

NASC

Regional Meetings
September 2014

A 'Heads-Up' Presentation about BIM



Copyright © Computer and
Design Services Limited.



Presented by CADS: Developers of 'SMART Scaffolder' Software



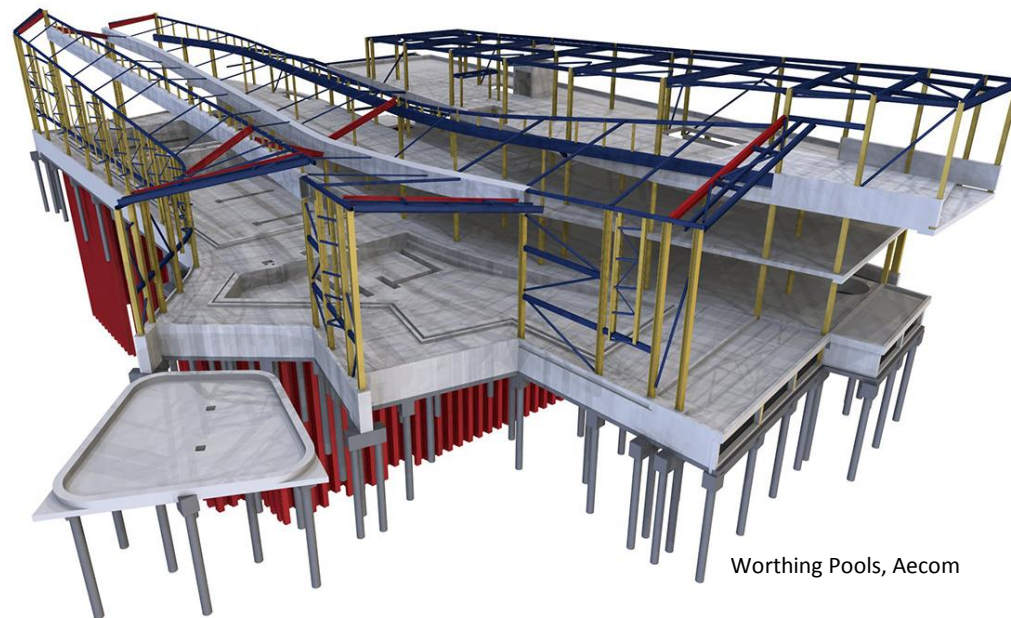
What is **BIM**?

BIM stands for:

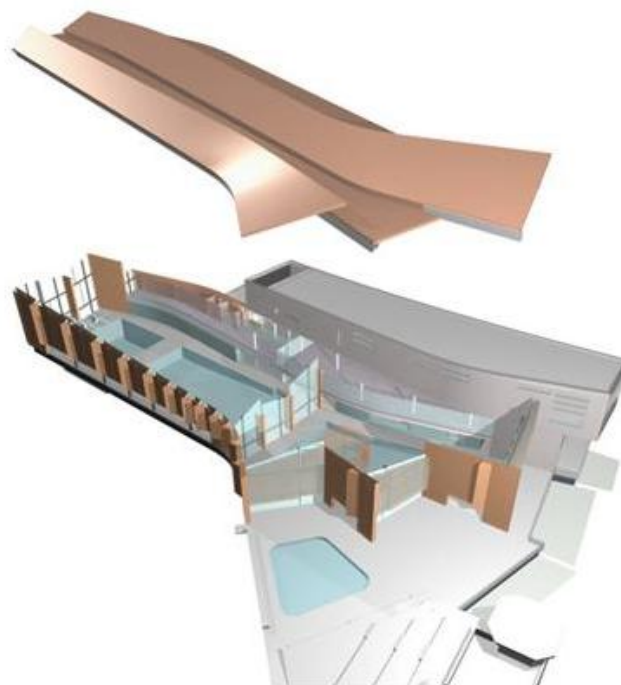
BUILDING **I**NFORMATION **M**ODELLING

What is **BIM**?

