

Collaborating for urban regeneration

By implementing the system early and mandating its use by all project team members, Crest Nicholson encouraged user 'buy-in' to BIW Information Channel at the £350 million Harbourside urban regeneration project in Bristol. The system cut the team's reliance on paper-based communication (reinforcing Crest Nicholson's sustainability credentials, and resulting in some consultant fee reductions); it has also speeded up key team processes, enabled faster searches for information, and delivered instant access to the most up-to-date design information.

Key benefits

- less production, copying and distribution of paper
- negotiation of architects' fee reduction
- faster drawing issue, review and finalisation
- complete audit trail of all communications
- better communication (even non-CAD users can view, download and/or comment on drawings)
- more disciplined project communication - no parallel systems via post or email
- wider collaboration (eg: extending to property agents)

Background

Harbourside is a major mixed development in central Bristol being undertaken by property developer Crest Nicholson PLC. When complete, the £350 million, 16.3-acre scheme will include over 600 residential units, several retail outlets, a casino, a 186-bedroom hotel, a three-storey car-park, a 180,000 sq ft head office for HBOS Financial Services, a community hall and over £4 million of infrastructure work.

Once the master-plan was approved by Bristol City Council in November 2003, initial work on the site's infrastructure commenced the following month. The project is divided into 13 phases with the first phase due to finish in May 2006 and the final phases due for completion in 2012.

As client, Crest appointed consultants and contractors to design, manage and construct the separate phases of the development. Contractors included Taylor Woodrow, Kier Build, Kier Western and Carillion. The scheme's master plan was prepared by Edward Cullinan Architects; other architects included Faulkner Brown, Stride Treglown, Fitzroy Robinson and Childs+Sulzmann. Gleeds, Gardiner & Theobald and Cyril Sweett were employer's agents. Other consultants included engineer Arup, landscape architect Grant Associates and services engineer Hoare Lea.

With such an intensive programme and a disparate, multi-disciplinary project team, Crest Nicholson's Major Projects Executive, Robert Knight, was keen to ensure that communications were efficiently managed. He was aware that the Harbourside scheme could involve a large amount of paper and numerous coordination interfaces. Having used a web-based collaboration solution on a previous Crest Nicholson project at Port Marine in nearby Portishead, Knight wanted to extend use of the system at Harbourside.

Crest Nicholson was also keen to demonstrate good environmental practice, working with its contractors to reduce noise and pollution, traffic congestion and waste, and to promote recycling, energy efficiency and use of natural resources.



The approach

BIW Information Channel from BIW Technologies had been deployed at Port Marine in 2000, but was introduced to the project too late, and despite working well as a source of project documentation, achieved little 'buy-in' from some users ("some users persisted in issuing six sets of everything," Knight recalls). Drawing on this experience, Knight insisted that all users at Harbourside should use the BIW system; with this client mandate, it became the only source of project information for all team members ("I get almost no post at all now, and a reduced number of Project related e-mails," he says).

To improve collaboration between designers and contractors, Crest Nicholson appointed its contractors as early as possible. During the project mobilisation phase, protocols for information exchange (eg: CAD drawing numbering conventions) were agreed, the system was 'seeded' with all relevant project information produced to date, and BIW provided an initial period of three days' training for key members of staff among the contractors and consultants. These in turn became trainers for their own colleagues and staff within their supply chain partners. The BIW system went 'live' in December 2003.

Take-up of the BIW system was widespread. The development's property agents, King Sturge, had access to the system, and even trades-people such as plumbers, electricians and metal-workers were happy to download information electronically. Crest Nicholson, however, retained ServicePoint to produce paper drawings for those who required them on-site. By the end of September 2006, the BIW system had been used to electronically issue 19,677 CAD drawings and 4,492 documents (excluding system-generated forms such as Technical Queries (TQs), instructions, change orders, etc).

Edward Cullinan Architects no longer issued drawings in paper form - and Crest Nicholson was able to negotiate a fee reduction as a consequence of this cost saving ("the architect and one of the main contractors said they would be horrified if we took the system away," Knight says). While other members of the supply chain sometimes needed to print drawings, they tended only to print out what they needed (the overall paper reduction helped reinforce the project's - and Crest Nicholson's - environmental credentials). For Knight the benefits of electronic information issue also included: easier, faster searches for information, immediate access to the most up-to-date design information, time savings through almost instantaneous issue of information, and greater transparency - "we can monitor compliance with the programme - the quality of data and the date it was issued is clear to everybody".

As well as using the BIW system for issuing information, team members also use the system extensively for feedback purposes. Designs could be 'marked-up' using BIW's integrated viewer, and online commenting became second nature for many users, says Knight. The system is also used to expedite production of an electronic Health & Safety File, and to speed up key project team processes, such as TQs. Crest Nicholson is also planning to use the BIW system to manage information during commissioning and handover phases, to facilitate the delivery of 'archives' of project data for individual contractors and supply chain member companies, and to improve management reporting processes.

Management issues

Crest Nicholson encouraged team members to commit as much information about the project to the system as early as possible. This accelerated user acceptance of the value of the system, and resulted in fewer requests for information.

BIW helped set up a user group among the Harbourside team members to help share best practice and draw on the team's experiences to help overcome any individual issues.

Some users had occasional problems either connecting to the system or being able to access system at an acceptable speed. These problems usually related to their firms' firewall settings, and were therefore quickly resolved.

Key lessons

- Implement the collaboration platform early
- Mandate use of the system by all team members
- Train the trainers - effective deployment, training and support are vital, and it helps to build up local experts in using the system.
- Maintain ongoing support - a user group can help to resolve individual issues and to disseminate and reinforce best practice; it is also a valuable channel for communication between the team and the technology provider.
- Recognise there may be connectivity issues - some users may need to upgrade their telecommunications systems or change their firewall settings.



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