



Latimer Road, Wokingham

CLIENT TYPE	Residential Housing
LOCATION	Berkshire
NO. OF UNITS	1 Apartment Block

Project Overview

Doswell Projects is developing a new apartment block on Latimer Road in Wokingham, Berkshire. The two-to-four storey building sits on a challenging site, with a live railway line running immediately alongside the development.

The close proximity of the railway placed restrictions on how the foundations could be designed and constructed. The foundation solution needed to provide the required support for the building while taking account of the railway's Track Support Zone and the requirements for working alongside Network Rail infrastructure.



Essential Design and Engineering

The site ground conditions comprised Made Ground over the Bagshot Formation and London Clay. Ground investigation also identified ground gas and sulphate conditions within the Made Ground. These results were considered as part of the concrete specification, resulting in a DC-2 classification for both the raft and piles.

SPEEDECK designed a single 1,155m² piled raft foundation, constructed at 300mm thick and incorporating two lift pits and movement joints to suit the building layout. The piling and raft slab was constructed using a single coordinated substructure package over an 8-week programme.

By bringing the structural and foundation design together with the construction methodology, SPEEDECK was able to develop a practical solution that could be built within the constraints of the site.

Construction Challenges

Network Rail's Track Support Zone placed restrictions on the piling works so pile lengths and capacities needed to be carefully controlled in the areas closest to the railway. SPEEDECK developed a zoned piling design.

Pile lengths across the development typically ranged from 9m to 18m, with the maximum safe working load reaching approximately 610kN in the areas furthest from the railway. This approach allowed the foundation design to work with the site's constraints while still providing the support required for the apartment building.

