



Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID-AFRIKA

Vol. 569

Pretoria, 19 November 2012

No. 35890

N.B. The Government Printing Works will not be held responsible for the quality of "Hard Copies" or "Electronic Files" submitted for publication purposes



AIDS HELPLINE: 0800-0123-22 Prevention is the cure

IMPORTANT NOTICE

The Government Printing Works will not be held responsible for faxed documents not received due to errors on the fax machine or faxes received which are unclear or incomplete. Please be advised that an "OK" slip, received from a fax machine, will not be accepted as proof that documents were received by the GPW for printing. If documents are faxed to the GPW it will be the sender's responsibility to phone and confirm that the documents were received in good order.

Furthermore the Government Printing Works will also not be held responsible for cancellations and amendments which have not been done on original documents received from clients.

CONTENTS • INHOUD

No.

Page
No. Gazette
 No.**GENERAL NOTICE****Trade and Industry, Department of***General Notice*

961	Manufacturing Development Act (187/1993): Application for designation of an IDZ at Saldanha Bay and the granting of the operator permit	3	35890
-----	---	---	-------

GENERAL NOTICE

NOTICE 961 OF 2012
DEPARTMENT OF TRADE AND INDUSTRY

I, Dr Rob Davies, Minister of Trade and Industry, hereby:

- (a) Issue for public comment, the THE APPLICATION FOR DESIGNATION OF AN IDZ AT SALDANHA BAY and THE GRANTING OF THE OPERATOR PERMIT, and
- (b) Invite interested persons and the public to submit comments on the Application for designation within 60 days of this publication.

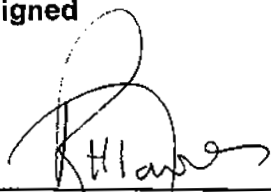
Interested parties are requested to forward their comments in writing for attention Ms Antoinette Baepi or Mr Herman Jonker, at the following addresses:

Ms Antoinette Baepi
Department of Trade and Industry (the dti) Campus
77 Meintjies Street
Sunnyside
Pretoria
0002
Tel: (012) 394 1226
Email: abaepi@thedti.gov.za

Or

Mr Herman Jonker
Department of Economic Development & Tourism – Western Cape Government
9th Floor
Wardorf Building
80 St George's Mall
Cape Town
8001
Tel: 021 483-9883
Email: Herman.Jonker@westerncape.gov.za

Signed



Dr Rob Davies, MP
Minister of Trade & Industry
Date: 14/11/12



SALDANHABAYIDZ

APPLICATION FOR IDZ DESIGNATION AND
OPERATOR PERMIT FOR THE SALDANHA BAY
INDUSTRIAL DEVELOPMENT ZONE

**INFORMATION DOCUMENT
FOR GOVERNMENT GAZETTE NOTICE**

Notice of 60-day Public Consultation Period

SUBMITTED ON BEHALF OF:
THE SALDANHA BAY IDZ LICENCING COMPANY
(Pty) Ltd

24 Main Road,
Saldanha Bay, 7395

T: +27 21 487 8644 | **F:** +27 21 487 8700
info@sbidz.co.za | www.sbidz.co.za

- FOR PUBLIC DISTRIBUTION -

November 2012
Revision 1



TABLE OF CONTENTS

1	Introduction.....	1
1.1	Purpose of this Document	1
1.2	Legislative Framework.....	1
1.3	Structure of this Document	2
1.4	Vision.....	2
1.5	Mission.....	2
1.6	Strategic Objectives	3
1.7	SWOT Analysis	3
1.8	Synopsis of the Value Proposition	3
2	Background	5
2.1	Activities leading to the Application	5
2.2	The Application for Designation and Operator's Permit.....	7
3	Role of Saldanha Bay IDZ Licencing Company.....	9
3.1	Definition	9
3.2	Governance	9
3.3	Relationship with Government Partners	10
4	Rationale for Commercial Sustainability.....	11
4.1	Key Market Research	11
4.1.1	The African Oil & Gas Industry	11
4.1.2	The Rig Repair Market.....	14
4.1.3	Market for the Off-shore Supply of Parts	15
4.1.4	Growth drivers of the African Oil & Gas Services Market	17
4.1.5	Competitive Landscape	19
5	SBIDZ Service Offering.....	25
5.1.1	Maintenance and Repair Services	25
5.1.2	Fabrication Services	26
5.1.3	Communal Services	26
5.1.4	Supply and other Services.....	28
5.2	Anticipated share of the African Oil & Gas services market.....	28
6	Broad Economic Analysis.....	30
6.1	Current Local Economic Outlook.....	30
6.2	Economic Impacts.....	30
6.2.1	Cost Benefit Analysis	30
6.2.2	Sensitivity Analysis	32
6.2.3	Macroeconomic Analysis.....	33
6.3	Overall Conclusions	36
7	Risk Management	37
8	Strategic Marketing	38
8.1	Key leverage points and recommendations.....	38
8.1.1	Ease of Doing Business	39
8.1.2	Input costs.....	39
8.1.3	Infrastructure	40
8.1.4	Operational excellence	40
9	Implementation Plan of the Saldanha Bay IDZ.....	42
9.1	Establishment of Management Functions of the SBIDZ LiCo (Wesgro)	42
9.2	Socio-economic Impacts and Contributions	44
9.3	Physical Master Plan	45
9.4	Land Provision.....	45



9.5	Environmental Considerations	46
9.5.2	Geotechnical Considerations	49
9.6	Provision of Utilities	50
9.6.1	General	50
9.6.2	Health, Education and Housing	51
9.6.3	External infrastructure required (and responsibilities)	51
9.6.4	Internal infrastructure required	53
10	Work Force Analysis for the Saldanha Bay IDZ	54
10.1	Potential work and Employment	54
10.2	Conclusions.....	55



1 Introduction

1.1 Purpose of this Document

This document provides an introduction to the proposed Saldanha Bay Industrial Development Zone (SBIDZ); a summarised background of the development; and a synopsis of important characteristics of the proposed development, for the purposes of informing the 60-day public consultative period necessary, upon the gazetting of a notice of an application for Designation and an Operator's Permit for an IDZ being considered by the Minister of Trade and Industry, as described in the applicable regulations of the Legislative Framework.

1.2 Legislative Framework

The IDZ programme was gazetted in 1999 as an incentive programme under the Manufacturing Development Act (no. 187 of 1993). The regulations for the IDZ programme were promulgated in 2000, published under regulation gazette number 1224 of 1 December 2000, as amended by government notice number R1065, published in the Government gazette number 29320 of 27 October 2006. The overall regulatory framework for the IDZ programme comprises of the following legislation:

- The Manufacturing Development Act (MDA), Act 87 of 1993 as amended.
- The IDZ Regulations and subsequent amendments.
- Section 21A of the Customs and Excise Act, and relevant provisions of the Value Added Tax.
- Report No. 14 promulgated by the International Trade Administration Commission in accordance with the Customs and Excise Act.

The IDZ programme is aimed at promoting the competitiveness of South African enterprises through leveraging investment in export-oriented manufacturing industries and promoting the competitiveness of South African firms through the export of value-added manufactured products. The key objectives and rationale behind the IDZ programme is to:

- Position South African-based manufacturing industries to meet the challenges of globalisation.
- Attract advanced foreign production and technology methods in order to gain experience in global manufacturing and production networks through attracting foreign direct investment (FDI).
- Develop linkages between local and international-based industries.



- Provide world class infrastructure and proximity to international ports to offer low cost and efficient logistics services.
- Provide services to facilitate overcoming administrative hurdles for investors securing permits required for their operations.

1.3 **Structure of this Document**

In accordance with the purpose stated previously, this document has been compiled on the basis of the application at hand, namely to develop an IDZ in Saldanha Bay, by the **Saldanha Bay Licencing Company (Pty) Ltd**, which services the needs of the upstream Exploration and Production service companies' operating in oil and gas fields in Sub Saharan Africa.

Hence the content herein is focused on the Oil & Gas and Marine Repair service industries, the proposed service offering in the SBIDZ, and the rationale behind it. The content is derived from the *Business Plan for Application of an Industrial Development Zone at Saldanha Bay* (the "Business Plan"). Please see Chapter 2 for the background to the project and the compilation of the Business Plan.

1.4 **Vision**

The SBIDZ will be an Oil & Gas and Marine Repair engineering and logistics services complex, serving the needs of the upstream Exploration and Production service companies' operating in oil and gas fields in Sub Saharan Africa. The SBIDZ will include logistics, repairs & maintenance, and fabrication activities. The facility will offer a prime value-added service by it having a contiguous customs-free area (i.e. a "freezone"), a benefit afforded to it by its IDZ Designation and Operator Permit.

1.5 **Mission**

Creating a functional, self-sustaining industry, with international and domestic investors, that contributes to economic development and sustainable employment in Saldanha Bay.



1.6 Strategic Objectives

A successful IDZ within the Saldanha Bay region will be achieved by working towards the following objectives:

- Consolidation and/or elimination of inefficient and bureaucratic administration processes.
- Initial focus on the establishment of a single cluster – the Oil & Gas and Marine Repair Cluster within the Saldanha Bay port precinct and surrounding area.
- Provide supporting infrastructure that differentiates the Cluster in Saldanha Bay from competitors e.g. logistics, land availability, utilities etc.
- Provide efficient free port operations and customs processes that facilitate timeous and cost-effective operations for both international and domestic investors.
- Provide a single point-of-contact for investors to address their concerns and queries.

1.7 SWOT Analysis

To contextualise the vision, mission and strategic goals and objectives of the SBIDZ within its initial focus of developing an Oil & Gas and Marine Repair Cluster, it is crucial to understand where such an entity's strengths and weaknesses may reside, what threats it may face, and overall, what the opportunities are. The SWOT analysis in Figure 1-1 provides an overview of the *current* strengths, weaknesses, threats and opportunities.

1.8 Synopsis of the Value Proposition

The value proposition of the SBIDZ is to provide a competitive and highly efficient Cluster that positions itself as the leading location for Oil & Gas and Marine Repair activities within the African continent in response to investor demand. This value proposition will be achieved through the depth and level of infrastructure support within South Africa (e.g. logistics); facilitation of the ease of doing business through the provision of One-Stop-Shops and a Freezone; a competitive and transparent market environment; and timeous and efficient response to investor's market requirements

Saldanha Bay is also an ideal location for the development of the Oil & Gas and Marine Repair Cluster because of the level of greenfield land available (that is already zoned for industrial purposes), and the depth of the Port alongside the Multi-Purpose Terminal. The Port of Saldanha Bay is also competitively located between the oil and gas developments on the West Coast of Africa, as well as the recent gas finds on the East Coast of Africa.



Figure 1-1: SWOT Analysis of the SBIDZ

Internal	<p>Strengths</p> <ul style="list-style-type: none"> • Deepest natural port in South Africa and possible to accommodate vessels with draft up to 21.5 m • Land available for development (capacity and plans for expansion of port and back-of-port) • Existing port infrastructure and activity surrounding multi-purpose terminals (MPT) • 4 berths in MPT that can handle oil rigs, VLCC and Cape size vessels • Relative geographical proximity to regional oil and gas markets in Sub Saharan Africa • Cape of Good hope: ideally positioned to service passing units • Excellent ease of doing business relative to other African countries • Strong private sector investor interest in servicing the end-market • Strong industrial capabilities and logistics relative to other African ports • Strong supporting industries and regional linkages, including strong logistics network • Human capital – strong recruitment and training potential of South Africa when compared to neighboring countries • Quality lifestyle in South Africa and the Western Cape province • Good Broadband Infrastructure 	<p>Weakness</p> <ul style="list-style-type: none"> • Long lead time of projects due to budgetary issues and complexities surrounding land allocation • South Africa currently has limited experience in off-shore oil and gas activities (but not less so than other African countries) • Limited qualified and skilled labor that meets specific standards within the Oil & Gas and Marine Repair cluster • Underdeveloped physical infrastructure: dedicated quays, docking facilities, utilities • High port tariffs • Difficulty in arranging visas for foreign workers • Environmentally sensitive area • Vague and limited financial/fiscal incentives • Perceived complacency and bureaucracy
External	<p>Threats</p> <ul style="list-style-type: none"> • Neighbouring countries developing or already having a basic off-shore supply base and marine repair facilities <ul style="list-style-type: none"> • Walvis Bay in Namibia • Luanda expecting an investment of \$350.0 million for infrastructure upgrades • Onne Port in Nigeria is a free export zone • Tema and Takoradi ports are undergoing upgrades to accommodate the oil and gas industry • East Africa’s oil and gas development could lead to a development of a supply hub for the industry • Centers of excellence in the Far East, Middle East, Europe and Americas (especially relevant to fabrication) 	<p>Opportunities</p> <ul style="list-style-type: none"> • Develop Saldanha Bay into a state of the art off-shore supply hub servicing the upstream off-shore Oil & Gas and Marine Repair industry in Sub Saharan Africa • Service a highly lucrative market through the existing infrastructure base in South Africa • Profitability and viability of projects and IDZ • Stimulate regional and national economic activity • Increase local employment through skills development and skills transfer initiatives • Strengthen South Africa’s industrial capabilities



2 Background

2.1 Activities leading to the Application

Saldanha Bay has for a long time been acknowledged as an important resource for the sustainable growth and development of the West Coast region, with the development of the deep-water port and the neighbouring industrial areas taking place in the 1970's.

