclaimed by payloader onto conveyor belts. The proposed slab is 20 000m$^2$ in size, and will have a maximum stockpile capacity of approximately 200 kt. The estimated throughput capacity is 2 million tons per annum, dependent on the density of the cargo. Associated infrastructure includes a stormwater management system, dust suppression mechanisms, high mast lighting and conveyors.

Three alternative technology options (aside from the preferred option) were identified for the project:

- **Direct Handling**: Direct handling excludes any significant storage of cargo between arrival at and departure from the Port. However, considering the variation in the rate of cargo transfer between road, rail and ship, as well the logistics associated with shipping schedules, this alternative may result in poor productivity and performance.

- **Unsurfaced Storage Areas**: In this option, the land proposed for the construction of the E/F Slab would not be surfaced, and cargo would be temporarily stored on open ground. This option will result in a considerable risk of environmental contamination in terms of the pollution of soil and groundwater.

- **Enclosed Storage Areas**: This option entails the construction of an enclosed structure for the storage of cargo, which may have benefits in terms of reducing dust emissions and managing stormwater arising from the facility. However, the cost and efficiency implications in terms of incorporation of conveyor belts and associated infrastructure are considerable, and will render the operations at the proposed facility unfeasible.

All three of the above alternatives were found to be unsuitable to the proposed project, and as such have been excluded from further consideration in this report.

In the case of the no-go alternative, the terminal will continue to operate at its current storage capacity. This would mean that the volume of imports / exports would not be able to increase through the Port. Due to potential productivity concerns, this option is not favoured. In addition, gainful employment opportunities during the construction phase would not materialise in the no-go alternative. As is required by EIA Regulations, the no-go option has been considered throughout this report.

ENVIRONMENTAL ISSUES AND IMPACTS

**Negative Impacts - Construction Phase:**

- **Traffic, Access and Safety**: The transportation of construction material will result in increased traffic movement to the site and within the Richards Bay Terminal (RBT).

- **Aesthetics**: There may be a visual impact on aesthetics in the vicinity of the proposed site due to the presence of construction materials and vehicles. However, as the E/F Slab is does not lie within the public viewshed, minimal impacts are anticipated.
- **Cultural and Heritage Resources:** There is the potential for unidentified cultural or heritage resources to be disturbed during construction. However, no cultural or heritage resources have been identified on site to date and the project site has been historically disturbed.

- **Air Quality:** Dust emissions have the potential to deteriorate local air quality which may result in a nuisance factor to local landusers and industries, particularly during dry and windy conditions. In addition, vehicular emissions from trucks transporting materials and labour may have an impact on local air quality.

- **Noise:** Elevated noise levels have the potential to result in a nuisance factor to receptors (e.g. local businesses and land users).

- **Surface and Groundwater Management and Contamination:** The potential exists for surface and groundwater contamination to occur should hazardous materials not be stored or handled correctly. This can potentially contaminate soil water runoff and harbour waters rendering them dangerous for either human or ecological use.

- **Geology and Soils:** There is the potential for localised soil erosion to occur as a result of site clearing and movement of construction vehicles especially during high rainfall events.

- **Flora and Fauna:** Potential impacts include disturbance to pre-existing land cover. The site is characterised by primarily alien vegetation.

**Negative Impacts - Operational Phase:**

- **Traffic, Access and Safety:** During the operational phase, there may be traffic congestion impacts relating to trucks delivering bulk cargo, and there will be an increase in traffic from the current operations at the existing storage slabs. In addition, vessel traffic within the Port is expected to increase due to additional vessels importing and exporting goods from the DBT.

- **Air Quality:** During the operational phase, localised air quality may be affected by dust and air-borne residue arising from the storage and handling of cargo. There will be an increase in emissions from the current operations at the existing storage facilities; however the contribution to the overall air quality, in relation to other operations in the Richards Bay Harbour area, is nominal.

- **Noise:** Elevated noise levels have the potential to result in a disruption to receptors (surrounding businesses and land users). However, there will be a minimal increase in noise emissions from the current operations at the existing storage facilities.

- **Surface and Groundwater Contamination:** An increase in hardened surfacing (i.e. construction storage slab) will result in an increase in surface water runoff especially during precipitation events and if uncontrolled will potentially entrain suspended sediments from the stockpiles, hydrocarbons, and other maintenance chemicals, potentially affecting water quality in the harbour. Stormwater management must be correctly implemented as per the Stormwater Management Plan (SWMP).

**Positive Impacts – Construction and Operational Phases:**

- **Employment and Social Upliftment:** Definite employment opportunities exist for semi-skilled and skilled workers in the construction sectors. The increased storage capacity of the DBT is expected to result in an increase in exports and imports within the Port during the operational phase. Potential impacts from this include local and/or regional economic growth.

**CONCLUSIONS**

The implementation of the Environmental Management Programme (EMPr), SWMP and AQMP is required to alleviate the potential negative impacts on the environment to a level of no or low significance. This should be a condition of the Environmental Authorisation, together with the requirement for the appointment of an
independent Environmental Compliance Officer (ECO). The assessment of the perceived impacts after implementation of the EMP, SWMP and AQMP indicates that the project will have impacts of low significance.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.

2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

3. Where applicable **tick** the boxes that are applicable in the report.

4. An incomplete report may be returned to the applicant for revision.

5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.

6. This report must be handed in at offices of the relevant competent authority as determined by each authority.

7. No faxed or e-mailed reports will be accepted.

8. The report must be compiled by an independent environmental assessment practitioner.

9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?  
YES X NO

If YES, please complete the form entitled “Details of specialist and declaration of interest”  
for appointment of a specialist for each specialist thus appointed:  
Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail:

Transnet Port Terminals Richards Bay Terminal is located within the uMhlathuze Local Municipality (UTHungulu District Municipality). In 1976, this terminal was built for the export of coal but has since expanded into handling a host of other bulk and break bulk cargoes. In 2011, the Port handled approximately 22 million tonnes of cargo. To facilitate the increasingly high throughput capacities of this terminal, direct rail links and excellent roads have been developed to transport goods between major cities in South Africa and the Port.

The RBT makes use of numerous import and export berths which are fed via a network of conveyor belts operating within the terminal. Most of these conveyor belts transport cargo, high in mineral content, from the train tippler station to open paved slabs. Different types and grades of cargo are stored separately from one another using different stockpile areas within the Port.

To facilitate South Africa’s growing economy and the associated increase in demand for a vast range of commodities, Transnet Port Terminals (TPT) wish to ensure that their operational capacity meets this demand by expanding on storage areas within the Dry Bulk Terminal (DBT). This requires the construction of a new storage slab to be called Slab E & F East (E/F Slab) in the currently vacant piece of land immediately south of storage Slab C & D East (Refer to Figure 1).

The proposed slab will be used for the storage of dry bulk cargo such as chrome, magnetite and coal, and will be suitably engineered with the use of G-blocks, or similar material, underlain by an impervious membrane. The proposed slab is proposed to be 20 000m$^2$ in size, and will have a maximum stockpile capacity of approximately 200 kt. Current storage areas within the DBT have a capacity to store 400 kt of cargo, as such this project represents a 50% increase in storage capacity. The estimated throughput capacity is 2 million tons per annum, dependent on the density of the cargo. Cargo is proposed to be brought in via rail, road truck and conveyor and stacked by payloader onto the storage slab until transfer via conveyor belts onto ships for export. Associated infrastructure includes a stormwater management system, dust suppression mechanisms, high mast lighting and conveyors. The expected duration of the construction phase is 12 months.

The proposed construction is subject to environmental authorisation by the Department of Environmental Affairs (DEA) in terms of the Environmental Impact Assessment (EIA) Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended. In addition, the project requires an amendment to the existing Air Emissions License in terms of the National Environmental Management: Air Quality Act (NEM:AQA) (Act No. 39 of 2004).

1 Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.
Figure 1: Project Locality (Google Earth, 2012).