- BIM is often associated with **3D CAD Models** by Architects & Engineers
- BIM is not a software product



- However, much can be achieved with intelligent 3D information!



Presented by CADS: Developers of 'SMART Scaffolder' Software



What is BIM?

- BIM is a way of structuring information digitally for use in design, construction maintenance and management of building & other facilities.
- BIM creates a digital knowledge resource shared by different project participants at any stage, forming a reliable basis for decisions.
- BIM affects the whole project 'life-cycle' i.e. from inception to demolition



IDEA



DESIGN



BUILD



MANAGE



DEMOLISH

- Note: BIM is also relevant to Civil Engineering and Infrastructure sectors!



Presented by CADS: Developers of 'SMART Scaffolder' Software



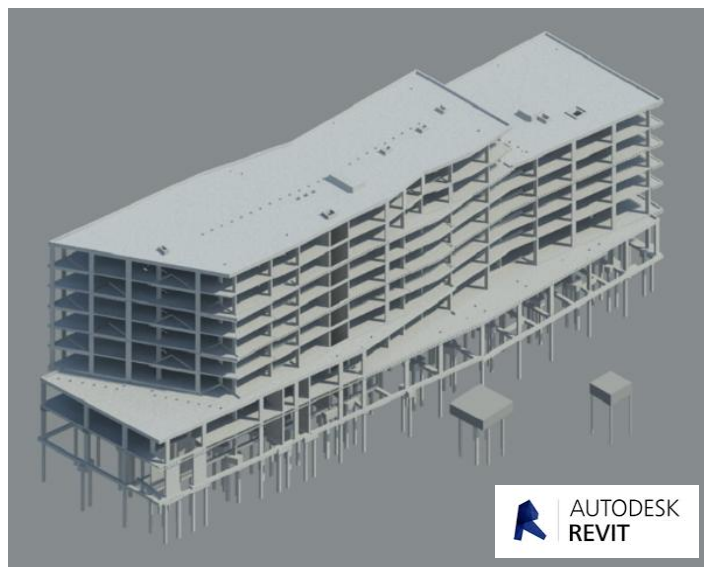
What is BIM?

- The 'BIM model' is in fact a **database** comprised of information from many sources
- This database becomes more complete as the project progresses
- Architects and Engineers will mostly **contribute** physical information to the BIM model using 3D CAD
- Others such as Contractors and Scaffolders will begin by **extracting** information in some form, initially for estimating, pricing and planning!

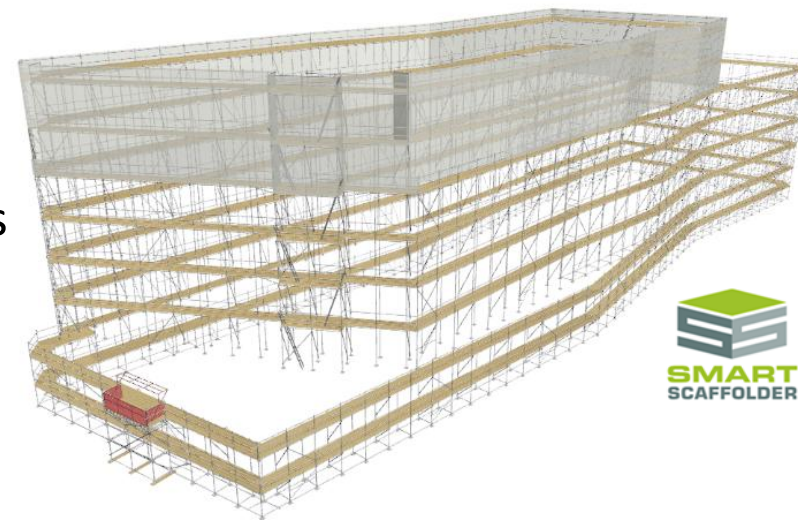


How can Scaffolders use **BIM** today?