Between 1999 and 2008, Wesgro, (the official Destination Marketing, Investment and Trade Promotion Agency for the Western Cape) and the local and provincial government have been approached by a number of proponents of large-scale projects. These included the possibility of certain mega-projects such as aluminium smelters, titanium processing plants, large scale chemical plants and steel processing, ship repair and oil & gas maintenance and repair operations. Increasingly, attention turned to the possibility of establishing an IDZ in Saldanha Bay as a mechanism that could co-ordinate planning and implementation of mega infrastructure investments, and serve to attract or crowd-in complementary investments boosting manufacturing and industrial development in the region.

The Western Cape Government's Department of Economic Development and Tourism (DEDAT), through Wesgro, embarked on a Pre-Feasibility Study to identify and assess the opportunities available in the industrial and business market and ascertain whether there are any binding constraints to establishing an IDZ programme at Saldanha Bay.

Demacon Consulting was appointed in 2008 as the lead consultants for the Pre-Feasibility Study, and the draft study was completed in September 2009. The key elements assessed in the study were the following:

- An IDZ profiling and development zone location assessment
- The Saldanha Bay Municipality (SBM) economic profile
- A local market profile
- An industrial market analysis
- A physical environment assessment
- A best practice analysis focussed on relevant case studies
- A pre-feasibility assessment on the establishment of an IDZ at Saldanha Bay



A final workshop held on the 27 October 2009 involving key government officials and relevant stakeholders recommended the potential of three industrial clusters, namely:

- A Renewable Energy Production and Manufacturing Cluster,
- An Oil Supply Base/Hub servicing the Oil and Gas Cluster and a Maritime Ship Building and Repair Cluster, and
- A Steel and Minerals Production and Manufacturing Cluster

These three Clusters were identified because of the existing industrial development and infrastructure within the Saldanha Bay region (e.g. Arcelor Mittal/Saldanha Steel; iron ore port capacity etc.); the locality and proximity of the Port of Saldanha Bay to the solar developments in the Northern Cape and wind farms in the Western Cape; and the passing Oil & Gas rigs between the West and East Coast of Africa that require both scheduled and unscheduled maintenance. In addition to the existing infrastructure capacity, the Port of Saldanha Bay has also been earmarked for minerals beneficiation facilities due to interest from investors and the availability of the Port for export of these products.

Overall, the study recommended that the government move into the next phase of a detailed Feasibility Study, culminating, if feasible, in a joint submission by the Western Cape Government (WCG) and the Saldanha Bay Municipality (SBM) to apply to **the dti** for Designation of an IDZ and the award of an Operator Permit.

Towards this end, **the dti**, through their The Enterprise Organisation (TEO) IDZ Special Projects unit, partnered with DEDAT, the provincial Department of Environmental Affairs and Development Planning (DEADP), and the SBM to investigate the feasibility of establishing an IDZ at Saldanha Bay. The Feasibility Study aimed to determine the opportunities available, the binding constraints of development, and the ability of the region and its stakeholders to overcome these constraints.

Wesgro was once again utilized to deliver the Feasibility Study. The process commenced with the appointment of Project Managers in June 2010, and thereafter the appointment of various professional service providers to undertake the research and analysis required.



2.2 The Application for Designation and Operator's Permit

Following the completion of the Feasibility Study in October 2011, a process of consolidation was initiated to determine the most feasible industry given the outcome of the scenarios presented in the key findings. This ultimately led to the recommendation of a business concept that the IDZ take place as a phased development.

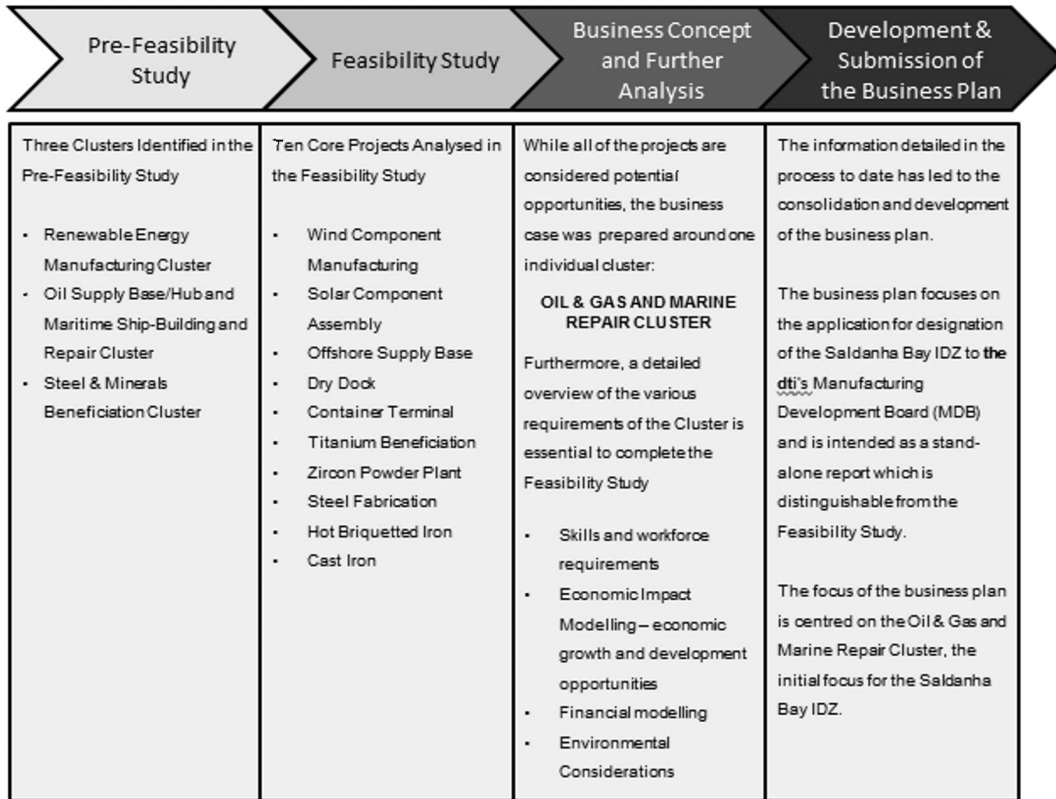
Therefore, the *Business Plan for Application of an Industrial Development Zone at Saldanha Bay* (which is the core document for the Application for Designation and Operator's Permit into terms of the applicable legislation) focussed on the Oil & Gas and Marine Repair Cluster as an initial cluster for submission in support of the application for IDZ designation. This first cluster was prioritised because of its minimum utility and infrastructure requirements; low environmental impact, existing strengths of the deep-water port and land availability; and imminent investor demand to establish such a facility, amongst others.

The Port of Saldanha Bay is also strategically located to serve the large Oil & Gas sector on the African continent due to an increasing number of oil rigs on the continent requiring maintenance and passing by on their way from the West Coast to East Coast of Africa. Based on this recommendation, further detailed study was undertaken, including an economic impact assessment, workforce analysis, financial modelling and environmental consideration report.

The Business Plan has been prepared following an in-depth and exhaustive process of evaluation of the Pre-Feasibility and Feasibility Study for the development of the SBIDZ. Figure 2-1 outlines the processes followed, leading to the preparation of the Business Plan. The Business Plan was prepared in accordance with **the dti's** Industrial Development Zone Programme Guidelines as announced under Section 10 of the Manufacturing Development Act (Act 187 of 1993) in Government Gazette No. 1224 of 1 December 2000, and as amended by Government Notice No. R1065, published in the Government Gazette No. 29320 of 27 October 2006.



Figure 2-1: Concept Development Leading to the Business Plan Phase for Designation



The Business Plan (as detailed in Figure 2-1) is intended to act as a stand-alone document, however the information contained therein was drawn from the numerous background studies, including the *Saldanha Bay IDZ Feasibility Study*. It is also important to re-emphasise that the Business Plan only speaks to the *initial* focus of the IDZ development, namely the Oil & Gas and Marine Repair services industries.



3 Role of Saldanha Bay IDZ Licencing Company

3.1 Definition

The ***Saldanha Bay Licencing Company (Pty) Ltd*** (SBIDZ LiCo) is the implementing vehicle of the SBIDZ. The SBIDZ LiCo has been established as a subsidiary under Wesgro. Wesgro was established with the creation of the Wesgro Investment and Trade Promotion Agency Law Amendment Act No. 1 of 2005. As a subsidiary, the SBIDZ LiCo automatically forms the same structure of Wesgro, which is a Schedule 3(c) public entity defined by the Public Finance Management Act 1 of 1999.

The role of the SBIDZ LiCo is defined in its Memorandum of Incorporation (MOI), where its day-to-day responsibilities would be the promotion, management and marketing of the Industrial Development Zone in the Saldanha Bay area, including but not limited to, managing contracts with one or more operators, controlling the relevant land and facilitating infrastructure investment, as well as ancillary activities that may be required for the establishment of the IDZ. The SBIDZ LiCo is meant to attract investment through infrastructure provision, land and lease options, and facilitating ease of doing business.

3.2 Governance

The structure of the SBIDZ LiCo Board takes cognisance of both the Wesgro Act and the Companies Act. The provisions of the Companies Act pertaining to the directors and governance has been adopted within the MOI of the SBIDZ LiCo, except where the Wesgro Act has express stipulations regulating matters pertaining to the Board.

The Board of Directors will be comprised of sixteen directors of which twelve will be appointed by the shareholder/s (fulfilling the requirements of section 68(1) of the Companies Act). In appointing the directors, the shareholder/s will be governed by a voting agreement in terms of which three directors will be appointed by the SBM, one director by the West Coast District Municipality (WCDM), two directors by Wesgro, two directors by the Western Cape Government and four directors by National Government (of which one shall be appointed by the IDC and one by National Treasury). In addition to this, four non-voting directors shall be appointed in an advisory capacity after consultation with the relevant stakeholders.



3.3 Relationship with Government Partners

The SBIDZ LiCo is to be an entirely independent entity with its own infrastructure, offices, and financial and human resources. It is envisioned that the SBIDZ LiCo will operate as an independent company and would initially report to Wesgro as a shareholder and incorporating entity as governed by legislation. It is not intended for the SBIDZ LiCo to have any dependency on Wesgro, the Municipality, the Provincial Government or **the dti**. Consequent to the SBIDZ LiCo being an independent entity, no resource or asset sharing with its government partners would take place.

However, in the establishing phase of the SBIDZ, the SBIDZ LiCo would outsource its corporate services to Wesgro, as the latter is the incorporating entity and the SBIDZ LiCo is a subsidiary entity thereof. Thus, as the SBIDZ LiCo is set up and becomes operational it would make use of Wesgro's corporate services after which certain resources would be migrated into the LiCo. Wesgro has made provision for the use of these services and resource migration in the 2012/13 financial year. Funding allowances have also been made from the Municipality and Provincial Government for co-funding of the operational expenses until the SBIDZ LiCo becomes an independent entity.



4 Rationale for Commercial Sustainability

The upstream oil and gas industry in Africa, notably the western, southern and eastern regions thereof, are of particular relevance to the SBIDZ. Upstream activity refers to exploration and appraisal, as well as development & production of crude oil and natural gas, while midstream activity includes primary distribution, refining and manufacturing. Terminal management and sales & retailing of refined products are classified as downstream activities. The SBIDZ will cater primarily for the needs of the upstream industry in Sub Saharan Africa.

4.1 Key Market Research

4.1.1 The African Oil & Gas Industry

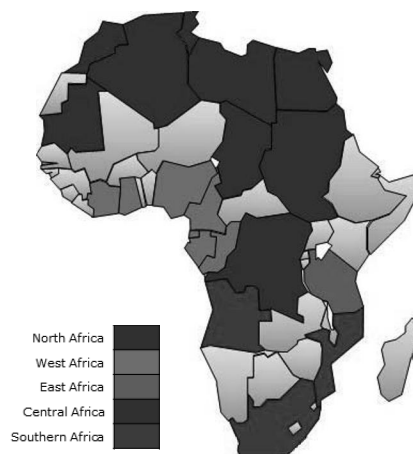
On a global scale, the Middle East has been the long standing leader in the supply of oil and gas. The second largest producing area is North America. While continuous advances and investment in technology are helping to develop unconventional resources, with support from high prices, the proportional contribution of these mature oil & gas resources to overall global supply is gradually reducing. While the long-term continuation of this trend is unclear, for the short- to medium-term, this is expected to continue.

Contributions from emerging regions such as Brazil, Africa and Asia are increasing as they continue to develop. It is estimated that Africa currently contributes approximately 11% of global crude production and 6% of gas. Estimates are that this contribution to global supply could be as high as 20% by 2030.