Table 1: Applicability of the EIA Regulations to the proposed project

<table>
<thead>
<tr>
<th>Listed Number</th>
<th>Description of listed activity</th>
<th>Project Relevance</th>
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<tbody>
<tr>
<td>GN. R.544, 18 June 2010 (16)</td>
<td>Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater, in respect of –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Fixed or floating jetties and slipways;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ii) Tidal pools;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iii) Embankments;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iv) Rock revetments or stabilising structures including stabilising walls;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(v) Buildings of 50 square metres or more; or –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The proposed slab will be larger than 50 square meters (20 000m²) and will increase the throughput capacity of the harbour.</td>
<td></td>
</tr>
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</table>
(vi) Infrastructure covering 50 square metres or more

But excluding:

(a) If such construction or earth moving activities will occur behind a development setback line; or

(b) Where such construction or earth moving activities will occur within existing ports or harbours and the construction or earth moving activities will not increase the development footprint or throughput capacity of the Port or harbour;

(c) Where such construction or earth moving activities is undertaken for purposes of maintenance of the facilities mentioned in (i) – (vi) above; or

(d) Where such construction or earth moving activities is related to the construction of a port or harbour, in which case activity 24 of Notice 545 of 2010 applies.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional
alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

**ALTERNATIVE S1: PREFERRED SITE ALTERNATIVE**

The selected site (Figures 2 & 3) for the proposed activity is located at the E/F Slab within the DBT at the Port of Richards Bay, UMhlathuze Local Municipality. The site is bordered by the existing C/D open storage slabs to the north; and sheds, offices and the quayside to the south. The DBT extends west and east of the proposed site. The site has been historically disturbed and no longer represents natural conditions. The vegetation present on site comprises predominantly of secondary (alien or pioneering) species. This portion of land is currently undeveloped within the Port boundary, and lies approximately 150 metres north of the quayside. It is ideally situated in terms of serving the surrounding cargo owners and complementing the surrounding land use within the Port. For these reasons, no further site alternatives have been considered in this assessment.

**ALTERNATIVE A1: PREFERRED PROCESS/TECHNOLOGY ALTERNATIVE**

The preferred process or technology for the construction of the proposed slab is the use of G-blocks underlain by impervious membrane. The use of G-block pavers will allow for deformation of the slab base (rather than breaking) in the case of geological instability. The proposed slab will be used for the storage of dry bulk cargo such as chrome, magnetite and coal. Cargo is proposed to be brought in via road truck and conveyor and stacked by payloader onto the storage slab until transfer via conveyor belts onto ships for export. The proposed slab is 20,000m$^2$ in size, and will have a maximum stockpile capacity of approximately 200 kt. The estimated throughput capacity is 2 million tons per annum, dependent on the density of the cargo. The stockpile capacity, material and status of operation of each slabs within the DBT are summarised in Table 2 below.
Table 2: Summary of each slabs capacity and material to be stockpiled.

<table>
<thead>
<tr>
<th>Stockpile Slab</th>
<th>Stockpile capacity (tons)</th>
<th>Material Stockpiled</th>
<th>Status</th>
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<tbody>
<tr>
<td>A &amp; B West</td>
<td>50 000</td>
<td>Ferrochrome</td>
<td>Fully Operational</td>
</tr>
<tr>
<td>C West</td>
<td>50 000</td>
<td>Ferrochrome, coal</td>
<td>Fully Operational</td>
</tr>
<tr>
<td>D West</td>
<td>50 000</td>
<td>Ferrochrome, coal</td>
<td>Awaiting Environmental Authorisation from DAEA</td>
</tr>
<tr>
<td>A &amp; B East</td>
<td>50 000</td>
<td>Ferrochrome</td>
<td>Fully Operational</td>
</tr>
<tr>
<td>C &amp; D East</td>
<td>200 000</td>
<td>Magnetite, coal</td>
<td>Fully Operational</td>
</tr>
<tr>
<td>E &amp; F East</td>
<td>200 000</td>
<td>Magnetite, coal, ferrochrome</td>
<td>Proposed</td>
</tr>
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</table>

Associated infrastructure includes the following:

- Dust suppression mechanisms – sprinklers are proposed to be installed on and around the storage slab to reduce the potential for dust arising from the stored cargo.
- High mast lighting – a maximum of four high mast lights are proposed to be erected around the periphery of the E/F slab to facilitate cargo working at night.
- Conveyors – two conveyor belts are proposed to be installed to the north of the E/F slab, to facilitate movement of cargo onto the main conveyors moving bulk products to the quayside. These conveyors...
Stormwater management system (as per attached Stormwater Management Plan (SWMP), Appendix D) – Stormwater channels will flank each conveyor, and will flow towards the western side of the slab. Details relating to the proposed construction of berms, channels, sediment traps and retention facilities are included in the SWMP.

ALTERNATIVE A2

Three alternative technology options (aside from the preferred option) were identified for the project:

- Direct Handling: Direct handling excludes any significant storage of cargo between arrival at and departure from the Port. However, considering the variation in the rate of cargo transfer between road, rail and ship, as well the logistics associated with shipping schedules, this alternative may result in poor productivity and performance.

- Unsurfaced Storage Areas: In this option, the land proposed for the construction of the E/F Slab would not be surfaced, and cargo would be temporarily stored on open ground. This option will result in a considerable risk of environmental contamination in terms of the pollution of soil and groundwater.

- Enclosed Storage Areas: This option entails the construction of an enclosed structure for the storage of cargo, which may have benefits in terms of reducing dust and stormwater emissions from the facility. However, the cost and efficiency implications in terms of incorporation of conveyor belts and associated infrastructure are considerable, and will render the operations at the proposed facility unfeasible.

All three of the above alternatives were found to be unsuitable to the proposed project, and as such have been excluded from further consideration in this report.

NO-GO ALTERNATIVE

In this case the development would not take place and the site would remain vacant. As is required by EIA Regulations, this option has been considered throughout this report. In the case of the no-go alternative, the terminal will continue to operate at its current storage capacity. This would mean that the volume of imports / exports would not be able to increase through the Port. Due to potential productivity concerns, this option is not favoured. In addition, gainful employment opportunities during the construction phase would not materialise in the no-go alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

<table>
<thead>
<tr>
<th>Alternative:</th>
<th>Latitude (S):</th>
<th>Longitude (E):</th>
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<tr>
<td>Alternative S1(^2) (preferred or only site alternative)</td>
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<td>47.368°</td>
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<tr>
<td>Alternative S2 (if any)</td>
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<tr>
<td>Alternative S3 (if any)</td>
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</table>

\(^2\) “Alternative S..” refer to site alternatives.
In the case of linear activities:

**Alternative:**

<table>
<thead>
<tr>
<th>Alternative S1 (preferred or only route alternative)</th>
<th>Latitude (S)</th>
<th>Longitude (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting point of the activity</td>
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<td>0</td>
</tr>
<tr>
<td>Middle/Additional point of the activity</td>
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</tr>
<tr>
<td>End point of the activity</td>
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**Alternative S2 (if any):**

| Starting point of the activity                      | 0            | 0             |
| Middle/Additional point of the activity             | 0            | 0             |
| End point of the activity                            | 0            | 0             |

**Alternative S3 (if any):**

| Starting point of the activity                      | 0            | 0             |
| Middle/Additional point of the activity             | 0            | 0             |
| End point of the activity                            | 0            | 0             |

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

### 4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

**Alternative:**

**Alternative A1** (preferred activity alternative)

<table>
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**Alternative A2 (if any)**

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**Alternative A3 (if any)**

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or, for linear activities:

**Alternative:**

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<th>Length of the activity:</th>
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<tbody>
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<td>m</td>
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Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

**Alternative:**

**Alternative A1** (preferred activity alternative)

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<thead>
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**Alternative A2 (if any)**

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<th>m²</th>
</tr>
</thead>
</table>

**Alternative A3 (if any)**

<table>
<thead>
<tr>
<th>m²</th>
</tr>
</thead>
</table>

### 5. SITE ACCESS

Does ready access to the site exist?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

---

3 “Alternative A..” refer to activity, process, technology or other alternatives.
If NO, what is the distance over which a new access road will be built

Describe the type of access road planned:

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;

6.2 the property boundaries and numbers of all the properties within 50 metres of the site;

6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

6.4 the exact position of each element of the application as well as any other structures on the site;

