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BIM4 Flt-Out



p38 **Mark Bew**
Global Outreach



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Empire

44th Edition

BIM TASK GROUP NEWSLETTER

December 11th, 2014



Building Information
Modelling (BIM)
Task Group

View the latest
Round the Parish News



GSL for Government Suppliers

BIM Conference



Read Headline STORY ★★★



HM Government



DEPARTMENTAL ENGAGEMENT AND SUPPORT OFFICER ACTIVITIES

Highways Agency (HA) Homes and Communities Agency (HCA)

Employers Information Requirements - EIR

The Highways Agency (HA) has recently commissioned Atkins to produce their Employers Information Requirements (EIR) to be used across the entire HA asset lifecycle. It's a key deliverable for the HA and will be a standard document to be used in all tenders from 2015. This documents will set out the information requirements for all the Agency's departments broken down into data exchanges and clear levels of detail, providing clarity on information deliverables and exchange formats.

IAN184/14

The Highways Agency (HA) has recently published their Interim Advise Note 184/14 Data and CAD Standards. It provides Instructions on naming conventions, file types and data structures for the delivery and transfer of CAD and BIM files to the Highways Agency and its supply chain. This guidance note is an important step to getting a consistent approach to file naming across the whole supply chain and will be used on all projects from 2015

BIM Portal

The BIM Programme Board are developing a BIM page on the supply chain portal to share information on what BIM means to the Highways Agency with the rest of the supply chain. This is due to go live in November with the intention to upload new documents and guidance when it becomes available.

Richard Lane



Fiona Moore



Graeme Tappenden



Philip Isgar



Phil Jackson



Peter Vale



DEPARTMENTAL ENGAGEMENT AND SUPPORT OFFICER ACTIVITIES

Defence Infrastructure Organisation (DIO)

- DIO's first Principal Support Provider (PSP) BIM Special Interests Group, which was held in September, went very well and provided a useful means of sharing BIM knowledge amongst all those present, DIO and PSP alike. It is hoped that as these meetings start to include Contractors, they will allow supply chain members to provide direct input into and comment on DIO's adoption of BIM.
- A series of meetings are being held with DIO BIM Trial Project Teams, allowing lessons learnt and specifically the benefits of that BIM has offered to DIO to date, to be shared with other project teams, in order to help ensure best practice through continuous improvement throughout the BIM adoption process.

Richard Lane



Fiona Moore



Graeme Tappenden



Philip Isgar



Phil Jackson



Peter Vale



DEPARTMENTAL ENGAGEMENT AND SUPPORT OFFICER ACTIVITIES

Environment Agency

- Working to formally test emerging BIM standards and methodologies with project teams on adopter projects in readiness for phased BIM adoption on all new projects in April 2015.

Local Government

- Working with National Association of Construction Frameworks (NACF) to integrate BIM4LG in its national and regional delivery strategy to further assist the regional Local Government BIM Special Interest Groups and assist Local Government benefit of Level 2 BIM.

Richard Lane



Fiona Moore



Graeme Tappenden



Philip Isgar



Phil Jackson



Peter Vale



DEPARTMENTAL ENGAGEMENT AND SUPPORT OFFICER ACTIVITIES

Nuclear

- Attended the launch of Nuclear Industries Partnerships at the House of Lords
- Working with Sellafield Ltd and NNL on possibility for BIM through the Innovations Framework
- Attended IStructE Edf Presentation on Hinkley Point 'C'
- Meetings with NDA CEO, Operations Director and Engineering Manager
- Attended SLC discussions with Sellafield Ltd, Magnox Ltd and RWM Ltd
- Attended NDA Supply Chain Event in Manchester
- Supply Chain Discussions with Cavendish, Capita, MACE, Atkins, Waldeck, Pwc, Gleeds and Parson Brinckerhoff
- Presented to NuGen at Initiation Meeting along with NNL and Waldeck
- Attended North West Nuclear Forum - Westinghouse Presentation
- Attended a LEAN / BIM Presentation in Manchester
- Now running with 4 nuclear projects at the Early Adopter stage
- BIM4Nuclear Strategy goes to NIA 'Construction Best Practice Forum' and 'Cost Reduction Group' Nuclear Industry Council
- Meetings with Aldermaston Head of Engineering and Engineering Manager by invitation.
- Presented to the Nuclear Liabilities Fund Board in London
- Invited to present to Chair of Nuclear Industry Research Advisory Board (NIRAB) and Director of Nuclear Industry Research Office (NIRO)
- Invited to NCE BIM Round Table discussion
- Invited to 'Marketing Manchester' Nuclear Dinner
- Presented along with Sellafield Ltd and the Cavendish / Balfour Beatty jv at ICE BIM 2014 'Business as Usual'

Richard Lane



Fiona Moore



Graeme Tappenden



Philip Isgar



Phil Jackson



Peter Vale



CORE TEAM MEMBER ACTIVITIES



Mark Bew
BIM Task Group – Chair

- FM & AM Presentations to Zurich University
- BIM4Manu with Murray Bean and Tata Steel
- Commercial Content Workshop including Protocol Review
- Level 2 Legacy Definition
- Building Smart UK Board Meeting
- B/555 BSi Strategy & Steering Group
- Smart City Workshops
- Defining the relationship between Smart Cities and BIM
- AP BIM Group Presentations
- Singapore Construction Week Presentations
- Tier 1 Strategy Workshops
- ICE BIM Conference
- Cross Rail and HS2
- Task Group Core Team Review
- Institutional Meetings with ICE, RICS, RIBA, RIBAE, CIBCE
- Academic meetings with UCL, Cambridge, Imperial and Salford
- EU BIM Task Group Meetings in Brussels
- Presentations to Construction Leadership Group
- Coordination meetings with UKTI



Mark gives keynote on the role of BIM to Asia-Pacific government representatives

CORE TEAM MEMBER ACTIVITIES



David Philp
BIM Task Group – Head of BIM

- Keynote in Dublin with our friends at CITA and their Smart Collaboration Challenge alongside Professor Chuck Eastman, Dr. Rafael Sacks, Professor Laura Lee. Standing ovation for the Class of Your Own team and their team challenge presentation.
- Presented on the UK Industrial Strategy at the 78th Euroconstruct Conference in Milan (Day 1) thanks to Prof. Arch. Angelo Ciribini for his hospitality
- Presented on the UK BIM programme at the the 78th Euroconstruct Conference in Milan (Day 2) HS (Jon Kerby also presented)
- Participated in the Construction Manager magazine BIM+ roundtable event.
- Chaired the Manufacturers Strategic BIM Forum (MSBF) – thanks to Tata Steel for hosting.
- Chaired the Manufacturers Strategic BIM Forum away day workshop – thanks to IBM for hosting
- Chaired the BIM4Clients – EIR workshop
- Keynote at the International Congress of Architecture Technology in Aberdeen.
- Update at the NHS Scotland conference in Crieff.
- Keynote at the wonderful “BIM, infrastructure and procurement” conference at the British Embassy in Warsaw for the British Polish Chamber of Commerce (more detail in the next issue).
- Keynote at the Bentley Year in Infrastructure Conference.
- Keynote at the Chartered Institute of Logistics and Transport (great discussion on the logistic model).
- Chaired the NBS Digital Thinking, Smart Building conference and BIM workshops.
- Attended the Task Group Core Team Meetings.
- Fun at our RTC class in Dublin (My BIMs bigger than your BIM) with Chris Needham of AECOM and RTC (Australia).
- Chaired RIBA POW BIM conference.
- Gave Task Group update at the biggest yet ICE BIM Conference (chaired by Mark Bew).
- Met contractor and client visitors from Denmark including Danish Association of Construction Clients.
- Keynote at the International BIMForum in Lisbon.
- Keynote presentation at the BSI BIM Conferences.

CORE TEAM MEMBER ACTIVITIES (CONTINUED)



David Philp
BIM Task Group – Head of BIM

- Keynote presentation at the BIM and the 'Ologies workshop
- BIM Technologies discussion with Canadian representatives
- Keynote at GSL BIM Conference in Leeds alongside Paul Morrell
- Met with UKCG BIM working group.
- Meeting with CITB.
- PAS1192-5 meetings.
- BIM Workshop – Cavendish House.
- Update at the BIM Technology Alliance.
- Various meetings with dissertation students.
- Meetings with BIM4 members.



Mark Bew with David @ ICE BIM Conference 2011 / 2014
3 years later and a few more grey hairs ...