North and West Africa are the biggest oil producing regions, each contributing approximately 36% to the continent's total production. In terms of gas, North Africa offers the lions share at nearly 80% of production. On a country level, Nigeria and Angola are the biggest oil contributors with 26% and 21% respectively, while Algeria and Egypt contribute a cumulative 71% to African natural gas production (see Table 4-1 below).

**Table 4-1: Total Oil and Gas Production in Africa, 2011**

	Crude Oil ('000bbl/d)	Gas (bcf/d)
Production	9,831	7,873.8
% Growth (2001-2011)	3.3%	5.5%
Contribution to Global Production	11%	6%
Split across regions (%)		
West Africa	36.6%	16.9%
East Africa	0.0%	0.3%
Southern Africa	21.2%	3.2%
Central Africa	0.2%	0.0%
North Africa	36.3%	79.6%



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

In the context of Saldanha Bay, the West, Southern and East Africa oil and gas regions are of particular importance. Besides the obvious trend of increasing oil and gas production, it is evident that there has been and will continue to be a shift in the proportional contributions of the regions to oil and gas production.

Table 4-2: Key African Oil and Gas Industry metrics and definition of producing regions, 2011

Top 10 producers of Oil, 2011 ('000 bbl/d)			Top 10 producers of Gas, 2011 (bcf/d)		
Nigeria	2534.4	26%	Algeria	3124.1	40%
Angola	2022.6	21%	Egypt	2410.2	31%
Algeria	1736.9	18%	Nigeria	974.2	12%
Libya	1146.8	12%	Libya	598.3	8%
Egypt	509.1	5%	Equatorial Guinea	275.8	4%
Sudan	454.3	5%	Mozambique	148.9	2%
Equatorial Guinea	309.9	3%	Tunisia	134.0	2%
Congo	316.3	3%	South Africa	73.0	1%
Gabon	232.4	2%	Côte d'Ivoire	55.7	1%
Chad	123.1	1%	Angola	26.7	0.3%
Others	445.0	5%	Others	52.9	1%

Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

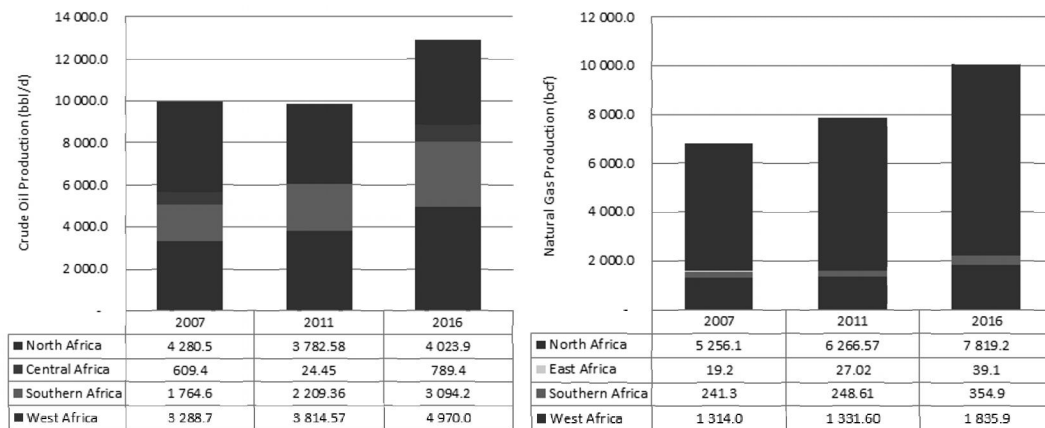
The West and Southern Africa oil & gas industries (including Nigeria, Gabon, Côte d'Ivoire, Congo, Cameroon, Ghana, Equatorial Guinea and Angola) are amongst the world's fastest growing. And with new finds being made on an on-going basis (the most recent being a



potentially massive find of oil off the Namibian coast and gas off Mozambique and Tanzania), the region is set to enjoy a prolonged period of growth in oil & gas activity.

It is immediately evident that 2011 oil production was somewhat lower than what the straight-line trend would have predicted in Figure 4-1. This is largely attributable to the reduced production from the Northern region caused by geo-political tension and civil war within the region – most notably in Libya. And, while North African oil production is expected to recover in 2012, a larger contribution is expected from the West and Southern regions as they continue to mature and as new discoveries are made. West Africa’s contribution is expected to increase from 33% in 2007 to 39% in 2016, and the Southern Africa’s from 18% to 24%, while the North African contribution is expected to decrease from 43% in 2007 to 31% 2016. **The predicted CAGR for West Africa oil production from 2007 to 2016 is 4.7% and, for Southern Africa, 6.4%.**

Figure 4-1: Historic, present and forecasted Oil & Gas production in Africa by region



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

With respect to gas production, North Africa will continue to be the largest producer in Africa with more than three quarters of continental production maintained from 2007 to 2016. However, the large discoveries of gas off the coast of Mozambique and the continued discoveries off of Tanzania are expected to cause a significant shift in this dynamic over the medium to long-term.



4.1.2 The Rig Repair Market

The growth in Africa's contribution to global oil and gas production is largely driven by declining production from mature regions as easy to access reserves are depleted and the continued growth in demand for fossil fuels from particularly emerging economies. A direct implication of increasing demand from the region is increased investment in fleet. And, given that crude oil and natural gas prices are expected to maintain their current high-levels for quite some time, oil and gas companies are confident that investments in additional fleet will show returns. This certainly has very positive implications for providing rig repair services from a Saldanha Bay-based Oil and Gas Services Centre.

Table 4-3 indicates that the number of rigs off West Africa increased from 63 to 72 within one year from October 2010. In that period, utilisation rates increased from 71% to nearly 81%, further evidence of increasing activity (albeit only over the short-term). It is estimated that the total number of rigs off the western African coastline (including Angola) is between 80 and 100 at present.

Table 4-3: Number of rigs on the West African coastline in October 2010 and 2011

	October 2010	October 2011
Total rigs in drilling fleet	63	72
Rigs under contract	45	58
Rigs without contract	18	14
Fleet utilisation rate	71.4%	80.6%

Source: Ods-Petrodata

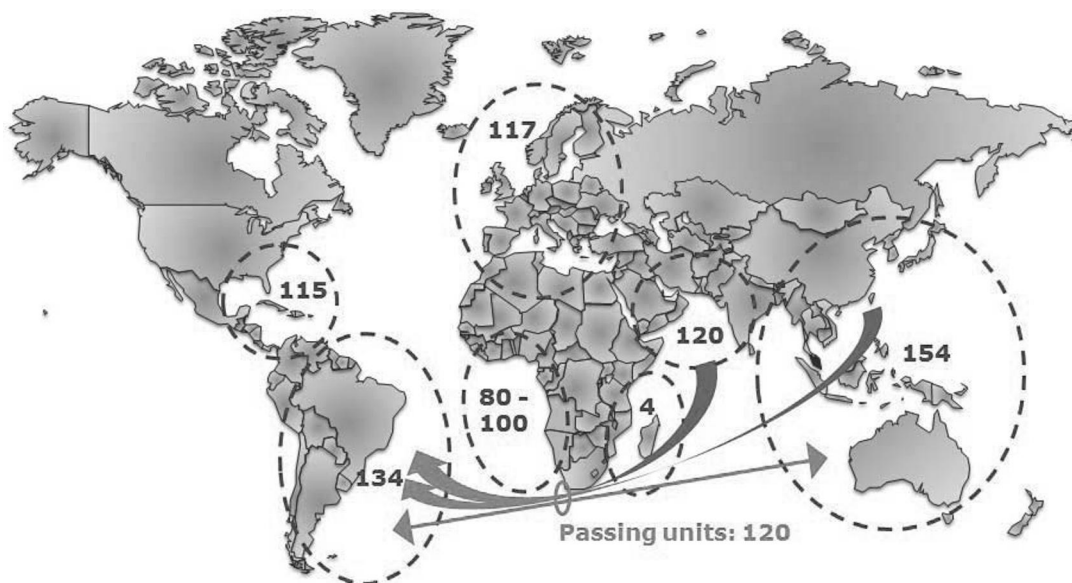
Given the aforementioned growth expected in the West and Southern Africa oil exploration and production industry, it is estimated that the 80 – 100 rigs currently active off the western coast of Africa could increase to between 100 and 120 by 2016. At present, there are 4 known rigs off the eastern coast of Africa.

That brings the (conservative) total number of rigs off of Africa's coast line that is considered accessible to Saldanha Bay to 84. This figure excludes the additional exploration activity that is expected with the recent potential finds of oil off the coast of Namibia and gas off the coast of Mozambique that would inevitably lead to further vessels off of the accessible coastline. While estimating the level of activity would be premature, indications are that the Namibian continental shelf shares characteristics extremely similar to those of Brazil's Santos basin, where more than 10 billion barrels of reserves have been discovered.



There is an additional benefit to being positioned within relative close proximity to the southern-most tip of Africa besides for having access to both the west and east coastlines. Each year a significant number of rigs move past the Cape of Good Hope en-route to a new operational location, seeking maintenance and repair services, or from their manufacture to their new production location. The number of these rigs was estimated at 120 in 2011 (see Figure 4-2).

Figure 4-2: Estimated regional distribution of mobile drilling rigs around the globe



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

4.1.3 Market for the Off-shore Supply of Parts

The off-shore oil and gas industry requires abundant support for a multitude of vessels required to drive the industry. Vessels include (but are not limited to) Floating Production Storage Offloading (FPSO), Semi-submersibles, Services vessels, Fixed platforms, Drilling ships, Deep water fixed platforms, Ultra deep semi-submersibles, Subsea equipment (FLETs, umbilical's, etc.), Seismic vessels, and Pipe laying barges, Etc.

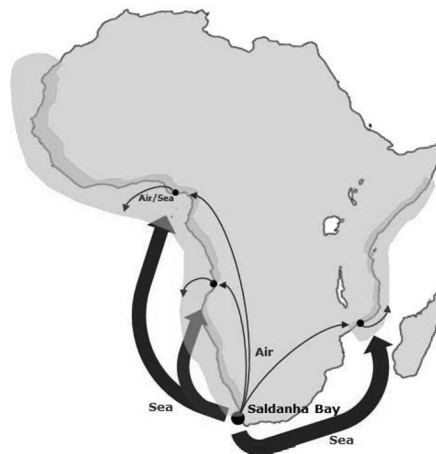
These vessels all require extensive servicing to ensure their continued operation within the harsh off-shore operating environment. Maintenance and repair work can be conducted during production or while in-situ by teams working from bases (often called Off-shore Supply Bases) that are in close proximity to operations (within 300km). These bases, including Port Gentil in Gabon and Onne in Nigeria's Port Harcourt, supply spare parts and maintenance teams to the many vessels operating within the region. However, even with the



existence of these bases, many services continue to be provided from Aberdeen, Stavanger, Houston and other established bases due to the challenges associated with moving goods rapidly through the ports, the lack of infrastructure and the availability of skills.

Operators are however actively seeking service providers able to deliver parts and services as rapidly and securely as possible and of the highest possible standard. The African oil and gas industry therefore requires a large base with the requisite infrastructure and proficient service providers from which parts and services can be centrally accessed in bulk, and in emergency situations, as quickly as possible. Parts and services sourced from this base would be forwarded to the smaller bases within close proximity to operations and then dispatched to their respective vessels (see Figure 4-3).

Figure 4-3: Saldanha Bay serving as the bulk provider of parts and services to the smaller regional ports



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

The West Africa region is expected to account for approximately 12% of the total global forecast fixed platform capital expenditure (2010 – 2014), equating to an annual growth rate of 10% on the existing platforms off the continent's coastline.

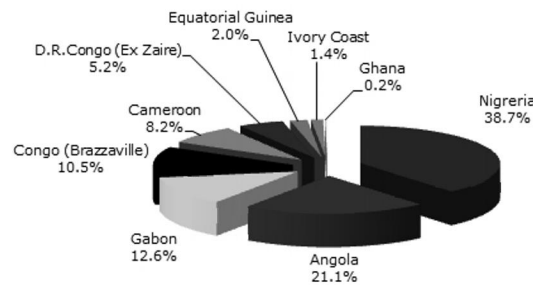
And, while total investment in West Africa's fixed platform market continues to be centered upon Nigeria and Angola, increased investment is expected in countries who are less directly associated with large hydrocarbon developments in the region such as Gabon, Senegal, Cameroon, Ghana and Congo.



Given the large installed base of fixed platforms off the West Coast of Africa (see Table 4-4), significant opportunities exist for local off-shore site engineering services companies to tap into the market currently being serviced out of Aberdeen, Houston and other distant locations, particularly if based within close proximity to the platforms.