6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;

6.6 all trees and shrubs taller than 1.8 metres;

6.7 walls and fencing including details of the height and construction material;

6.8 servitudes indicating the purpose of the servitude;

6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
   - rivers;
   - the 1:100 year flood line (where available or where it is required by DWA);
   - ridges;
   - cultural and historical features;
   - areas with indigenous vegetation (even if it is degraded or invested with alien species);

6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and

6.11 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.
8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the expected capital value of the activity on completion?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the expected yearly income that will be generated by or as a result of the activity?</td>
<td>R200 million</td>
<td>R108 million</td>
</tr>
<tr>
<td>Will the activity contribute to service infrastructure?</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Is the activity a public amenity?</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>How many new employment opportunities will be created in the development phase of the activity?</td>
<td>To be confirmed</td>
<td></td>
</tr>
<tr>
<td>What is the expected value of the employment opportunities during the development phase?</td>
<td>To be confirmed</td>
<td></td>
</tr>
<tr>
<td>What percentage of this will accrue to previously disadvantaged individuals?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>How many permanent new employment opportunities will be created during the operational phase of the activity?</td>
<td>0*</td>
<td></td>
</tr>
<tr>
<td>What is the expected current value of the employment opportunities during the first 10 years?</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>What percentage of this will accrue to previously disadvantaged individuals?</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

* TPT intends to make use of established staff for the operational phase of the project.

9(b) Need and desirability of the activity

In line with Transnet’s capacity expansion programme and a directive issued by Government to increase employment levels throughout the organization, TPT wishes to further stimulate the local economy by providing adequate infrastructure to facilitate the movement of additional cargo through its port system. This increase storage capacity will contribute to local economic growth and will, by necessity, lead to increased employment levels in the associated sectors as well as within TPT itself.

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the relevant provincial planning department involved in the application?</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Does the proposed land use fall within the relevant provincial planning framework?</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:
### DESIRABILITY:

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does the proposed land use / development fit the surrounding area?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Will the benefits of the proposed land use / development outweigh the negative impacts of it?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Will the proposed land use / development impact on the sense of place?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>Will the proposed land use / development set a precedent?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>7</td>
<td>Will any person’s rights be affected by the proposed land use / development?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Will the proposed land use / development compromise the “urban edge”?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>9</td>
<td>If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### BENEFITS:

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Will the land use / development have any benefits for society in general?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Explain:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Will the land use / development have any benefits for the local communities where it will be located?</td>
<td>Yes</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>Explain: Increased economic growth of Richards Bay associated with increased exports; potential employment opportunities during the construction phase.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

<table>
<thead>
<tr>
<th>Title of legislation, policy or guideline:</th>
<th>Administering authority:</th>
<th>Date:</th>
</tr>
</thead>
</table>

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?  
YES X NO

If yes, what estimated quantity will be produced per month?  
Approximately 5000 tons

How will the construction solid waste be disposed of (describe)?

Construction waste to be safely disposed of to a designated general landfill site by road truck, namely uThungulu Regional Landfill site by TPT’s waste disposal service provider. Certificates of safe disposal to be obtained for each waste load sent for disposal. For further detail on this process, waste will be disposed according to the disposal requirement for each waste type as stipulated in the waste management procedure.

Where will the construction solid waste be disposed of (describe)?

uThungulu Regional Landfill site

Will the activity produce solid waste during its operational phase?  
YES X NO

If yes, what estimated quantity will be produced per month?  
Approximately 10 tons

How will the solid waste be disposed of (describe)?
The low hazardous waste generated from stacking/reclaiming bulk cargo will be recovered and given back to cargo owners.

All other contaminated bulk cargo sweepings will be collected in waste skips provided by Transnet Port Terminal’s waste disposal service provider and taken to accredited recyclers, with all tonnages accounted for and audited by Transnet Port Terminals.

Should further detail be sought, waste will be disposed according to the disposal requirement for each waste type as stipulated in the waste management procedure.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

As per the above.

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

If yes, what estimated quantity will be produced per month?

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

If yes, provide the particulars of the facility:

Facility name:

Contact person:

Postal address:

Postal code:

Telephone:  
Cell:
Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

Waste water produced on site comprises only stormwater, which will be managed according to the attached Stormwater Management Plan (SWMP) (**Appendix D**).

### 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If yes, is it controlled by any legislation of any sphere of government?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

#### Construction Phase:

There will be some vehicular emissions during the construction phase. There is also the potential for dust generation during the construction phase. This may be a result of wind over exposed areas of cleared land. Dust generation can be prevented through the implementation of air pollution mitigation measures contained in the EMPr (**Appendix F**).

#### Operational Phase:

During the operational phase of E/F Slab the key source of emissions is anticipated to be dust generated from operations undertaken at active stockpiles. An Air Quality Impact Assessment (AQIA) was conducted as part of this environmental authorisation application (**Appendix D**).

**Methodology**

For the purpose of this AQIA, two scenarios were identified and modelled as follows:

- Scenario 1 – PM$_{10}$ impact from proposed E/F Slab (only E/F Slab was modelled and results were combined with background particulate measurements for a cumulative assessment)
- Scenario 2 – PM$_{10}$, SO$_2$, and NO$_2$ impacts from proposed E/F Slab and other neighbouring industrial sources.

California Puff (CALPUFF) View 7.5.1 was utilized in this study, which is the recommended Tier 3 model in the Regulations Regarding Air Dispersion Modelling (GN R533, 2014). For the purpose of the AQIA, the key pollutant of concern was PM$_{10}$.

The dispersion model incorporated emission rates from existing port activities and the predicted emission rates for the proposed E/F Slab. The following emission processes were accounted for in TPTs inventory:

- Operations undertaken at active stockpiles, including:
  - Storage of product in open stockpiles;
  - Stockpile loading and offloading;

---

*NOTE: This refers to the Revised 2015 AQIA.*
Vehicle movements;
- The use of sprinkler systems;
- Ship Loading and Offloading
- Product Transfer Points (conveyors, wagon loading, bottom discharge etc.)

The following factors that influence emissions from the above processes were taken into account:
- Mitigation measures were applicable (example sprinkler systems)
- Buildings

To account for cumulative air quality impacts from industrial activities, atmospheric emission licenses (AELs) from eleven industries were obtained by WSP through the Richards Bay Clean Air Association (RBCAA). Below is listed the industries that provided their AELs and were included in the cumulative model. If emissions data was not available in the industries AEL; the source was excluded from the assessment.

- BHP
- Collateral Trading
- Foskor
- Grindrod
- Mondi
- Mpact
- RBCT
- RBM
- Tata Steel
- Tongaat Hulett
- Tronox

Results

i) Scenario 1

The average PM$_{10}$ concentration measured in 2013 at the RBCAA Central business District (CBD) monitoring station was 26.92 µg/m$^3$ and has been summed (as a blanket background concentration) with modelled concentrations at each receptor. Period average percentage increase in PM$_{10}$ concentrations and their P99 24-hour concentrations have been compared with the relevant National Ambient Air Quality Standards (2009) (NAAQS).

- To assess health effects from the operation of E/F Slab, predicted emissions were compared with the NAAQS. Results include:
  - Cumulative period average and P99 24-hour PM$_{10}$ concentrations demonstrate full compliance with the respective annual and 24-hour NAAQS.
  - The highest percentage increase in emissions is predicted at the CBD discrete receptor. The period average and P99 24-hour average PM$_{10}$ concentrations are predicted to increase by 0.01% and 0.07% respectively.

Plume isopleths show that the highest concentrations are predicted onsite at E/F Slab. Compliance is achieved within TPT’s fenceline. While PM$_{10}$ is a pollutant of concern in Richards Bay, results from this air quality impact assessment clearly demonstrate that the increase in emissions from the proposed E/F Slab to the existing air quality status of Richards Bay is marginal.

i) Scenario 2

Although E/F Slab will emit only PM, the cumulative model included an assessment of PM$_{10}$, NO$_2$ and SO$_2$, which are all considered key pollutants in the Richards Bay airshed. At present this cumulative model is a work in progress. Early results have been presented to the RBCAA and combined efforts will ensure that this model is developed over time to provide a critical tool for cumulative ambient air quality assessments in the region. Once finalised, a report of outputs will be compiled and submitted to the RBCAA. The model setup will also be made available to the RBCAA for future cumulative assessments.

