


Tokyo 2020 Olympic Games

Helical Piles

 Tokyo, Japan



ScrewFast helical piles deliver strong, temporary foundations for Tokyo 2020 Olympic Games

Helical piles, manufactured specifically to overcome challenging ground and tropical weather conditions in Tokyo, Japan, provided strong, reliable foundations for the ballistic nets within the temporary 2020 Olympic Games shooting ranges.

Project Background

ScrewFast designed, manufactured and transported helical piles, along with the 30T tracked excavator and 250 kN/m Torque Head to deliver the 17-week programme.

Three ScrewFast staff installed the piles with support from a Japanese team of labourers, excavators and telehandlers.

Client Challenge

Set in volcanic soils, 428 helical piles (of between 244—273mm diameter) were designed to withstand both seismic load conditions – large over-turning moments as well as high compression and tension loads - and typhoons.

The piles were tested to the extremes when Typhoon Hagibis – the biggest storm in 60-years - passed through Tokyo in October 2019.

ScrewFast Solutions

ScrewFast installed helical piles, connected into different grillage arrangements from single piles up to eight pile groups, including vertical and raked piles.

The foundation piles support lattice towers upon which the frames for the ballistic nets, combined and finals ranges were held.

Once the Games conclude, the venue will be dismantled and the piles removed, leaving no negative environmental legacy on the site. The piles will then be recycled on other projects.

Key Benefits

Zero Environmental Legacy

Once the games conclude the venue will be dismantled and the foundations removed

Fast Installation

17-week programme

Social Value

Collaboration with local labourers, excavators and telehandlers

Project stats

Client: **ESG**

Value: **£1.5M**

Date: **Spring 2019**

Rig/Kit: **30T tracked excavator and 250 kN/m Torque**

