

**ENVIRONMENTAL IMPACT ASSESSMENT: EXPANSION OF THE SISHEN –  
SALDANHA RAILWAY LINE TO 93MTPA IRON ORE EXPORT CAPACITY**

**BACKGROUND INFORMATION DOCUMENT**

**TRANSNET LIMITED  
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**TRANSNET**  
LIMITED  
(Registration No. 1990/000900/06)



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## 1 BACKGROUND

### General

Transnet Limited is carrying out a feasibility study for a proposed upgrading of the Sishen-Saldanha railway line to be able to carry iron ore for export at 93 million tonnes per annum (MTPA). SHE Cape Environmental CC has been appointed by Transnet as the Environmental Assessment Practitioner to carry out the Environmental Impact Assessment (EIA) of the proposed upgrade.

This Background Information Document (BID) describes the nature of the project and the broad environmental issues potentially involved, sets out the proposed study procedure and creates a means by which the public are notified of the project and become involved in the EIA process.

### Project History

The railway from Sishen to Saldanha is a single, heavy haul line, built to carry export iron ore primarily from mines near Sishen. Crossing loops are positioned at intervals along the line to enable trains travelling in opposite directions to pass each other. The line has progressed from having 10 crossing loops  $\pm$  90 km apart to now having 19 loops at  $\pm$  45 km. This has increased the capacity of the line from 18MTPA to 38MTPA. The line is electrified, using 50 kV AC power. Trains of 216 wagons with a payload of 85 or 100t are presently hauled by a combination of electric and diesel-electric locomotives. See route and locality map attached as Annexure 1.

In the period after the opening of the line in 1976 and the building of all the additional loops between 2000 - 2003, environmental authorisation to increase the capacity of the line to 41MTPA was received in April 2006. This includes making the loops approximately 1,5km longer to allow trains with 342 wagons to run and cross each other. These trains will use distributed power, which allows locomotives to be controlled by radio and spaced at intervals in the train.



The current EIA to assess the feasibility of an increase in iron ore export capacity to a possible 93MTPA is therefore the latest step in the environmental planning process.

Transnet has allocated R65 billion to capital investment over the next 5 years to upgrade old infrastructure, locomotives and wagons as well as to increase the amount of traffic it is able to move by rail. Reaching potential foreign exchange earnings through exporting more iron ore via the dedicated Sishen – Saldanha channel forms a large part of this capital investment and expansion programme.

## 2 DESCRIPTION OF ACTIVITY

### Site Location

The iron ore railway line (IOL) is 861 km long and runs between Sishen in the Northern Cape and Saldanha in the Western Cape. The line was specially built to be able to run heavy iron ore trains. The route starts at Erts railway yard, where empty trains from Saldanha are exchanged for trains loaded by the mines. Major points along the route are to be found at Halfweg or loop 10 where train crews are changed and rest facilities are available, thereafter Salkor yard at Saldanha, where loaded trains are split into two parts to be emptied through a tippler (equipment that turns two wagons at a time upside down) in the Port of Saldanha. The line is built as a transport route specially for running long and heavy trains and is designed so that there are no major or public roads that cross it. Except for farm crossings and a road near Elands Bay, all roads cross over the line by bridges or under it through culverts.

The line follows the west coast through Velddrif and Elandsbaai, close to the towns of Dwarskersbos, Lamberts Bay and Doringbaai before heading through the sparsely populated interior near the towns of Vredendal, Kenhardt, Groblershoop, Olifantshoek and Sishen. The line passes through the area known as Bushmanland in the south of the Northern Cape, then the Karoo and ending in the Kalahari at Sishen. Except for Elands Bay and some of the other coastal towns, the line runs through open country where only scattered farm settlements are found.

## Scope of the Project

The project involves investigating whether it is possible to increase the rate of iron ore exports from the 41MTPA allowed at present to 93MTPA by means of a number of actions, including the following possibilities:

- 1) Running longer trains – 420 wagons instead of the 216 wagons being used at the moment and the 342 wagon trains planned under the 41MTPA capacity upgrade.
- 2) Running shorter trains more often – loaded trains to increase to 44 per week, with a theoretical 2.2 hours between trains.
- 3) Providing additional equipment, machinery and other railway infrastructure, which will support the expansion of the whole railway system.
- 4) Build extra crossing loops at regular intervals between the existing loops, to reduce the time delay when trains have to cross each other as well as to relieve traffic blockages and train delays in problem sections of the line.
- 5) Making the 19 crossing loops even longer by adding approximately 1,5km per loop over and above the 41MTPA extension, to allow 420 wagon trains to cross each other.
- 6) Adding extra lines to the Salkor North yard extension proposed under the 41MTPA expansion, so that arriving as well as departing trains can be placed here.
- 7) Upgrade the power supply to the trains, including the modifying and / or building new sub-stations, feeder lines and transformer equipment. Providing power lines to any new sub-stations on Transnet property will be handled by Eskom.
- 8) Provide additional lines at certain loops to allow more trains to be staged or parked.
- 9) Upgrade of crew change restrooms and locomotive inspection facilities.
- 10) Allow for obtaining new land or servitudes as well as rerouting and upgrading of bulk services such as water or electricity, by other parties such as Municipalities.