CORE TEAM MEMBER ACTIVITIES



Terry Stocks
BIM Task Group – Delivery Director for Level 2 BIM

- Presented at a BISRIA futures conference presented on the expectations of BIM
- Attended meeting on the new PAS 1192 -5 Information Security Document.
- Took part in the CIC 2050 Group Speed Mentoring event in London.
- Attended the GSL for Govt Suppliers event on 7th Nov.
- Presented at the Green Construction Board.
- Chaired Dept BIM Stewardship Group
- Hosted meeting with UKCG BIM Group
- Attended CE National Awards. MOJ won Highly Commended in Client of Year Category.
- Chaired BIM Level 2 core group and Dept Support Team Meeting
- Attended Civil Service Awards. MOJ won Programme and Project Delivery Category.
- MOJ have embedded the UK Construction Strategy deliverables in their delivery practice. Early contractor and supply chain engagement has been central to the adoption of BIM, GSL, Lean Delivery etc. Winning the client and delivery awards at both CE and Civil Service Awards has been a true highlight and recognition in the departments leading approach to client leadership and delivery.

CORE TEAM MEMBER ACTIVITIES



Rob Manning
BIM Task Group - Core Team

- Presented PAS 1192 Part 3 at the bsi BIM Conference.
- Reviewed the Level 2 BIM documents with the BSRIA BIM user group.
- Presented PAS 1192 Part 3 to asset managers and facility managers from the Norwegian organisation NBEF.
- Presented PAS 1192 Part 3 to mutual clients of a legal practice and project management practice in Birmingham and London.
- Engaged in the appointment of RIBA Enterprises to deliver the research and development project funded by Innovate UK to deliver 'A digital tool for Building Information Modelling'.
- Presented PAS 1192 Part 3 to a Japanese BIM delegation.
- Chaired the first meeting of the drafting panel to update BS 8536:2010 to include briefing for the approach of soft landings for government, performance evaluation and building information modelling. First draft is now being reviewed by the drafting panel.
- Presented PAS 1192 Part 3 to the CIC BIM Forum.
- Presented a review of GSL, PAS 1192 Part 2 and PAS 1192 Part 3 to the BIM Stewardship Group.
- Presented PAS 1192 Part 3 to the BIM4Water group in Swindon.
- Presented "Implications of Level 2 BIM for the public sector" at the CIBSE Leadership in Building Performance Conference.
- Presented "Government Soft Landings – What is it?" at the GSL Stewardship supply chain engagement event.
- Participated in the first project board meeting of RIBA Enterprises (Newcastle upon Tyne) on the project to deliver "A digital tool for Building Information Modelling"
- Presented PAS 1192 Part 3 at the Education Estates Conference in Manchester.
- Chaired a presentation of proposals for "A digital tool for Building Information Modelling" at the CIC BIM Forum.

CORE TEAM MEMBER ACTIVITIES



Adam Matthews
EU & International Relations

- EU: Coordination with EU BIM community - next steps: develop Best Practices paper
- Chinese delegation visit London to meet Task Group, 9th Oct
- Japanese delegation visit to meet Task Group, 21st Oct
- Singapore: Mark & Adam - present at Singapore's BCA Government BIM Symposium and held international government meetings 13th & 14th October. Our thanks to the organiser, BCA & Tai Fatt Cheng for the great event. It showcased Singapore's and the UK's leadership BIM programmes to the Asia-Pacific region creating Growth opportunities.
- Portugal: National Lab for Civil Engineering - R&D for Ministry of Economy: Briefing on UK programme and EU BIM.
- Training: LOF version2 - successful consultation completed with support from BSI. Thanks to Richard Lane & Jason Underwood for a fantastic outcome.
- Training: LOF & accreditation strategy meeting.
- Core management meetings.



Adam gives workshop on the EU BIM collaboration



Audience vote: 90% say Asia public sector estate face the same or similar policy challenges as EU



Mark and Adam in panel conversation with Tai Fatt Cheng on Asia collaboration

WELCOME BABY BIM



Ella Jane Braine

BORN OCTOBER 17, 2014 | 22:45 | 4 POUNDS 1 OUNCES



C O N G R A T U L A T I O N S

BIM: PEOPLE MATTERS

David Frise





BIM: PEOPLE MATTERS

12 Questions to
David Frise

HEAD OF BIM4FIT-OUT WORKING GROUP, 'the BIG Lebowski' fan, Tottenham Hotspur supporter, a blogger, a comedian, **David Frise** shares his thoughts on early BIM adoption within the BIM4FitOut community, data capture techniques and BIM digital revolution.

01

Let's start with you! How did a former nuclear submariner become involved in the construction sector?

I was fourth generation in the Navy. A nuclear submarine is just a lot of plumbing and wires stuffed in a tube with a large kettle to generate steam. I came out the Navy and entered the world of M&E - pipes and wires in a building (bit more space and easier to get spares).

02

Can you tell us about the BIM4FitOut working group?

We set up BIM4FitOut to answer the question 'how will BIM impact the fit-out sector?' We thought it was better to try to answer the question ourselves, rather than let someone else do it for us and then complain they got it wrong.

03

What are the Group's key objectives?

To answer the above question. The answer is we don't know exactly. But BIM is a manifestation of the digital revolution and revolutions are generally not fully predictable. The focus has always been on the nuts and bolts - exactly how will this work for a contractor or manufacturer? We are looking at processes and asking if they add any value, if they don't then how can we improve or replace them. Unless we become more efficient we will never see the savings everyone is predicting.

04

Is BIM bringing about any changes to the finishes and fit-out sector generally?

I think it is slowly. There are an increasing number of projects requiring BIM. I not sure that BIM is always what is delivered but the trend is clear and unstoppable.

05

How digitally advanced is the fit-out sector?

We have members who have advanced digital design capability and use digital tools on site to improve communication, monitor performance, and project manage. Where something makes their lives easier they will quickly adopt.

One of the major issues with BIM for them, is where do you start? There is an array of software tools and new processes and ways of working to be learned. There is also a fear of making the wrong decision (VHS v Betamax) and a genuine concern that everyone else is an expert. Safer to wait until everything becomes a bit clearer.

06

What is BIM adoption like within the BIM4FitOut community?

Within our membership we represent the whole supply chain, having manufacturers, tier one contractors and specialist subcontractors. Adoption is patchy but many tier ones are bringing shell and core build experience of BIM into the fit-out world.

Manufacturers are also bringing experience gained in foreign markets. We are encouraging specialists to take part, some have embraced BIM. We run events for those with little or no experience to come along to a meeting and try it out. They quickly learn they know as much as just about everyone else in the room.

I often hear that “BIM will not impact my company in my lifetime”. I don’t accept that but even if I did, I would say that other people on the project will be impacted by BIM and if you have no idea what they are talking about you will be significantly disadvantaged. Our training courses and workshops mix disciplines and trades so we can all learn together, no wrong answers.

07

Where do you see the biggest opportunities for your members?

There has to be advantages in standardising processes, a common understanding of what we mean by information, knowing what data is required, in what format and when. Currently we introduce errors and repetition through value destroying processes and out-dated work practices. BIM will provide a better way to build. We cannot remain an analogue industry in the digital age. So as well as an opportunity, there is an implicit threat. If we don't change new entrants will do it for us.

08

Is there any synergy with the manufacturing community?

We work very closely with manufacturers, working specifically on Product Data Templates (PDTs) to simplify information provision. This helps everyone in the supply chain by standardising the format for information provision. BIM4FitOut is developing PDTs for the interiors sector and working to coordinate the production of a range with other trade associations. We are working very closely with BIM4M2 and CIBSE on this project.

09

We are pre-supposing that most fit-out projects are undertaken over a short-time frame, does BIM help support this rapid construction cycle.

Currently no, I don't think it does on those quick start projects but it will.

10

Are you seeing any linkage with digital data capture techniques such as laser scanning?

Very much so, this is probably the only way refurb projects will adopt BIM.

11

What advice would you offer a contractor about to start their BIM journey?

You know more than you think you do and the person next to you knows less than you think they do. There is a language to learn and once you understand the terms, things will start to fall into place. Get all aspects of your business involved, estimators and commercial, don't leave it to the techies.

12

We've learned about your comedy talents. Can you tell us more about it? Go on ... tell us your best BIM joke.

Been doing open mic stand up for about a year, took it up to take me out of my comfort zone. I succeeded on that score.

Best BIM joke - Honestly I sat with 10 comedians in a room last week trying to think of one - nothing. Clearly it is not possible to develop a BIM joke without defining the process first, thinking a new PAS will be required.

David Frise is the CEO of AIS FPDC (the merged AIS and FPDC, rebranding soon!) the trade association representing the Fit Out industry.

