



Proposed Durban Dig-Out Port:

# DISCUSSION DOCUMENT

FEBRUARY 2013

## Introduction

Transnet SOC Ltd is a State Owned Company that has been mandated by Government to be the custodian of rail, port and pipeline infrastructure and is responsible to assist Government with growing the economy. As part of Transnet's responsibility to provide capacity in the ports to handle the import and export of more goods, the proposed Durban Dig-Out Port (DDOP) has been identified as one of the projects required to provide that capacity ahead of demand.

## Purpose of the Document

This document has been prepared to share information on the proposed DDOP for discussion with stakeholders and to encourage initial comments and inputs.

The purpose of this request for input and comment is to:

- Identify initial material issues for consideration in the proposed DDOP planning process; and
- Develop the foundation for future stakeholder engagement to take place within the later planning phases of the proposed DDOP programme.

## Aim of Stakeholder Engagement

Transnet has contracted WSP Environment and Energy (WSP) to facilitate engagement with stakeholders early in the planning process and to use inputs from stakeholders to develop a Sustainable Port Development Framework (SPDF) that could guide the further development of this programme.

Transnet has highlighted stakeholder engagement as a critical requirement for the development of the SPDF as it

recognises that sustainability related issues associated with the development of the port and operation thereof are of concern to a full spectrum of stakeholders. Targeted stakeholder engagement is therefore integral to refining the identification and assessment of material issues for incorporation into the SPDF guidelines.

This early engagement is being initiated well in advance of the statutory Environmental Impact Assessment (EIA) that will have to be done. Should the proposed project proceed as planned, an EIA will be conducted in accordance with all legal requirements.

A key stakeholder is an individual or group:

- with a vested interest in the outcome of the proposed project; and
- who may be significantly impacted by the proposed project.

## WHY: National Driver for the Proposed Durban Dig-Out Port

The New Growth Path published by the Government sets a goal of five million new jobs by 2020; it recognises structural problems in the economy to be overcome in order to create jobs, and it identifies certain job drivers (opportunities in specific sectors and markets). President Jacob Zuma highlighted the key initiatives in his State of the Nation Address in 2012. Infrastructure development was identified as a significant job driver and in this regard, Transnet was mandated to implement several projects. The

Government then adopted the National Infrastructure Plan in 2012 to improve Government's service delivery, stimulate job creation and accelerate economic transformation. Cabinet also established the Presidential Infrastructure Coordinating Commission (PICC) to integrate and coordinate the National Infrastructure Plan.

In response to infrastructure gaps, the PICC identified 18 Strategic Integrated Projects (SIPs) covering all 9 provinces. The SIPs represent corridors of proposed infrastructural development which have the following core functions (PICC, 2012<sup>1</sup>):

- Promote balanced economic development
- To unlock economic opportunity;
- To transform the economic landscape;
- To create new jobs;
- To strengthen the delivery of basic services; and
- To support the integration of African economies.

Each SIP consists of a large number of specific infrastructure components and programmes.

### SIP2: Durban-Free State-Gauteng Logistics and Industrial Corridor

SIP2 is one of the geographically focused SIPs identified in the 2012 National Infrastructure Plan. The objective of this strategic project is to improve logistics and economic integration between the main economic centres of Durban and Gauteng, and raise the efficiency of export operations.

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<sup>1</sup> PICC Report 2012 – Summary of the South African National Infrastructure Plan

The main components of SIP2 include:

- Development of cargo nodes in Harrismith, Cato Ridge, Tambo Springs, and Dube Trade Port;
- Upgrade of City Deep, Pyramid, West Rand and Sentrarrand cargo nodes;
- Expansion of rail capacity and rolling stock to meet forecast demand;
- Development of the Ekurhuleni Aerotropolis (surrounding OR Tambo International Airport) as a service, manufacturing and cargo node;
- Upgrade of roads, principally the N3 route as well as feeder roads and the N2;
- Expansion of the current Durban Port;
- Development of the proposed Durban Dig-Out Port (DDOP), and
- Development of Cornubia Integrated Human Settlements.

The proposed DDOP therefore forms a key pillar in SIP2 for long term economic growth as a node within the proposed Durban to Gauteng freight corridor. The corridor is vital in facilitating economic growth for the country and the Southern African region. It also seeks to improve access by currently isolated industrial and logistics hubs as well as marginalised rural production centres to the country's primary general freight export and import corridor.