1. Most of your customers that are using BIM (or who are obliged to do so) will be using a 3D CAD model produced in Revit, produced by them or the consultants;
2. From their Revit model they will be able to send you 2D CAD files;
3. Such 2D files are usually supplied in PDF, DWG, DXF or even IFC format;
4. BIM enabled software can interpret these 2D files to produce 3D scaffolding models.



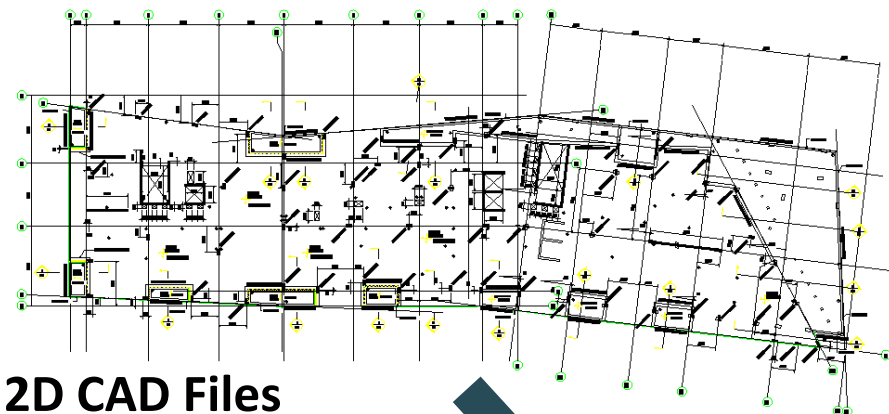
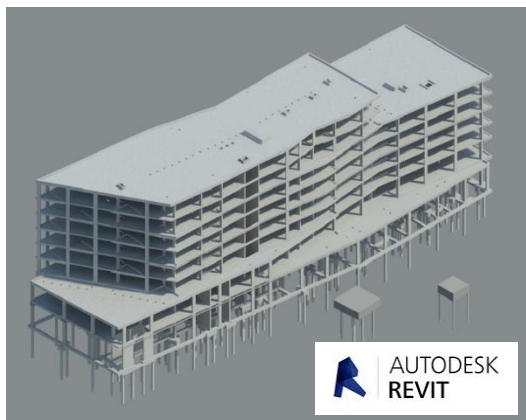
2D CAD Files



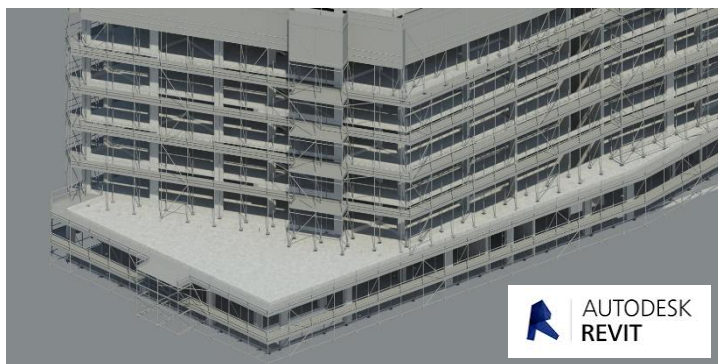
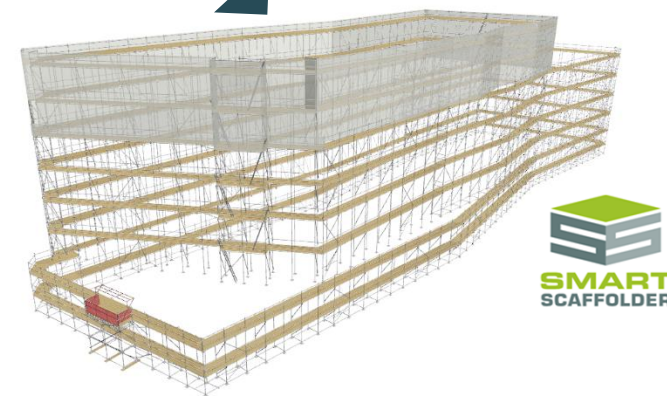
A 'Heads-Up' Presentation about **BIM**

How can Scaffolders use **BIM** today?