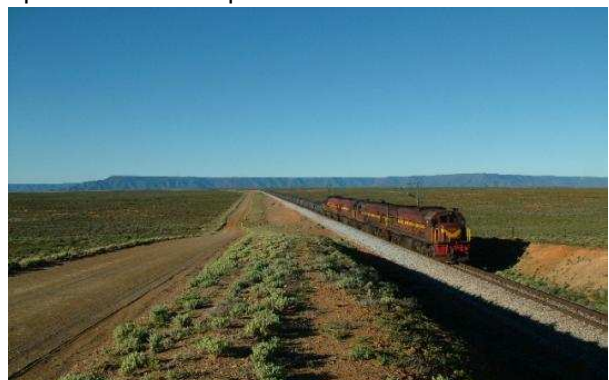


## 3 THE ENVIRONMENTAL AUTHORISATION PROCESS

The project is being carried out under the Environment Conservation Act (73 of 1989) (ECA) and the EIA Regulations under Government Notice R1183 as amended. In terms of these regulations the construction of a railway line is a listed activity which needs authorisation by the National Department of Environmental Affairs and Tourism (DEAT), who must consult with the relevant Northern and Western Cape Provincial Authorities.

The EIA regulations under the ECA (1989) have been replaced by new EIA regulations made under section 24 of the National Environmental Management Act, 1998 (NEMA). Because this study relates to an application submitted before 1<sup>st</sup> July 2006 and was originally part of a broader study of the Iron Ore Channel, this assessment will be handled under the regulations contained in GN R1183 of 5<sup>th</sup> September 1997. The study will, however, ensure that any activities listed under the new NEMA legislation will also be included and addressed.

The project is presently in the Scoping Phase of the EIA process. In this phase the basic environmental characteristics are identified and a wide range of impacts and concerns from the public and stakeholders are raised. Issues and concerns are then grouped together to determine how significant they are. Significant issues that cannot be managed at Scoping level and those requiring further detailed study are carried forward to the Environmental Assessment phase, if necessary. In the EIA phase, specialist studies are carried out and an Environmental Impact Report is produced, showing what the impacts in the field of study are and how they can be managed.



The study boundaries and scope of this EIA deal with the increase in export ore capacity of the railway line between Sishen and the Vredenburg road over rail bridge near Saldanha. The southern boundary is approximately 1,8km to the north of Salkor yard. The possible upgrade or increase in capacity of the Port of Saldanha is being handled at the same time, but as a separate EIA.

#### 4 POTENTIAL ENVIRONMENTAL ISSUES

From previous studies dealing with an increase in traffic capacity of the ore line, the following are some of the known environmental concerns likely to arise. These, together with any other issues identified, will be addressed as part of the scoping study:

- Soil and land disturbance as a result of making crossing loops longer,
- Soil and land disturbance at borrow pits, where rock and gravel are dug out for building loop extensions,
- Noise from increased train movement, with more and possibly longer trains running,
- Construction activity and disturbance from construction sites, particularly at new or extended loops,
- Increased safety hazard – road and pedestrian traffic affected by longer or more frequent trains,
- The spreading of dust during earthworks construction at loops,
- Generation of ore dust from trains in transit,
- The aesthetic or visual effect of construction on the landscape and sense of place at loops,
- Negative effect on adjacent landowners through trespassing, poaching, littering and social effects,
- Effect on terrestrial (land), riverine and coastal ecology in sensitive environments.



#### 5 PUBLIC PARTICIPATION AND REGISTRATION.

Widespread and fully transparent public participation is a critical part of this environmental study and the process of obtaining authorisation for the project. The project will be advertised and the public is requested to participate by completing the Registration form, which will ensure that you are registered as an Interested and Affected Party (I&AP). All I&AP's will be kept informed and provided with feedback on the project, especially regarding the way in which concerns and suggestions are treated in the decision – making process.

Attached to this letter is a **Registration Form** that must be completed and signed if you wish to be listed as an I&AP. We encourage all I&AP's to lodge their comments and / or concerns on this registration form, so that we can endeavour to address them during the scoping exercise. For any additional copies of the attached Registration Form you are welcome to photostat the attached Registration Form or contact the SHE Cape office at (021) 553 2500. All responses should either be **posted** to SHE Cape Environmental CC, PO Box 471, Paarden Eiland, Cape Town, 7420 or **faxed** to (021) 553 1851. Please note that to qualify as a registered I&AP. response must be submitted within 21 days but not later than **Monday 4<sup>th</sup> of December 2006**.



SHE Cape Environmental CC trusts that you find the above concise information of value. Please do not hesitate to contact us should you require any further information.