*With a background in M&E he set up the **BIM4FitOut** and **BIM4Building Services** groups. Lives in London and is a long suffering Spurs fan.
David's Blog*



GSL for Government Suppliers

BIM Conference, London, 7th November 2014

by **Monika Orzeszak, UK BIM Task Group**

On 7th November 2014 **Government Soft Landings (GSL) for Government Suppliers Conference** took place in BIS Conference Centre, in London.

Andrew Digby of GSL Stewardship Group chaired the Conference, which attracted over 60 of participants, representing government departments.

01

KEYNOTE SPEAKER AND INTRODUCTORY SESSION

Peter Hansford, UK Government Chief Construction Adviser opened the Conference, giving a pre-recorded keynote speech. He spoke of the Government Soft Landings role and how it plays an important part in the overall Government Industry Strategy for construction.

Peter pointed out the importance of continuing productive dialogue on GSL between clients and the supply chain. He outlined how GSL relates to BIM and how both support delivery of a Government Construction Strategy, as well as cost and time reduction targets; how both clients and supply chain must work together to find right tools to support UK construction, domestically and around the world.

Peter emphasized that being a key client, Central Government spends £10 billion a year, therefore it wants strong influence on industry practice.

Next he mentioned the Government Construction Strategy, launched in May 2011. It aims to reduce the cost of construction commission by 15% - 20% by the life of this parliament. Key elements of the Strategy include BIM, a clear construction pipeline, benchmarks in cost reduction trajectories, payment mechanisms, new procurement models.

Peter emphasised that Government Soft Landings (GSL) was integral part of Government Construction Strategy 2025. He reminded us that GSL strategy was approved by the Government Construction Board, in September 2012, and that GSL policy would apply to all new Central Government project by 2016. He also mentioned that GSL has become successfully embedded in departments alongside with BIM.

Next, Peter highlighted that ongoing maintenance and operation cost of the building during its lifecycle far outweighs the original capital cost of construction and that GSL recognizes the need for this to be identified through early engagement in the design process. In so doing it contributes to Government Industrial Strategy for Construction - Construction 2025.

Peter continued by saying that GSL connects facilities management with the designing and construction process, both through tools and its part of integrating team working. GSL helps impact on operational cost to be considered early in the process. It enables early and effective use of the asset through commissioning, training and hand-over, which enables asset to reach early optimal performance. GSL establishes a clear regime for post occupancy evaluation. Clear measurements for building performance that are monitored up to three years post-completion, with the mechanisms for remedy from constructors or designers if performance is not met.

Peter believed that the Government Construction Strategy targets for speed and cost of delivery can only be met by making full, effective use of BIM and GSL.

He concluded his keynote speech by saying that GSL and BIM support all of the four, bold ambitions, in the heart of Industrial Strategy, and that GSL and BIM are both really important contributors to transforming the construction industry to becoming world-class by 2025.

Peter Hansford **recording for the GSL Suppliers Conference** can be found on BIM Task Group website **[LINK]**

GSL Conference 7th Nov 2014



GSL and BIM support all of the four targets set by the Government Construction Strategy 2025.



They are both really important contributors to transforming the construction industry to becoming world-class by 2025

Peter Hansford
UK Government
Chief Construction Adviser

GOVERNMENT CONSTRUCTION STRATEGY 2025 KEY AMBITIONS

33% *reduction in both initial cost of construction and the whole-life cost of assets*

50% *reduction in the overall time from inception to completion for new-built and refurbished assets*

50 % *reduction in greenhouse gas emissions in built environment*

50 % *reduction in the trade gap between total exports / total imports for construction products and materials.*



02

WHAT IS GOVERNMENT SOFT LANDINGS (GSL)?

Rob Manning of BIS BIM Core Team explained that Government Soft Landings is there to close the performance gap between planned and actual performance.

He quoted sustainable development of **WHO 2008 Zagreb Declaration for Healthy Cities** and analysed sustainable development - public spending relationship.

Rob laid out the **Guiding Principles of the GSL Policy**, explained the **GSL Process**, the importance of finding a **GSL Champion** on each project, as well as Environment, Social and Operating Costs Measures.

Next, he talked about **GSL Procurement Templates** for both Design & Construction and Operations Teams. Drafts have been uploaded onto BIM Task Group website. Feedback us sought on these documents, to develop them further.

He finished with presenting **GSL Timeline** and **GSL Roadmap**, which lists details of development stages through years 2011 - 2016, and **GSL Status Report**.

PDF version of Rob's slides can be downloaded from BIM Taskgroup website, **RESOURCES / PRESENTATIONS [LINK]**

What is "soft landings" for central procurement by government departments.

Is there a performance gap and if so is there a solution?

**Rob Manning, BSc(Hons) CEng FCIBSE.
BIS BIM Core Team.**

Rob's presentation was followed by a brief Q/A session. Rob received many constructive questions which were duly noted by the GSL team as invaluable feedback for their further work.



“

What can be done to better increase Government Soft Landings (GSL) adoption within supply chain community?

Government Soft Landings is about adopting a mind-set and a process to align design and construction with operational asset management and purpose. This alignment means that the needs of the end-user, will be considered and addressed throughout the design process. Designers and contractors will be involved with the building beyond its construction completion to ensure that handover becomes a smooth process, operators are trained, and optimum performance outcomes become a focus of the whole team.



We often however hear the words - "I'm not doing GSL because my client isn't asking for it". To increase GSL adoption within the supply chain community we need the government construction and operation client to ask for the soft landings approach on every project. It will be necessary to influence the procurement professionals in each department and ensure they are ready to have achieved 100% adoption by 2016 coterminous with the Level 2 BIM requirements. (Continued on the following page...)

”



What can be done to better increase Government Soft Landings (GSL) adoption within supply chain community? (Continued)

We need the departments to specify their procurement requirements for GSL such that the supply chain community know exactly what is required and can compete on a level playing field. Such documents are available in draft for critique and development. The departments will then need to manage the adoption of the agreed procurement documents by the procurement professionals in each department.

