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# PNB 118

## Skyscraper Foundation

PNB 118 is a geometrically-intricate 118-story office and hotel tower that will be home to the headquarters for Permodalan Nasional Berhad (PNB), one of Malaysia's leading investment firms. With a completed height of more than 600 meters, PNB 118 will become the tallest building in Malaysia, and rank amongst the world's 10 tallest buildings.

G&P Geotechnics Sdn Bhd was appointed by PNB as one of the Independent Check Engineers for tower foundation design and construction.

The site is located at the Kuala Lumpur city centre surrounded by historical landmarks, namely the Merdeka Stadium, Stadium Negara, Chin Woo Stadium as well as pre-war school grounds of the Methodist Boys' School and the Victoria Institution.

The 118-storey mega tall tower was founded on pile foundation; comprising 137 reinforced concrete bored piles of 2.2m in diameter with a length of 60m. The basement was constructed with the support of an 800mm thick circular cofferdam wall of 76m diameter. This allowed obstruction-free excavation of 17m down to the pile cut-off level. The circular shape enabled the cofferdam to be self-supporting through the mobilisation of hoop stress without any additional support system.



**Circular cofferdam with 76m diameter**



**Construction progress at Feb 2018**