Table 4-4: Count of fixed platforms off the West and Southern African coastline and distribution by country, 2009

Country	Total
Nigeria	310
Angola	169
Gabon	101
Congo (Brazzaville)	84
Cameroon	66
D.R. Congo	42
Equatorial Guinea	16
Ivory Coast	11
Ghana	2
Total	801



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

4.1.4 Growth drivers of the African Oil & Gas Services Market

This off-shore Oil and Gas industry in Sub Saharan Africa is characterized by a number of trends and drivers that are stimulating the growth thereof. Below is a summary of these growth drivers.

4.1.4.1 Increasing exploration and drilling activity

Given the expected increase in global demand for oil and gas from Africa, and new technologies being developed into deep and ultra-deep exploration, it is expected that exploration initiatives within the region will intensify. Increased exploration is further driven by West African governments awarding additional exploration and production licenses through new tender rounds.

New drilling technologies have allowed governments to open blocks to tender for deep and ultra-deep water drilling, further growing the market for these companies in the region. The direct impacts of these factors include an increase in exploration activities, an increase in the number of operational rigs, and increased utilisation of existing operational equipment. This all stimulates the oil and gas services market.



Within the region, significant interest is also being placed on the development of natural gas deposits, particularly in Equatorial Guinea and Cameroon, Tanzania and Mozambique. Further, initiatives by West African governments toward the development of their natural gas markets, primarily as a new source of export revenues, are expected to drive the demand for off-shore investment and activity.

4.1.4.2 Stringent health and safety requirements

The oil and natural gas industry is an increasingly safer place to work, despite it often involving harsh environments, heavy equipment, hazardous materials, high temperatures and high pressure equipment. This is reflected by a declining rate of illnesses and injuries – a rate estimated to be much lower than that for the private sector as a whole.

The continuous strive for improved occupational health and safety standards is driven by such organisations as the American Petroleum Institute (API) who develop, regulate and accredit only the most stringent of health and safety procedures amongst industry incumbents. Further, with the tightening of regulatory policies for deep water drilling following catastrophes such as the British Petroleum episode in the Gulf of Mexico, very little is left to chance. This results in rigorous monitoring and maintenance of the equipment used in off-shore and deep water conditions, providing ongoing stimulus for the oil and gas services industry.

4.1.4.3 High cost of downtime

The cost implication of rigs not producing when they should be is extremely high. The opportunity costs alone are currently estimated to be in the region of R2.4 million (USD 300,000) per day. This does not include the penalties charged to operators for a rig that should have been operational but is not, as well as the damage caused to goodwill in an industry where reputation is paramount. As a result, before each contract commences, the oil rigs go through a thorough overhaul to ensure that they will be operational for the full tenure of the drilling contract with minimal disruptions. Further, should a rig show signs of possible problems, nothing is spared in the maintenance and repair work to ensure its undisrupted and efficient production.

4.1.4.4 Pressure from insurance companies

Insurance companies are particularly cognisant of the high-risk nature of the oil and gas industry. As such, they are not willing to insure an operator that has not attained the requisite class certification, proving that health and safety standards have been met. In order to meet



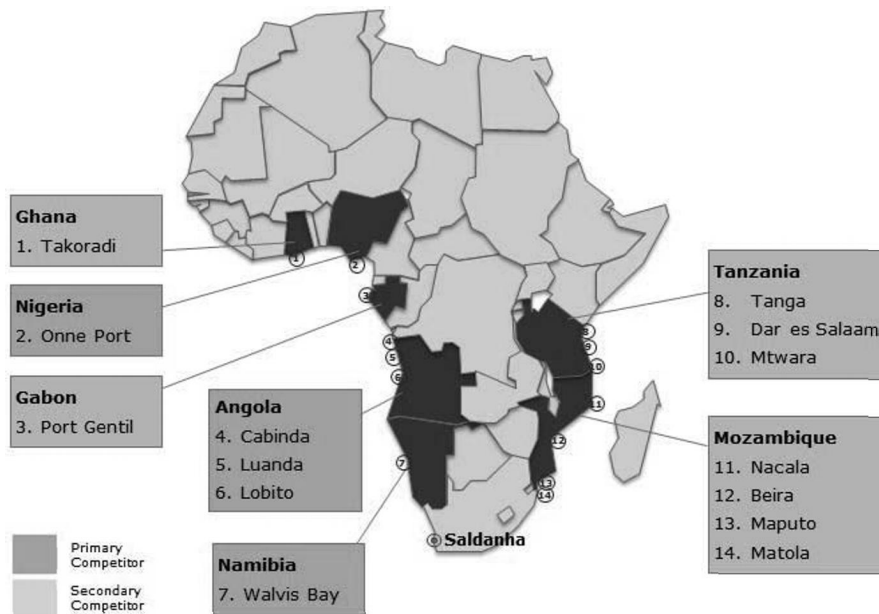
these requirements, substantial maintenance and repair work is required on the various off-shore vessels.

4.1.5 Competitive Landscape

This section provides a brief overview of the major African ports in neighbouring countries that could possibly position themselves as opposition to the development of the SBIDZ in Saldanha Bay. However, in most instances, these ports are not appropriately positioned, do not have the requisite infrastructure, and would struggle to attract the necessary skills to compete directly.

Rather, these ports would serve as key partners in completing in the critically efficient oil and gas services value chain – and would be part of ensuring the best possible service is provided on the whole. This is conceptually depicted in Figure 4-4. The map below depicts the regions within Africa and the various ports, the larger of which will be discussed in this section.

Figure 4-4: List of African ports that could be competitors and/or partners in the oil and gas value chain



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012



4.1.5.1 Namibia

An Export Processing Zone (EPZ) was established in 1996 in Walvis Bay as an innovative approach to off-shore investments. Current activities taking place within the EPZ include textiles and footwear industries, manufacturing and assembling of electronic equipment, processing industrial products, industrial plastics, and assembling/producing of electrical products.

With regards to the off-shore industry, there are Marine Repair activities taking place with Dormac and Elgin Brown & Hamer being the main investors. Walvis bay is one of the most significant potential competitors to Saldanha Bay given its location, ease of doing business, expected infrastructure investments, and the facility enjoying the benefits of being within an EPZ. Currently, there is minimal oil and gas maintenance activity in the Port of Walvis Bay, however given the expertise of companies such as Dormac, and the existing ship repair capacity, the Port could potentially be a strong contender for an Oil and Gas Supply Base. Table 4-5 provides an overview of Namibia's operations.

Table 4-5: Summary of Namibian Region and its Ports

Country	Namibia
OSB	<ul style="list-style-type: none"> • Walvis Bay is an Export Processing Zone • Private Public Partnership
Facilities	<ul style="list-style-type: none"> • Floating docks • Steel and pipe fabrication • Mechanical services • Wet repair facility
Active companies	<ul style="list-style-type: none"> • Elgin Brown & Hamer Namibia • Dormac
Investment	<ul style="list-style-type: none"> • R2.7 billion in the next 3-4 years
Main transport corridors	<ul style="list-style-type: none"> • Trans-Kalahari Corridor, the Trans-Caprivi Corridor and the Trans-Cunene Corridor
Traffic clearance	<ul style="list-style-type: none"> • 20 to 30 min due to single admin document

4.1.5.2 Angola

Angola is the second biggest producer of oil and gas in Africa after Nigeria. During the Niger-Delta crisis, Angola's production surpassed that of Nigeria.

The Luanda and Lobito Ports are small and often saturated with cargo coming into the country waiting to clear customs. The Port of Cabinda currently has limited oil and gas activity. Major multinationals companies for the oilfield services companies and chemicals producers are present in Angola. However, the majority of transactions occur in Onne Port in



Nigeria due to its designation as an Oil and Gas Free Zone. The development of Saldanha Bay would provide the Angolan oil and gas industry with an alternative for sourcing off-shore supplies from an environment more conducive to business than Nigeria's. Table 4-6 provides an overview of Angola's operations.

Table 4-6: Summary of Angolan Region and its Ports

Country	Angola
Ports	<ul style="list-style-type: none"> • Luanda • Lobito • Cabinda
Facilities	<ul style="list-style-type: none"> • Dry Docks • Fabrication yards • Supply and work boats • Fabrication of off-shore platforms and decks
Port of Luanda	<ul style="list-style-type: none"> • Quay (2738 m²) divided into seven terminals and a support base for the oil industry • The depth along the quays ranges from 10.5m to 12.5m • 17 berths, 19 warehouses (55,500m²) and a lay down area (792,219m²) • This is the main port of Angola, moving about 70% of the import/export cargo (1.2 million tons) – this excludes import and export of oil and gas

4.1.5.3 Nigeria

Nigeria has 11 export processing zones, 9 under construction and 5 that are still to be declared. The Onne Port is a hub for oil and gas operations and a logistics center for West and Central Africa. Further, Onne is designated as an Oil and Gas Free Zone, with 111 companies licensed to operate within the zone.

Companies such as Tenaries, Socotherm and West Atlantic Shipyard add significant value to the economy through activities such as pipe coating, pipe vending, waste treatment and boat building.

Sixteen off-shore rigs are serviced on an annual basis and 55 service boats are move through the port on a weekly basis. Pilotage payment is the major revenue earner for the port. Table 4-7 provides an overview of Nigeria's operations.

**Table 4-7: Summary of Nigerian Region and its Ports**

Country	Nigeria
OSB	<ul style="list-style-type: none"> Port Harcourt (Onne Port is an Oil and Gas Free Zone) in Lagos
Facilities	<ul style="list-style-type: none"> Fabrication and assembly yards Chemicals warehousing Supply boat services Bunkering of fuel and water Pipe coating facilities
Services for oil and gas	<ul style="list-style-type: none"> Fabrication of subsea structures, decks, manifolds, jackets, wellheads, process platforms. Challenges of operating in Nigeria
Active companies	<ul style="list-style-type: none"> Major multinational oilfield services companies and chemicals producers

4.1.5.4 Secondary competitors

Ghana and Gabon are well positioned for the West African oil and gas industry and enjoy a growing presence therein. Activities are however currently at a relatively low level.

Mozambique and Tanzania's location is extremely important to support the land locked countries in East and Central Africa. As the gas industry develops in these countries and exploration and production activities increase, their ports are expected to grow significantly. Table 4-8 provides a summary of operations by secondary competitors.

Table 4-8: Summary of Region and Ports for Secondary Competitors

Country	Ghana
Takoradi Port	<ul style="list-style-type: none"> 6 berths with draughts between 8.4m and 10m and dedicated manganese, bauxite and oil berths. Covered storage area (140,000 m²), open storage area (250,000 m²), private warehouses, container holding capacity of more than 5,000 containers.
Oil and gas activities	<ul style="list-style-type: none"> Oil berth is 120m long and depth of 8.4 m Vessel repair facilities in a dry dock (798 m²) Ship repair industry, with main activities such as docking of vessels up to 450 tons, steel works, sand blasting, painting, machinery, mechanical, hydraulics, propulsion systems, electrical equipment, propeller repairs and preparing the vessels for class certification
Country	Gabon
Ports	<ul style="list-style-type: none"> 5 ports in Gabon: <ul style="list-style-type: none"> 2 Commercial ports Fishing and large yacht port Tourism/private boats port River port for inland sailing 3 terminals for timber, manganese, and oil and gas
Oil and gas activities	<ul style="list-style-type: none"> 100 ha industrial zone near Port Gentil with ship repair and maintenance facilities <ul style="list-style-type: none"> Wharf (8,100 m²) with a depth of 7m Quay (2700 m²) Water and fuel is supplied to the ships via pipes



	<ul style="list-style-type: none"> ○ Storage facilities for pipes, cement and bentonite for used in the oil and gas industry
Country	Mozambique
Ports	<ul style="list-style-type: none"> • Port of Maputo is a cargo terminal with 16 linear berths with 9.5m in depth, and 24/7 operational <ul style="list-style-type: none"> ○ Matola Port is as bulk terminal for coal, aluminium, grain and petroleum ○ Beira Port has 11 berths, one bonded transit warehouse, multipurpose container terminal ○ Nacala Port also a SEZ has a large bay 60m deep and 800m wide at the entrance thus no vessels restrictions ○ Pembe is emerging as a possible supply hub
Oil and gas activities	<ul style="list-style-type: none"> • Ship repair services, diesel bunkers and fresh water are available at all berths within the Maputo port • 205 m long and 11m depth for the oil and gas in Matola bulk terminal • 1 oil terminal in Beira port and upstream terminal being build • New oil refinery to be built in Nacala
Country	Tanzania
Ports	<ul style="list-style-type: none"> • 3 sea ports <ul style="list-style-type: none"> ○ Das es Salaam – Deep water and ship length restriction (175m) ○ Mtwara ○ Tanga – shallow water berth
Oil and gas activities	<ul style="list-style-type: none"> • Mtwara port has an oil terminal (Kurasani) with 76,500 m³ storage capacity which is managed by Oilcom Tanzania • World oil terminal complex managed by Kenol Kobil Ltd with oil storage capacity of 33,000 m³ • The aim of this complex is to become the destination of choice for companies seeking storage and distribution for hospitality arrangements

4.1.5.5 Summary of competitive landscape

While the various ports listed above offer components of the infrastructure and services necessary for the off-shore oil and gas industry, there is limited structure and coordination from these ports in providing a holistic and efficient offering. The activities are scattered between the various countries often requiring various stops from end-users before reaching their final destination. Activities are scatted as follows:

- Marine repair activities in Namibia, Ghana, Gabon and Mozambique
- Fuel and water bunkering activities in Nigeria and Gabon
- Logistics center in Nigeria that supports both West and Central Africa
- Oil terminals in Mozambique and Tanzania

This is far from ideal for an industry where every non-operational hour lost is extremely expensive considering the opportunity costs and penalties alone. The unquantifiable reputational damage caused by unplanned stoppages could however be considered greater. Thus, a centralized provider of bulk parts and services along with the coordination of the



supply chain are vital for the industry going forward. Saldanha Bay is ideally positioned to fulfill this role.



