

CASE STUDY

Stanhope and Bovis benefit at 95 Queen Victoria Street

For clients Legal & General and Stanhope, Bovis Lend Lease's delivery of a £24m office development at 95 Queen Victoria Street in the City of London, EC4, supported by the BIW Information Channel construction collaboration platform, achieved measured savings of over £230,000. The key savings came from making it easier to access the latest information online, so minimising rework, and from improving the drawing review process.

Key benefits

- **Faster distribution of design and construction information, with less time spent searching for the latest documents or drawings**
- **Faster drawing review and response (average drawing approval time was more than halved, from 20 days per drawing to 9.2 days)**
- **Fewer errors and less re-work**
- **Lower expenditure on paper, printing, postage and couriers**

Background

Legal & General Property Ltd, part of Legal & General Investment Management, is an experienced central London property investor and developer. With Stanhope plc, a private company specialising in commercial and mixed use developments, it proposed a speculative redevelopment of the Walker House site at 95 Queen Victoria Street in the City of London.

The long, narrow and sloping site lies between the River Thames and St Paul's Cathedral, and adjacent to two Grade I listed buildings; other constraints included a major sewer running through the site, an electricity substation, a 30m city walkway attached to an adjacent building, residential neighbours and the nearby London Underground Circle and District Lines.

The professional team appointed to design the building included: architect Sheppard Robson, structural engineer Waterman Partnership, mechanical and electrical engineer Waterman Grove, quantity surveyor Gardiner & Theobald, M&E QS Mott Green Wall and landscape consultant Charles Funke.

The resulting design envisaged a nine-storey building with extensive basement areas, a ground floor and five upper floors. The proposed 13,895 sq m development incorporated 8,200 sq m (88,000 sq ft) of office accommodation and 1,290 sq m (13,886 sq ft) of leisure facilities, plus associated parking, services and access.

Bovis Lend Lease, one of the world's leading project and construction management companies, was appointed as construction manager. The project also adopted a best practice 'partnering' approach, involving trade contractors early in the construction process. To improve communications, it was decided to use a collaboration solution (a 'project extranet'). Other objectives for using such technology included:

- **reducing project risk through productivity gains and improved communications**
- **enabling easy access to the latest information**
- **speeding up access to project drawings and documents**
- **providing remote access to the content**
- **reducing environmental impact by decreasing the amount of paper used**

The project team employed BIW Information Channel, from BIW Technologies, to manage all project documentation processes. The technology was delivered by Asite plc, a BIW reseller.

BIW Information Channel - the 'Channel' - is a sophisticated web-based supply chain integration technology, designed specifically to manage individual construction projects or major multi-project programmes of work. Using this, information is made available (from a single, shared central repository, hosted in a secure environment) to every authorised project team member, with the amount and type of information tailored exactly to fit each user's security profile, role and responsibilities.

The approach

The solution enabled authorised members of the project team to view, share and review project information simply via the internet. BIW Information Channel was customised to meet Stanhope's requirements and specific project processes. In total, around 60 companies were set up to use the collaboration platform, including clients, tenants, design teams and over 40 trade contractors in both the UK and Europe. In total there were 331 users, of whom approximately half received training. The project team used the Channel to manage all types of project information, from drawings through to invoices - a total of over 6000 documents. All drawings, produced in both AutoCAD and Microstation, were published to the system by both design teams and trade contractors.

Stanhope and Bovis Lend Lease made measured savings of approximately £231,000 on the project using the collaboration software. The key contributors to the savings were:

- easier data storage and retrieval (44%). As well as saving time finding documents, it minimised the amount of rework needed and enabled individuals to obtain access to information to the level of detail they needed.
- more efficient processes for the review of drawings (30%). For example, drawing approval times were reduced from an average of 20 days per drawing (Oct 2001 - April 2002) to 9.2 days (May-July 2002) per drawing.

Other savings were identified relating to:

- Postage and couriers (7%)

- Reduced drawing printing (5%). Although the exact amount of paper was not formally benchmarked, Stanhope project director Martin Long said that "instead of finding hundreds of filing cabinets in the site office, we would be lucky to find 10 of them!"
- Operation and maintenance and facilities management (4%)
- Collaborative working benefits (4%)
- Reduction in rework and on-site errors (4%). It was clear which was the latest document, reducing the risk of errors and re-work.
- Auditable Information (2%)

The collaboration system was also voted as the top "value-added" initiative that should be transferred to the next project.

Management issues

By involving trade contractors at an early stage in the design and construction process, they were able to easily review and comment on designs using the project collaboration tool, resulting in fewer changes needed further into the project.

Key lessons

- Encourage early involvement - As trade contractors were brought into the team at an early stage in the design and construction process, they were able to easily review and comment on designs using the project collaboration tool, resulting in fewer changes as the project progressed.
- "There is less rework as people use the right information, first time. There is no argument as to whether a document is the latest, and the one which should be used."
(source: Paul Davey, Project Manager, Bovis Lend Lease)
- "The use of the collaboration tool made it quicker and easier for the team to review and approve information. This was particularly important with a team that was based throughout the UK and Europe."
- By improving communications, the collaboration system reduced time and, therefore, the risk of a costly project over-run.

(This case study is based on information already in the public domain, published by, among others, Asite, the CIOB and Gardiner & Theobald.)

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