

# FOUNDATION ENGINEERING & GROUND IMPROVEMENT

## Layyah Power Plant Extension

### Sharjah

UTILITIES - ELECTRICITY • SECANT PILED WALLS • ROTARY BORED PILES • GROUND ANCHORS • VIBRO COMPACTION



#### Client

Sharjah Electricity and Water Authority

#### Consultant

Electricite De France (EDF)

#### Main Contractor

Overseas AST Company LLC

#### Location

Sharjah, UAE

#### Start Date

January 2020

#### Completion Date

May 2020

#### Project Details

##### Secant Piled Walls

Perimeter : 188 m  
Retained height : 11.0 m (Section A), 10.5 m (Section B),  
14.0 m (Section C)

Thickness : 935 mm  
935 mm dia. piles : 244 nos. @ 785 mm. c/c spacing  
Total length drilled : 4,242.7 LM

Ground anchors : 143 nos.

##### Rotary Bored Piles (for Tower Crane Foundation)

930 mm dia. : 8 nos  
Total length drilled : 120 LM

Concrete volume : 3,538.5 m<sup>3</sup>  
Reinforcement steel : 140.4 tons

##### Vibro Compaction

Total 670 points with a grid spacing of 2.5 m  
Depth : 6 m - 13 m  
Volume : 37,474 m<sup>3</sup>  
Area of treatment : 2,963 m<sup>2</sup>  
Equipment used : VibroFlot B27 & 55 ton crawler crane