J P DUNN
Construction Limited
Innovation above and below ground

CASE STUDY

Royal Brompton Hospital

• Client; Kier • Value; £4m

JP Dunn Construction Ltd were appointed by Kier to complete the groundworks and concrete frame works for a new 3,417m² imaging centre at Royal Brompton Hospital in London.

Royal Brompton & Harefield is the largest specialist heart and lung healthcare provider in the UK. Its new imaging centre will provide diagnostic facilities for patients and enable several innovative treatments, including interventional bronchoscopy. The imaging centre will have two storeys below ground, for plant and services for the building and for MRI scanners, and two storeys above ground. The ground and first floors will have a range of facilities, including echocardiography, transoesophageal echocardiogram, CT scanners and clinical support accommodation.

A substantial part of the building is subterranean and our temporary works design expertise was bought in to play to support the piled walls, tower crane and to provide a loading gantry supported on plunge columns. The 9m deep basement was constructed using sheet piled walls which was propped at 3 levels using a mixture of Hydraulic and fixed steel props. A temporary loading gantry was erected, supported on plunge columns, so that muck away vehicles could be brought on to site and loaded with our own telescopic clamshell excavator. The tower crane was required on site early to lift the props into position, so the crane was erected on plunge columns before the reduced level dig commenced.

JP Dunn worked closely with FIS to develop the initial waterproofing design intent as a CDP element. A combination of waterproof concrete and cavity drain system was installed to provide a Grade 3 watertight basement to BS 8102:2009.

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