SIP2 was launched by the Minister of Public Enterprises, Malusi Gigaba, on 6 December 2012 where he indicated that the proposed DDOP forms a central component of the success of SIP2.

## Transnet Long-Term Planning Framework

Transnet's Long-term Planning Framework (LTPF) defines Transnet's long-term port, rail and pipeline infrastructure capacity investment plans. The LTPF is based on a 30 year integrated freight demand forecast and is closely aligned with the National Development Plan of Government. This plan is updated on an annual basis.

The LTPF provides a framework for unconstrained capital investment requirements to meet the predicted demand.

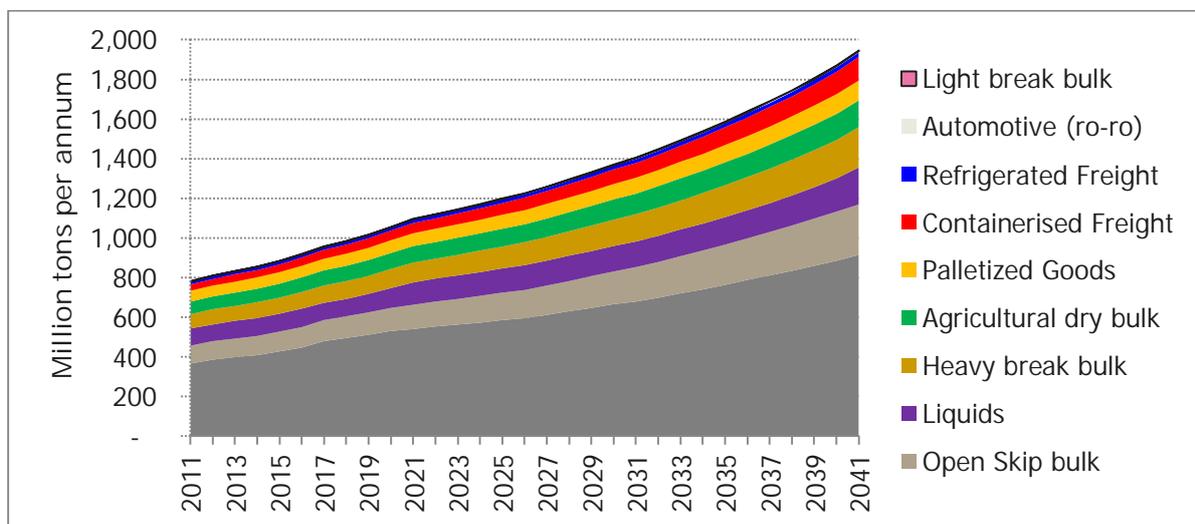
The final demand planning is informed by using three sets of models:

- the Freight Demand Model (FDM) (how many tons of goods needs to be transported countrywide);

- the Transportation Model (where do these goods need to be transported to); and
- the Market Share Model (split between road and rail allocation).

Due to the current world-wide economic situation, as well as local socio-economic and environmental realities, this forecast will be constantly re-evaluated during the planning phases of the proposed DDOP.

The LTPF is based on principles such as creating capacity ahead of demand; ensuring long-term sustainability; integrating port, rail and pipeline planning; benchmarking internationally; regional integration and reducing the total cost of the South African freight transport and logistics.



	2011	2016	2021	2026	2031	2036	2041
<b>Surface</b>	762	885	1,043	1,188	1,373	1,608	1,927
<b>Rail suitable</b>	356	420	494	561	641	745	885
<b>Planned rail</b>	212	308	393	456	536	611	689
<b>General freight</b>	73	134	178	241	312	370	437

The Freight Demand Model is forecasting overall freight handled in SA will grow from the current 762mtpa to 1 927mtpa by 2041

Freight on rail will grow by more than three times the current volumes (212mtpa – 689mtpa)

General freight on rail is expected to grow by an average of 6% annually

Figure 1: National Freight Demand Projections (Transnet LTPF 2012)

It is clear from the FDM (Figure 1), that demand for all forms of freight will grow over the next 30 years, including containers.

Due to the complementary port system used in SA, other ports such as Richards Bay and Ngqura were considered for container expansion, but the focus of these ports is mainly on exports of coal and manganese, respectively, hinterland containers and automotive imports and exports. Durban, due to its role as the premier gateway to Gauteng and Southern Africa for containers, as well as Durban and the KwaZulu-Natal (KZN) hinterland, is best placed for major container handling expansion.

