

Bill Boley Project Profile: Kings College Hospital London

Total Solutions in Controlled Hydraulic Movement and Jacking

Project Designation / Location

Construction of a new critical care unit (CCU) above an existing operating theatre block at Kings College Hospital, London.

Client

McLaughlin & Harvey



Severfield



Project Challenge

The new 60 bed CCU building is being built above the existing theatre block. Working space is very limited and the work is being carried out 32 m above ground within the confines of a fully working hospital. As a result the new 2 storey building is being constructed in situ in 7 sections, each 45 m wide. The construction work must not interfere in any way with ongoing surgical operations in the theatre block below. This presents a number of operational challenges to minimise disturbance, noise and vibration.

Bill Boley Solution

JACK TYPE: Strand CAPACITY: 30 tonnes STROKE: 250 mm

JACK TYPE: Jacking Sledge CAPACITY 100 tonne

There are two parts to this complex jacking project.

1) As each section of the building is constructed, it is being pulled into place using 2 x 30 tonne twin ram, semi-continuous strand jacks. (See opposite). Each of the 7 sections are supported on 4 x 100 tonne capacity PTFE- faced jacking sledges (28 total – see below left). These run on stainless steel rails, fixed to a temporary steel structure above the operating block. Each section weighs approximately 100 tonnes.

2) When the structure is complete, the floor slab below will be carefully lowered into position using 32 x 30 tonne jacks.



New CCU – 7 Sections

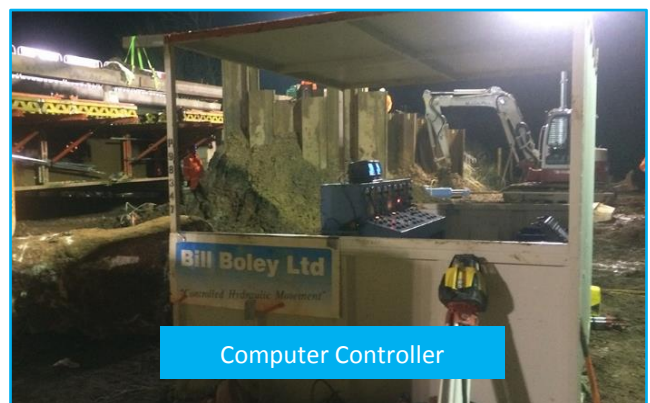
Operating Theatre



30 tonne Twin Ram Strand Jack



100 tonne Jacking Sledge



Computer Controller

Bill Boley Project Profile



One of the seven sections being constructed above the theatre prior to pulling into place



Bird's eye view of the new CCU taking shape with the new helipad on the left



The complexity of the construction site is clear to see from this view