

CASE STUDY



The Shard

Client: Sellar Property

The iconic Shard, sitting 310 metres high, is the tallest building in Western Europe. A complex project located adjacent to London Bridge station and above the Northern and Jubilee tube lines, it was clear from the outset that innovation, accuracy and collaboration would be key components in the project's success.

A Building Information Modelling (BIM) driven process to include architecture, structure and MEP was required to deal with the complexity of the site. Plowman Craven was involved in various aspects of the scheme and provided a variety of measurement and modelling services.

Planning and Design Stage

3D topographical surveys and 3D scanning of surrounding environment

View verifications and Rights of Light

High accuracy positioning of underground tunnels and ventilation shafts

3D modelling of the below ground infrastructure

Main Construction Stage

Continued deformation monitoring of below ground infrastructure and surrounding buildings, automated and manual.

High accuracy 3D laser scanning of floor plates and ceilings for:

- Slab variation analysis
- Offsite manufacture for fit out
- Risk mitigation and clash detection
- Design against as-built
- MEP recording prior to fit-out

Area referencing at pre-completion for:

- Due diligence
- Leasing and rent

High Dynamic Range Photography (TruView™) for

- Enhancement of laser scan point cloud and BIM model
- 'Point in time' condition and location recording
- Offsite decision making

Related Services:

Area Referencing; Correlation Surveys; Measured Building Surveys; Underground Utilities Mapping and Topographical Surveys; Surveys for Planning, Rights of Light & Visualisation

Related Markets:

Offices, Industrial and Residential



Post Completion Stage

The information gathered on site with 3D laser scanning technology created a critical data legacy for the BIM model going forward, both for asset management and maintenance operations.

This information and future measurement data will continually enhance the parametric model through the life cycle of the building.

About Plowman Craven

Plowman Craven provides integrated measurement and consultancy services to the property and infrastructure markets, pioneering the use of technical innovation to deliver proven expertise and trusted results throughout the project lifecycle.

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