Below is a graphical overview of this process which provides your customer with a digital model of your proposed scaffolding!

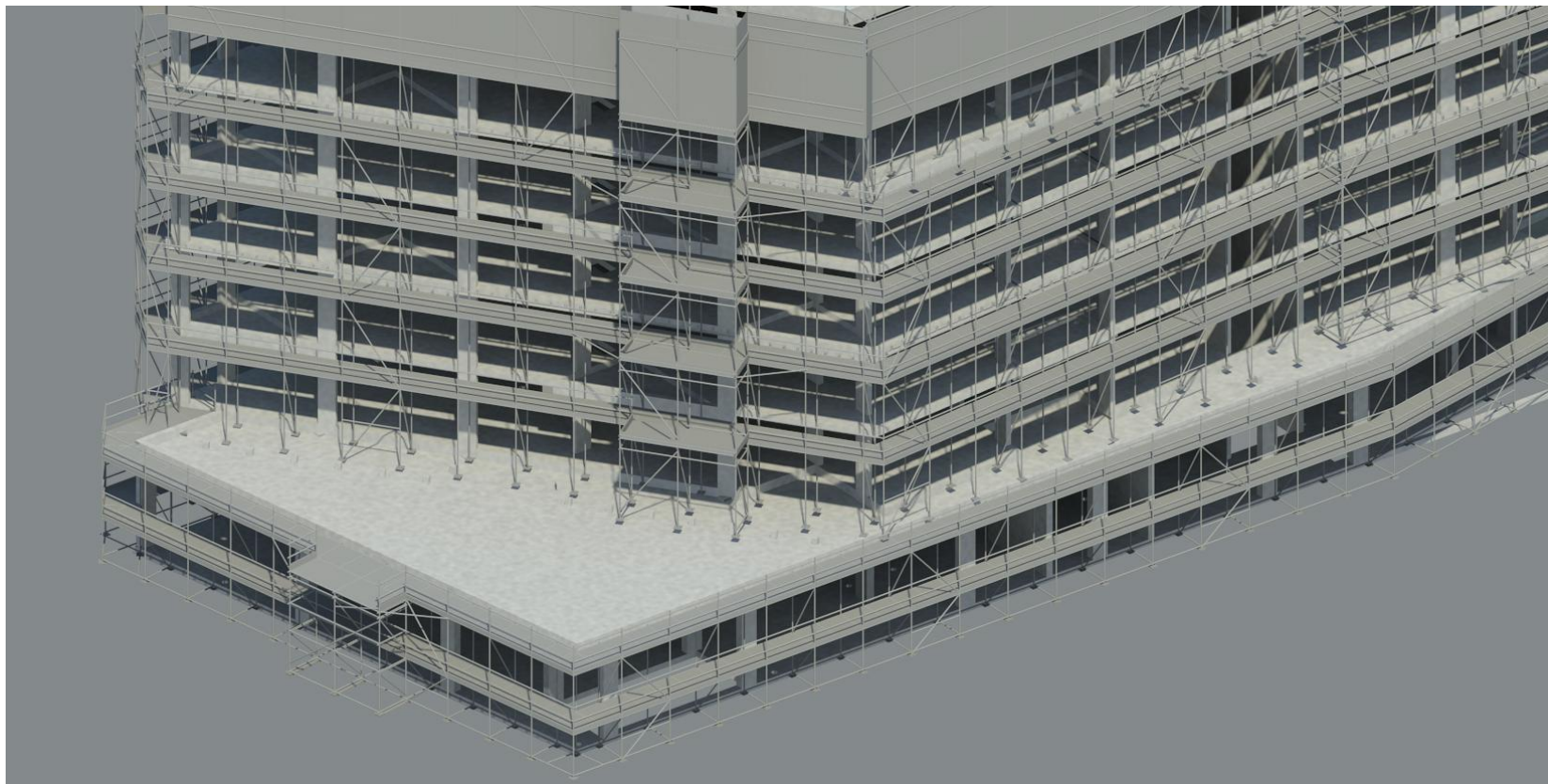


IFC (BIM) Files



How can Scaffolders use **BIM** today?

