

# Smartfoot foundation system delivered within +/-2.5mm tolerance at MMC development

## OUR APPROACH

This project ran from November 2020 to January 2021.

- 108 No. 300mm diameter CFA were drilled to depths of up to 20.5m.
- Using our Soilmec SR30 CFA piling rig.
- 433m linear metres of bespoke pre-cast Smartfoot ground beams were installed.
- +/-2.5mm tolerance in both level and plan position.



## Van Elle's Housing division have successfully installed 433m of our innovative Smartfoot modular foundation system within a +/-2.5mm tolerance.

The project at Boxwood Park, Hoddesdon, saw our team install foundations for 12 new modular homes to be constructed by our client WoolensBrook Developments.

As the project had to comply with BIM Level 2, 3D models were developed to ensure the bespoke Smartfoot design, for each individual plot, met the tight specification required for the modular units.

Chris Bosworth, Technical Director for Housing, said: "The precast modular housing developed by our client required tighter tolerances of +/-2.5mm.

"More demanding than standard piling tolerances.

"We successfully delivered this tolerance across the site in budget and on programme."

Smartfoot uses post tensioning

technology to connect factory-produced ground beams which are made at our Nottinghamshire head office.

For this project, new moulds were developed to improve casting tolerances in our factory.

To support the Smartfoot beams, 108 continuous flight auger piles were installed to depths of up to 20.5m.

Additional procedures were implemented when surveying the pile caps which were cast-in-place.

Mr Bosworth added: "This is where we had to be really accurate. We took care to survey the level of each cap."

Millimetre thick steel shims were used to level Smartfoot beams to meet the tight tolerances.