NOTE: The above approach to the AQIA has been discussed and agreed with the RBCAA. The
cumulative impact assessment will be completed, although outside of the E/F slab Basic Assessment process. The reason for this is that the complexity of the model and the lack of availability of accurate data has resulted in an incomplete emission inventory, which does not provide a true reflection of the current situation in terms of PM$_{10}$ (the emission of concern) at the port. The cumulative model, once completed, will be made available to relevant stakeholders for discussion with TPT, as it no longer considered as part of the Basic Assessment Report.

11(d) Generation of noise

Will the activity generate noise?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If yes, is it controlled by any legislation of any sphere of government?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

**Construction Phase:**

The activity is likely to produce noise during the construction process as a result of construction and excavation activities in terms of equipment, staff etc.

**Operational Phase:**

The generation of noise during the operational phase is related to the increase in activity at the DBT due to the increased capacity provided by the newly constructed storage slab.

Acceptable noise levels are currently prescribed by SANS 10103:2008 (The Measurement and Rating of Environmental Noise with Respect to Annoyance and to Speech Communication). It is the most relevant code of practice for environmental noise impact assessment in South Africa. Typical rating levels for noise are illustrated in Table 3.
Table 3: SANS 10103 (2008) recommended residual sound levels for (relevant) land use districts

<table>
<thead>
<tr>
<th>Type Of District</th>
<th>Equivalent Continuous Rating Level for Noise (L_{req,T}) (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outdoors</td>
</tr>
<tr>
<td></td>
<td>Day-Night (L_{R,dn})</td>
</tr>
<tr>
<td>Residential Districts</td>
<td>a) Rural</td>
</tr>
<tr>
<td></td>
<td>b) Suburban (with little road traffic)</td>
</tr>
<tr>
<td></td>
<td>c) Urban</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>d) Urban (some workshops, businesses and main roads)</td>
</tr>
<tr>
<td></td>
<td>e) Central Business Districts</td>
</tr>
<tr>
<td></td>
<td>f) Industrial Districts</td>
</tr>
</tbody>
</table>

The noise levels generated by the construction and operation phase activities are not anticipated to exceed the prescribed standards. Notwithstanding this, construction phase mitigation measures are included within Appendix F.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

| Municipal X water board | groundwater | river, stream, dam or lake | other | the activity will not use water |

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

| litres |

Does the activity require a water use permit from the Department of Water Affairs? YES NO X

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
All movement of cargo on/off the E/F slab is to be undertaken in line with Transnet Port Terminal's Safety, Health, Environment and Quality Standard, related Standard Operating Procedures and Work Instructions, all of which incorporate best available technology and practice in conducting Transnet Port Terminal's operations.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Not applicable. The facility will be an open slab used for cargo storage.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

1. Important notes: For linear activities (pipelines etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES  NO X

If YES, please complete the form entitled “Details of specialist and declaration of interest” for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

21 / 8 / Erf 5333, Lot 223, Umhlatuzi 16230
Corner of Minerva and Wayfarer Roads,
Richards Bay Port
KwaZulu-Natal

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

Infrastructure/Port

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.
Is a change of land-use or a consent use application required?  
| YES | NO X |

Must a building plan be submitted to the local authority?  
| YES | NO X |

Locality map: An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. **GRADIENT OF THE SITE**

Indicate the general gradient of the site.

**Alternative S1:**

|--------|--------------|--------------|-------------|-------------|-------------|------------------|

**Alternative S2 (if any):**

|------|--------------|--------------|-------------|-------------|-------------|------------------|

**Alternative S3 (if any):**

|------|--------------|--------------|-------------|-------------|-------------|------------------|

2. **LOCATION IN LANDSCAPE**

Indicate the landform(s) that best describes the site:

2.1 Ridgeline
2.2 Plateau
2.3 Side slope of hill/mountain
2.4 Closed valley
2.5 Open valley
2.6 Plain
2.7 Undulating plain / low hills
2.8 Dune
2.9 Seafront X

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Alternative S1:</th>
<th>Alternative S2 (if any):</th>
<th>Alternative S3 (if any):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow water table (less than 1.5m deep)</td>
<td>YES</td>
<td>NO X</td>
<td>YES</td>
</tr>
<tr>
<td>Dolomite, sinkhole or doline areas</td>
<td>YES</td>
<td>NO X</td>
<td>YES</td>
</tr>
<tr>
<td>Seasonally wet soils (often close to water bodies)</td>
<td>YES</td>
<td>NO X</td>
<td>YES</td>
</tr>
<tr>
<td>Unstable rocky slopes or steep slopes with loose soil</td>
<td>YES</td>
<td>NO X</td>
<td>YES</td>
</tr>
<tr>
<td>Dispersive soils (soils that dissolve in water)</td>
<td>YES X</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Soils with high clay content (clay fraction more than 40%)</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Any other unstable soil or geological feature</td>
<td>YES X</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>An area sensitive to erosion</td>
<td>YES</td>
<td>NO X</td>
<td>YES</td>
</tr>
</tbody>
</table>

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

<table>
<thead>
<tr>
<th>Groundcover Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural veld</td>
<td>- good condition</td>
</tr>
<tr>
<td>Natural veld with scattered aliens</td>
<td></td>
</tr>
<tr>
<td>Natural veld with heavy alien</td>
<td></td>
</tr>
<tr>
<td>Veld dominated by alien</td>
<td></td>
</tr>
<tr>
<td>Gardens</td>
<td></td>
</tr>
</tbody>
</table>

GIBELA UMKHUMBI OLWA NOBUBHA
5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area
The site has been historically disturbed and no longer represents natural conditions. The vegetation is comprised predominantly of secondary (alien or pioneering) species.

5.2 Low density residential
5.3 Medium-High density residential
5.4 High density residential
5.5 Informal residential
5.6 Retail commercial & warehousing

5.7 Light industrial
The Port of Richards Bay is an industrial area and the proposed development is in keeping with this land use.

5.8 Medium industrial
The Port of Richards Bay is an industrial area and the proposed development is in line with this land use.

5.9 Heavy industrial
The Port of Richards Bay is an industrial area and the proposed development is in line with this land use.

5.10 Power station
5.11 Office/consulting room
The export office is located on the quayside to the south of the proposed site.

5.12 Military or police base/station/compound
5.13 Spoil heap or slimes dam
5.14 Quarry, sand or borrow pit
5.15 Dam or reservoir
5.16 Hospital/medical centre
5.17 School
5.18 Tertiary education facility
5.19 Church
5.20 Old age home
5.21 Sewage treatment plant
5.22 Train station or shunting yard
5.23 Railway line
5.24 Major road (4 lanes or more)
5.25 Airport
5.26 Harbour
The proposed activity is located within the Port of Richards Bay.

5.27 Sport facilities
5.28 Golf course
5.29 Polo fields

<table>
<thead>
<tr>
<th>Infestation</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport field</td>
<td>Cultivated land</td>
</tr>
</tbody>
</table>

If any of the boxes marked with an “X” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.
5.30 Filling station
5.31 Landfill or waste treatment site
5.32 Plantation
5.33 Agriculture
5.34 River, stream or wetland
5.35 Nature conservation area
5.36 Mountain, koppie or ridge
5.37 Museum
5.38 Historical building
5.39 Protected Area
5.40 Graveyard
5.41 Archaeological site
5.42 Other land uses (describe)

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity?

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?
If YES, specify:
If YES, specify and explain:

If any of the boxes marked with an "X" are ticked, how will this impact / be impacted upon by the proposed activity.
If YES, specify and explain:
If YES, specify:

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site?
If YES, explain:
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.
Briefly explain the findings of the specialist:

Section 38(1) of the National Heritage Resources Act, 1999 (Act 25 of 1999) requires that any development which will change the character of a site exceeding 5 000m² in extent may require a Heritage Impact Assessment to be undertaken.

