

CASE STUDY HMP Shotts



PROJECT OVERVIEW:

Client: Scottish Prison Service

Sub-contracted to: Laing O Rourke

Engineer: Arup

Sector: Public Sector

Value: £105k

Description of Works: Design, supply and install piles to form part of the foundations for a new housing block at HMP Shotts.



TECHNICAL DETAILS:

Type of Piling System: Steel Tubular Piles

Soil Conditions: Made Ground/
Clay/Mudstone/
Sand



Max Load kN: Up to 1200kN

Length of piles: Up to 10m

Type of Testing: Dynamic

No. of piles installed: 200 No.

Diameter of piles: 244mm & 340mm



Green Piling Limited was subcontracted by Laing O Rourke to install steel tubular piles at HMP Shotts. We worked closely with our client at tender stage on an alternative pile layout which was based on fewer, more heavily loaded piles. This layout was later adapted on site as it proved to be a more economical solution to what was originally proposed.

244mm diameter steel tubular piles were installed for the retaining wall with 340mm diameter used for the main building.



Maintained load testing was carried out to 3000kN on 340mm diameter piles and prelim test pile. Ground anchors were used as reaction piles to resist test load.