5 SBIDZ Service Offering

The service offering of the SBIDZ can be loosely grouped as a) Maintenance & Repair, b) Fabrication, and c) Supply & other Services. These clusters are primarily focused on servicing external customers. Communal Services are primarily aimed at internal customers, i.e. the enterprises operating in the IDZ.

To meet the requirements of **the dti's** Industrial Development Zone Programme Guidelines, only the initial five years of the SBIDZ operations have been described in detail in this section.

Table 5-1: SBIDZ: High level overview of proposed activities/clusters: 2013 to 2017

<p><u>Maintenance & Repair Services</u></p> <ul style="list-style-type: none"> - Maintenance, repair, upgrade and conversion of rigs and other vessels (floating repairs, dry docking) - Repair of parts and structures - Inspection, certification 	<p><u>Fabrication Services</u></p> <ul style="list-style-type: none"> - Structures, subsea manifolds - Spare parts
<p><u>Communal Services</u></p> <ul style="list-style-type: none"> - Property development - Customs clearance - Marketing & administrative functions - Security, medical, food & retail - Utilities, waste management, transport - Road and quay access 	<p><u>Supply & other Services</u></p> <ul style="list-style-type: none"> - Bonded warehousing / storage - Scheduling & forecasting - Logistics and transport – sourcing and forwarding (air, ship, rail and road) - Lifting, stacking, moving - Fuel bunkering - Pipe coating & upsetting - Tugging / piloting - Project and engineering services (e.g. EPC)

5.1.1 Maintenance and Repair Services

Saldanha Bay is expected to become a state-of-the art facility where wet work¹ and dry work² on mobile drilling units such as semi-submersible oil rigs and other vessels can be done. These include inspection, maintenance, repair, upgrade and conversions of these vessels at a Common User Facility which includes a dedicated repair quay, hard lay-down areas and a floating dock.

Rig repair projects offer a multitude of opportunities for subcontractors; including scaffolding, roping, and equipment rental, and repair of parts and structures on the rig. In the case of the

¹ Wet work: Rig is anchored next to the quay for maintenance and repairs.

² Dry docking: Either on the floating dock or on the hard lay-down area. In the latter instance, the rig is lifted and transferred onto dry land by the floating dock and transfer system)

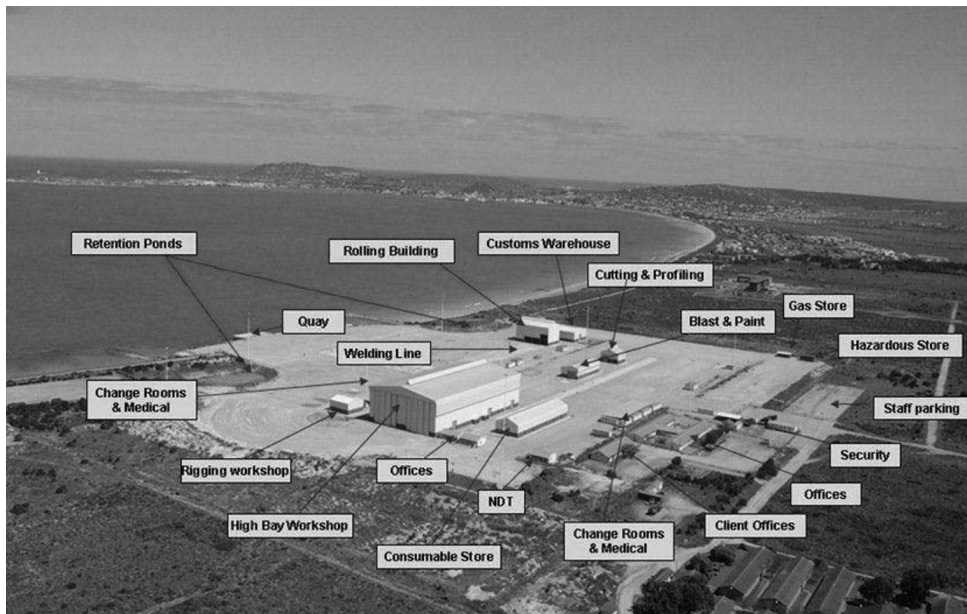


latter, parts might need to be moved in and out of the IDZ to and from Cape Town. The movement of goods in and out of the IDZ is expected to decrease in the medium- to long-term as engineering firms see the benefit of basing themselves within the IDZ.

5.1.2 Fabrication Services

Saldanha Bay has an existing fabrication facility (shown in Figure 5-1) that is currently in disuse but the current operator is implementing plans to ramp up activities at the yard after exploring a number of international partnering and customer options. These fabrication facilities include a 12m long quay dredged to 8 meters, which can be used to launch or load structures. The facility currently services jack-up oil rigs.

Figure 5-1: Existing fabrication facilities at Grinaker-LTA site, Saldanha Bay



Source: Grinaker-LTA

5.1.3 Communal Services

While the majority of communal services and facilities might be provided by public sector; there is significant private sector interest in property development, specifically offices, warehousing, food and retail and waste disposal. The provision of bulk utilities, road and quay access, and customs clearance are likely to be provided by public sector, while training could be a joint venture between public and private sector. Security, medical services, food & retail, filling stations and transport within the IDZ could all potentially be private sector



endeavors. Marketing and administrative functions for the IDZ will become the responsibility of the IDZ Operator.



5.1.4 Supply and other Services

Pipes, cement, oilfield chemicals, equipment and a multitude of other commodities needed for oil and gas exploration and production will be stored in open and closed warehousing facilities. Forecasting, sourcing, scheduling, storage and forwarding will either be done by logistics companies such as UAL, DHL, Barloworld and Imperial Logistics; or by end-users establishing themselves within the IDZ. Modes of transport include sea, road, air and rail.

TNPA will provide tugging and piloting services for vessels entering the port, and private sector will provide fuel bunkering services for vessels to refuel and discharge. A prime example of value-added service is the concrete-coating of line pipe sourced from the UAE and Far East en route to West Africa.

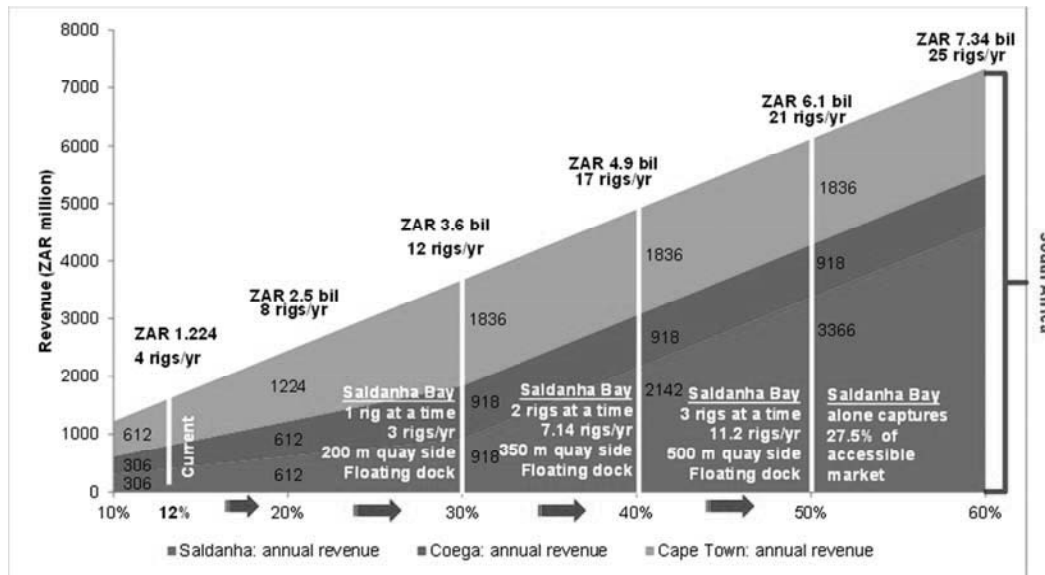
5.2 Anticipated share of the African Oil & Gas services market

With the above mentioned Common User Facilities (CUF) for rig repair, the SBIDZ could service 3 rigs at any given time. The type of repair projects can vary from inspections with little maintenance done to major refurbishments / conversions; ranging from days to months and anything between ZAR 10 million and ZAR 500 million or more.

A repair project worth ZAR 300 million over a time frame of 3 months describes the best combination of historic projects done in the Western Cape and the type of project the Cluster wishes to capture. Three such projects at one time totals approximately 11 projects per year, bringing in annual foreign earned revenues of ZAR 3,366 million for Saldanha Bay alone in Year 5 (see Figure 5-2).



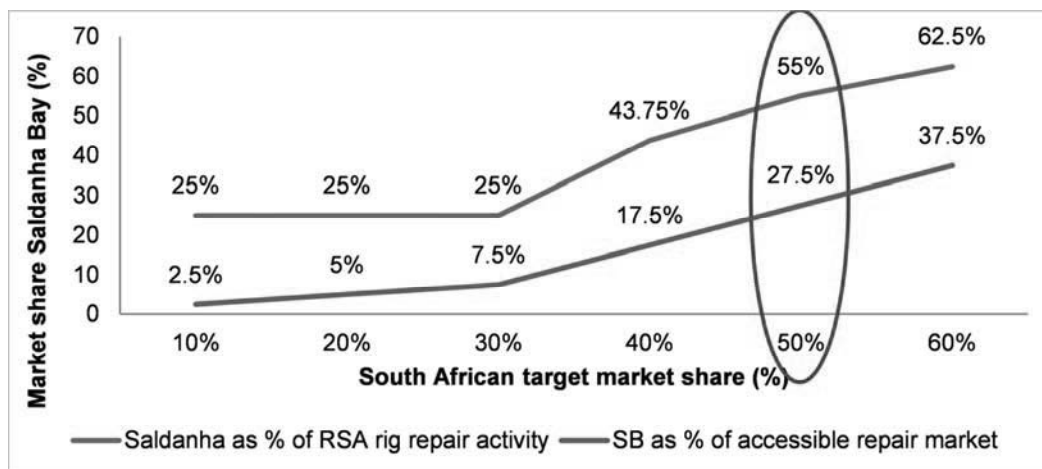
Figure 5-2: South African target market share (%) of accessible rig repair market: Revenues (ZAR mil) and corresponding rig repair jobs



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

In this scenario, Saldanha Bay services 27.5% of the accessible market in Year 5, and contributes 55% to the South African rig repair industry – assuming that Cape Town and Coega a) operates at full capacity, and b) with no capacity expansions. As a nation, South Africa captures 50% of the accessible market with 21 typical rig repair projects per year in Year 5.

Figure 5-3: Saldanha Bay market share as a percentage of South African Rig Repair activity and as a percentage of the total accessible repair market; against South African target market share



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012



6 Broad Economic Analysis

6.1 Current Local Economic Outlook

Saldanha Bay is a critical resource for the sustainable growth and development of the Western Cape. The deep-water port and surrounding infrastructure have already encouraged the development of major industries that contribute positively to local employment and regional and national GDP. The size of the Saldanha Bay economy was estimated at R4.6billion in 2010. This makes up around 31% of the West Coast Districts total GDP of R14.8billion for that year and 1.3% of the Western Cape economy.

6.2 Economic Impacts

6.2.1 Cost Benefit Analysis

The cost benefit analysis show that not only is the SBIDZ economically viable with a BCR of 9.5, but it is also extremely robust. Economic returns of this magnitude will be very beneficial to society and warrant funding.

The results of the cost benefit analysis are shown in Table 6-1. The table includes the present value (PV) of all the costs as well as the benefits. It lists the Net Benefits (NPV) and the Benefit Cost Ratio (BCR). It should be noted that these forecasts have not been based on a low-case, medium case or high-case scenario.