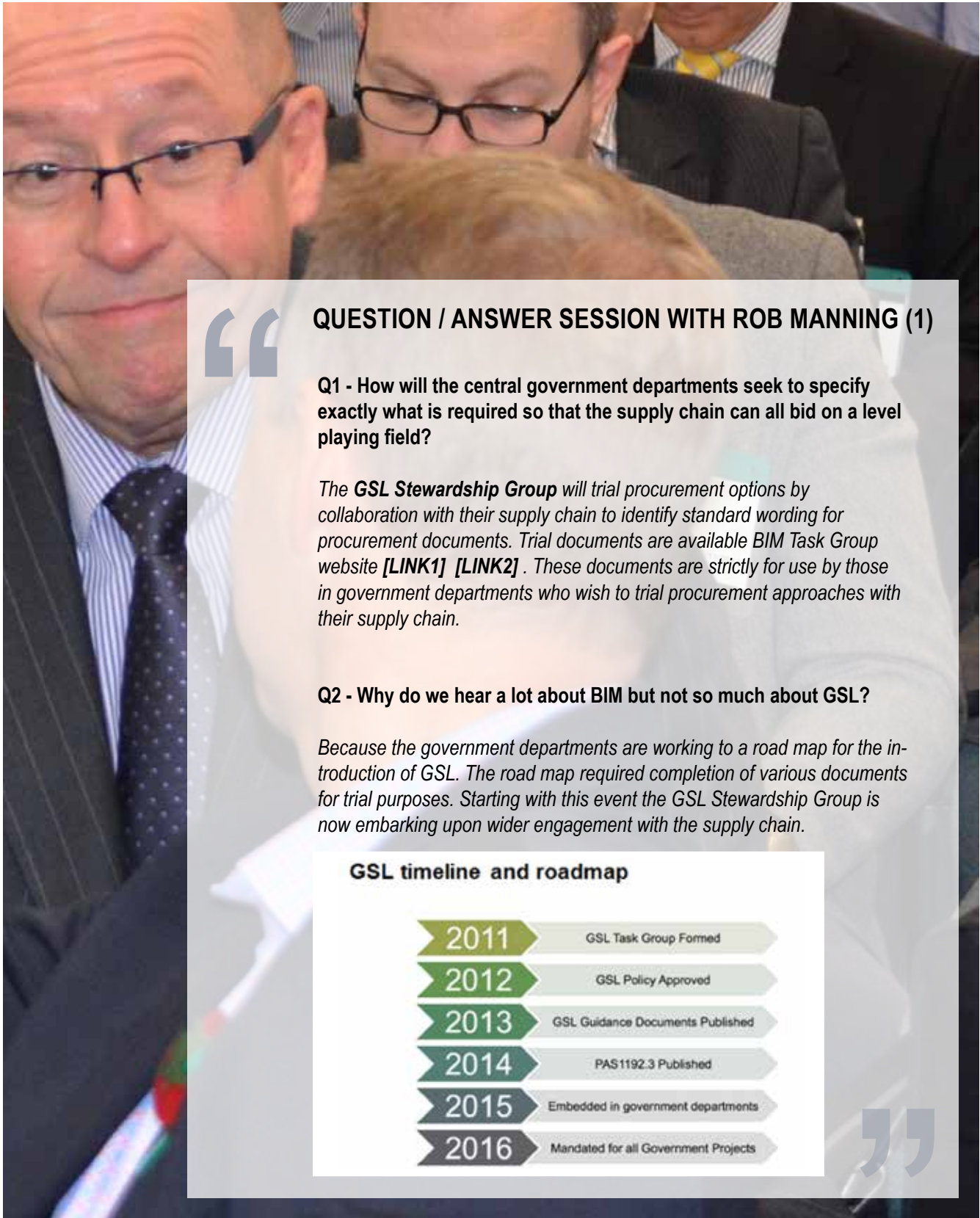


On a broader front and with regard to embedding the soft landings approach in all projects (public and private sector) we need to engage with the Property Managers, Asset Managers and Maintenance Providers. We are generally talking about the material assets and it is the Property Managers and Asset Managers who deal with the executive board to establish strategy, systems and day to day plans for the asset management of system networks and the estate portfolios. They procure FM providers and maintenance providers. The maintenance providers do the 'use and maintain' activities on material assets and also need to be closely connected with information management and GSL approach.

A conference or workshop with Asset Managers, Property Managers and providers of maintenance could open such discussions. Engagement and adoption might be advanced by discussion with such groups as BIM4Clients, Institute of Asset Management, ICE, RICS, BIFM, British Property Federation. If their members are persuaded then they will influence the wording of procurement documents for providers of both construction and asset operation.



Rob Manning
BIS BIM Core Team



QUESTION / ANSWER SESSION WITH ROB MANNING (1)

Q1 - How will the central government departments seek to specify exactly what is required so that the supply chain can all bid on a level playing field?

*The **GSL Stewardship Group** will trial procurement options by collaboration with their supply chain to identify standard wording for procurement documents. Trial documents are available BIM Task Group website [\[LINK1\]](#) [\[LINK2\]](#). These documents are strictly for use by those in government departments who wish to trial procurement approaches with their supply chain.*

Q2 - Why do we hear a lot about BIM but not so much about GSL?

*Because the government departments are working to a road map for the introduction of GSL. The road map required completion of various documents for trial purposes. Starting with this event the **GSL Stewardship Group** is now embarking upon wider engagement with the supply chain.*

GSL timeline and roadmap





QUESTION / ANSWER SESSION WITH ROB MANNING (2)

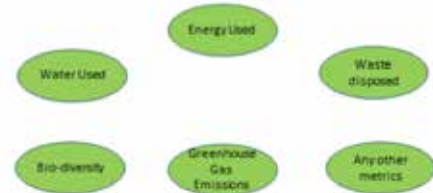
Q3 - Is there a will to standardise the measures adopted by the central government departments?

The measures should address economic, social and environmental performance. In so doing they will benchmark cost and carbon performance so that government can demonstrate progress against reduction targets. For the office space constructed or procured for occupation by government departments there is a will to standardise reporting measures and discussion is on-going with a view to enabling this to happen.

Sustainable Development – Public spending



Indicative Measures - Environment



Indicative Measures - Social

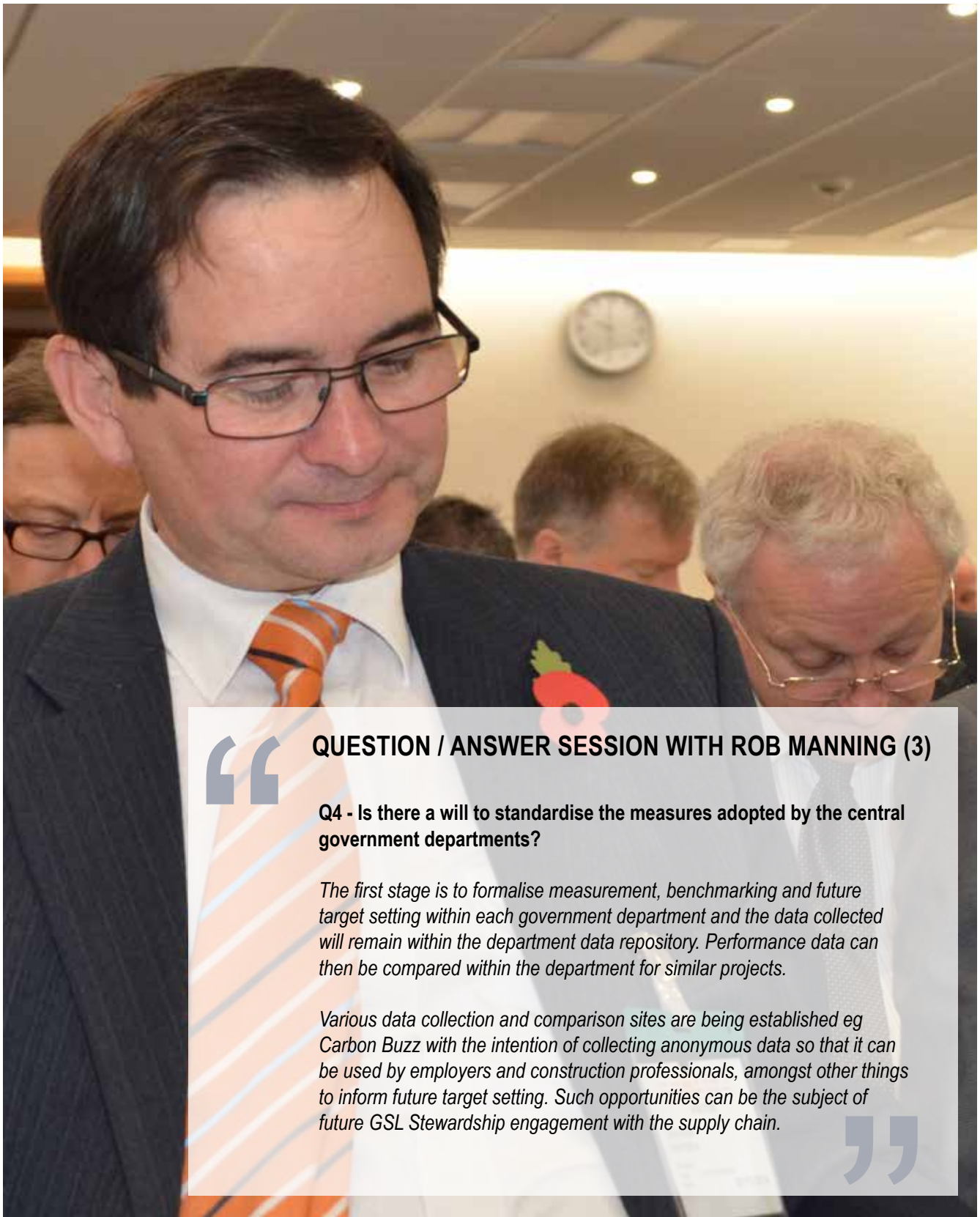


Indicative Measures – Operating Cost

Measure	Unit	Target
Water consumption	litres per person per day	10
Energy consumption	kWh per m ² per year	10
CO ₂ emissions	kg per m ² per year	10
Waste disposal	kg per m ² per year	10
Greenhouse gas emissions	kg per m ² per year	10
...

For central government departments procuring the construction of such facilities as flood defence, highways, schools, health care buildings and legal/custodial buildings the standardisation of measures is much more difficult to achieve but will nonetheless reflect economic, social and environmental metrics so that individual departments can demonstrate cost and carbon reductions.





QUESTION / ANSWER SESSION WITH ROB MANNING (3)

Q4 - Is there a will to standardise the measures adopted by the central government departments?

The first stage is to formalise measurement, benchmarking and future target setting within each government department and the data collected will remain within the department data repository. Performance data can then be compared within the department for similar projects.

Various data collection and comparison sites are being established eg Carbon Buzz with the intention of collecting anonymous data so that it can be used by employers and construction professionals, amongst other things to inform future target setting. Such opportunities can be the subject of future GSL Stewardship engagement with the supply chain.





“

What feedback did you receive from the supply chain with regards to GSL implementation?



The supply chain were hugely enthusiastic about GSL. There was a general recognition that GSL would provide them with the tools to help deliver better projects. Not just for better for government but with better outcomes for supply chain partners too.