- There can be little doubt that for the right customers such information will prove very attractive giving your business a **competitive advantage** over 'non-BIM' scaffolders!



Why should my business adopt **BIM** now?

1. Any engagement with the construction industry will soon **only** be via BIM!
2. The UK Government has stipulated that by **2016** all public sector projects must be designed and built using 'Collaborative Level 2 BIM'!
3. As a result most of **your larger customers** have been busy adopting BIM in most aspects of their businesses.

Inside Knowledge: League tables
cnplus.co.uk/league-tables

TOP 50 CONTRACTORS SEPTEMBER 2013 TO AUGUST 2014		
Contractor	Deals	£m
Kier	268	2,078.6
Balfour Beatty	131	1,906.3
Morgan Sindall	194	1,470.4
Galliford Try	131	1,282.0
Interserve	154	1,186.3
Royal BAM	114	1,108.7
Mace	29	1,098.8
Carillion	42	1,065.0
Wates	109	1,004.8
Keepmoat	69	915.3
Laing O'Rourke	20	903.2
Costain	41	865.8
Willmott Dixon	164	814.4

Contractor	Deals	£m
Buckingham	50	351.9
Robertson	45	321.4
Shepherd	22	317.9
JRL	5	287
Winvic	37	268.2
Lagan Construction	18	264.3
Midas	68	249.7
Ferrovial	8	230
Hitachi Zosen Inova	3	216
Hill Partnerships	20	202.7
GB Building Solutions	19	186.8
John Graham	22	164.6
Durkan	23	158.3

TOP 10 CLIENTS AUGUST	
Client	Contracts provided by client
Unseed Assets	
Department for Transport	
Department of Health	
Pirbright Institute	
Greater London Authority	
Grafton Estate	
University of Oxford	
Imperial College	
Estuary HA	
Gresham Down CP	