However, considering the past disturbance of the site during the development of the Port and DBT (whereby the area was platformed), it is unlikely that any heritage or cultural resources are present on site. The site has been used as a lay-down area for construction, and has a modified environment, with surrounding slabs used for the storage of cargo. The proposed development will therefore not change the character of the site.

The EMPr (Appendix F) includes mitigation measures to prevent damage to any potential heritage resources on site, and the method for dealing with the presence of such resources.

Will any building or structure older than 60 years be affected in any way?  
YES  NO X

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?  
YES  NO X

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
   (i) the site where the activity to which the application relates is or is to be undertaken; and
   (ii) any alternative site mentioned in the application;
(b) giving written notice to—
   (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
   (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
   (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
   (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
   (v) the municipality which has jurisdiction in the area;
   (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
   (vii) any other party as required by the competent authority;
(c) placing an advertisement in—
   (i) one local newspaper; or
(ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken; Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—

(i) illiteracy;
(ii) disability; or
(iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation;

(b) state—

(i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;

(iii) the nature and location of the activity to which the application relates;

(iv) where further information on the application or activity can be obtained; and

(iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any Gazette that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.
6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

<table>
<thead>
<tr>
<th>Department of Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Water Affairs</td>
</tr>
<tr>
<td>UThungulu District Municipality</td>
</tr>
<tr>
<td>Mhlathuze Local Municipality</td>
</tr>
<tr>
<td>Local Ward Councillor: Mhlathuze Local Municipality</td>
</tr>
<tr>
<td>Ezemvelo KZN Wildlife</td>
</tr>
</tbody>
</table>

List of authorities from whom comments have been received:

| No comments have been received |

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?  

| YES | NO |

If “YES”, briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

1. Comment received from Carolyn Schwegman, WESSA, February 2012
   a. The issues of interest to WESSA and Coastwatch relate to contamination of the environment by stored substances (i.e. chrome, manganite and coal) and we would like to receive detail on the stormwater management system and dust suppression mechanisms in particular.
   b. Is the RoD amendment for the C/D Slab in anyway linked to the expansion of slab E/F? The storage areas appear to be in the same locality and we trust that the Dry Bulk Terminal Area is being looked at in its entirety in terms of potential contamination and the cumulative impacts thereof.
   c. Issues of interest relate to the stormwater management systems and final disposal of stormwater.

2. Comment received from Sandy Camminga, Richards Bay Clean Air Association (RBCAA), March 2012:
   a. An Air Quality Specialist Study must be undertaken.
   b. The RBCAA must be afforded the opportunity to review and comment on the draft Terms of Reference for the Air Quality Study.
   c. The Dispersion Modelling for the Air Quality Study should not be undertaken in-house, as this is a clear conflict of interest.
   d. The use of the Hawk Model for dispersion modelling is strongly recommended.
SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

1. Contamination of the environment by stored substances.
2. Detail requested on the stormwater management system and dust suppression mechanisms.
3. Cumulative impacts in terms of the locality of the C/D slab and details of relation to the amendment of the environmental authorisation for the C/D Slab.
4. Details of the final disposal of stormwater.
5. Request for an Air Quality Specialist Study.
6. Request for the RBCAA to comment on the Terms of Reference for the Air Quality Study.
7. Request for Dispersion Modelling for the Air Quality Study to not be undertaken in-house.
8. Request for the use of the Hawk Model for dispersion modelling.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

1. Potential impacts relating to contamination by stored substances have been assessed as part of the BAR.
2. A stormwater management plan has been prepared and is included in Appendix D of the BAR. Details of proposed dust suppression mechanisms are given in the project description of the BAR.
3. The amendment of the environmental authorisation for the C/D Slab is not linked to the E/F slab expansion, although they will serve a similar purpose within the Richards Bay Terminal (RBT). WSP is currently undertaking a cumulative air quality study of the RBT. The storm water systems will be managed separately.
4. A stormwater management plan has been prepared and is included in Appendix D of the BAR.
5. An Air Quality assessment has been undertaken for the E/F slab expansion, and is included in the BAR (Appendix D).
6. The terms of reference for the Air Quality Study were finalised and agreed to in advance of the commencement of this environmental assessment process, and public scrutiny of these documents is not required to be part of this process in terms of current legislation. The air quality specialist report has been included into the BAR, which will be made available to stakeholders for review. It must be noted, however, that the terminal has recently received an Atmospheric Emissions License (in accordance with the NEM:AQA), and is WSP is currently undertaking a cumulative model for the terminal as a whole. This will provide a strong background for the E/F slab specialist assessment.
7. The air quality specialists remain independent of the client, TPT, and therefore WSP does not consider this as a conflict of interest.
8. WSP have adopted ADMS v4.2 as it handles area sources better than most other steady state models and does not require extensive amounts of prognostic data to produce an accurate result. The Hawk model is not widely used internationally and appears to have been replaced by proprietary models even in South Africa. It is also not readily available to other consultants.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

a. Site alternatives

**Alternative S1 (preferred alternative)**

Planning and design entails limited, non-intrusive site survey and desktop design work. Accordingly, no direct, indirect or cumulative ‘site’ related impacts are anticipated.

<table>
<thead>
<tr>
<th>Alternative S2 (if any)</th>
</tr>
</thead>
</table>

**No-go alternative (compulsory)**

In this case there will be no planning and design, therefore no direct, indirect or cumulative ‘site’ related impacts are anticipated in the planning and design phase.

Mitigation measures to manage the potential impacts listed above:

<table>
<thead>
<tr>
<th>Alternative S1</th>
<th>Alternative S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>None required.</td>
<td></td>
</tr>
</tbody>
</table>

b. Process, technology, layout or other alternatives

**Alternative A1 (preferred alternative)**

Planning and design entails limited, non-intrusive site survey and desktop design work. Accordingly, no direct, indirect or cumulative ‘process, technology or layout’ related impacts are anticipated.

<table>
<thead>
<tr>
<th>Alternative A2 (if any)</th>
</tr>
</thead>
</table>

**No-go alternative (compulsory)**

In this case there will be no planning and design, therefore no direct, indirect or cumulative ‘process, technology or layout’ related impacts are anticipated in the planning and design phase.
Mitigation measures to manage the potential impacts listed above:

**Alternative A1:**

None required

**Alternative A2:**


**IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE**

a. Site alternatives

**Alternative S1 (preferred site)**

No direct, indirect or cumulative ‘site’ related impacts are anticipated during the construction phase.

**Alternative S2 (if any)**


**No-go alternative (compulsory)**

No direct ‘site’ related impacts are likely to occur with the no-go alternative, as the status quo will remain.

Mitigation measures to manage the potential impacts listed above:

**Alternative S1**

None

**Alternative S2**


b. Process, technology, layout or other alternatives

**Alternative A1 (preferred alternative)**

The following environmental aspects associated with the construction phase of the proposed development have been considered. Whilst they will not result in “likely environmental impacts”, they have been documented for purposes of completeness.

**Direct impacts:**

Social:

- **Traffic, Access and Safety**

  There may be temporary inconvenience and moderate delays to traffic within and around the Port during the construction phase due to the presence of construction vehicles and trucks delivering construction materials. Mitigation measures recommended in the EMPr will ensure any traffic congestion is minimised and does not result in impacts greater than low significance.

- **Aesthetics**

  There may be a visual impact on aesthetics in the vicinity of the proposed site due to the presence of construction materials and vehicles. However, due to the short term nature of the construction phase and the industrial nature of the area, construction activities are not expected to have a significant impact on visual disturbance of the area. In addition, the E/F Slab is does not lie within the public viewshed. This potential impact is therefore deemed to be of low significance.
**Employment and Social Upliftment**

The construction phase will provide a positive impact by providing new employment opportunities. This is likely to have an impact of low significance on employment and social upliftment in the local area.

**Cultural and Heritage Resources**

No cultural or heritage resources are anticipated to occur within the project site as the area is previously disturbed. Provided that recommendations and mitigation measures made in the EMPr (Appendix F) are implemented, the construction phase is not expected to have an impact on local cultural and heritage resources resulting in an impact of no- to low significance.

