Case Study:
Bestwood Village, Nottinghamshire

VAN ELLE
TOTAL FOUNDATION SOLUTIONS

Client:
David Wilson Homes

Sector:
Housing

Services Provided:
Smartfoot, Precast Foundations & Driven Piling

Location:
Nottinghamshire

Value:
£166,000

Year:
2009

As modern methods of construction continue to top the agenda with large housebuilders and commercial builders alike, Van Elle's pre-cast systems being utilised in larger numbers across the industry as these developers look to capitalise on the benefits. Designed using an innovative and bespoke software package and manufactured at Van Elle's new manufacturing facilities, the Vemech® and Smartfoot® systems are the latest in offsite foundation engineering.

The work for David Wilson at the site in Bestwood consisted of piling and foundations for 16 No. four and five bedroom detached homes with garages.

333 No. 200mm square precast Vemech® piles were designed and installed in 2.5m lengths to depths of up to 5m over a nine day programme. Utilising the 24 tonne precast concrete driven piling rig, a 360° tracked machine built in-house, Vemech® is the only short segmental concrete pile designed in compliance with European design codes.

Benefits of using Vemech® included:

Reduced piling mat due to being able to utilise a smaller rig.
Increased flexibility on variations in pile lengths due to short segments.

No spoil to be removed from site so reducing vehicle movements, carbon emissions and safety hazards.

Once the piling had been carried out and pile caps cast, the Smartfoot® team moved in to install the ground beams. Whilst the system is based on a simple post-tensioned principle, this project also required precast angle joints, on the Bestwood site. 15 No. 45° angle blocks were used and a total of 965lm of 330mm wide ground beams were installed.

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