SOURCE: GLIMCEN

Aside from Lins
Leicester Squa

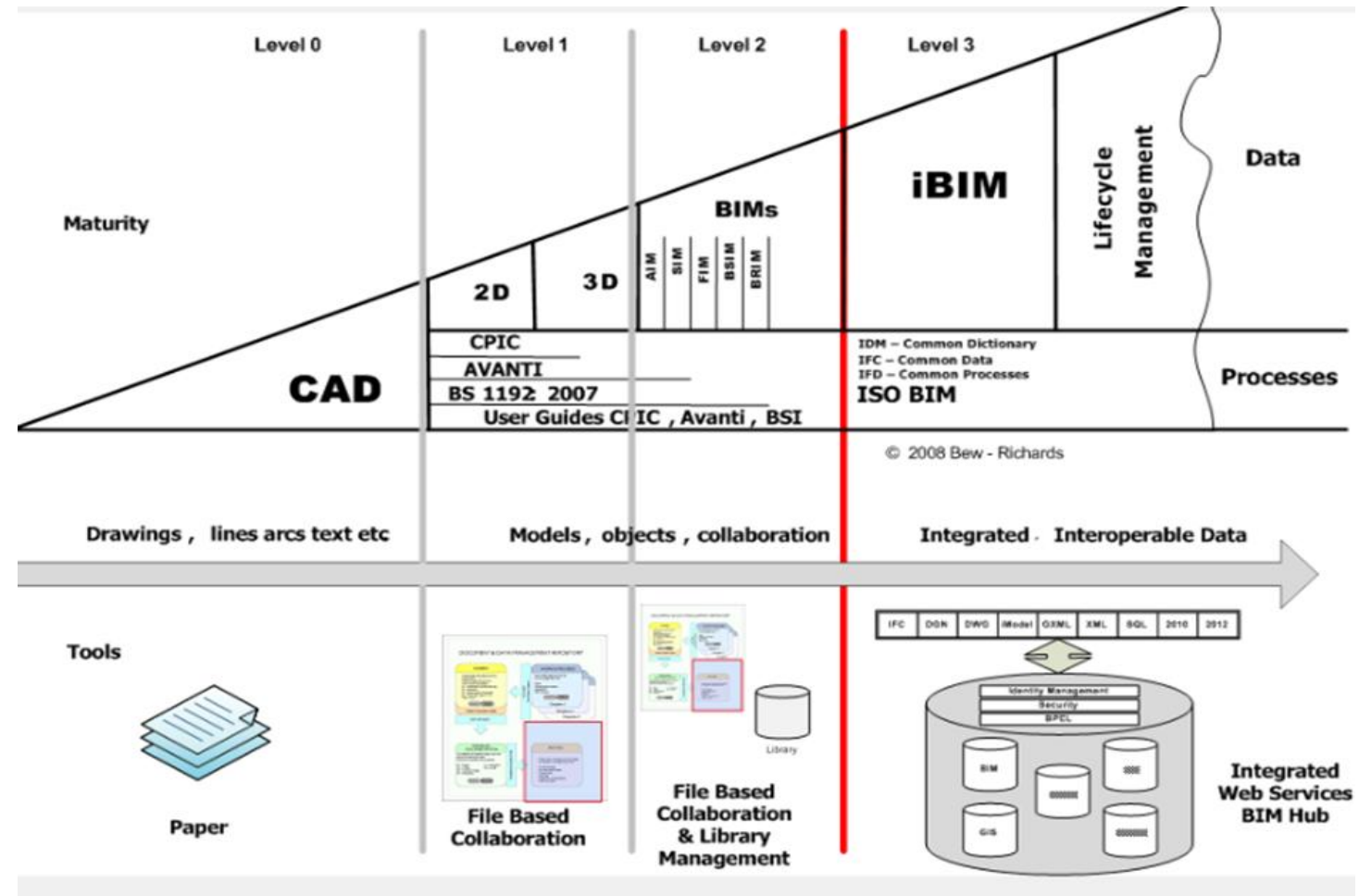


Presented by CADS: Developers of 'SMART Scaffolder' Software



A 'Heads-Up' Presentation about **BIM**

Stages of **BIM** and situation today!



Levels 1, 2 & 3 of BIM

BIM Level 1:

- Managed 2D or 3D CAD with a collaborative software tool providing a common data environment with a standardised approach to data structure and format.

BIM Level 2:

- A managed, largely 3D environment but held in separate discipline 'BIM' models
- This level of BIM may utilise 4D construction sequencing and/or 5D cost information.

BIM Level 3:

- A fully integrated and collaborative process compliant IFC standards ideally based around a single BIM model with data available in 3D CAD format.
- **BIM Level 3 is not technically possible at present!**

What the industry says about **BIM**

1. Kier topped the list of Top 50 Contractors in UK in 2014! Kier have adopted BIM as a core process from e-tendering to completion!
2. Kier say they have proven that BIM helps to expose issues, reduce risk and inefficiency, encourages collaboration and increases profits!
3. More importantly Kier request and receive quotes from suppliers and subcontractors by offering them access to their BIM data.
4. In the near future those suppliers and subcontractors that cannot respond with BIM data will be excluded from Kier's tender lists!