### Transnet Market Demand Strategy

The Transnet Market Demand Strategy (MDS) will expand and modernise the country's ports, rail and pipeline infrastructure and improve operating efficiencies over the next 7 years. Transnet manages its capital investment spend according to a 7 year business planning cycle, using the Long Term Planning Framework (LTPF) as an overarching forecast, but at the same time taking cognisance of short-term forecasts and demands, which are based on the current economic situation.

R300bn has been allocated in the MDS for investment in infrastructure development and maintenance. The MDS will allow Transnet to transport goods in a reliable, efficient and cost-effective manner. In support of Government's drive to expand infrastructure, Transnet will, through the MDS, create an estimated total of 288 000 additional jobs in the economy, increase container capacity by approximately 71% by 2019, spend some R7.7bn on training, skills development and bursary grants by 2018/2019, and increase its own

headcount by approximately 25% over the next 7 years.

The proposed DDOP will generate significant opportunities for the people of Durban and surrounding areas, as the proposed project forms part of the planning for this area.

## WHAT: Proposed Durban Dig-Out Port Opportunities

### Need for the Proposed Durban Dig-Out Port

Nationally, South Africa's container cargo volumes have increased fivefold over the past 30 years. They are currently expected to increase by roughly the same order of magnitude over the next 30 years, from around 4 million twenty-foot equivalent units (TEUs) per year in 2010 to approximately 20 million TEUs per year by 2040. In that period, Durban is expected to handle about 70% of the country's container cargo volumes.

The Port of Durban is currently Africa's busiest port, playing a critical role in servicing the import and export needs of Durban and KZN, as well as Gauteng and the greater Southern African region. Almost two thirds of South Africa's containers, equating to approximately 2.7 million TEUs per annum, as well as significant liquid fuel and vehicle cargoes move through Durban. The demand for container capacity in Durban is currently expected to exceed 12 million TEU's over the next 30 years. There is already pressure on the existing Port of Durban and associated infrastructure to accommodate the required increases in volume. Transnet, as a key economic enabler for South Africa, must thus expand its existing port operations to accommodate these growing freight

volumes and support the growing South African economy.

Another major driver that South Africa is experiencing is the demand for deep water berth capacity, as shipping lines look for benefits of scale in their operations. This is not only in terms of financial efficiency, but a crucial means of reducing the carbon footprint per TEU transported by these lines. It is a fact that the size of container vessels has grown significantly, and ships that can accommodate 15 000 TEUs, with a draft<sup>2</sup> of -16m, are already in operation on the World's major trade routes. Plans are already afoot for the production of 18 000 TEU container ships, and the proposed DDOP will have to be designed to accommodate these large ships if South Africa is to remain competitive and retain its position as Southern Africa's general freight gate and transshipment hub. Linked to the increasing vessel size is the need for larger equipment to handle these vessels and containers.

#### VISION:

- Largest container port in Africa
- World class port
- Green port

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<sup>2</sup> "Draft" is simply defined as the depth of a vessel at any given time (defined as the distance between the vessel's waterline and the lowest point of the vessel, usually the keel).

## Vision and Overview of the proposed Durban Dig-Out Port

Transnet's vision for the proposed DDOP is a port defined by the following key characteristics:

- The largest container port in Africa;
- A world class port in terms of efficiency; supply chain, security and sustainability.
- A green port that balances environmental challenges with economic demands and provides socio-economic opportunities to surrounding communities

It is likely that the proposed DDOP will be developed in a phased manner between 2016 and 2050. Initial indications are that the first phase container terminal is scheduled for commissioning by 2020. The completion of all future phases will be dependent on projected national growth in cargo and container handling demand.

The proposed fully developed port could consist of:

- A 16-berth container terminal which would provide in excess of 9 million TEUs in container handling capacity;
- An automotive terminal;
- A liquid bulk handling facility;
- Construction of road and rail access capacity and supporting back-of-port logistics infrastructure; and
- Construction of key infrastructure including a breakwater and an entrance channel.

The proposed DDOP will complement Transnet's container handling capacity at its ports in Durban, Ngqura, Port Elizabeth and Cape Town.

## WHERE: Proposed Location

The old Durban International Airport (DIA) site has been identified for the proposed development (Figure 2). The South Durban Basin, in which the old DIA site is located, is a key industrial centre within the eThekweni Municipality.