**Physical Environment:**

**Air Quality**

During construction, localised air quality may be affected as dust and other particulate matter will potentially be released into the air as a result of the movement of construction vehicles and machinery. Dust emissions have the potential to deteriorate local air quality which may result in a nuisance factor to local landusers and industries, particularly during dry and windy conditions. Potential dust impacts will be short term (i.e. limited to the construction period), and provided that dust control measures are implemented (Appendix F), it is unlikely that there will be significant impacts. In addition, vehicular emissions from trucks transporting materials and labour may have an impact on local air quality. This is also considered to be a short term impact, and providing that vehicles are well maintained to limit emissions, it is unlikely that there will be significant impacts.

**Noise**

Noise emissions are likely to be generated from typical construction sources, such as construction vehicles, excavators, machinery, cranes and labourers. Elevated noise levels have the potential to result in a nuisance factor to receptors (e.g. local businesses and land users). Provided that construction activities occur within normal working hours (i.e. Monday to Friday 7:30am to 5pm), elevated noise levels are likely to result in impacts of low significance. Recommendations made in the EMPr (Appendix F) should be followed in order to ensure minimal disturbance.

**Surface and Groundwater Management and Contamination**

Aspects such as soil erosion and accidental spillage of hazardous substances (such as hydrocarbon waste, fuel, oil, and paint) during the construction phase can result in accidental or negligent small scale spills to the environment. This can potentially contaminate soil, groundwater, stormwater runoff and harbour waters rendering them dangerous for either human or ecological use. The potential for contamination will be significantly reduced provided that soil erosion and surface water protection measures recommended in the EMPr (Appendix F) are implemented, thereby reducing potential downstream impacts to low significance. In addition, hazardous substances must be stored and used in the correct manner in order to reduce the risk of spills. In the event of accidental spills, the correct clean up procedures are stipulated in the EMPr (Appendix F).

**Geology and soils**

There is the potential for localised soil erosion to occur as a result of site clearing and movement of construction vehicles especially during high rainfall events. Soil erosion has the potential to contaminate nearby harbour waters, from increased sedimentation. The extent of soil erosion can be minimised to an impact of no- to low significance through the implementation of stringent soil erosion control measures stipulated in the EMPr (Appendix F).

**Biological Environment**

**Flora & Fauna**

The proposed site is vacant and vegetated with grass species, scattered alien species and small
shrubs. The entire site will need to be cleared before construction commences, and the entire slab area will be surfaced. Recommendations made in the EMP (Appendix F) must be followed in order to ensure minimal damage to indigenous resources. However, the site has been historically disturbed and is not in a pristine nature condition, as is evident from the proliferation of alien species on site. Impacts associated with flora and fauna present on site are therefore deemed to be of no- to low significance should control measures contained within EMP (Appendix F) be properly implemented to ensure that construction activities do not result in spread of alien invasive plants.

Indirect impacts / Cumulative impacts:
No indirect or cumulative impacts are anticipated in the construction phase.

Alternative A2
No-go alternative (compulsory)

Direct impacts:
No direct process/technology/layout related impacts are likely with the no-go alternative, as the status quo will remain.

Indirect / Cumulative impacts:
Social:
- Employment and Associated Social Upliftment
Local semi-skilled and skilled workforce in the area will not receive the employment they would have received during the construction phase. This is a long term impact of low significance.

Mitigation measures to manage the potential impacts listed above:

Alternative A1: Alternative A2:
An EMP (Appendix F) has been developed to address environmental issues related to the construction phase.

IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

Alternative S1 (preferred alternative)
No direct, indirect or cumulative ‘site’ related impacts are anticipated during the operational phase.

Alternative S2 (if any)

No-go alternative (compulsory)
In this case there will be no operational activities, therefore no direct, indirect or cumulative ‘site’ related impacts are anticipated in the operational phase.

Mitigation measures to manage the potential impacts listed above:

Alternative S1 Alternative S2
b. Process, technology, layout or other alternatives

Alternative A1 (preferred alternative)

<table>
<thead>
<tr>
<th>Direct impacts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social:</td>
</tr>
<tr>
<td>Traffic, Access and Safety</td>
</tr>
</tbody>
</table>

During the operational phase, there may be traffic congestion impacts relating to trucks and rail cars delivering bulk cargo (approximately 660 loads are anticipated per year). In addition, vessel traffic within the Port is expected to increase due to additional vessels importing and exporting goods from the DBT (approximately 40 vessels are anticipated per month). This is considered to be a long term impact of low to medium significance, considering that there will be an increase in traffic from the current operations at the existing storage slabs.

- Aesthetics

The E/F Slab East will not be visible to the public due to surrounding structures and conveyor housings. Due to the industrial nature of surrounding activities and the fact that the project involves the expansion of existing storage facilities, no impacts relating to visual disturbance are expected.

- Employment and Social Upliftment

The operational phase will utilise the resources of current employees at the existing storage facilities, and no additional jobs are expected to be provided. The increased storage capacity of the DBT is expected to result in an increase in exports and imports within the Port. Potential impacts from this include local and/or regional economic growth. This is considered to be a long-term impact of low to medium significance.

<table>
<thead>
<tr>
<th>Physical Environment:</th>
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</thead>
<tbody>
<tr>
<td>Air Quality</td>
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</table>

During the operational phase the key source of emissions is anticipated to be dust generated from operations undertaken at active stockpiles. Increased cumulative PM$_{10}$ has potential to deteriorate local air quality which may result in health concerns for residents and employees, damage to equipment, and a nuisance to local land users and industries.

An Air Quality Impact Assessment (AQIA) was conducted as part of this environmental authorisation application (Appendix D). The average PM$_{10}$ concentration measured in 2013 at the RBCAA CBD monitoring station was 26.92 µg/m$^3$ and has been summed (as a blanket background concentration) with modelled concentrations at each receptor. Period average percentage increase in PM$_{10}$ concentrations and their P99 24-hour concentrations have been compared with the relevant NAAQS.

To assess health effects from the operation of E/F Slab, predicted emissions were compared with the NAAQS. Results include:

- Cumulative period average and P99 24-hour PM$_{10}$ concentrations demonstrate full compliance with the respective annual and 24-hour NAAQS.

- The highest percentage increase in emissions is predicted at the CBD discrete receptor. The period average and P99 24-hour average PM$_{10}$ concentrations are predicted to increase by 0.01%.

---

*NOTE: This refers to the updated 2015 AQIA.*
Plume isopleths indicated that the highest concentrations are predicted onsite at E/F Slab. Compliance is achieved within TPT’s fenceline. While PM$_{10}$ is a pollutant of concern in Richards Bay, results from this air quality impact assessment clearly demonstrate that the increase in emissions from the proposed E/F Slab to the existing air quality status of Richards Bay is marginal.

- **Noise**

Noise emissions are likely to be generated from typical operational sources (i.e. the movement of bulk cargo and operation of machinery). Elevated noise levels have the potential to result in a disruption to receptors (surrounding businesses and land users). This is considered to be a long term impact of low significance, considering that there will be a minimal increase in noise emissions from the current operations at the existing storage facilities.

- **Surface and Groundwater Management and Contamination**

An increase in hardened surfacing (i.e. construction storage slab) will result in an increase in surface water runoff especially during precipitation events and if uncontrolled will potentially entrain suspended sediments from the stockpiles, hydrocarbons, and other maintenance chemicals, potentially affecting water quality in the harbour.

Suspended solids transported from the site may result in the following impacts:

- Deposition of sediment and resultant blockages within the stormwater conveyance structures (i.e. pipes and channels) which reduces the design capacity of this infrastructure, leading to increased risk of flooding; and,
- Increased turbidity of the receiving waters leading to potential environmental impacts.

Without the appropriate sediment control (i.e. sediment traps) prior to discharge, there is the potential for impacts to surface water bodies due to elevated suspended solids. Through dissolution, the stockpiles may lead to the contamination of stormwater which has the potential to contaminate surface and groundwater resources. However, the following can be noted:

- Chrome ore has a low solubility and based on relevant MSDS data has a limited risk to aquatic receptors; and,
- Magnetite is not listed a hazardous substance or toxic pollutants under the United States Clean Water Act.