”

Andrew Digby
Chair of the Government Soft Landings
Stewardship Group

03

WHY GOVERNMENT SOFT LANDINGS?

Roy Evans of GSL Stewardship Group followed with “*The Ministry of Widgets - a tale of two projects*”. First he introduced two hypothetical projects being procured and produced for the fictitious Ministry of Widgets.

Each developed identified the for a need for a new building, developed a proposal, got some idea of budget, £5m and timescale of two years to produce their new buildings.

Team A completed on time and roughly to budget, handover explained how to operate the asset and performance from the office was better than expected.

Team B were slightly over budget and time, handover was quite rushed and sadly in under a year after completion some re-work was needed to the building.

Next, Roy explained what lessons had been learned by Team B, why GSL was used by Team A and how it helped the final users, operators and suppliers.

Roy continued his story saying that Team A wanted to use ‘something called BIM’ on their next project. They knew that to do BIM they needed to do GSL. GSL would help them, as it has a series of structured questions that could support design and construction process. Also, the project team felt that sometimes the Ministry needed to be clearer in specifying its needs and that GSL would help this. Implementing GSL helped people to have a broader view of projects, feel more included and also identify problems earlier.

Roy concluded his presentation by saying that GSL provides way to bring common understanding to a project that reduces capital and operational costs, mobilisation time and improves operational performance.

PDF version of Roy’s slides can be downloaded from BIM Taskgroup website, RESOURCES / PRESENTATIONS [[LINK](#)]



** Disclaimer. The Ministry of Widgets' is purely fictional and any association with any other Ministry of Widgets Departments in existence are unintentional*



What feedback did you receive from the supply chain with regards to GSL implementation?

Where it has been used people are committed to and support GSL. Clarity in terms of outputs and measures is important for its implementation on projects. Tenders need to be clear about GSL and how it is assessed.



What can be done to better increase GSL adoption within supply chain community?

1) *Work in establishing and publicising further measures that we are developing for its use.*

2) *Engagement with professional bodies*

3) *More publicity of the benefits and savings that GSL has brought, such as the £45k operational savings it has brought to the Environment Agency*

(Exemplar Early Adopter Project: Environment Agency – Shonks Mill Flood Storage Area

Roy Evans
GSL Stewardship Group
Implementation Lead





HM Government

UNCLASSIFIED



Early Adopter Project: Environment Agency – Shonks Mill Flood Storage Area	Early user engagement to improve project delivery and reduce operational costs
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Value identified / Outcomes:

A new flood alleviation scheme is being developed by the Environment Agency (EA) to reduce flood risk to properties within the River Roding catchment area.

Early engagement with end users and stakeholders has provided a significant improvement in the understanding of the risks and constraints for the project, improving predictability, planning and forecasting. Where an estimate goes beyond a planned budget, a project variation authorisation is needed. The variation can take a minimum of two and six months. We believe that this process has considerably reduced that risk from occurring.

Early identification of preferable passive, low cost, low maintenance structures has focused the teams' scope and will potentially mean operational costs are reduced in the region of £45k for the first 5 years and there will be less of a burden maintenance funds.

Other key benefits achieved:

The EA used GSL to prompt end user engagement at the concept stage. It is estimated that to date they have saved at least 7 days of project management time and ongoing design iterations through earlier engagement with end users and other stakeholders. Many of these stakeholders would otherwise have not been engaged until later on in the definition stage of the project rather than the concept stage. Using GSL meant a greater depth of engagement and that stakeholders have a better understanding of the project.

As well as improving relationships with stakeholders through earlier and better engagement, using the GSL process has lead to better budget development, project planning and programming. Earlier engagement has lead to a far more detailed and precise consultants scope of works which lead to a better price and more focussed approach.

Trial information	
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Project title	- Shonks Mill Flood Storage Area
Clients	- Environment Agency
Form of project	- Infrastructure new build flood alleviation scheme
Focus	- Early engagement to drive clarity of requirements and improved performance

Executive summary:

The Environment Agency (EA) are developing a new flood alleviation scheme to reduce flood risk to properties within the River Roding catchment area; for a project of this nature, the EA has to consult with a range of stakeholders.

At the preliminary stages of the project a wide range of stakeholders have been engaged with so that their views on a number of key issues can be identified and each others' expectations understood. This has been undertaken using GSL and the review of an existing site.

This consultation has resulted in savings that address; project forecasting, operational costs, improved risk management and maintenance. As the project is at an early stage it is not possible to forecast all of the savings, but it is believed that they are significant.



HM Government

UNCLASSIFIED



What was done

The Project Manager and Project Sponsor acting in the role of the GSL Champion used the Environment Agency Plain Language Questions (PLQs) as a basis for engaging with the wider project team.

The GSL PLQs were used as a prompt for reviewing how the EA were going to engage with the stakeholders on the project team. This was undertaken by bringing the stakeholders together at the EA – Project Start-Up / Construction Industry Council Concept Stage.

This was undertaken through a Stakeholder workshop. The workshop took half a day and had 20 people from the stakeholders invited. These fell into the following stakeholder groups;

- Operation requirements and constraints / maintenance
- Environmental opportunities issues, resources, landscape
- Funding, contributions, planning, modelling and communications

Each group was given the prompts / questions to answer and these were developed from the PLQs in review of the project requirements. The workshop focussed on asking the groups to clarify their needs targets and constraints. This approach helped us to bring forward engagement on issues that otherwise would have been left till later in the project such as:

- Design constraints, e.g., access, spillway type, power type and supply, automation requirements.
- Maintenance targets, power, cost, etc.
- Data needed by user and end format
- Legal and land strategy
- Lessons Learnt

This engagement across a broad range of stakeholders helped them to understand the context of the information that is needed.

The outcomes of the stakeholder engagement workshop were reviewed with a site visit to a recently completed Flood Storage Area in Banbury; this was undertaken with the operational and environmental stakeholders. The visit reinforced some of the issues highlighted in the workshop, e.g., communication with external stakeholders, improved understanding of design constraints.

What was achieved

Holding the workshop has saved at least 7 days and potentially numerous design iterations for the Project Managements team.

From the workshop a stakeholder issues register was developed to identify key factors that have improved its planning and development, e.g.,

- Better access to and throughout the site by footprint purchase. Consequently;
 - o Operation of the site will be much easier;
 - o The communications strategy and land negotiations can be developed much earlier;
 - o Improved accuracy in our budget allowance.
- The opportunity for passive structural design was resulting in benefits of;
 - o Running and maintenance costs;
 - o Cost of supplying of power to the site as mechanical plant is no longer needed;
 - o Improved accuracy for whole life costing.
- An understanding of information needed by end users and the format it is needed in.

Conflicts between internal stakeholders that could have arisen later on in the project were also addressed sooner.

The Banbury visit helped to improve the benefits and scope that would be required for the site investigation at Shonks Mill, innovations in controls structures, modelling and communications to avoid conflict.

Early engagement of the end users and stakeholders has provided a significant improvement in the understanding of the risks and constraints for the project. Where a budget goes beyond that originally planned, a variation authorisation is needed and this can regularly take between two and six months for a project. We believe that this process has considerably reduced that risk from occurring.

What they would do differently next time

Undertake the site visit first with a wider group as this drew out issues that could have been addressed at the workshop.

How do I find out more?

On GSL and further case studies / questions:
<http://www.bimtaskgroup.org/gsl/>

For information about the project please contact:
Roy.Evans@cabinet-office.gsi.gov.uk

04

HOW WILL GOVERNMENT SOFT LANDINGS BE IMPLEMENTED?

Karen Alford, HBIM Project Executive at Environment Agency

Karen Alford, BIM and GSL Project Executive at Environment Agency spoke about delivering assets to reduce flood risk and how engaging with a range of stakeholders can be challenging and how the approach to embedding GSL holds the key to successful delivery. She explained how satisfying a range of stakeholders needs, some of whom are also paying a contribution for the asset, as well as meeting the 15% efficiency target can be challenging.

She explained that although the Senior User role or GSL champion is an existing role by adopting the Government Soft Landings procedures it focuses input both from the Senior User and the other stakeholders to better describe the outcomes required and to reduce issues arising during handover process. The plain language questions being of particular importance to tease out the essential requirements and outcomes both at local and corporate level. Equipping the Senior User with the right skills and knowledge is an essential component. Karen demonstrated how this was applied to a GSL Early Adopter Project - Shonks Mill. The Senior User along with the Project Manager drove the process and as a result the requirements at the beginning of the project are clearer. In addition, a consensus on the project teams approach to reduce risks both during construction and in asset operation was agreed at the outset.

Finally she described how GSL will be an integral part of delivering projects, by creating a framework for better capex and opex decisions by putting the end user(s) at the forefront of decisions.

