



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



Final 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 GBRs on projects with major underground works**
D. Powel, *Independent Consultant, Canada*
(Online presentation)
- 10:10-10:30 **Mid-Morning Refreshments**
- Session 1**
Session Chair: R. Freese, *Knight Piésold, South Africa*
- 10:30-10:40 **Sponsor Presentation** 
OHMS, South Africa
- 10:40-11:00 **ASM winzng applied in an East African gold mine**
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**
M. Dhlamini, *TCTA, South Africa*
- 11:40-12:00 **The uMkhomazi transfer tunnel: Background, geotechnical conditions and 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: G. Keyter, *SRK, South Africa*

- 13:20-13:50 **Keynote: A practical approach to technology implementation in South Africa which unfortunately is lagging its international peers**
G. Chamberlain, *Cementation Africa, South Africa*
- 13:50-14:10 **Construction method evaluation for ventilation and surge shafts on the uMWP-1 water transfer tunnel project**
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.B. Makgate¹, V.C. Madanda², N.M. Chiloane², F.K. Mulenga², T. Mtshali¹, T. Chauke², ¹Palaborwa Mining Company, ²University of South Africa, South Africa
(Online presentation)
- 15:10-15:30 **Afternoon Refreshments**

Session 3

Session Chair: D. Roos, *Herrenknecht, South Africa*

- 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 **End of Day 1**
- 16:10-18:00 **Networking cocktail function**
Circle Bar Lounge, Southern Sun, Rosebank



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Final 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: C. Warren-Codrington, *SMEC, South Africa*

- 09:45-10:05 **Pressure tunnel/shafts – risk of oversimplifications or overdesigning**
M. Zoorabadi, *SMEC, Australia*
(Online presentation)
- 10:05-10:25 **Lining design for pressure tunnels and shafts focusing on more reliable crack spacing and crack width calculations**
M. Zoorabadi, *SMEC, Australia*
(Online presentation)
- 10:25-10:45 **Mid-Morning Refreshments**

Session 5

Session Chair: I. Crous, *Master Drilling, South Africa*

- 10:45-11:15 **Keynote Address: Logistical challenges with long, relatively small tunnels**
U. Rehm, *Tunnelling Consultant GmbH, Germany*
(Online presentation)
- 11:15-11:35 **Mechanised solutions for hydropower tunnelling and shaft construction**
K. Bäßler, *Herrenknecht AG, Germany*
- 11:35-11:55 **About the International Tunnelling Association, its vision and how this could be applied in Africa**
D. McGirr¹, E. Chiriotti², ITA^{1,2}, COWI, United Kingdom¹, INCAS Partners, France²
(Online presentation)
- 11:55-13:00 **Lunch**

Session 6

Session Chair: M. Mohlabane, *The Lesotho Highlands Water Commission, Lesotho*

- 13:00-13:20 **Application and prospects of tunnel boring machines in the mining industry**
J. Xiong, *CRCHI, China*
- 13:20-13:40 **Developing a niche rock boring system for near horizontal slots based on tunnelling experience**
I. Crous, *Master Drilling, South Africa*
- 13:40-14:00 **Progress in developing a shaft boring system as an alternative to conventional shift sinking for deep and hard rock applications**
N. Goodwin, *Master Drilling, South Africa*
- 14:00 **End of Conference**