**Table 6-1: Cost Benefit Results**

Costs	PV
Infrastructure Costs	457.2
Capital Costs	328.4
Operating Costs	128.8
LiCo Costs	448.5
Capital Costs	308.6
Operating Costs	139.8
Private Capital Costs	566.6
Oil Supply Base	170.7
Rig Repair	377.3
Fabrication	18.6
External Costs	3 030.8
Total Costs	4 503.1
Benefits	PV
Foreign Direct Investment	214.1
Oil Supply Base	117.3
Rig Repair	91.4
Fabrication	5.5
Increased Turnover	42 593.6
Oil Supply Base	10 944.3
Rig Repair	15 918.1
Fabrication	15 731.2
Total Benefits	42 807.7
Net Benefits (NPV)	38 304.6
BCR	9.5

Source: Economic Impact Analysis, EIS, 2012

The following results can be seen in the table:

- Total costs have a PV of R 4,503m.
 - Infrastructure costs have a PV of R457m. Capital costs contribute R328m and operating costs R129m.
 - LiCo costs have a PV of R449m. This consists of a capital cost component of R309m and an operating cost component of R140m.
 - Private capital costs funded from South African sources have a PV of R567m. This consists of:
 - The oil supply base with a PV of R171m;
 - Rig repairs with a PV of R377m;
 - Fabrication with a PV of R19m.
 - External costs, which include provision for health, education, housing and environmental costs, have a PV of R3,031m.
- Total benefits have a PV of R42,808m.
 - Foreign direct investment contributes R214m. This is the portion of private capital costs funded from overseas sources. The amounts are:



- Oil supply base with a PV of R117m;
- Rig repair with a PV of R91m;
- Fabrication with a PV of R6m.
- The contribution from increased business at the IDZ amounts to R42,594m. Local business has been excluded based on the assumption that it would have been displaced from elsewhere in South Africa. Imports by the new international business have also been excluded because this is international funding going back to international sources. The various industries in the IDZ contribute the following:
 - The oil supply base with a PV of R10,944m;
 - Rig repair with a PV of R15,918m;
 - Fabrication with a PV of R15,731m.
- The project has a positive NPV of R38,305m.
- The BCR is 9.5.

Rig repair has the highest benefits, followed closely by fabrication and then the oil supply base. Rig repair also has the highest costs, followed by the oil supply base and fabrication. Overall, fabrication gives the highest return, followed by the oil supply base and then rig repair.

6.2.2 Sensitivity Analysis

A sensitivity analysis was conducted on five main assumptions, namely:

- Infrastructure set-up costs.
- Private business set-up costs.
- Amount of business attracted to the IDZ.
- Proportion of internationally owned firms operating at the IDZ.
- Ratio of profits paid out as dividends.

In addition to this, a combination of the five least and most favourable assumptions was analysed to determine the overall robustness of the proposed initiative.

A sensitivity analysis of the least favourable assumptions showed that the proposed initiative remains economically viable. This analysis was continued by keeping all the assumptions unchanged apart from the rate of business attraction. This was reduced until the BCR became 1 – which is the tipping point of an unviable project. It was found that this occurred



when only 13% of the expected business was attracted. This is an attraction rate that is 87% less than expected. The conclusion to this extreme test is that the amount of business attracted to the IDZ would have to be considerably less than expected for the project to be unviable.

6.2.3 Macroeconomic Analysis

6.2.3.1 Gross Domestic Product

Gross Domestic Product is the total value of all final goods and services produced in the country. It is clearly fundamental to the economic quality of life of people in the country. It is also the most important and all-encompassing measure of the macroeconomic effect from the SBIDZ.

The total contribution to GDP is expected to amount to R3.4bn in Year 1 and increases to nearly R6.0bn in Year 2, mainly as a result of the private capital expenditure in that year. In Year 3 the contribution is slightly lower at R5.5bn but then increases until by Year 20 the total annual contribution to GDP amounts to R11bn.

Based on these projections, the proposed SBIDZ is expected to make a cumulative contribution to GDP of nearly R34bn by the end of Year 5, just five years into the project period. By Year 20 the cumulative contribution to GDP is expected to total nearly R199bn.

6.2.3.2 Western Cape Gross Geographic Product

The total contribution to GGP is expected to amount to R2.8bn in Year 1 and R4.9bn in Year 2. The increase in Year 2 is mainly due to the private capital costs in that year. The total contribution to GGP is then expected to settle slightly to R4.7bn in Year 3, before increasing until by Year 20 the annual contribution is R9.6bn.

Based on these projections, the proposed SBIDZ is expected to make a cumulative contribution to Western Cape GGP of R28.7bn by the end of Year 5 and of over R173bn by the end of Year 20.

6.2.3.3 Direct and Indirect Jobs

The proposed IDZ at Saldanha Bay would create two types of jobs. The first are the direct jobs that would be created in the IDZ. These are jobs in infrastructure development and the new businesses. The second are the so-called indirect jobs resulting from multiplier effects



of capital costs, operating spending and increased business activity. Some of the indirect jobs would occur in the province and the balance would occur elsewhere in the country.

Total direct and indirect jobs in the Western Cape are expected to amount to 4,492 in Year 1, 8,094 in Year 2, 7,274 in Year 3, 10,132 in Year 4 and 14,922 in Year 5. From Year 7 around 14,700 direct and indirect jobs would be sustained in the province as a result of the IDZ (see Table 6-2).

Table 6-2: Contribution to Total Jobs in the Western Cape

Contribution to Total Jobs - Western Cape								
	Yr 1	2	3	4	5	10	15	20
Infrastructure Costs	216	552	407	129	195	40	40	40
LiCo Costs	191	409	271	83	146	36	36	36
Private Capital Costs	0	1 728	0	0	0	0	0	0
External Costs	219	507	358	542	801	801	801	801
New Business	3 866	4 897	6 238	9 377	13 780	13 780	13 780	13 825
<i>Oil Supply Base</i>	<i>1 005</i>	<i>1 150</i>	<i>1 511</i>	<i>1 984</i>	<i>3 931</i>	<i>3 931</i>	<i>3 931</i>	<i>3 945</i>
<i>Rig Repair</i>	<i>997</i>	<i>1 466</i>	<i>1 970</i>	<i>3 971</i>	<i>5 571</i>	<i>5 571</i>	<i>5 571</i>	<i>5 600</i>
<i>Fabrication</i>	<i>1 864</i>	<i>2 281</i>	<i>2 757</i>	<i>3 422</i>	<i>4 278</i>	<i>4 278</i>	<i>4 278</i>	<i>4 280</i>
Total Jobs	4 492	8 094	7 274	10 132	14 922	14 657	14 657	14 702

Source: Economic Impact Analysis, EIS, 2012

Total direct jobs in the Western Cape are expected to amount to 2,692 in Year 1 and 5,151 in Year 2. After most of the capital expenditure and set-up costs have occurred, the operations due to the proposed SBIDZ are expected to create a sustainable 7,808 direct jobs between Year 7 and Year 17 and a sustainable 7,815 from Year 18 onwards.

Table 6-3: Contribution to Total Jobs in South Africa

Contribution to Total Jobs - South Africa								
	Yr 1	2	3	4	5	10	15	20
Infrastructure Costs	402	1 013	749	242	362	80	80	80
LiCo Costs	337	714	473	134	247	47	47	47
Private Capital Costs	0	3 072	0	0	0	0	0	0
External Costs	421	953	689	1 044	1 542	1 542	1 542	1 542
New Business	6 956	8 765	11 095	16 338	23 645	23 645	23 645	23 724
<i>Oil Supply Base</i>	<i>1 571</i>	<i>1 795</i>	<i>2 359</i>	<i>3 098</i>	<i>6 141</i>	<i>6 141</i>	<i>6 141</i>	<i>6 165</i>
<i>Rig Repair</i>	<i>1 564</i>	<i>2 294</i>	<i>3 085</i>	<i>6 224</i>	<i>8 735</i>	<i>8 735</i>	<i>8 735</i>	<i>8 786</i>
<i>Fabrication</i>	<i>3 821</i>	<i>4 676</i>	<i>5 651</i>	<i>7 015</i>	<i>8 770</i>	<i>8 770</i>	<i>8 770</i>	<i>8 772</i>
Total Jobs	8 116	14 517	13 006	17 757	25 796	25 314	25 314	25 393

Source: Economic Impact Analysis, EIS, 2012

Total jobs nationally are expected to increase from 8,116 in Year 1 to over 25,000 from Year 5 onwards (see Table 6-3). By Year 20 it is estimated that 25,393 direct and indirect jobs



would have been created. These jobs consist of 80 from operational infrastructure expenditure; 47 due to the SBIDZ LiCo; 1,542 due to spending on health, education, housing and the environment; 23,724 from new business at the IDZ. These jobs, in turn, consist of 6,165 due to the Oil Supply Base activities; 8,786 due to Rig Repair activities; 8,772 due to Fabrication activities. These jobs are all new and sustainable. They exclude those jobs that might be displaced from elsewhere in the country.

Taxes

Total tax generation, which is the sum of the direct and indirect taxes, is expected to amount to R524m in Year 1 and to exceed R1bn annually from Year 4. In Year 20 total tax generation is expected to amount to R1.73bn. Cumulatively, it is estimated that the proposed IDZ would have generated in excess of R30bn in direct and indirect taxes over a twenty year period.

Indirect household income

The project would also contribute to indirect household income. The expected contribution to indirect household income increases from R1.0bn in Year 1 to R3.4bn by Year 20. By Year 20 it is expected that the project would have added a cumulative R61bn to indirect household income.

Foreign exchange

Foreign direct investment from international companies is expected to amount to R790m in Year 2. The contribution from international business increases from R2.16bn in Year 1 to a sustainable R7.89bn from Year 5.

The nature of the business at the IDZ is import intensive and as a result funds would also flow out of the country. In addition, international companies would repatriate some of their profits. It is estimated that total funds flowing out of the country would amount to R1.18bn in Year 1 and increase to over R4.3bn from Year 5 onwards.

On balance, inflows exceed outflows and the project would be a net generator of foreign exchange. This nett generation of foreign exchange is estimated to amount to R980m in Year 1 and to increase to an annual R3.5bn from Year 5 onwards. Cumulatively over the twenty years it is estimated that the project would generate R62.1bn in foreign exchange.



6.3 Overall Conclusions

There are three key conclusions that are drawn from the economic analysis of the proposed SBIDZ:

- The cost benefit analysis show that not only is the SBIDZ economically viable with a BCR of 9.5, but it is also extremely robust. Economic returns of this magnitude will be very beneficial to society and warrant funding.
- A sensitivity analysis of the least favourable assumptions showed that the SBIDZ remains economically viable. This analysis was continued by keeping all the assumptions unchanged apart from the rate of business attraction. This was reduced until the BCR became 1 – which is the tipping point of an unviable project. It was found that this occurred when only 13% of the expected business was attracted. This is an attraction rate that is 87% less than expected. The conclusion to this extreme test is that the amount of business attracted to the IDZ would have to be considerably less than expected for the project to be unviable.
- The project will have major macroeconomic benefits for the province. It will generate income, create jobs, grow the tax base and be a net generator of foreign exchange.



7 Risk Management

In the development of the Business Plan for Designation of the SBIDZ, the SBIDZ LiCo is cognisant that there are risks involved as part of the official process of establishing the Oil & Gas and Marine Repair Cluster within the SBIDZ. These risks are both inherent within the establishment of such a Cluster (e.g. environmental, land availability etc.) and external (e.g. current policy framework, incentives etc.)

A risk framework has been developed in consultation with key stakeholders and is cognisant of both pre-designation and post-designation risks. External risks have also been discussed separately from the project risks that the SBIDZ LiCo has direct influence over. In all cases the probability of the risk occurring, as well as its impact on the project has been discussed. Lastly, control measures and/or response to the risk have been discussed.

The risk management framework has been developed to measure the impact, probability and control measures or response to the risks associated with establishing a successful Oil & Gas and Marine Repair Cluster in Saldanha Bay.



8 Strategic Marketing

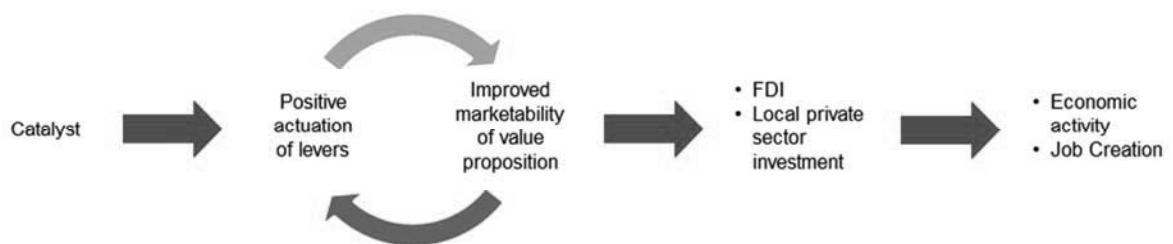
8.1 Key leverage points and recommendations

The Public Sector has a direct influence on a number of marketing variables affecting the success of the IDZ. Of these variables, the following four have been defined as key leverage points or success factors:

- Ease of doing business
- Infrastructure
- Input costs
- Operational excellence

There is a vital positive feedback loop that needs to be managed to ensure the success of the IDZ through these levers.