PDF version of Karen's slides can be downloaded from **BIM Taskgroup** website [\[LINK\]](#)





What feedback did you receive from the supply chain with regards to GSL implementation?

Our suppliers have been supportive and for us GSL is about getting the right understanding internally of what we want at the outset and ensure our decision making during the construction phase of an asset does not have adverse consequences on our ability to afford the maintenance and operations of an asset



What can be done to better increase GSL adoption within supply chain community?

1. Working with your supply chain partners to de-mystify and help them understand what it means for your organisation
2. Don't promote it being something new – it's a progression on what already happens but the tools help to shape input in a way it can be better utilised – being collaborative with your client
3. Move away from project delivery to asset delivery focus – thereby using skills and knowledge to better inform and support your clients commitment to improve maintenance and operations of an asset.

Karen Alford

HBIM Project Executive
FCRM Asset Management and Engineering
Environment Agency



05 WHAT DO GOVERNMENT DEPARTMENTS AND AGENCIES WANT FROM THE SUPPLY CHAIN AND WHAT DOES SUPPLY CHAIN WANT FROM US? OPEN DISCUSSION SESSION

The Conference participants were provided the opportunity to voice their views on their experience on practical GSL implementation. They engaged in lively discussion pointing out several key findings: Capturing operating costs was seen as important and an area where having a ‘*common language*’ in government and across suppliers is important. Making GSL visible and providing parity of pricing in assessment of proposals for this is seen as important. As one of the participants, **Steve Gladwin of BIFM** pointed out - “*Capturing lessons learnt from suppliers and particularly operators would yield significant benefits for all suppliers*”

06 GSL FOR FACILITIES MANAGEMENT AND GSL FOR INFRASTRUCTURE - SPECIAL INTEREST GROUP SESSION

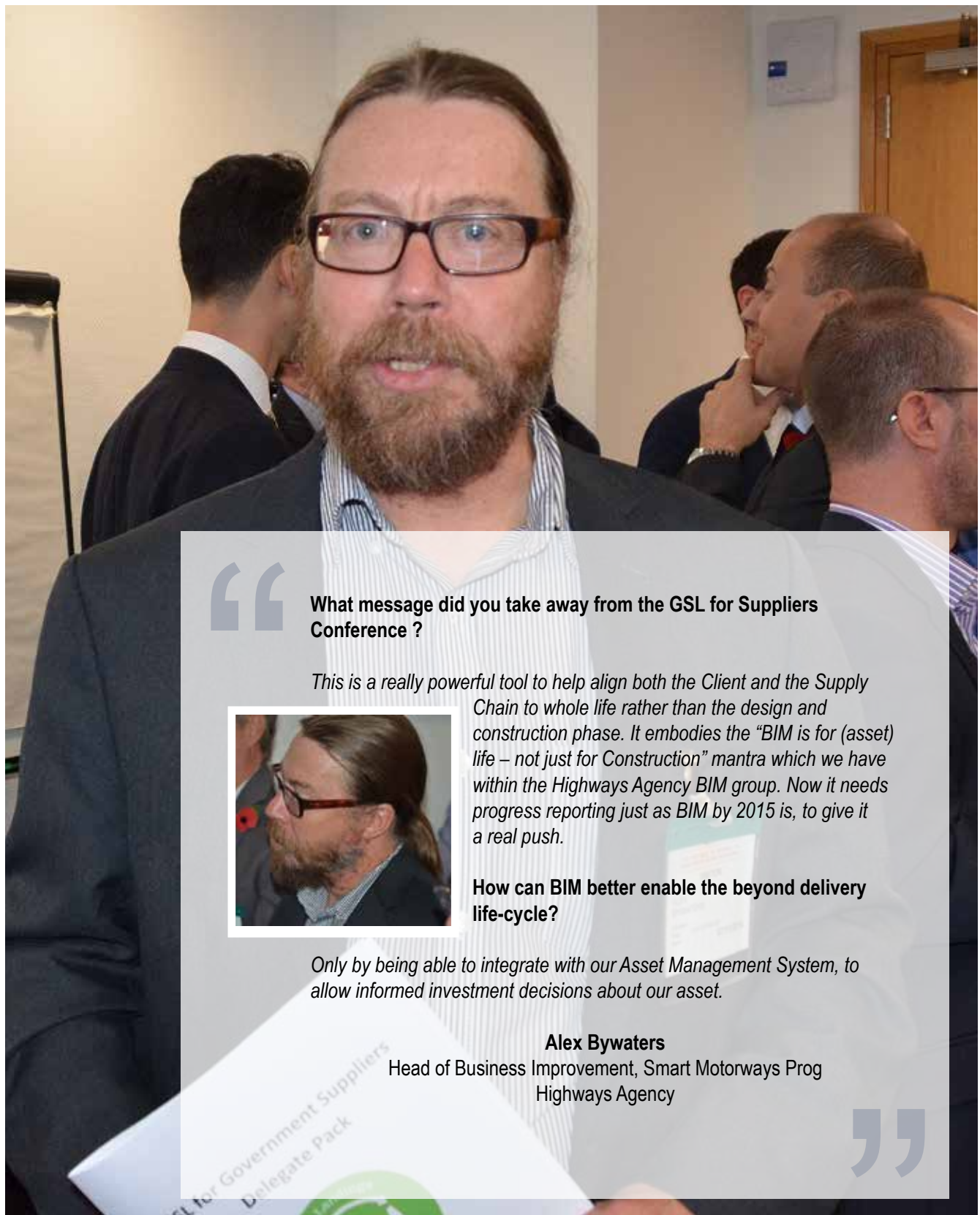
This was undertaken as a facilitated workshop.

07 PLENARY ROUND UP SESSION - KEY OUTCOMES

The Conference concluded with a plenary: The key outcomes were summarised as the need to communicate and educate about GSL. The GSL Stewardship Group will build on their relationships with key professionals, IAM, ICE, CIOB, RICS, BIFM, etc. Next, it was pointed out that GSL did provide a vision and focus for projects and their outcomes.

A holistic view of the asset creation process is needed and GSL provides this through its three strands. Therefore, GSL will be a significant help in steps towards the 2025 Construction Strategy and the vision that this sets.

Special thanks to **Rob Manning, Roy Evans** and **Karen Alford** for all their support in collating this article.



“

What message did you take away from the GSL for Suppliers Conference ?

This is a really powerful tool to help align both the Client and the Supply Chain to whole life rather than the design and construction phase. It embodies the “BIM is for (asset) life – not just for Construction” mantra which we have within the Highways Agency BIM group. Now it needs progress reporting just as BIM by 2015 is, to give it a real push.

**How can BIM better enable the beyond delivery life-cycle?**

Only by being able to integrate with our Asset Management System, to allow informed investment decisions about our asset.

Alex Bywaters

Head of Business Improvement, Smart Motorways Prog
Highways Agency

”



What message did you take away from the GSL for Suppliers Conference ?

That there is significant commitment by Government and the Private Sector in collaborating to deliver projects using BIM and Soft Landings. But more work is needed across all Central Government agencies to ensure a consistent way of working to drive the efficiencies that are required. In addition more training and development is required to facilitate these new processes.



How can BIM better enable the beyond delivery life-cycle?

BIM on its own will deliver limited benefits to the overall life cycle and operating costs. However, applied with GSL and the involvement of the Facility Management and Operational staff, then the combined BIM and GSL process should deliver significant benefits.

Steve Gladwin
Director of Nodus Solutions Ltd





UK BIM Task Group

International Engagement

A key target of the Industrial Strategy– Construction 2025 is to identify areas of capability that can drive tangible growth for the UK in both the domestic and international markets. UK BIM is proving to be a capability that everyone wants wherever we go and the UK team are actively supporting and encouraging wherever possible.



by: **Mark Bew**
UK BIM Task Group - Chair



Starting closest to home we have made great progress with our European colleagues from 15 member states to form an EU BIM Task Group. The group responds to the European Public Procurement Directive's encouragement for BIM in public works and shares common practices among public clients on the introduction of BIM into European construction procurement. **The EU BIM Group will launch early in 2015.** We hope that the group will involve the entire EU market and build on the recent announcements made by the French Government to adopt a phased BIM programme similar to the UK. Germany's government recently announced BIM pilots on major projects.

“

*The EU BIM Group will
launch early in 2015*

”





Joining dots in Australia

Further afield we have been working with countries in the Asia Pacific region, including Singapore and Australia to identify opportunities for collaboration and opening markets, through the sharing and aligning of practice. I spent some time in Australia during September 2014, meeting with both public (Federal and State) and private sector clients and suppliers. I was struck by the alignment of thought between clients keen to delivery best value and suppliers keen to develop their capability but looking to public and private clients to lead the way with a clear and consistent procurement strategy.