Nonetheless, there is the potential for the ore to contain other materials (either due to mixing at the source, during transport or during subsequent handling and storage); hence the dissolved phase concentrations of contaminants of concern arising from the proposed materials needs to be determined to ensure that the associated environmental risk is limited.

Based on the potential for elevated suspended solids and dissolved phase contamination, to ensure that stormwater generated on site is adequately contained and routed, a Stormwater Management Plan (SWMP) has been produced as part of this environmental authorisation application, and is included as a Specialist Report in Appendix D. This includes the use of berms, channels, sediment traps and retention facilities to manage both clean and dirty stormwater. Provided that stormwater management is correctly implemented as per the SWMP (Appendix D) and the EMPr (Appendix F), it is unlikely that the proposed operational activities at the E/F storage slab will result in significant environmental impacts. Reduction and mitigation of potential surface water and groundwater contamination will result in an impact of low significance.

- **Geology and soils**
The probability for soil erosion to occur during the operational phase is low, as all proposed activities will be restricted to areas with hard standing. No significant geology and soil related impacts are therefore expected during the operational phase.

**Biological Environment**

- **Flora & Fauna**

  No impacts associated with disturbance to ecologically valuable pre-existing land cover are anticipated as no vegetation clearing will occur during the operational phase. On-going vegetation management must include pollution prevention and the removal of any invasive plants.

**Alternative A2**

**No-go alternative (compulsory)**

In this case the development would not take place and the site would remain vacant. The terminal will continue to operate at its current storage capacity (400 kt). This would mean that the volume of imports / exports would not be able to increase through the Port, and the potential economic benefits in terms of the handling of cargo would not be available.

No further direct, indirect or cumulative process/technology/layout related impacts are likely with the no-go alternative, as the status quo will remain.

Mitigation measures to manage the potential impacts listed above:

**Alternative A1**

Refer to Section F for an outline of mitigation measures and recommendations.

**Alternative A2**

**IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING OR CLOSURE PHASE**

a. Site alternatives

**Alternative S1 (preferred alternative)**

No direct, indirect or cumulative ‘site’ related impacts are anticipated during the decommissioning or closure phase.

**Alternative S2**

**No-go alternative (compulsory)**

In this case there will be no decommissioning or closure. Accordingly, no ‘site’ related impacts are anticipated during the decommissioning or closure phase.

Mitigation measures to manage the potential impacts listed above:

**Alternative S1**

**Alternative S2**
b. Process, technology, layout or other alternatives

Alternative A1 (preferred alternative)

**Direct / Indirect / Cumulative impacts:**

The proposed development and associated activities are likely to be used for the foreseeable future, and therefore the likely impacts of decommissioning cannot be accurately predicted at this stage. The decommissioning phase has therefore not been considered within the ambit of this assessment. Impacts associated with the decommissioning phase should be addressed at the appropriate time.

Alternative A2

**No-go alternative (compulsory)**

**Direct / Indirect / Cumulative impacts:**

In this case, there will be no decommissioning of the facility, and the operational phase of the development will continue. Other than impacts already identified for the operational phase, no further direct, indirect or cumulative impacts are anticipated.

Mitigation measures to manage the potential impacts listed above:

<table>
<thead>
<tr>
<th>Alternative A1</th>
<th>Alternative A2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

**Impact Assessment Methodology:**

The following section comprises a summary table of potential environmental impacts identified in the preceding sections. Refer to the Environmental Management Programme (EMPr) in Appendix F for a mitigation summary (i.e. recommendations for minimising or eliminating negative impacts).

A semi-quantitative rating of the significance of environmental issues has been included. The purpose of the significance rating is to highlight relevant important issues, and to eliminate the insignificant issues from the investigation. Each category was divided into a number of different levels. These levels were then assigned various criteria. This is detailed in the table below:

**Impact assessment criteria**

<table>
<thead>
<tr>
<th>Nature of the potential impact</th>
<th>Qualifier</th>
<th>Description of the effect, and the affected aspect of the environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent</td>
<td>Site</td>
<td>Impact will be limited to within the site boundaries</td>
</tr>
<tr>
<td></td>
<td>Local</td>
<td>Impact will affect surrounding areas/communities</td>
</tr>
<tr>
<td></td>
<td>Regional</td>
<td>Impact will affect areas far beyond the site boundary</td>
</tr>
<tr>
<td>National</td>
<td>Impact will affect areas far beyond the site boundary within South Africa</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Global</td>
<td>Impact will affect areas far beyond South African borders</td>
<td></td>
</tr>
<tr>
<td><strong>Duration (time scale)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term</td>
<td>Impact restricted to construction and early operation (e.g. 0-1 years)</td>
<td></td>
</tr>
<tr>
<td>Medium-term</td>
<td>Impact restricted to operational phase (e.g. 1 - 3 years)</td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td>Impact will cease after the operational life of the activity either by natural processes or by human intervention</td>
<td></td>
</tr>
<tr>
<td>Permanent</td>
<td>Where mitigation either by natural processes or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.</td>
<td></td>
</tr>
<tr>
<td><strong>Intensity (sensitivity of impact)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Where the impact affects the social environment in such a way that social and cultural functions or processes are not affected</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Where the affected social environment is altered, but social, and cultural functions or processes continue albeit in a modified way</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Where social and cultural functions or processes are altered to the extent that it will temporarily or permanently cease.</td>
<td></td>
</tr>
<tr>
<td><strong>Probability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improbable</td>
<td>Possibility of the impact to materialise is very low, either because of design or historic experience</td>
<td></td>
</tr>
<tr>
<td>Probable</td>
<td>There is a distinct possibility that the impact will occur</td>
<td></td>
</tr>
<tr>
<td>Highly probable</td>
<td>Where it is most likely that the impact will occur</td>
<td></td>
</tr>
<tr>
<td>Definite</td>
<td>Where the impact will occur regardless of any mitigation measures</td>
<td></td>
</tr>
<tr>
<td><strong>Significance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Synthesis of the aspects produced in terms of their nature, duration, intensity, extent, and probability)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Where the impact will not have an influence on the outcome</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Where it should have an outcome on the decision unless it is mitigated</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Where it would influence the outcome regardless of any possible mitigation</td>
<td></td>
</tr>
<tr>
<td><strong>Mitigation Summary</strong></td>
<td>Summary of recommendations for minimising or eliminating negative impacts</td>
<td></td>
</tr>
</tbody>
</table>

Evaluation of Potential Environmental Impacts associated with the proposed activities. Note: Where the impact is negative mitigation is considered, where the impact is positive, mitigation is not considered.

**Alternative S1 (preferred site)**

No direct, indirect or cumulative ‘site’ related impacts are anticipated as a result of the project.

**Alternative S2**
### Table 4: Evaluation of Potential Environmental Impacts Associated with the construction and operation of the proposed E/F Slab Expansion

