



South African National
Committee on Tunnelling

SANCOT SYMPOSIUM 2026

13-14 APRIL 2026
SOUTHERN SUN ROSEBANK,
JOHANNESBURG

Unlocking Africa's Potential:
Advances in Tunnelling in Civil
Engineering and Mining



Preliminary Programme

Conference Day 1 – Monday 13 April 2026

- 08:00-09:00 **Registration Opens & Early Morning Refreshments**
- 09:00-09:10 **Welcome and Opening Address**
R. Freese, *Conference Chairperson, Knight Piésold, South Africa*
- 09:10-09:15 **Safety Briefing**
Venue Official
- 09:15-09:30 **SAIMM Presidential Address**
G.R. Lane, *Vuuma, South Africa*
- 09:30-09:40 **Introduction to SANCOT**
C. Warren-Codrington, *SMEC, South Africa*
- 09:40-10:10 **Keynote Address: The application of GBR's on projects with major underground works**
D. Powel, *Independent Consultant, Canada*
(Online presentation)
- 10:10-10:30 **Mid-Morning Refreshments**
- Session 1**
Session Chair:
- 10:30-10:40 **Sponsor Presentation** 
OHMS, South Africa
- 10:40-11:00 **The development of a steeply dipping winze utilising pneumatic rock drills and a scraper winch**
S.M. Rupprecht, L. Langston, *University of Johannesburg, South Africa*
- 11:00-11:20 **Industry Update: DMPR Guideline for the compilation of a mandatory code of practice to mitigate geotechnical risk in civil tunnels and underground spaces**
G.J. Keyter¹, T. Mateta², ¹SRK Consulting, ²Department of Mineral and Petroleum Resources, South Africa
- 11:20-11:40 **uMkhomazi water project – Phase 1: Project update**
J. Nyakale, M. Dhlamini, *TCTA, South Africa*
- 11:40-12:00 **The uMkhomazi transfer tunnel: Background, geotechnical conditions & tunnel design considerations**
R.L. Freese¹, G.J. Keyter², ¹Knight Piésold, ²SRK Consulting, South Africa
- 12:00-12:20 **Design considerations and construction strategies for the uMkhomazi water project Phase 1**
M. Nasiri¹, G.J. Keyter¹, U. Rehm², T. Mac Kellar², ¹SRK Consulting, ²Knight Piesold, South Africa
- 12:20-13:20 **Lunch**

Session 2

Session Chair:

- 13:20-13:50 **Keynote: Tunneling and Shaft Sinking in South Africa: The Productivity-Innovation Challenge**
G. Chamberlain, *Cementation Africa, South Africa*
- 13:50-14:10 **Considerations in the design and construction of Ventilation and Surge Shafts for the uMWP Phase 1 water transfer tunnel**
B.C. Rodrigues¹, T. Mac Kellar¹, G.J. Keyter², ¹Knight Piésold, ²SRK Consulting, South Africa
- 14:10-14:30 **Beyond the blast: How 3D data capture is reshaping tunnel construction**
F. Phamotse, M. Rammoko, *MSKC-JV, South Africa*
- 14:30-14:50 **Introduction of the MC51 continuous hard rock miner / cutter**
V. Hardy, C. Wade, M. Riley, *Komatsu Joy Global, South Africa*
- 14:50-15:10 **Investigating the effect of aggregate type on the strength and energy absorption of shotcrete in block cave mining**
B. Makgate, V.C. Madanda, F.K. Mulenga, N.M. Chiloane, *Palabora Mining Company, University of South Africa, South Africa*
- 15:10-15:30 **Afternoon Refreshments**

Session 3

Session Chair:

- 15:30-15:50 **Using the mobile tunnel borer for mining primary tunnel development**
W. Roothman, *Master Drilling, South Africa*
- 15:50-16:10 **Construction progress of the Polihali Transfer Tunnel – Lesotho Highlands Water Project Phase II**
B. Ranjan, *Lesotho Highlands Water Project (Phase II), Lesotho*
- 16:10-18:00 **Networking cocktail function**
Southern Sun Rosebank



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Preliminary Programme

Conference Day 2 – Tuesday 14 April 2026

08:00–09:00 **Registration Opens & Early Morning Refreshments**

09:00–09:10 **Welcome and Opening Address**
R. Freese, *Conference Chairperson, Knight Piésold, South Africa*

09:10–09:15 **Safety Briefing**
Venue Official

09:15–09:45 **Keynote Address: What has the mining industry done for underground civil construction and what is the civil construction industry doing in return?**
D. Lees, *Grouting & Foundation Works, Australia*
(Online presentation)

Session 4 **Session Chair:**

09:45–10:05 **Lining design for pressure tunnels and shafts focusing on more reliable crack spacing and crack width calculations**
M. Zoorabadi, *SMEC, Australia*

10:05–10:25 **Pressure tunnel/shafts – risk of oversimplifications or overdesigning**
M. Zoorabadi, *SMEC, Australia*

10:25–10:45 **Mid-Morning Refreshments**

Session 5 **Session Chair:**

10:45–11:15 **Keynote Address: Logistical challenges with long, relatively small tunnels**
U. Rehm, *Tunnelling Consultant GmbH in Germany*
(Online presentation)

11:15–11:35 **Design and construction of the Polihali Dam outlet tunnel on the Lesotho highlands water project Phase II**
H.A. Labuschagne, *Matla-a-Metsi JV, South Africa*

11:35–11:55 **Mechanized solutions for hydropower tunnelling and shaft construction**
K. Böppler, *Herrenknecht AG, Germany*

11:55–12:15 **ITA, the vision, scope and the opportunities membership offers**

E. Chiriotti, *ITA/AITES, Incas-Partners, Paris*
(Online presentation)

12:15–13:15

Lunch

Session 6 **Session Chair:**

13:15–13:35 **Application and prospects of tunnel boring machine (TBM) in mining industry**
J. Xiong, *CRCHI, China*

13:35–13:55 **Developing a niche rock boring system for near horizontal slots based on tunnelling experience**
I. Crous, *Master Drilling, South Africa*

13:55–14:15 **Progress in developing a shaft boring system as an alternative to conventional shift sinking for deep and hard rock applications**
N. Goodman, *Master Drilling, South Africa*

14:15

End of Conference