

## CASE STUDY

### Plots 18 & 19 Fourth Quarter, Edinburgh



## Greenpiling

#### PROJECT OVERVIEW:

**Client:** Cruden Homes

**Sub-contracted to:** Laing O'Rourke

**Engineer:** Grontmij

**Sector:** Residential

**Value:** £206k

**Description of Works:** Installation of piles to form part of the foundations for a high rise development.

#### TECHNICAL DETAILS:

**Type of Piling System:** Steel Tubular

**Soil Conditions:** Fill Material (variable thickness)/Boulder Clay/Strong White Sandstone

**Max Load kN:** Up to 800kN

**Length of piles:** 3 to 8m

**Type of testing:** Dynamic

**No of piles installed:** 710 No.

**Diameter of piles:** 244mm

Green Piling installed reclaimed steel tubular piles to form part of the foundations for two phases of high profile residential developments as part of the overall Edinburgh Waterfront Regeneration.

Steel tubular piles were chosen as the most suitable piling system that could provide high load capacities whilst successfully penetrating the shallow and sloping rock head profile.

With Sandstone appearing at or very near ground level, it was proposed that the foundations for the building be a mixture of conventional pad foundations, and piles where the depth to rock exceeded 2m. At this depth excavation and mass concrete foundations became uneconomic.

Steel tubes driven with high energy accelerated hammers were needed to ensure sufficient penetration would be achieved into the Sandstone to maintain pile stability.

As piling proceeded, Green Piling also undertook the trimming of steel tubular piles to their final cut off level. This was done with flame cutting equipment, with no exposure of our operatives to hand arm vibration (HAV).

