

Bill Boley Project Profile: Kings College Hospital London - Phase II

Total Solutions in Controlled Hydraulic Movement and Jacking

Project Designation / Location

Lowering of new composite CCU floor above an existing operating theatre at Kings College Hospital, London.

Client

McLaughlin & Harvey



Severfield



Project Challenge

Following the successful jack-sliding of the seven structural steel sections comprising the upper floor of the new 60 bed CCU, Bill Boley lowered the new concrete floor structure that forms the unit's lower level. The floor, weighing 170 tonnes, was lowered a total distance of 4 metres.

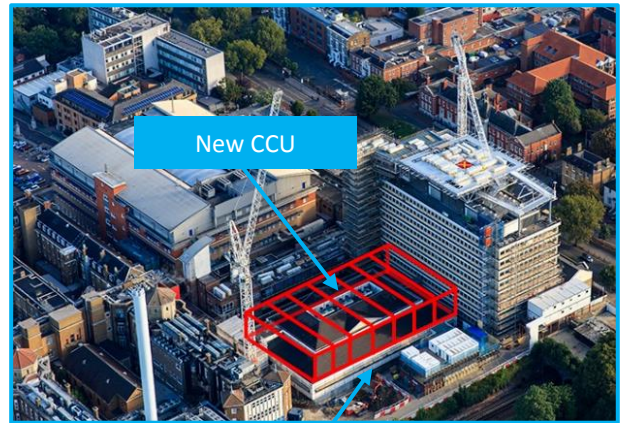
Bill Boley Solution

JACK TYPE: Rod QUANTITY: 32
CAPACITY: 30 tonnes STROKE: 500 mm

Once the new upper CCU structure was in place, the existing pitched theatre roof was removed, allowing a new floor structure, which had been constructed underneath the upper CCU floor, to be lowered down. This floor will provide the lower level of the CCU.

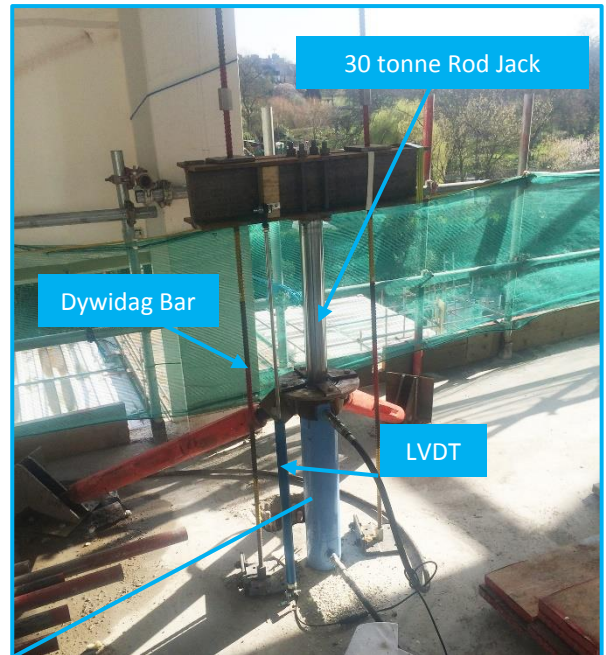
At each of the 32 jacking points, the floor structure was supported via pairs of Dywidag threadbar passing through the new CCU floor. After each 500 mm stroke was completed, the retaining nuts were adjusted on the bars and the lowering process started again. The overall jacking operation was computer controlled using position data from LVDTs at each jacking point. This ensured the roof was lowered by exactly the same amount at each point and prevented any vibration.

The whole lowering process was completed within 24 hours whilst the surgical block continued to be in use.



New CCU

Operating Theatre



30 tonne Rod Jack

Dywidag Bar

LVDT



Panoramic view of new CCU Structure

Bill Boley Project Profile



Set over two floors, and with a roof garden that will be the world's first outdoor critical care unit, the £80 million centre will be equipped with state-of-the-art assessment and monitoring equipment, providing a better environment for patients, staff and relatives.