Figure 8-1: Initial positive actuation of key levers is required to catalyse the IDZ and ensure success



Source: Frost & Sullivan, Strategic Marketing Plan for the SBIDZ, 2012

But, the cycle needs a focused catalytic contribution from multiple public sector entities to create the necessary facilitating conditions and initiate the process. The facilitating conditions need to be created by positively actuating the appropriate levers.

A number of concrete recommendations for marketing the SBIDZ are made based upon the key direct leverage points available to public sector as listed above. Lastly, the importance of stakeholder collaboration in the strategic marketing of the IDZ will be discussed as an overriding mechanism to accentuate these levers.



8.1.1 Ease of Doing Business

From a strategic marketing point of view, ease of doing business is considered one of the most important components of the marketable value proposition. The IDZ will offer a One-Stop Shop (OSS) approach to potential investors, aimed at streamlining the processes associated with investing in South Africa. This is expected to have a direct, positive impact in reducing the cost, time taken and ease of setting up operations within the IDZ and operating within the IDZ going forwards.

Both in the short term (leading up to designation of the IDZ) and in the long term, it is critical that the IDZ system and process should enhance the investor experience and not stall investment already under progress. Apart from the more general aspects discussed under stakeholder collaboration, public sector can enhance the investor experience by supporting an OSS approach in the following practical ways:

8.1.2 Input costs

The IDZ will offer investors substantial fiscal and other financial benefits which will stimulate gains that exceed the cost of establishing and maintaining the IDZ.

- As per the current IDZ offering, companies operating within the IDZ are relieved from import duties on manufacturing assets, any goods for storage, and raw materials used in the manufacturing process; as well as export duties on goods exported from the Customs Control Area (CCA) to a foreign country; and any services rendered to the IDZ or within the IDZ.
- As per the current IDZ offering, no VAT is payable when goods are imported for use in the construction and maintenance of the infrastructure of a CCA; on land acquired or rented; on electricity and water supplied to the IDZ operator or CCA enterprise located in the CCA
- Reduced corporate and income tax rates could be charged to companies operating within the Cluster. Income tax reductions can reduce the cost of labour and stimulate job creation
- Double taxation agreements to avoid companies and individuals being double-charged in different jurisdictions are of particular importance to international investors and foreign workers
- The national 'Headquarter Tax Regime', which encourages firms to operate from a headquarter base in South Africa is an added incentive, but not only relevant to IDZ's



- Favourable lease/rental agreements for public sector-funded infrastructure could increase the potential profitability of operations, thereby generating investor interest. Examples include port fees, lease of land, and cost of utilities

8.1.3 Infrastructure

Targeted public sector investment in infrastructure acts as a catalyst for private sector investment and supports the operational excellence of the IDZ. Marketing material will present both current and planned infrastructure, and communicate construction progress.

Infrastructure will be funded by both public and private sector, and the IDZ can support private sector property developers through aspects discussed under Ease of Doing Business (e.g. assistance with construction permits).

The following infrastructure is needed to support operations:

- Water supply
- Wastewater systems
- Waste disposal facilities
- Electricity
- Fencing
- Road access
- Bus stops, taxi ranks, petrol stations
- Quayside: dedicated transshipment quay and a dedicated rig repair quay
- Dry-docking facilities (floating dock)
- Quay equipment such as cranes, tugs, forklifts
- Warehousing, fabrication yards, hard laydown areas
- Offices
- Retail, food, medical, training centres, accommodation

8.1.4 Operational excellence

Operational excellence of the IDZ is a function of infrastructure availability, industrial capabilities, and streamlined systems and processes that support logistical and administrative efficiency. Increased industrial capability increases *operational excellence*, which in turn attracts *FDI*, stimulates *private sector investment by local companies*, and therefore stimulates *economic activity* and *job creation*.



Apart from the aspects already discussed, public sector can directly support operational efficiency in the following ways:

- TNPA's effective scheduling as well as tugging and piloting services can support rapid turnaround time at port, especially for transshipment
- Through streamlined processes, the customs clearance office can support quick turnaround time at port and rapid release of cargo
- As discussed, sufficient investment in human resources, supported by continuous training and development opportunities for the civil servants working with and within the IDZ, will support operational excellence of the IDZ



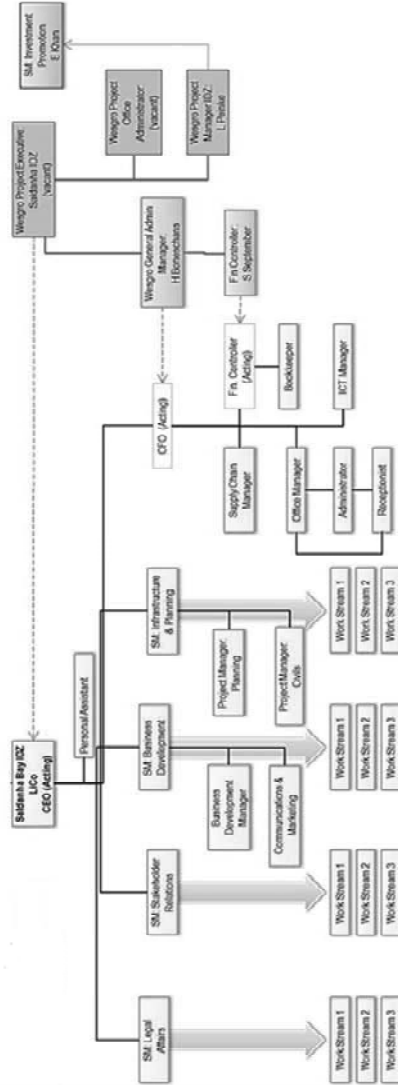
9 Implementation Plan of the Saldanha Bay IDZ

9.1 Establishment of Management Functions of the SBIDZ LiCo (Wesgro)

The day-to-day management activities of the SBIDZ LiCo will be governed by the Acting Chief Executive Officer (CEO) upon his/her appointment by the SBIDZ LiCo Board of Directors. The CEO is responsible for overseeing the various core functions of the SBIDZ LiCo including legal matters, stakeholder relations, business development and infrastructure & planning. The SBIDZ LiCo will also have its own Chief Financial Officer (CFO) who will be responsible for administering and controlling the finances of the SBIDZ LiCo. The CFO will report directly to the CEO. In accordance with the requirements for the functions of the SBIDZ LiCo, additional employees will be contracted to various work streams to fulfil the SBIDZ LiCo's mandate as per the MOI (see Figure 9-1).



Figure 9-1: Overview of the management function of the LiCo





9.2 Socio-economic Impacts and Contributions

The development of an Oil & Gas and Marine Repair Cluster within the Saldanha Bay will have an important and lasting effect on the economic development objectives of the Western Cape Government and National Government. This includes the impacts of the B-BBEE policies as well as the incorporation of SMEs into international value chains through a supplier development framework.

B-BBEE is viewed by government as an integrated and coherent socio-economic process that directly contributes to the economic transformation of South Africa. The SBIDZ LiCo's B-BBEE strategic interventions seek to align measurable outcomes, competitive advantage and socio-economic objectives in a manner that is both value-adding to the Saldanha Bay IDZ and integrated into its overall strategic plan. To this end, the SBIDZ LiCo is in the process of developing a B-BBEE charter as an expression of intent to explore the possibilities and implication for B-BBEE policies on the Oil & Gas and Marine Repair Cluster within Saldanha Bay.

The Charter, which is not a legally binding document, will also evaluate the level of existing B-BBEE and identify SMEs that can contribute to local content requirements and ensure the uptake of black people within the Saldanha Bay IDZ.

The SBIDZ LiCo is also in the process of evaluating a supplier development framework to ensure that as many SMEs and local companies benefit from the Saldanha Bay IDZ as possible. This will entail evaluating the existing SMEs and local companies that provide services/ goods to the Oil & Gas and Marine Repair Cluster. However, the SBIDZ LiCo is also cognisant that the Oil and Gas and Marine Repair industries have international accreditation standards and existing contracts with suppliers in their value chain may limit the initial amount of local companies and suppliers in the value chain. This issue will be acknowledged in addressing the supplier development framework, and efforts will be coordinated to ensure support is given to SMEs and local companies to meet these international requirements.



9.3 Physical Master Plan

Figure 9-2 illustrates the envisaged footprint of the area intended for development of an Oil & Gas and Marine Repair Cluster in the SBIDZ at Saldanha Bay, with the Cluster comprising of three main elements, namely, the Oil & Gas Supply Base, the Marine and Rig Repair Centre and the Fabrication Centre.

Segments of the envisaged footprint of the area intended for utilisation of the development of an Oil & Gas and Marine Repair Cluster had been zoned for industrial purposes previously, and already has some existing industrial investors.

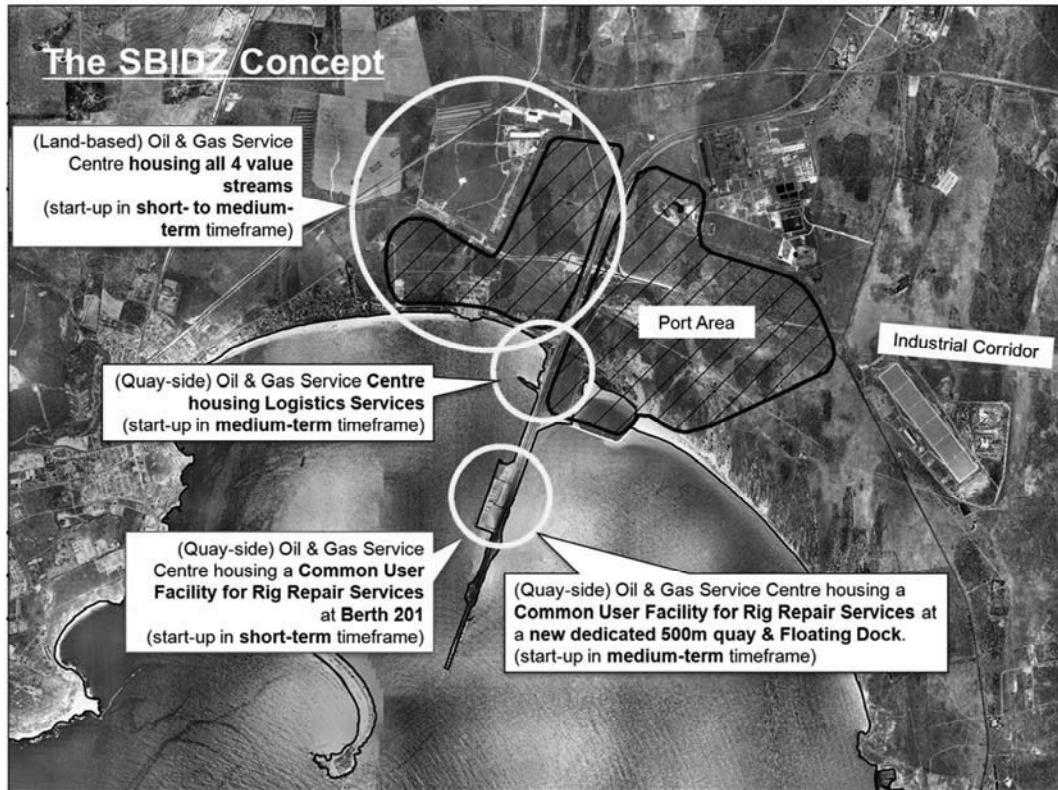
9.4 Land Provision

Two land areas are identified as the initial footprint (outside of TNPA Land) for the SBIDZ, and have a combined area of 138 Ha for this initial application for the SBIDZ. The IDC are the landowners of this land and SBIDZ LiCo are in progress to a MoU being completed for long-term lease agreements between the IDC and SBIDZ LiCo.

Discussions with regards to a Memorandum of Understanding between the SBIDZ LiCo and Transnet National Ports Authority (TNPA) are underway to allow for servitude to the TNPA Land for the SB IDZ. In this case, the land will continue to be owned and operated by TNPA. An appropriate transportation link will be established between the port land and the SBIDZ land so that the two areas can operate as one, integrated zone. In addition, the Memorandum of Understanding/Agreement being drafted will capture these aspects and other areas of co-operation, which include joint marketing, joint planning and operational efficiencies between the two land areas.



Figure 9-2: Conceptual Plan of the SBIDZ



9.5 Environmental Considerations

Saldanha Bay is acknowledged as an area having important environmental value and all investigations and planning into an IDZ at Saldanha Bay have taken this into consideration.

In the Feasibility Study, a *Strategic Environmental Review* and an *Air Emission Model* was generated to analyse the wholesale impacts and potential mitigation measures of an IDZ.

The *Strategic Environmental Review* defined the elements that would require detailed study and consideration for Environmental Impact Assessments (EIAs) should the application of the development of the IDZ be positively received. An EIA would apply to activities that are listed under section 24 of the National Environmental Management Act (Act 107 of 1998) – NEMA. Any activity that is listed in the Regulations is subject to environmental authorisation and depending on the Listing Notice in which a given activity is listed, a Basic Assessment or



Scoping and/or full EIA process would be required. It is illegal to commence a “Listed Activity” without environmental authorisation.³

9.5.1.1 Air quality

Baseline analysis of current industrial activities in Saldanha Bay revealed that the Iron Ore Handling Facility (IOHF), Namakwa Sands and Saldanha Steel operations represent the most significant air pollution sources affecting the area.

