



How BSI verification of BIM Level 2 Design and Construction is driving new business for Mabey Hire

“BSI verification demonstrates how our team has been applying new processes to solve customer challenges. It’s a major step forward for our business, helping us to take on more ambitious projects.”

Paul McLaughlin
Digital Engineer, Mabey Hire

Mabey Hire in brief

Mabey Hire Ltd, the UK hire arm of Mabey Group, a leading bridge and engineering services specialist, has achieved verification by BSI that it is working to BIM Level 2 for Design and Construction.

Mabey Hire has met the PAS 1192-2 Tier 2 subcontractor requirements for building information modelling (BIM) Level 2, demonstrating it has the necessary systems, processes and engineers to reduce uncertainty, speed up delivery, minimize errors and reduce on-site waste. Verification by BSI puts the company in a prime position to tender for BIM Level 2 projects and UK government contracts.

PAS 1192-2 verification:

- Shows compliance with government ‘condition of contract’ requirement for BIM Level 2 for Design and Construction
- Provides reassurance to Tier 1 customers – and their clients – of BIM Level 2 capability
- Drives digital transformation and business efficiency
- Improves client communication and supply chain collaboration
- Differentiates the company, creating competitive advantage
- Underpins business growth.



BSI Case Study: Mabey Hire Ltd

Certification: PAS 1192-2 BSI Verification

About Mabey

Established in 1923, Mabey Group is a leading global bridging and construction services specialist, with over 800 employees and sales in over 140 countries. Mabey's expert engineers digitally design and deliver modular bridging and temporary works solutions.

The group's UK hire division Mabey Hire Ltd, which has achieved the PAS 1192-2 verification by BSI, employs almost 500 staff in the UK and operates a nationwide network of depots. It focuses on the delivery of temporary works projects, helping construction and infrastructure customers deliver projects quickly, safely and efficiently.

Why BSI verification?

Building information modelling (BIM) ensures all relevant information is available – at the right time and in the right format – throughout the supply chain for large building and infrastructure projects. It is underpinned by a suite of standards, including PAS 1192-2, which addresses the BIM requirements for the design and construction phase of a project.

Since April 2016, companies looking to secure Government building and infrastructure contracts must demonstrate BIM Level 2 capability. Mabey began to introduce BIM several years ahead of this requirement, but the April 2016 deadline drove the process. As Paul McLaughlin, Digital Engineer for Mabey Hire, explains, "Obviously, Government contracts were important, but Tier 1 contractors were also asking if we would be BIM-compliant."

PAS 1192-2 verification certification by BSI is earned by companies that can demonstrate they have embraced new collaborative methods of project delivery, underpinned by digital technologies, to refine how they work and deliver complex infrastructure projects. Beyond compliance, Mabey also wanted to differentiate itself from other hire companies delivering BIM projects. Verification by BSI offered that differentiation – and with it a competitive edge.

Achieving compliance

Over the last five years, BIM has transformed the way Mabey's engineers work and collaborate. The company initially set up a programme to research and develop a BIM strategy. McLaughlin continues, "From there, we established a digital engineering team tasked to implement BIM as part of our digital transformation, and by early 2016 we were using BIM on major projects."

New techniques include sharing detailed geometry, data and functionality, and integrating real-time data from infrastructure monitors. Augmented Reality (AR) and Virtual Reality (VR) are also bringing Mabey's design solution closer to the client, with immersive three-dimensional environments to aid design and better communicate complex solutions.

Andrew Gascoine, also Digital Engineer for Mabey Hire, explains that the company's evolution from a two-dimensional computer-aided design (CAD) environment to the data-heavy, 3D world of BIM has been a major challenge. "The key has been to communicate the advantages," he says. "For example, a task such as compiling a parts list, which might have taken two or three hours in the past, now takes only a few seconds."

The company ran centralized group training for regional 'BIM champions', who then cascaded new processes and techniques to colleagues in their local areas.

"We won staff over by explaining how vital BIM is in enabling us to work efficiently and win new business," adds Gascoine. He summarizes Mabey Hire's key digital engineering projects in 2017:

- Gain BSI BIM Level 2 accreditation
- Implement new software and hardware providing new capabilities including BIM, VR and AR
- Develop BIM training programme for internal engineering teams and external clients, focusing on temporary works
- Complete BIM Objects library
- Establish BIM to VR process for design review on live projects.

BSI's role

Mabey considered several possible certification partners, but selected BSI because, says McLaughlin, "We felt BSI offered the best BIM verification process. We also attended several BSI conferences and events. BSI was always our reference point."

The verification process began with a two-day Gap analysis by BSI to establish where BIM processes needed changes. "We were pretty well prepared overall, but not quite as ready for assessment as we thought we were," admits McLaughlin. "BSI really helped us refine our thinking and pinpoint areas where we could improve. For example, as a temporary works company we're not involved when a building is completed and handed over, so BSI helped us define which parts of PAS 1192-2 were applicable to us, and where we could gain the most benefit."

BSI observed a number of key positive elements during the assessment:

- BIM documentation is available to support the BIM processes
- The business has made significant investments in terms of people, systems/tools and processes
- The high level of knowledge displayed by staff participating in the assessment
- The commitment of senior management to BIM, shown by the participation of the Engineering Director during the assessment.

Benefits

BSI verification recognizes Mabey's digital engineering team for its understanding of BIM Level 2 and how using the process enables organizations and individuals to work together more effectively. Benefits include:

- More consistent design outputs from all teams
- Improved certainty and confidence in complicated design and programmes
- More efficient design changes
- Automated parts list and reduced engineering time
- Reduced risks on site with a clear view on installation methodology, improving safety
- Fewer potential delays on site, minimizing costs and penalties

Looking ahead, Mabey wants to provide more benefits to clients. "Presenting our designs as a 3D model is a big part of the process, but we also want to use our design data to provide faster and more efficient delivery of projects in a safer and more sustainable way," says McLaughlin. "Working through the BSI BIM certification process helps us achieve this."

He continues, "We are developing all our own skills internally to deliver BIM on live projects. We are establishing BIM, VR and digital engineering workflows throughout all our engineering teams and we see VR as an accessible way to introduce the concepts and benefits of the bigger BIM process. This will help drive digital change through our business."

The BSI certification offers a high level of assurance to Mabey's customers that BIM projects will be delivered successfully, making it unnecessary to provide further evidence for individual tenders. In future, Mabey will benefit from improved collaboration right across the supply chain, giving customers confidence in its ability to work with them and other parties involved in projects, using digital technologies to add value and cut waste.

McLaughlin concludes: "BSI verification is a major step forward, helping us take on more ambitious projects in both the public and private sectors."

Contact us to find out how BSI certification can help your business make excellence a habit.

To speak to an advisor call:

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