

Best practice at Farringdon – ramp construction



Overview

Probably the most significant part of the transformation of Farringdon station is the construction of the new ticket hall, known as the Integrated Ticket Hall (ITH) because it will serve both Thameslink and Crossrail. The ITH sits over the top of the north-south Thameslink lines, where platforms will be extended for longer, more frequent trains. But these lines pose a problem during construction as they divide the site, making access to the east of the site difficult.

To solve the problem of the railway tracks preventing access to one half of the site, a ramp was constructed leading down to the site from what had been a butcher's shop onto the disconnected rail line between Farringdon and Moorgate.

Innovation

With a crane needed to lift sections of the ramp into place, ground penetrating radar was used to establish where the crane's outriggers could be sited.



Crane set up on Charterhouse Street

Because a building which was to sit underneath the ramp after construction had already been installed, an innovative use of slide beams was employed to move the main girders into place above the new building.



Girders moved on slide beams

The pre-cast units that form the ramp each weigh ten tonnes. These were put in using a purpose built gantry crane because the size of the crane needed on Charterhouse Street, would have been too great.



Gantry crane on ramp

Benefits

Keeping the project to time and to budget. Without the ramp, waste material from site could only have been removed by a road / rail vehicle whilst rail services were not running. This would have limited the amount of material that could be removed and stored, in turn increasing the amount of time it took to complete piling.

Targets and objectives

Building the ramp helped with the Farringdon project's targets and objectives in the following areas:

- CEEQUAL – energy; transport
- Sustainable Design and Construction – energy and carbon; transport