Presented by CADS: Developers of 'SMART Scaffolder' Software

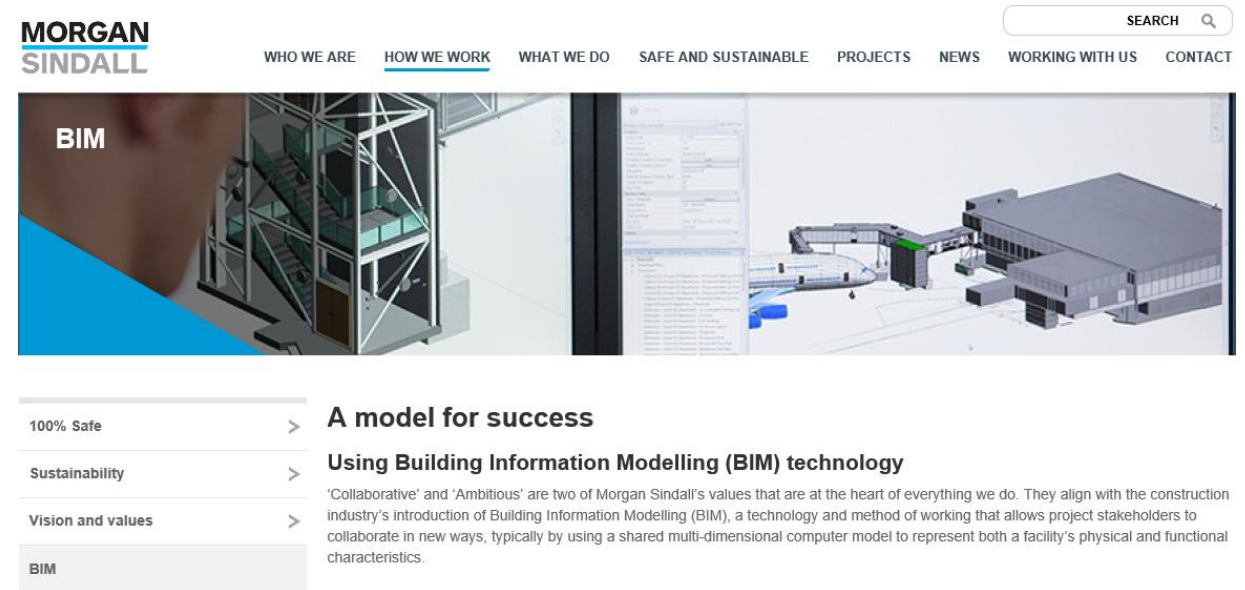


What the industry says about **BIM**

1. Morgan Sindall says "Building Information Modelling (BIM), a technology and method of working, allows project stakeholders to collaborate in new ways, typically by using a shared multi-dimensional computer model to represent both a facility's physical and functional characteristics."

Cost and time-saving benefits have already been realised on projects:

- Edinburgh 's Haymarket Railway Station
- Manchester Victoria Railway Station
- Beal High School, Ilford
- Redevelopment of Gatwick Airport's Pier #1



MORGAN SINDALL

WHO WE ARE HOW WE WORK WHAT WE DO SAFE AND SUSTAINABLE PROJECTS NEWS WORKING WITH US CONTACT

BIM

100% Safe >

Sustainability >

Vision and values >

A model for success

Using Building Information Modelling (BIM) technology

'Collaborative' and 'Ambitious' are two of Morgan Sindall's values that are at the heart of everything we do. They align with the construction industry's introduction of Building Information Modelling (BIM), a technology and method of working that allows project stakeholders to collaborate in new ways, typically by using a shared multi-dimensional computer model to represent both a facility's physical and functional characteristics.

What the industry says about **BIM**

1. Laing O'Rourke believes that BIM is about much more than creating 3D CAD models. It is about unlocking knowledge and insight and creating the platform for true collaboration!
2. BIM enables us to integrate data about a building's design, construction and future function to develop the most efficient methods of delivery and operation.
3. **"If it can be built in the 'virtual' world of BIM, then it can be built in the real world!"**



BUILDING INFORMATION MODELLING (BIM)

OUR APPROACH

ENGINEERING EXCELLENCE GROUP

BUILDING INFORMATION MODELLING (BIM)

PRODUCT AND PROCESS INNOVATION

RESEARCH AND DEVELOPMENT

SKILLS AND EDUCATION

CASE STUDIES

ADVANCED MANUFACTURING SUPPLY CHAIN INITIATIVE

BIM is about more than creating models. It is about unlocking knowledge and insight, creating the platform for true collaboration.

This state-of-the-art digital prototyping technology enables us to integrate data about a building's design, construction and future function to develop the most efficient methods of delivery and operation.

To put it simply, if it can be built in the 'virtual' world of BIM, then it can be built in the real world.