The Air Emissions Model revealed that the incremental air pollution impact resulting from the implementation of the Oil & Gas and marine repair industry cluster results in a negligible increase in air pollution, given the assumption that Best Available Technology (BAT) will be utilised in all cases.

Future potential development of the IDZ must however be assessed cumulatively, i.e. including all other significant air pollution sources potentially included in the other clusters identified in the Feasibility Study, namely the Renewable Energy Manufacturing Cluster and the Steel & Minerals Beneficiation Cluster.

9.5.1.2 Water biodiversity

The Langebaan lagoon is an internationally recognised conservation area and is a designated Ramsar⁴ site. With respect to the Bay, there is concern on deterioration of water quality and ecological functioning with the proposed location of Marine and Rig Repair operations and an Oil & Gas Services Centre in Small Bay and the potential for increased shipping traffic due to the IDZ. This is evidenced by on-going research under the auspices of the Saldanha Bay Water Quality Trust. The latest “State of the Bay” report shows that the situation has stabilised in some areas and that there has been improvement in some water quality parameters.

³ The environmental considerations regarding the IDZ development have been closely aligned to the work being undertaken in the development of the Environmental Management Framework (EMF). At the time of submission of the IDZ application the EMF had not been concluded, however any interim conclusions had be taken into consideration.

⁴ A wetland or water body of international significance and so recognised in terms of the Ramsar Convention (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat). This is an international treaty for the conservation and sustainable utilisation of wetlands. Sites are Langebaan Lagoon, Jutten Island, Malgas Island & Marcus Island.



9.5.1.3 Land biodiversity

Saldanha Bay has a sensitive biodiversity landscape; it has four Ramsar sites, a large proportion of Critical Biodiversity Area (CBA) within its boundaries, CapeNature conservation areas, South African National Parks Board conservation areas, local nature reserves and private nature reserves. Certainly the conservation of these areas and their ecosystems is important for global biodiversity, and loss of relatively undisturbed areas of these ecosystems would severely compromise the realisation of conservation targets.

With regards to the IDZ, the CBAs were of paramount influence to the land availability question, and therefore at the outset of the Feasibility Study a fundamental principle of “no-go” into those areas was set within SBIDZ. Furthermore, a buffer zone of 35m was applied to the edge of all CBAs to avoid or at least minimise potential negative impacts that can arise due to edge effects of the development. It was considered valuable to obtain more detailed information on the CBAs relevant to the IDZ, as the latest GIS data⁵ on land biodiversity was captured in 2008, and therefore a specialist study on the extent, classification and conservation management measures possible was undertaken.

The investigations revealed that a few areas which were previously classified as CBA had been significantly degraded and perform very little or no ecological connectivity function. They are thus considered to be of limited regional conservation value, and do not contribute to meeting regional conservation targets for either species or vegetation types. They are wholly located within the Port of Saldanha land (owned by Transnet Ltd) and the total area amounts to 162.6ha.

⁵ From the CapeNature, C.A.P.E Fine-Scale Biodiversity Planning Project.



Figure 9-3: Land Biodiversity – Ground-truthing survey results



Source: MEGA and Nick Helme Botanical Surveys, *SBIDZ Strategic Environmental Review for Feasibility Study*, 2011

Alternatively, some areas which were not designated as CBAs were found to be worthy vegetation as it is a requirement to support rare and localised plant species or good (high diversity) examples of threatened habitat. The locations of these sites were spread inside and outside the SDF-defined Industrial Corridor and had a combined area of 456.9ha.

9.5.2 Geotechnical Considerations

The general geology of the area around the proposed IDZ site consists of sandstone, calcrete and calcified parabolic dune sand. The surface is overlaid by windblown sand and ancient sea bed deposits of various thicknesses. The geology of the area is remarkable consistent over the full extent of the proposed site.

Geotechnical investigations were performed for the purpose of preparation of this Business Plan. These investigations revealed that hardpan sandstone is generally found at very shallow surface. No test pit could be excavated deeper than 400mm, before refusal on hard rock of a TLB type with an 80 kW flywheel capacity. From a construction point of view the conclusions from this are summaries as follows:



- The permissible soil bearing capacity for design of foundations are very high. However, no deep foundations will be possible due to the shallow hard rock present on virtually the entire site. Furthermore, buildings should not include subsurface basements.
- Installation of underground services such as water pipelines and sewers will prove to be difficult and expensive due to the shallow calcrete hardpan plates.

9.6 Provision of Utilities

9.6.1 General

In the Feasibility Study, an extensive analysis of existing and required infrastructure was done. This work was covered in two separate reports. The first report analysed status quo of utility provision in the SBM service area. The second report analysed the requirements for the expansion of existing infrastructure and provision of new infrastructure to accommodate the proposed IDZ. The analysis of infrastructure requirements was based on the development scenarios of the IDZ as detailed in the Feasibility Study.

The main conclusion from the Status Quo Report is that although existing service utilities in the Saldanha area are well maintained and in good condition, the service level that the utilities can provide is under pressure from a capacity point of view. Water demand has already reached the capacity of the supply system. There is a relatively small spare capacity in the electricity supply system. Waste water treatment and solid waste disposal systems have reached their life expectancy and will be due for upgrade shortly. Industrial development in the SBM service area should therefore be approached with this in mind as such development might require large expansion and upgrading of existing infrastructure.

The industries targeted in the current IDZ approach will have a relatively low impact on service delivery in greater Saldanha area. The industries are low on demand, have relatively low waste streams and can be accommodated within the existing supply capacity. Transport services, however, will be impacted due to the high number of jobs expected to be created. The external infrastructure required to support the proposed IDZ development are individually discussed in section 9.6.3.



9.6.2 Health, Education and Housing

Requirements and provision of requirements relating to health, education and housing concerns as an indirect impact of the development of the SBIDZ were considered in the financial and economic impact assessments.

9.6.3 External infrastructure required (and responsibilities)

9.6.3.1 Transport Infrastructure

Existing transport infrastructure in the greater Saldanha area consists of well-maintained provincial and national roads with sufficient capacity to support the development of an Oil & Gas and Marine Repair industry. The development of this industry will however cause a substantial increase in traffic to and from the Port area. This will mainly be due to commuting of workers that will require an expansion of the local provincial and municipal roads infrastructure around the Port to service morning and afternoon peaks. This is the conclusion from a transportation study performed as part of the development of the Business Plan.

9.6.3.2 Bulk Electricity Supply

The current electricity supply capacity to the Saldanha area is sufficient to accommodate the initial development of an Oil & Gas and Marine Repair industry for up to 5 years. Initial infrastructure required will be limited to a designated distribution line and substation at the Port area. This infrastructure will typically be provided by Eskom.

An increase of the bulk electricity supply capacity to the region will be required in the medium term (+5 years), irrespective of the development of the IDZ. This will require substantial capital investment by Eskom to extend the regional transmission system to Saldanha Bay. This had not been factored into the financial requirements.

9.6.3.3 Bulk Water Supply

As mentioned above, current water demand in Saldanha already exceeds the supply capacity. Planning for provision of water through desalination is already in progress. The desalination project is funded by the Department of Water Affairs and implemented through, the local water authority, namely West Coast District Municipality. It is expected that phase 1 of the desalination project will be completed within 3 to 5 years.



In order to relief the pressure on the current water supply system, is recommended that the local water authority implement a Water Demand Management Program to optimise use of the existing water resources and supply infrastructure.

Bulk water supply infrastructure in Saldanha Bay already provides water to the Port area, with sufficient capacity to support the proposed industrial development. The water demand from the SBIDZ industries is relatively low. The impact of these industries is not expected to impact on the regional water supply infrastructure. It is however recommended that a dedicated bulk supply pipeline be provided to serve the Port area.

9.6.3.4 Bulk Waste Water Discharge

Due to the low water use at the IDZ, a relative low impact is expected on the sewerage and waste water treatment systems. Initial studies have shown that a sewage pump station and rising main to the existing Saldanha Waste Water Treatment Works (WWTW) will suffice in the short term. The existing WWTW is however not designed to treat industrial waste. It will therefore be necessary to upgrade the WWTW to accommodate the waste water produced in the IDZ. As an alternative, on-site pre-treatment of industrial effluent may be considered. This possibility had been factored into the capital requirements exercise.

It is important to note that planning for waste water discharge and treatment for the IDZ should be integrated with other current planning initiatives of the Saldanha Bay Municipality and existing industries such a Saldanha Steel and Namaqua Sands considering a regional water balance system that includes the reuse of treated effluent. Such a water balance system could solve the problem of caused by the limitations in the water supply system. This possibility had not been factored into the financial requirements for the establishment of the SBIDZ.

9.6.3.5 Solid Waste Disposal

Currently none of the local registered landfill sites are suitable for industrial or hazardous waste. Furthermore, the local landfill sites are nearing their capacity. Proposed new regional landfill sites had been identified; however, the process involved in authorising these had not been completed.



A Waste Transfer Station and Waste Sorting Facility are recommended for the IDZ. Such facilities will be situated within the IDZ from where waste will be discharged to suitable remote land fill sites.

9.6.4 Internal infrastructure required

The land considered to be included in the IDZ is largely un-serviced. The TNPA land is partially serviced around the quay, the corporate office block and the existing fabrication facilities on the Grinaker-LTA Site. The IDC land north of MR 559, Camp Road, currently houses a number of small industries that provide services to the local commercial market. These industries are housed on small serviced plots. The bulk of the IDC land is however not serviced.

The intention is to provide full services on the whole of the TNPA and IDC land of a total of 286 ha, phase over a period of 5 years. This will include roads, water, sewers, stormwater management infrastructure and 11 kV electricity. The cost of the civil engineering services is estimated at R520 000/ha and that for electrical engineering services at R480 000/ha. The total cost of servicing the land is estimated at R286 million. The estimated time for development of the whole of the area is 8 to 10 years.



10 Work Force Analysis for the Saldanha Bay IDZ

The University of the Western Cape (UWC) conducted a work force analysis as part of the Saldanha Bay IDZ (SBIDZ) Feasibility study, which included an estimate of personnel requirements of various skills for potential industries in the IDZ. The study concluded that there were insufficient skills available in the Saldanha Bay municipal area, despite having a sufficient labour force.

The education facilities in the area were found to be unable to support the training of required skills in the short- and medium-term without significant improvement and support from both public and private sector.

The purpose of the work force analysis was to identify the skills required for the Oil & Gas and Marine Repair service industries, assess the shortage of skills and make recommendations on how to address this shortage in the short, medium and long-term.

10.1 Potential work and Employment

It is understood that the overall IDZ study has used the following as a work basis:

- Three oil rigs under maintenance, repair or modernisation
- A significant oil and gas facility including fabrication and hub activities.

An estimate has been made of the skills required for this activity level, using the same methodology as the main study (see Table 10-1).

Table 10-1: Overview of the number of skills required by level of experience and job type

Skills demand	Numbers
Management	26
Engineering	20
Supervision	42
Boilermakers	380
Fitters (incl. pipe)	410
Electricians	84
Welders (incl. coded)	610
Semi-skilled	540
Assistants (painters etc.)	490

Source: Saldanha Bay IDZ Work Force Study, UWC, 2011



10.2 Conclusions

Currently the numbers of trained people in the Saldanha Bay area is insufficient to supply the maritime industry requirements for skilled personnel able to produce work of an internationally acceptable standard.

However there are short-, medium- and long term solutions which can alleviate the situation and provide future requirements so that the Oil & Gas and Marine Repair service industries of the IDZ in Saldanha Bay will be able to operate competitively in an international market. It is essential that the short-term solutions be implemented – even before designation – to ensure that the local workforce benefits from the skills demand of the IDZ.

The SBIDZ LiCo has engaged, and continue to engage, in discussions with the Western Cape Government PSDF and **the dti** Skills Task Team to ensure that the skills and training requirements of the local workforce are met in a sufficient and timeous manner.

Printed by and obtainable from the Government Printer, Bosman Street, Private Bag X85, Pretoria, 0001
Publications: Tel: (012) 334-4508, 334-4509, 334-4510
Advertisements: Tel: (012) 334-4673, 334-4674, 334-4504
Subscriptions: Tel: (012) 334-4735, 334-4736, 334-4737
Cape Town Branch: Tel: (021) 465-7531

Gedruk deur en verkrygbaar by die Staatsdrukker, Bosmanstraat, Privaatsak X85, Pretoria, 0001
Publikasies: Tel: (012) 334-4508, 334-4509, 334-4510
Advertensies: Tel: (012) 334-4673, 334-4674, 334-4504
Subskripsies: Tel: (012) 334-4735, 334-4736, 334-4737
Kaapstad-tak: Tel: (021) 465-7531