



Newcastle-under-Lyme College



Newcastle-under-Lyme College was schemed by Consulting Engineer BDP as a post-tensioned flat slab for reasons of economy and performance. Not only is there significantly less material in a PT slab than an RC slab, the deflection control is superior. This was important because the spans were reasonably long; 9-10m, plus the loadings were unusually high being 6.5kN/m² live load, 1.4kN/m² superimposed dead load with internal partitions of 12.8kN/m run.

In addition, the acoustic and dynamic performance afforded by the 300mm thick post-tensioned slabs is superb. Structural Systems have undertaken the detailed design of the post-tensioning using the 406 bonded flat duct tendon system. The college building is 99m long by 77m wide with a central courtyard. The structure is 4 storeys and features a raking façade to the front three teaching wings.

The main contractor is HBG Construction Ltd.



Project Data Sheet

Year:
2008

Location:
Newcastle under Lyme

Client:
Thames Formwork

Division:
Structural Systems UK Ltd—Post-Tensioning

Scope:
Design and install

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