“

A major outcome of the Singapore event was the agreement to form an Asia-Pacific BIM Network to share best practices, this is a great opportunity for public clients to share learning and we hope to build a bridge from this to the European Task Group.

”

Speaking at the Singapore's Building Construction Authority's (BCA) Construction Week Conference, a similar pattern emerged with government representatives from across the region including Hong Kong, Singapore, Korea, Vietnam, India, New Zealand, Taiwan. In the workshops we concluded that we share similar objectives and challenges – and recognised the need to show leadership from the public client. A major outcome of the Singapore event was the agreement to form an Asia-Pacific BIM Network to share best practices, this is a great opportunity for public clients to share learning and we hope to build a bridge from this to the European Task Group.



We look forward in collaborating with all nations in jointly opening markets and creating a digital construction economy. For further information, please get in touch with **Adam Matthews**, who leads our EU & International programme (amatthews@cic.org.uk)



UK BIM TASKGROUP

www.bimtaskgroup.org | @BIMgcs



UK BIM EMPIRE

Conference: UK Empire
building again, thanks to BIM

This article is a reprint from Australian website **The Fifth State** www.thefifthstate.com.au

The UK's excellence in building information modelling will see it "*rebuild its empire*" if other countries don't quickly lift their game, Bentley's Year in Infrastructure conference has heard.

Through the use of BIM and green building innovation, the UK's Construction 2025 strategy aims to cut construction capital expenditure by 33 per cent, delivery time by 50 per cent, carbon emissions by 50 per cent, and also reduce "the trade gap between total exports and total imports for construction products and materials" by 50 per cent.



It's this last point that other countries should pay attention to, Bentley chief operating officer Malcolm Walter told the conference crowd.

"When I'm in a country that isn't the UK, I like to say, 'It's the intent of the Brits to come back and rebuild their empire... You better adopt these practices or the Brits will come and build your infrastructure,'" Mr Walter said.

Central to the Brit's leadership is a government mandate that BIM be used for all centrally procured government contracts from 2016. Not just any BIM, but level 2 BIM, which necessitates a managed 3D environment held in separate discipline BIM tools with data attached, and could involve 4D construction sequencing and/or 5D cost information. The mandate is driving the uptake of BIM in the UK, with 94 per cent of firms using BIM in some form – 56 per cent at level 2 and 38 per cent at level 1.



Savings in capital expenditure are already estimated as being up to 20 per cent, and engineers and consultants on such projects as the 2012 Olympics and London Crossrail are now popping up on projects across the world thanks to their BIM expertise, the conference heard.

AUSTRALIA LACKING

For Australia, things sadly haven't moved anywhere in the past year. According to one Bentley executive, Australia had a lack of political leadership in the area, and a lack of push in the industry to get the government to act. This is despite a report showing benefits of close to \$8 billion a year to the economy.

A key problem, some Australian attendees said, was confusion over what BIM was. Common belief was it was simply a 3D software program or an addition where you could "*just slap on three coats of BIM*", rather than a process necessitating cultural change.



DIGITAL DARWINISM

However, **David Philp, head of BIM at consultancy Mace**, said *it wasn't a matter of if, but when firms will implement BIM – though those who don't move quickly enough face extinction.*

The digital economy, he said, was transforming the way we live and work, and the construction industry – often seen as slow to innovate and change – would not be immune.

Those who resisted BIM, Mr Philp said, faced a "digital Darwinism", where laggard incumbents would drop off, replaced by those firms able to leverage BIM for the savings in capital expenditure, carbon emissions and delivery time.



BIM Down Under

An Expat view on UK BIM

As an Englishman working in Australia, I recently visited London to meet with members of the UK BIM Task group, attend various BIM conferences, and also meet with UK clients / supply chain stakeholders to further understand how the Level 2 BIM programme was tracking, from both client and supply side.

**by: Gavin Cotterill,
Information Management Practice Leader at Aurecon**

As an Englishman working in Australia, I recently visited London to meet with members of the UK BIM Task group, attend various BIM conferences, and also meet with UK clients / supply chain stakeholders to further understand how the Level 2 BIM programme was tracking, from both client and supply side.

You might ask why is an expat is interested in the UK BIM programme? The main reason, is that at Aurecon we have made the decision to adopt UK BIM standards (BS1192:2007 & PAS1192:2).

Aurecon's aim is to effectively standardise the way the business manages information across its projects. Aurecon believes that by implementing these standards, we will help reduce waste, improve productivity and better enable work sharing across our global business.

Australia and the UK construction sectors share a common thread, in that the each country's construction sectors is one of the largest industries in each country. The Australia construction sector contributes 11.5% of the total economy and the total Australian construction activity (2014 – 2015)

is projected is to amount to around AUD228 billion (Australian Construction Industry Forum: Construction Market Report – May 2014).

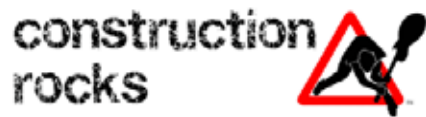
There has always been a history between Australia and the UK and many of the stereotypical observations are light-hearted and humorous, such as how good or bad our national cricket team is, depending on which side of the world you originate from. The differences between the two countries are well known. The UK is small, wet, cool, green and has a lot of people crammed into a small amount of land. Australia is large, dry, hot and red and has fewer people spread out over a lot more land. As well as these well-known differences, the construction industry sectors in both the UK and Australia certainly differ within government policy and procurement of built assets regarding BIM.

The UK Government has provided the UK supply chain with a clear strategy and plan to reduce capital cost and the carbon burden (by 2016) from the construction and operation of the built environment using Building Information Modelling (BIM). The Australian Government unfortunately hasn't to date provided the Australian supply chain with the same strategy as the UK. However, there is a current framework being worked on by the Australian Construction Industry Forum (ACIF) and the Australasian Procurement and Construction Council (APCC) which will provide a guide to Australian construction sector on the use of BIM.

With the absence of an Australian government BIM mandate and in true Australian larrikin style, the Australian supply chain has forged ahead over the last six years in delivering world class BIM projects, and is generally operating within a Level 1 maturity.

Further to this industrious approach by the Australian supply chain, select Australian public and private clients this year have made the decision to adopt UK BIM standards (BS1192:2007 & PAS1192:2) to set their own EIR. This adoption of UK BIM standards highlights that Australian clients are now realising the commercial benefits to procuring information, and subsequently are not waiting for any Australian government policy.

Mark Bew, Chairman of the UK Government's BIM Working Group recently visited Australia and presented at various BIM conferences, but more importantly met with various Australian Government stakeholders. Hopefully, these meetings are the start of the Australian government's journey to adopt BIM on publically procured assets with the ultimate aim to reduce waste and improve productivity within the Australian construction sector.



MACENARIES R - O - C - K

THE MACENARIES CROWNED TOP CONSTRUCTION ROCKERS

This article is a reprint from Construction Rocks and WSP Group websites www.constructionrocks.com & www.wspgroup.com

CONSTRUCTION ROCKS 2014

The Macenaries win this year's Battle of the Construction Industry Bands, on 9 October 2014.

Mace's band beat off stiff competition from **Balfour Beatty, WSP, Atkins, Assael Architecture, B SkyB, Como Interiors, Cluttons, Sweet Group, Country and Metropolitan Homes and Catalyst Housing Ltd.**



2014 Winners - Best Band - The Macenaries - CONGRATULATIONS!

The judges, **Peter French**, ex front man of **Atomic Rooster**, **Gina Way**, owner of the **Eel Pie Club** on the **Thames**, **Adam Branson**, professional and legal editor of **Property Week**, and **Christopher Liddle**, Chairman of **HLM Architects**, had a tough task but the final winners were:

Best Band – **The Macenaries (Mace)**

Best New Band – **The Bullets (BskyB Development and Construction Team)**

Best Fundraisers – **Comotosed (Como Interiors Ltd)**

The Macenaries' winning set was:

She Sells Sanctuary - The Cult

Baker Street (Foo Fighters version) - Jerry Rafferty

Ain't no love in the heart of the city (Whitesnake version) – Michael Price and Dan Walsh

It's a long way to the top (if you wanna rock n roll) - AC/DC

Almost five hundred people attended the annual gig, raising nearly **£20,000** primarily for property industry charity **LandAid**, among others. This brings the total raised since the event's inception six years ago to well over **£75,000**.



“

The event this year was the best supported ever and the quality of entertainment staggering. To cap it all, the event raised more money for LandAid than ever before at almost £20,000. Construction certainly did Rock the Vaults and the eleven bands delivered a great night.



