



## Gateway Upgrade North Nudgee to Deagon, Queensland, Australia

**Client: Lendlease Engineering**  
**Project Value: \$1.1 Billion**

The Gateway Motorway between Nudgee and Deagon is a four-lane motorway providing a critical transport corridor for more than 75,000 vehicles each day. It also services the Brisbane Airport, Port of Brisbane and the Australia TradeCoast precinct. The Gateway Upgrade North (GUN) Project has been commissioned by Queensland Motorways Pty Ltd (QM) on behalf of the State Government to combat congestion issues and includes:

- Widening 11.3 km of the motorway from four to six lanes from Nudgee to Deagon
- Reconfiguring the Nudgee interchange including a new Nudgee Road overpass
- Widening the Deagon Deviation between Depot Road and Bracken Ridge Road to provide two lanes in each direction
- Modifications to the Bicentennial Road interchange including extended on- and off-ramps

The majority of the highway traverses either Holocene or Pleistocene estuarine deposits overlying a deeply-weathered residual profile originating from the Tertiary-age Petrie Formation (i.e. sandstone, siltstone, mudstone and basalt). The Holocene deposits are recent alluvial deposits that are mainly mapped as undifferentiated coastal plains of mud, sand and gravels, underlain by tidal flats comprising sand and mud. The Pleistocene deposits represent an older, over consolidated alluvium mapped as clay, silt, sand and gravel; flood plain alluvium is mapped on high terraces. The top of the Pleistocene represents a former land surface subject to dramatic erosion and stream down-cutting when sea levels were lower.

Geoinventions has been engaged by the client to assist with the temporary works design for the project.

The support services provided include:

- Providing DTMR approved geotechnical assessors for all piling operations
- Design of temporary piling and crane platforms at Bicentennial, Sandgate and Nudgee Roads
- Various other temporary support systems for excavations next to bridge abutments and the existing highway
- Temporary sheet pile walls to support excavations