

Grasmere Gardens

Whitstable, Kent

CLIENT TYPE	Housing Contractor
LOCATION	Whitstable, Kent
NO. OF UNITS	78 Units, over three phases

Project Overview

The Grasmere Gardens Phase 1 project in Whitstable, Kent, for Kitewood Estates, achieved significant cost and environmental benefits. The use of SFA piles and a concrete working surface, as opposed to a traditional piling mat and ground beam foundation, resulted in substantial cost savings for the client while leaving much of the existing soil in situ. Completion for phase one was just 11 weeks.

Construction

During the construction phase, several strategic decisions were made to address the challenges presented by the site's conditions and to minimise disruption to the surrounding community. Heavy rain & necessitated careful planning for the excavation works, enabling the protection of the subsurface to remain suitable for blinding.

Due to the nature of the soils, SFA (Sectional Flight Auger) piles were chosen. These could be installed with a lightweight rig that could work off a 50mm concrete working surface, saving hundreds of muck-away lorries. The Phase 1 development of Grasmere Gardens in Whitstable exemplifies a successful approach to building in challenging conditions. By leveraging thoughtful foundation solutions and making strategic construction choices, the project team delivered a cost-effective, timely, and minimally disruptive residential development.

Concept Design & Engineering

The initial design phase of the Grasmere Gardens project presented several geological challenges due to the site's location on the London Clay Formation. This soil type, characterised by clay and silt, is susceptible to moisture change, making it one of the most shrinkable soil types.

Given the relatively weak nature of the London Clay, a piled raft was an excellent choice for foundations for this project. SPEEDECK worked hard to minimise pile numbers and limit the project's total length.

Void-formers played a critical role in design engineering for this project by mitigating the impact of soil expansion and contraction on building foundations, especially in clay-rich soils and areas influenced by tree roots. These engineered void spaces absorb soil movement, preventing stress transfer to the structure.