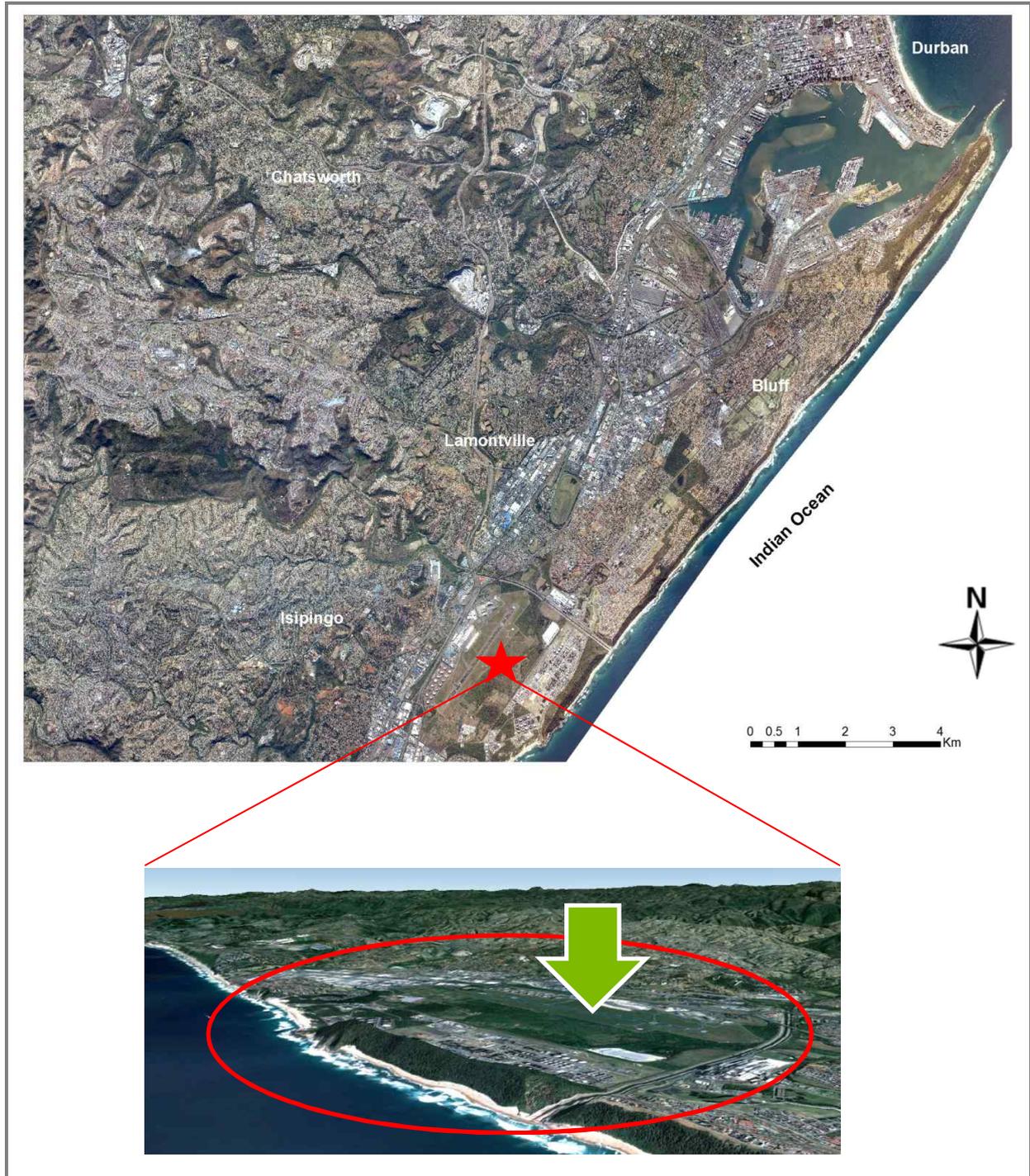


Figure 2: Proposed Durban Dig-Out Port Location (Department of Rural Development and Land Reform, National Geospacial Information, 2009, with Google Earth insert)

As indicated (Page 5), site options in Richards Bay and the Eastern Cape were considered but were not deemed feasible for the construction of a suitable port, on the basis of logistics and proximity to Johannesburg.

Transnet acquired the DIA site on 1 October 2012, with the official hand over from the Airport Company South Africa (ACSA) to Transnet occurring on 6 December 2012.

## HOW: Transnet's Planning Process

### Initial Research Studies

As indicated before, the 30 year long-term plan for freight demand is updated on an annual basis. Once certain programmes and proposed projects have been identified and included in the seven year Market Demand Strategy, then an initial study is conducted, called a Front End Research (FER) study.

