



LANDAU 400KV LINE DEVIATION, EMALAHLENI Mpumalanga, South Africa



Project Facts

Product
Micropiles

Market
Power

Client
Eskom

Main Contractor
Melees Electrical Lines (Pty) Ltd.

Achievements

- Foundation piling for 58 no. towers carried out over changing terrain.
- Versatile plant was used for the required setups over a distance 20kms.
- All 58 no. foundations (232 pile caps) completed 2 weeks ahead of the contractual programme.

- **About the project**

Relocation of 400kV Eskom transmission lines affected by sink holes at Landau Colliery mine. There are two sections in the lines, first section of the transmission line is 18.3km from Duvha to Apollo and the second one is 3.3km from Kusile to Vulcan.

- **Challenges**

The two lines required 58 no. foundations with various loads. Along the lines there are 2 no. 518DR towers, 16 no. 518C towers, 11 no. 518D towers and 29 no. 518H towers. 518D structures are used on railways and national roads crossing and 518DR structure are used where they will tie in the old line and the new line, the 518C is used where there is a long span, and areas with a lot of trees that they cannot be cut down (wetlands) and 518H structure are intermediate structures.

Working in wetlands was a major challenge because of the environmental restrictions.

- **The solution**

The works entailed the total installation of 661 no. micropiles comprising of 13 no. test piles, 264 no. R38N piles and 384 no. R51N piles. The depth varied depending on loads and soil type nomination, ranging from 3m to 18m.