

## Mount Edgecombe Interchange

KwaZulu-Natal, South Africa

The Mount Edgecombe Interchange is contributing greatly to reducing traffic congestion, promoting road safety and is also a significant business enabler.



### The project

Piling, earth retention & dynamic replacement was required for the upgrade of the Mount Edgecombe Interchange. The main civil contract comprised of a four level interchange with the highest bridge being 1 600m long & 27m high with the next level to be 700m long & 18m high. There was a total of 8 bridges.

## The challenge

Achieving tender productions was a logistics challenge working around and in between one of the area's busiest highways. In addition, lifting of the cages often occurred during extraction of the casings due to the tight tolerance between the reinforcement cage and the casing, and concrete workability period of only 1,5 hours. Mud rising in the casing due to back pressure also created serious challenges.

## The solution

The scope of works consisted of 485 No 900mm diameter bored piles, 3 050m<sup>2</sup> of permanent & 4 200m<sup>2</sup> of temporary earth retention and 1 440 no. dynamic replacement stone columns.

## Project facts

### Owner(s)

SANRAL

### Keller business unit(s)

Keller South Africa

### Main contractor(s)

CMC Ravenna

### Engineer(s)

SMEC

### Solutions

Heavy foundations

Excavation support

Bearing capacity / settlement control

### Markets

Infrastructure

### Techniques

Bored piles

Soil nails

Shotcrete / Guniting

Dynamic replacement

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