A typical FER study will consist of the following aspects:

- Market intelligence gathered and consideration of demand scenarios related to the proposal;

- Alignment with national policy objectives (such as the National Infrastructure Plan);
- High level assessment of capacity in the national system (for example: containers);
- High level specialist research studies (for example: impact of vessel size on proposal; energy requirements, socio-economic impacts etc.); and
- Alignment with the broader Long-term Planning framework (LTPF).

Once the FER study has been completed and reviewed by the company for further investigation, then the next phase of the planning process commences, in accordance with Transnet's Project Lifecycle Process (PLP), consisting of Front End Loading (FEL) phases 1-4.

### Project Implementation Phases

The PLP consists of four Front End Loading (FEL) phases (Figure 3). Between each of these phases a gate review is held to determine if the specific phase has addressed all the criteria for investigation required and that there is sufficient certainty that the proposal would be viable and sustainable.

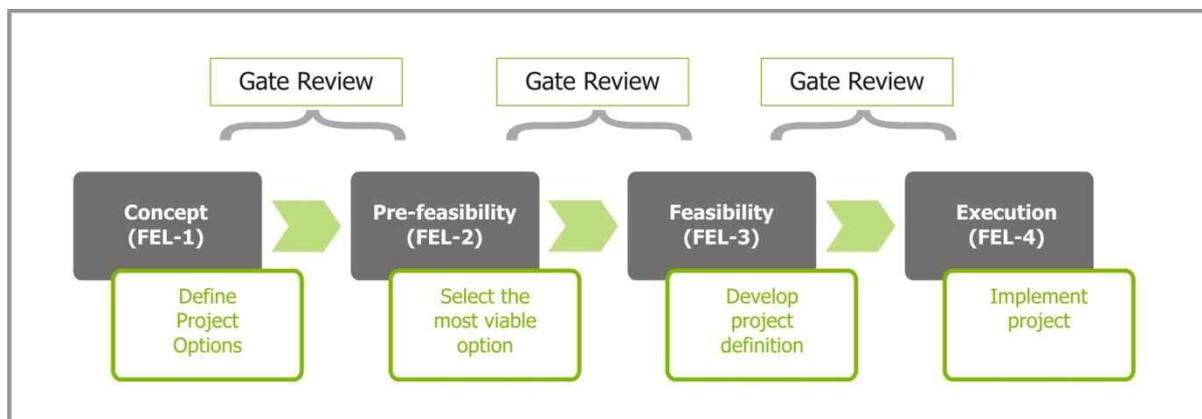


Figure 3: Project Lifecycle Process (FEL-1 to 4)

Transnet is currently involved in the first phase of the PLP, or the FEL-1 phase for the proposed DDOP, which is focused on the generation of conceptual design options. Transnet realises the value of considering sustainability elements (including environmental, social and economic considerations) and stakeholder engagement in the early stages of the project lifecycle. This aspect of the proposed DDOP development is being addressed through a specific and specialist Sustainability Workstream that has been formed, alongside a number of other workstreams that have been initiated by Transnet as part of the overall proposed DDOP programme. The workstreams include:

- Engineering workstream: tasked with the design of the proposed port, port operations and supporting logistics infrastructure at a FEL-1 level and in accordance with international best practice;
- Communication and Corporate Affairs workstream: tasked with presenting the proposed DDOP to internal and external stakeholders;
- Legal workstream: tasked with the promulgation of the proposed port in terms of the National Ports Act;
- Property Acquisition workstream: tasked with acquisition of properties required for the proposed DDOP;
- Property Management workstream: tasked with management of acquired properties;
- Port Funding Model: tasked with development of a funding model for the development; and
- Sustainability workstream: tasked with stakeholder engagement and development of a Sustainable Port Development Framework.

The process of moving from the current concept (FEL-1) phase, through the pre-feasibility (FEL-2) and feasibility (FEL-3) phases, and finally to actual implementation or construction (FEL-4) is anticipated to take approximately 4 years, and will follow due legislative and regulatory process.

## Sustainability and Community Focused Approach

### Sustainable Port Development Framework

To ensure that the proposed DDOP is developed and operated sustainably, a Sustainable Port Development Framework (SPDF), will be developed and it is essential that stakeholders form part of this process. The SPDF aims to achieve the following objectives:

- Promote long-term port sustainability;
- Integrate environmental and social principles into the planning process;
- Support construction and operational excellence;
- Protect sensitive natural environmental and local communities; and
- Address environmental and social risks and legal requirements early on during the project lifecycle.

