

by Kevin Grayson

Beyond BIM

Bond Bryan Architects is one of the largest architectural, masterplanning and building surveying consultancies in the north of England. The practice has been operating for almost 20 years and boasts a staff of almost 100 employees. Clients span all sectors and include names such as Audi, English Partnerships, the National Railway Museum and Sheffield University.



1. Sandwell College.



As a Director at Bond Bryan Architects, I am often amazed at how practices invest so much in IT without really appreciating how much they might get out of it. Building Information Modelling (BIM) has been around for some time now, yet few design teams appear to know how to make full use of it. Certainly, many do know that the parametric BIM model is “intelligent”, and changes made in one part of a design are automatically reflected throughout it; as the model up-dates itself, so do drawing schedules.

The case for building efficiency is also clear. Working with a well-managed BIM model between consultants means that clashes can be detected early-on which means fewer mistakes on site, and thus improved profitability. At early stages too, 3D can give an architect a real edge. For instance, being able to produce sophisticated and seductive looking visuals quickly for a scheme is a real asset. Using ArchiCAD together with programmes like Studio Max and Cinema 4D led us to win some prestigious projects recently for Newcastle University, Sandwell College and Sheffield University.

Presently at Bond Bryan we are only using something like 50-60% of the potential of ArchiCAD. Even so, we are ahead of the game in the industry as a whole. This says a lot about how the application of BIM is still in its infancy; architects have a lot to learn. And, yet, pace-setting clients and contractors are clearly seeing the benefits of this technology in terms of vastly improved accuracy and, in particular, with new scheduling and cost analysis programmes on the market that are helping to deliver buildings on time and budget.



2. Newcastle University – SAS Building.

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*Kevin Grayson –
Director at Bond Bryan Architects*

Increasingly, all Bond Bryan BIM models are developed to Stage F and ready to tender. The practice is therefore gradually entering the realm of what is called virtual 5D models with time as the 4th dimension, and money as the 5th. In addition to this, there is a roster of other specialist programmes that our CAD technicians can integrate within our models such as the much talked about environmental analysis programme, Ecotect. As a result, our practice is seeing that we cannot afford the time not to invest in creating a BIM model.

Overall, using BIM makes us better disciplined and more logical in our working methods. We are less tempted to produce too much detail at an early stage and have it value engineered out at a later stage. I have also seen how BIM can improve results of the design-and-build process by allowing one to position specific elements in the model that give contractors the scope to inject subcontractor expertise at the right time. As a result, our tenders are coming in on budget.

We are at a really interesting stage in our profession. The bad reputation of the construction industry for wastage of resources is beckoning a resolution. With constantly improving technology such as BIM modelling available to architects, they can begin to be a part of that solution and to manage information provided to clients and contractors infinitely more effectively than they have in the past.

By embracing 5D, the entire building process becomes much more transparent. Architects will for instance benefit from a library of “recipes” of their past projects’, building components with detailed information regarding material and labour costs. With so much of the project management side of things streamlined and automated, architects can really focus energies on what they do best; design.

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Bond Bryan has evolved into one of the largest architectural, masterplanning and building surveying consultancies in the north of England – providing a range of design, analytical and delivery services to help guide our Clients from inception through to the successful completion of their projects.

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