



SPEEDECK
FOUNDATIONS LIMITED



Church Road, Steep, Petersfield

CLIENT TYPE	Residential
LOCATION	Steep, Petersfield
NO. OF UNITS	Nine units

Project Overview

SPEEDECK were engaged to provide a robust and efficient foundation solution for a residential development of nine new homes at Church Road, Steep, near Petersfield. The site is located on land underlain by Gault Clay with Made Ground and topsoil present at shallow depth.

The ground investigation confirmed soft to very stiff clay strata extending to significant depth, with potential for shrink-swell behaviour and heave risk due to clay soils and nearby trees.

Essential Design and Engineering

Due to the presence of high volume change potential clay soils within the upper ground profile, heave protection measures were incorporated into the design. Voidformers were introduced beneath the raft slab to accommodate potential ground movement and reduce the risk of uplift forces acting on the structure. This concept provided a cost-effective and warranty-compliant solution suited to the challenging ground conditions.

Pile lengths were typically designed in the range of 10.0 m to 12.0 m, allowing loads to be transferred beyond the weaker near-surface clays into more competent strata at depth. The reinforced piled raft slab was designed to integrate seamlessly with the building structure, supporting both internal loadbearing elements and the outer skin of brickwork while maintaining structural efficiency and durability.

A Complete Solution

The selected piled raft solution enabled a streamlined construction methodology. CFA piling minimised noise and vibration compared with alternative driven systems, making it particularly suitable for the rural residential setting.

Once piling works were completed, the reinforced raft slab was constructed as part of the substructure works, creating a stable platform for the superstructure. The integration of piling and raft construction simplified site sequencing and supported efficient programme delivery.

For the client, the outcome is a warranty-compliant foundation system that provides long-term structural performance while supporting predictable construction sequencing and programme certainty for the nine-home residential scheme.