**Alternative A1 (preferred alternative)**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Traffic, Access and Safety</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Construction</td>
<td>During the construction phase, construction vehicles may cause traffic delays and accessibility problems.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td>Definite: The transportation of construction material will result in increased traffic movement to the site and within the RBT. Mitigation measures have been included within the EMPr.</td>
<td>Low</td>
</tr>
<tr>
<td>Operational</td>
<td>During the operational phase, traffic delays may result from an increase in traffic from the current operations at the existing storage slabs.</td>
<td>Regional</td>
<td>Long-term</td>
<td>Low</td>
<td>Definite: During the operational phase, there may be traffic congestion impacts relating to trucks and rail cars delivering bulk cargo. In addition, vessel traffic within the Port is expected to increase due to additional vessels importing and exporting goods from the DBT.</td>
<td>Low to Medium</td>
</tr>
<tr>
<td><strong>Aesthetics</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Visual disturbance may result from the construction of the proposed storage slab.</td>
<td>Site</td>
<td>Short-term</td>
<td>Low</td>
<td>Probable: Negative impacts relate to the presence of construction equipment and activities such as the stockpiling of soil. Mitigation measures have been included within the EMPr.</td>
<td>Low</td>
</tr>
<tr>
<td>Phase</td>
<td>Impact</td>
<td>Extent</td>
<td>Duration</td>
<td>Intensity</td>
<td>Probability (with mitigation)</td>
<td>Overall Significance</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------------------------------</td>
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</tr>
</tbody>
</table>
| Cultural and Heritage Resources | There is the potential for unidentified cultural or heritage resources to be disturbed during construction. | Site     | Short-term | Low       | Improbable: No cultural or heritage resources have been identified on site to date and the project site has been historically disturbed. Any heritage resources identified during the construction phase must be appropriately dealt with as per the EMP
t | No to Low | |
| Air Quality     | During construction, localised air quality may be affected as dust and other particulate matter will potentially be released into the air as a result of the movement of construction vehicles and machinery. | Site     | Short-term | Low       | Probable: Dust emissions have the potential to deteriorate local air quality which may result in a nuisance factor to local landusers and industries, particularly during dry and windy conditions. In addition, vehicular emissions from trucks transporting materials and labour may have an impact on local air quality. Mitigation measures have been included within the EMP
t | Low | |
<p>| Operational     | During the operational phase localised air quality may be affected by dust and air-borne residue arising from the storage and handling of cargo. | Local    | Long-term | Low       | Highly Probable: Dust emissions have the potential to deteriorate local air quality. It is critical that Transnet adheres to the mitigation measures outlined in their Air Quality Management Plan (AQMP) and the EMP (Appendix F) to minimise the environmental impact of operations at the terminal. | Low |</p>
<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Noise emissions are likely to be generated from typical construction sources, such as construction vehicles, excavators, machinery, cranes and labourers.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td>Probable: Elevated noise levels have the potential to result in a nuisance factor to receptors (e.g. local businesses and land users). Mitigation measures have been included within the EMPr.</td>
<td>Low</td>
</tr>
<tr>
<td>Operational</td>
<td>Noise emissions are likely to be generated from typical operational sources (i.e. the movement of bulk cargo and operation of machinery).</td>
<td>Local</td>
<td>Long-term</td>
<td>Low</td>
<td>Probable: Elevated noise levels have the potential to result in a disruption to receptors (surrounding businesses and land users). However, there will be a minimal increase in noise emissions from the current operations at the existing storage facilities.</td>
<td>Low</td>
</tr>
<tr>
<td>Construction</td>
<td>There is the potential for construction activities to result in surface and groundwater contamination from soil erosion or accidental spills of fuels and other contaminants.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td>Improbable: The potential exists for surface and groundwater contamination to occur should hazardous materials not be stored or handled correctly. This can potentially contaminate soil water runoff and harbour waters rendering them dangerous for either human or ecological use. Mitigation measures have been included within the EMPr.</td>
<td>Low</td>
</tr>
</tbody>
</table>
**Basic Assessment Report**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational</strong></td>
<td>There is the potential for operational activities to result in surface and groundwater contamination due to suspended and dissolved solids in stormwater runoff.</td>
<td>Local</td>
<td>Long-term</td>
<td>Low</td>
<td><strong>Probable:</strong> An increase in hardened surfacing (i.e. construction storage slab) will result in an increase in surface water runoff especially during precipitation events and if uncontrolled will potentially entrain suspended sediments from the stockpiles, hydrocarbons, and other maintenance chemicals, potentially affecting water quality in the harbour. Provided that stormwater management is correctly implemented as per the SWMP (Appendix D) and the EMPr (Appendix F), it is unlikely that the proposed operational activities at the E/F storage slab will result in significant environmental impacts.</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Geology and Soils**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td>There is the potential for localised soil erosion to occur as a result of site clearing and movement of construction vehicles especially during high rainfall events.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td><strong>Probable:</strong> Soil erosion has the potential to contaminate nearby harbour waters, from increased sedimentation. The extent of soil erosion can be minimised to an impact of no- to low significance through the implementation of stringent soil erosion control measures stipulated in the EMPr (Appendix F).</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Flora and Fauna**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td>Potential impacts include disturbance to ecologically pre-existing land cover.</td>
<td>Site</td>
<td>Short-term</td>
<td>Low</td>
<td>The proposed site is vacant and vegetated with grass species, scattered alien species and small shrubs. The entire site must be cleared before construction commences, and the entire slab area will be surfaced. Control measures contained within EMPr (Appendix F) must be properly implemented to ensure that construction activities do not result in spread of alien invasive plants.</td>
<td>Low</td>
</tr>
<tr>
<td>Phase</td>
<td>Impact</td>
<td>Extent</td>
<td>Duration</td>
<td>Intensity</td>
<td>Probability (with mitigation)</td>
<td>Overall Significance</td>
</tr>
<tr>
<td>---------</td>
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<td>--------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Positive Impacts</td>
<td>Employment and Social Upliftment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>The construction phase will provide new temporary employment opportunities.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td>Definite: Definite employment opportunities exist for semi-skilled and skilled workers in the construction sectors.</td>
<td>Low</td>
</tr>
<tr>
<td>Operational</td>
<td>The increased storage capacity of the DBT is expected to result in an increase in exports and imports within the Port.</td>
<td>Regional</td>
<td>Long-term</td>
<td>Low</td>
<td>Definite: The increased storage capacity of the DBT is expected to result in an increase in exports and imports within the Port. Potential impacts from this include local and/or regional economic growth.</td>
<td>Low to Medium</td>
</tr>
</tbody>
</table>
## Negative Impacts

### Employment and Associated Social Upliftment

<table>
<thead>
<tr>
<th>Phase</th>
<th>Impact</th>
<th>Extent</th>
<th>Duration</th>
<th>Intensity</th>
<th>Probability (with mitigation)</th>
<th>Overall Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>The no-go alternative would result in lost employment opportunities for a small number of contract workers during the construction phase.</td>
<td>Local</td>
<td>Short-term</td>
<td>Low</td>
<td>Definite: Local semi-skilled and skilled workforce in the area will not receive the employment they would have received during the construction phase.</td>
<td>Low</td>
</tr>
<tr>
<td>Operational</td>
<td>In the no-go alternative, the storage capacity of the DBT will remain the same.</td>
<td>Regional</td>
<td>Long-term</td>
<td>Low</td>
<td>Definite: In the case of the no-go alternative, the terminal will continue to operate at its current storage capacity. This would mean that the volume of imports / exports would not be able to increase through the Port.</td>
<td>Low to Medium</td>
</tr>
</tbody>
</table>
SECTION E: RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

The overall objective of the Basic Assessment is to provide sufficient information to enable informed decision-making by the authorities. This was undertaken through consideration of the proposed project components, identification of the aspects, sources and description of potential impacts and subsequent provision of mitigation measures.

The implementation of the EMPr, SWMP and AQMP is required to alleviate the potential negative impacts on the environment to a level of no or low significance. This should be a condition of the Environmental Authorisation, together with the requirement for the appointment of an independent ECO. The assessment of the perceived impacts after implementation of the EMPr, SWMP and AQMP indicates that the project will have impacts of low significance.

Is an EMPr attached?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

The EMPr must be attached as Appendix F.
SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report (Stakeholder Engagement Report)

Appendix F: Environmental Management Programme (EMPr)
Appendix A: Site plan(s)
Figure 4: Locality map indicating the position of the proposed site.
Figure 5: Site plan indicating position of the proposed site and surrounding land use.
Appendix B: Photographs

![Figure 6: North - 360° view from the site centre.](image1)

![Figure 7: North east - 360° view from the site centre.](image2)

![Figure 8: East - 360° view from the site centre.](image3)

![Figure 9: South east - 360° view from the site centre.](image4)

![Figure 10: South - 360° view from the site centre.](image5)

![Figure 11: South west - 360° view from the site centre.](image6)
Figure 12: West - 360° view from the site centre.

Figure 13: North west - 360° view from the site centre.

Figure 14: Vegetation along the eastern edge of the site, facing north.

Figure 15: Vegetation along the northern edge of the site and boundary fence of D slab, facing west.

Figure 16: View of the proposed site and existing D slab, facing North west.

Figure 17: View of the existing D slab, facing West.
Appendix C: Facility illustration(s)
Appendix D: Specialist reports

- Stormwater Management Plan
Appendix E: Stakeholder Engagement Report
Appendix F: Draft Environmental Management Programme (EMPr)