To meet these objectives, the development of the SPDF will require collaboration with specialists across the other programme workstreams.

The development of the SPDF consists of the following steps (Figure 4):



Figure 4: Sustainable Port Development Framework (SPDF) Development Process

- **Material Issues Identification (Step 1)**  
All material issues associated with the proposed port and planning process will be identified for incorporation into the SPDF. Stakeholder engagement will assist with the identification of a wide range of material issues. In addition, a number of specialist studies are being carried out within FEL-1 phase. These include a contaminated land assessment, and biodiversity assessments (fauna and flora including potential relocation of chameleons). These studies will be reviewed to understand the current site characteristics, and identify critical issues associated with the DDOP site.
- **Issues Assessment (Step 2)**  
All material issues identified will be assessed.
- **Risk and Opportunity Assessment (Step 3)**  
Alignment with the engineering team will ensure that identified sustainability criteria following from the stakeholder engagements are built into the risk and opportunity assessment and design options of the proposed DDOP. During this step, it is critical to discuss the socio-economic and environmental risks and opportunities that the project holds for communities and other stakeholders.
- **Sustainable Port Development Strategy (Step 4)**  
A high level sustainability strategy will be generated to guide the further development of the proposed port. This strategy will comprise goals, objectives and targets for incorporating sustainability criteria into the design of the proposed DDOP during FEL-2 and FEL-3, should the project proceed.
- **Sustainable Port Development Framework (Step 5)**  
The SPDF will consist of a high-level strategic road map outlining priority milestones to be completed in order to ensure effective implementation of the sustainability objectives of the proposed DDOP.

## Stakeholder Engagement

### Approach to stakeholder engagement during FEL-1

A distinction must be made between stakeholder engagement during FEL-1 (early conceptual phase), and engagement which will be conducted during the EIA process (FEL-3 and beyond). Stakeholder engagement during the EIA phase will be all inclusive, extending to the broader public and conducted within the legal requirements of an EIA process.

The objective of stakeholder engagement during this phase (FEL-1) is to share project information, open lines of communication between Transnet and key stakeholders, and actively engage key representatives of the various stakeholder groups with the view to initiating dialogue. This dialogue will facilitate stakeholder input and comment and allow for the inclusion of key issues and expectations (material issues) in the decision making process of the project early in its development and inform the SPDF.

### Proposed Focused Engagement Strategy

Discussion sessions will be held with key representatives of the various stakeholder

groups where information pertaining to the proposed DDOP will be shared in order to allow stakeholders to raise and discuss their particular issues; and make recommendations for future stakeholder engagement.

### Your involvement

- You are invited to submit your initial comments, queries and issues relating to the proposed DDOP to WSP before 10 APRIL 2013. See attached Comment Form.
- Key stakeholders and representatives of stakeholder groups will be invited to attend focused, constructive, discussion sessions.

All comments raised (in writing and at discussion sessions) will be incorporated into a Comment and Response Report which will be used as a mechanism to feed stakeholder issues into the SPDF and the other streams of the FEL-1 study.

Feedback mechanisms will be discussed to facilitate on-going dialogue with key stakeholders.

## Acronyms used in this document

ACSA	Airport Company South Africa	LTPF	Long Term Planning Framework
DDOP	Proposed Durban Dig-Out Port	MDS	Market Demand Strategy
DIA	Durban International Airport	PICC	Presidential Infrastructure Coordinating Commission
EIA	Environmental Impact Assessment	PLP	Project Lifecycle Process
FDM	Freight Demand Model	SIP	Strategic Integrated Projects
FEL	Front End Loading	SPDF	Sustainable Port Development Framework
FER	Front End Research	TEU	Twenty-foot equivalent unit
KZN	KwaZulu-Natal	WSP	WSP Environment & Energy

## Comment Form

To ensure that your input, comments and queries regarding the proposed Durban Dig-Out Port are accurately documented and addressed, please complete this form by 10 April 2013 and return it to:

**Bathabile Msomi**  
WSP Environmental (Pty) Ltd  
Address: WSP House, 1 on Langford, Langford Road, Westville, 3629  
Tel: 031-240 8860  
Fax: 031-240 8861  
Email: DDOP@wspgroup.co.za

Please insert your personal details below:

Name:	
Organisation & Designation:	
Address:	
Tel:	
Fax:	
E-mail:	

Please list your interest in the project and comments below: