

Data sources drawn on in National Treasury CPU Manganese export transport options study

	Document / contact person / source	Reference
#	TECHNICAL AND STATISTICAL SOURCES	
1	Transnet Capital Projects	Meeting with Krish Reddy and Francois Meyer to discuss the brief and receive their comments on how to structure costs in a manner that reflects as fairly as possible on Transnet scenario. Email: Francois.Meyer@transnet.net; Krishna.Reddy2@transnet.net
2	Transnet National Infrastructure Plan	This is a comprehensive review of ports, rail and pipeline investment plans.
3	Transnet Capital Plans - 2019 and beyond	Public domain presentation setting out physical plans and estimated costing for all freight rail corridors
4	Transnet 2010 Annual report	Chris Wells' last report. This report quotes annual capital investment amounts and also annual operating costs + comparisons which allow insightful comparisons between port and rail viability
5	Imperial Logistics	Discussion with former senior Transnet Freight Rail manager dealing in bulks and now with IL: Gebisa Ledwaba, Rail Projects Executive with IL. Tel: 011 821 5500 / 071 854 1601; Email: gebisal@il.co.za
6	Imperial Logistics - Freight Max	A freight forwarding / logistics subdivision of IL. Name can be supplied if contact needs to be made.
7	Department of Transport	Brief discussion with Clement Manyungwana, Chief Director, Eastern Corridor

8	Department of Transport	National Freight Transport Framework
9	Department of Transport	1986 'De Villiers report': "Samevattende verslag van die Studie deur Dr. W. J. de Villiers Rakende die Stragesiese beplanning, Bestuurspraktyke en Stelsels van die Suid Afrikaanse Vervoerdienste'
10	Morton, Visser, Horak, CSIR 2006: 'A Life Cycle Cost Analysis of the Gauteng to Durban Freight Corridor: introduction to study'	A research project being undertaken by Bruce Morton of Ninham Shand / University of Pretoria. This 2006 report only sets the parameters of the exercise. I did not have access to subsequent work
11	Strategic Economic Solutions	Firm responsible for GFIP CBA; consulted Antony Boting re scale of congestion savings on existing N3 if freight traffic were completely removed. Email: antony@stratecon.co.za; Tel: 083 320 8670
12	UK Department for Transport	2009 report: 'Environmental benefits values information for the new Mode Shift Benefit Values'
	UK Department for Transport	'Eddington Transport Study', 2006
RAILWAY and HIGHWAY COSTING		
13	Press article re planned Transnet - Swaziland rail link	IOL Business Report, January 13 2012: 'Transnet and Swazi rail utility get going on plan to build R17bn line'
14	Trans Kalahari Railway	Consultant's own work on options for funding a TKR for coal export

- 15 Trans Kalahari Railway
Sight of report of 2012 prefeasibility study of a state developed proposal for a Botswana / Namibia bulk / mixed railway.
- 16 Transnet investment programme presentations
Shared conference platform with Deidre Strydom of Transnet on rail investment, both bulk corridors and Durban Gauteng corridor. We spoke at the conference but she did not respond to my attempts to contact her directly: **Email: deidre.strydom@transnet.net**
- 17 Bo Giersing, railway development consultant
A longstanding friend and colleague who advises public and private sector clients throughout southern Africa on costs of railways. **Tel: 082 852 4814; Email: giersa@iafrica.com**
- 18 Burlington Northern Santa Fe - US rail operator's consultancy arm
Tanzania double stack rail project for link between Dar-es-Salaam and Rwanda: sight of report provided by an industry contact. **Report available for inspection.**
- 19 China Rail Construction Company - internet report
CRCC designed and costed a two-way freight railway in Nigeria in 2005/06 - not clear if double stack capable
Corresponded seeking confirmation of my own estimates for the cost of a purpose built dual-2 freight highway between Durban and Gauteng; Nazir Alli supported the request and Alex van Niekerk responded confirming my estimates. **Email: NiekerkA@nra.co.za; tel: 083 676 1415**
- 20 SANRAL
Met N3TC to discuss the scope of this exercise. Detailed freight statistics and actual programmed maintenance and upgrade costs were provided on condition of being used generically. N3TC also provided industry details for operating costs of all freight vehicle types. **Neil Tolmie, CEO: email: ntolmie@n3tc.co.za; Tel: 011 454 3596. William Crosse, Chief Financial Officer: email: wcrosse@n3tc.co.za; Miles le Roux, Transport manager Email: milesl@n3tc.co.za**
- 21 N3 Toll Concession

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Notes

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I shared my 'Transnet Upgrade' scenario with Francois Meyer. Only received his adjustments to it after my presentation. It turned out that Transnet's current traffic volumes on the corridor were considerably lower than my estimates - but that our 2040 projections were very similar. In my judgment the Upgrade option as Francois Meyer defined it does not adequately allow for ongoing development of bulk and other mixed traffics on the line. I therefore stick to the scenarios presented in the seminar as being a reasonable reflection of options for increasing capacity on the corridor.

This document contains the data used in my presentation for the 'Transnet Upgrade' scenario - including estimated % for 'sustaining' investment as alluded to on the final slide. CPU has a copy of this presentation.

I drew on data in this report to derive Transnet Upgrade operating costs. The report is also valuable because of the acknowledgment by Chris Wells that Transnet's capital investment programme cannot be funded off Transnet's balance sheet alone. He also notes the threat to fundability posed by more effective Ports Regulation

Discussed in detail how Transnet would build up freight tariffs from costs - towards the 'DORC' Depreciated, Optimised, Replacement Cost, and how tariffs invariably had to be set well below DORC in order to win business

Obtained current freight rates for containers between Johannesburg and Durban as well as insights into 'drivers' of choice as between road and rail. This information was a major contributor to the 'market reality based' tariffs used in the latter part of my presentation.

Not very valuable - just confirmed existence of a 50 year vision committee for the corridor

An attempt in 2008/09 to develop detailed corridor statistics; a detailed breakdown of rail commodities was given. Subsequent information received from Transnet show that volumes have actually declined between 2008 - 2011 mainly as a result of bulks being replaced by containers. I am not 100% certain of Transnet's own data or the DOT source; the values in my presentation are probably too high for 2010.

This report, available at present in Afrikaans only, reviews global experience of declining rail transport and recommends that SA transport services be exposed to market pressures in order to allow them to discover where each technology still retains an economic advantage - this in order to prevent over / under investment through artificially determined markets

Valuable mainly in that it quoted (then) current estimates of road and rail capacity on the Durban - Gauteng corridor which I quoted in the presentation

Used his input to estimate value for congestion cost savings

This work updates that done in the 2006 Eddington Transport Study to give values for road vs. rail environmental impact in monetary terms. I drew on this in arriving at the cost to add to highway investment to make it more equivalent with rail, adding (10%)10% to projected financial cost of road scenarios

www.dft.gov.uk/publications/environmental-mode-shift-benefit-values/

This report challenged many assumptions about transport infrastructure investment and did detailed work on monetarisation of environmental externalities. As such it provides many of the general insights upon which my presentation was based.

www.hm-treasury.gov.uk/media/39E/D6/eddingtonreview_vol1.0_011206pdf

The cost and distance / volumes quoted in the article provide an additional gauge for estimating rail construction costs

This work, undertaken while with Arup between 2008-2010, led to a useful benchmark against which to cost different scales of bulk railway

I was asked for professional comments as part of a review exercise. This report offers up to date costing for bulk / mixed freight railways of various annual volumes and which I was able to interpolate and use in my estimates

The contact was less useful for this project than for the manganese one, but confirmed Transnet's view that the scale of rail investment plans is not fundable via the Transnet balance sheet alone

Obtained estimates of costs of developing and operating a range of bulk export and mixed freight railways in southern Africa.

This was used to create a benchmark for a standard gauge, double stack, privately developed railway. Costs were inflated from 2007/09 to 2012

Used to contribute further to a benchmark for a standard gauge, double stack, privately developed railway. Costs were inflated from 2006/06 to 2012

www.forbes.com/2008/11/04/china-railway-nigeria-markets-equity-cx_twdd_1104markets03.html

Alex van Niekerk confirmed my own estimates by reference to recent SANRAL work on the Nelspruit by-pass, commenting that the cost I was using would probably cover land purchase as well.

They offered advice on feasibility of a standalone freight highway and also proposed an alternative, less expensive way in which it might be developed by building on committed N3TC capacity enhancements