Critical to our Design for Manufacture and Assembly agenda, BIM supports greater collaboration and more informed decision-making by providing a central data source. This helps create more unified delivery teams, while allowing the supply chain to see beyond their own activities to a more holistic view of the client's objectives.



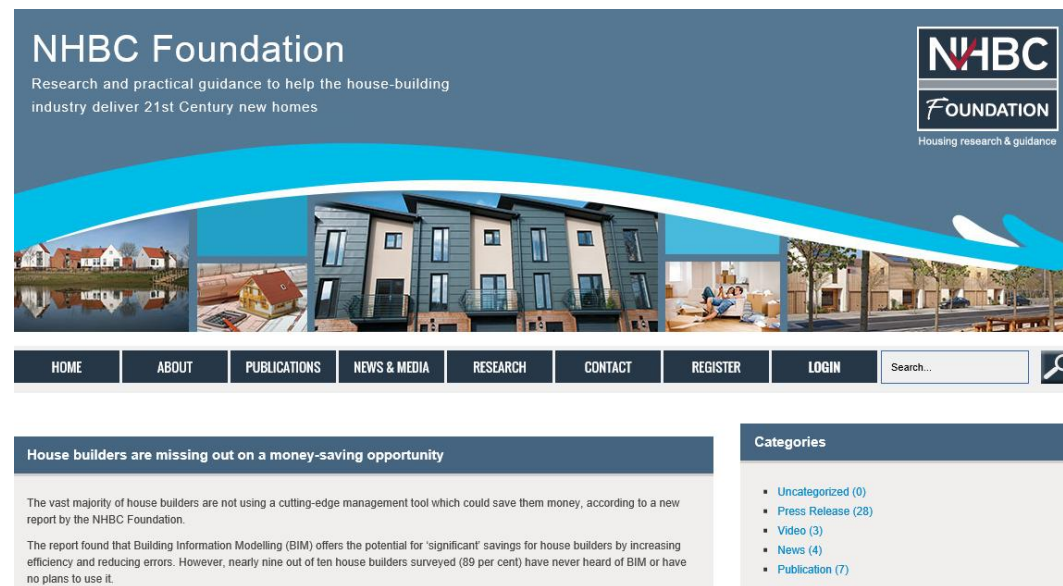
Presented by CADs: Developers of 'SMART Scaffolder' Software



A 'Heads-Up' Presentation about **BIM**

What the industry says about **BIM**

1. Neil Smith, Group Research and Innovation Manager, NHBC, said: *"There is no doubt that BIM has the potential to realise significant savings for the house-building industry."*
2. *"If builders can overcome the initial hurdles by investing time and money in BIM, it offers the prospect of improved efficiency and fewer issues on site."*
3. However, recent surveys of the house-building industry by the NHBC Foundation revealed:
4. Most house builders are not using BIM!
5. A few of the house builders surveyed have never heard of BIM or have no plans to use it!
6. So there are good opportunities for Scaffolders to impress clients!



Further Information

- '**BIM4SME**' is a non-profit making organisation made up of individuals from different sectors of the construction industry.
- BIM4SME is part of the national **BIM Task Group** and are here to enable small and medium business in this BIM journey.
- BRE (**Building Research Establishment**) is delivering training, tools and consultancy that will help industry to meet the Government's 2016 target.
- BRE is also running '**BuildingSMART UK**', the network organisation who develop industry standards for BIM. CADS is a member of BuildingSMART UK
- 'The objective of the **UKCG** BIM task group is to inform and support UKCG members in implementing BIM, and to provide information and guidance to ensure consistency of approach across the supply chain to enable collaboration'.



Summary

- **BIM** = an opportunity to secure customer loyalty
- **BIM** = a way to differentiate your business from your competitors
- **BIM** = a chance to get a competitive advantage and win more business
- **BIM** = better information and project co-ordination and increase profit
- **BIM** = full integration of scaffolding in client project planning
- **BIM** = reduce risk when participating in large projects!

A 'Heads-Up' about **BIM**



Questions?