- Bill Price
Director of WSP and
Co-founder of Construction Rocks

“

*Despite the ringing in my ears and the husky voice, my head is full of the fantastic sights and sounds of Construction Rocks 2014. A night of big sounds and big hair from the 11 bands who took to the stage at the Vaults under Waterloo Station. The bands and their fans gave it their all. As ever the quality of the performances were brilliant, especially with so many new comers this year. A big, big thank you to everyone who made it possible, especially WSP. You've raised an amazing £15,000, and still counting, for LandAid and other charities. **YOU ARE ALL STARS!***



- Joanna Averley
Chief Executive
LandAid



Bill Price (yellow hat) looks on during preparation for Construction Rocks 2014.



Nigel Fraser, Bill Price and MC Joanna Averley, CEO LandAid at the 2014 event

2015

If you work in the construction industry and fancy your chances next year then **Construction Rocks** would like to hear from you.

Contact them via
info@constructionrocks.com
and you will be send you the
information you need.



Avanti Partnership

Research and Education

Plain Language Questions and Employers Information Requirements Explained

For the past 12 months Avanti Partnership, in collaboration with the BRE Academy, has been delivering education on Information Management and BIM Level 2 to a wide variety of industry

by: Avanti Partnership (Mervyn Richards & Paul Shillcock)

Throughout this period, it has become clear that there is a common misunderstanding that the definition of Plain Language Questions (PLQ) and production of the Employer's Information Requirements (EIR) is undertaken once for each project and is a 'one-shot' activity.

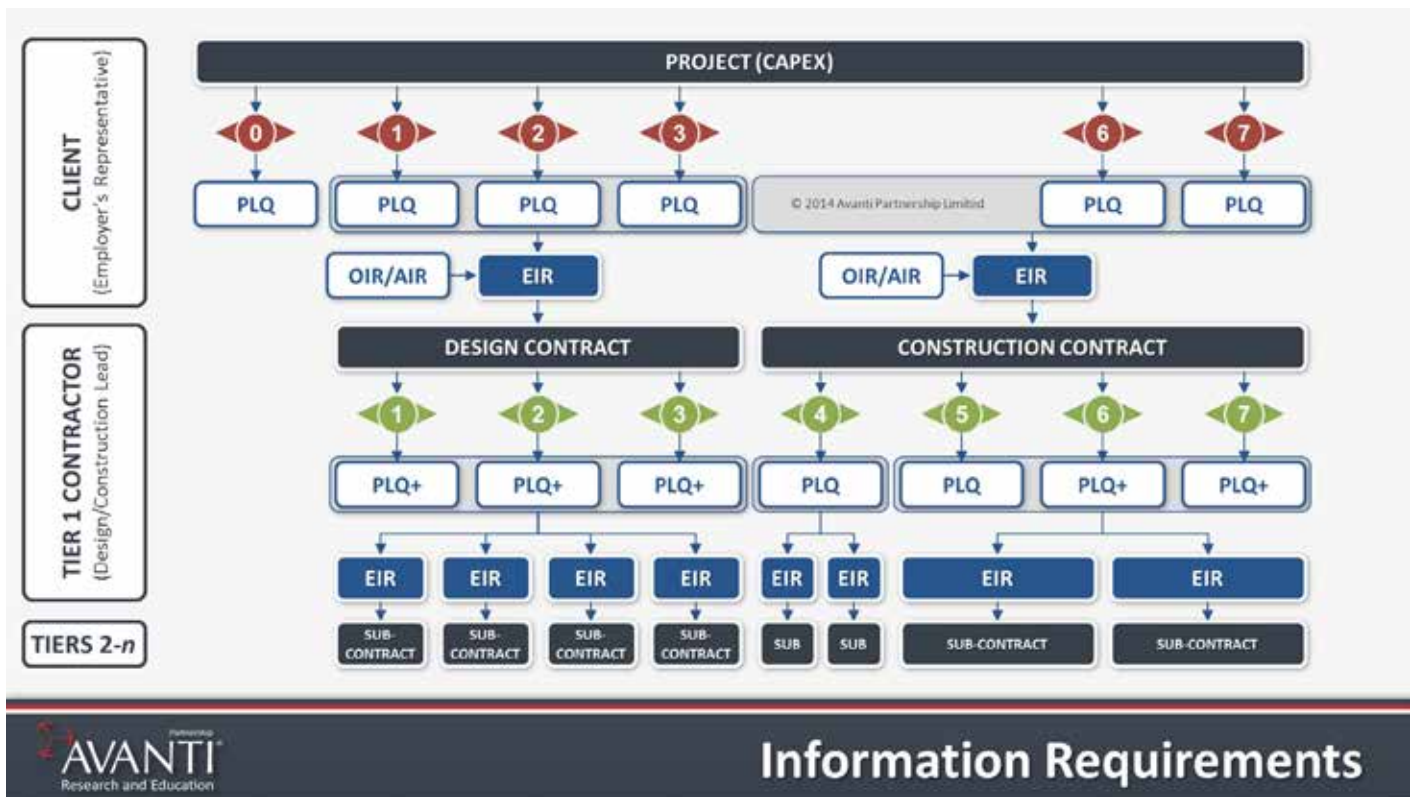
In reality, PLQ's should only be defined for the each key decision points within the scope of the contract and an EIR will need to be included within each main contract awarded by the Client (Employer) throughout the project; of which there is typically more than one.

PAS 1192-2:2013 highlights this approach via the Management Process depicted within Information Delivery Cycle (Figure 2) and the discontinued (blue) arrows throughout the early design and definition stages. This represents the fact that Client's (Employer's) will initially require answers to some high level PLQ's in order to make key business decision; prior to committing to a full contract delivery requirement.

Furthermore, it may not always be possible for Tier 1 Contractors (Design and/or Construction Lead) to answer all of the Client’s PLQ’s defined within the main contract and may cascade some or all of the Client’s PLQ’s to their suppliers, via the inclusion of an EIR within the sub-contract(s).

The result of which is that each main contract and sub-contract, created throughout the project, will require an EIR to be included - the exact number of which will vary, depending on the procurement strategy the Client (Employer) wishes to employ.

The diagram below, developed by **Paul Shillcock** and **Mervyn Richards** of **Avanti Partnership**, conceptually depicts how this approach may look within a simplified project using both a design contract and construction contract.





24 hrs in BIM

of a BIM4 SMEs member


Henry Combs of BIM4SME and RG Group shows us his diary and shares **24 hours** of his BIM activities.




MODEL UPDATES
All projects 1

Location: Head office - Kings Hill
Participants: Henry Coombs RG Team

Henry: "I ensure all design teams latest models are downloaded, amalgamated and issued as a viewable format to the whole team to review"

 08.00 - 09.30



*I sit on **BIM4SME**, because I want to be able to participate in the digital formation of the construction industry and help others to achieve competence to the required level.*



BIM TEAM
Catch Up - Video Conference 2

Location: Head office - Kings Hill
Participants: Henry Coombs, Alan Boulton (Feasibility Manager) John Casey (Director)

Henry: "A catch up with the BIM team responsible for implementation across the business"

 09.45 - 10.45

ON SITE MEETING & LUNCH On site design/project team meeting

3

Location: Sainsbury's Waterlooville

Participants: Henry Coombs, RG Team, Architect, Structural/Civil Engineer, Steelwork Fabricator M,E,S and R

Henry: "Time to drive to one of our BIM projects in Waterlooville. This consists of a New Build Sainsbury's 'Store on stilts', due for completion November 2014.

Design/project team meeting held on site with all members of the team in attendance. Navisworks amalgamated model used throughout and clash detection review carried out."



10.45 - 14.30

BIM TRAINING

5

Location: Sainsbury's Waterlooville

Participants: Henry Coombs, RG Team

Henry: "I carry out training with all members of the project regularly. This includes a range of software applications and also process and protocol. The slots can also be refresher sessions for anybody who wishes to attend"



16.00 - 17.00



4 REVIEW BUILD PROGRESS On Site using Synchro

Location: Sainsbury's Waterlooville

Participants: Henry Coombs, RG Team

Henry: "Update Synchro with the latest design team's models and construction programme. Build progress is then reviewed with the RG team in 4D. Synchro file updated and issued accordingly."



15.00 - 16.00



6 ISSUE REPORT To the team on discussions from yesterday's team meeting

Location: Head office (Kings Hill)

Participants: Henry Coombs

Henry: "I Issue a report of any discussions and issues picked up in the design/project team meeting yesterday. Along with minutes, this report can contain screen shots of the marked up BIM model, photographs on site etc. This can then be reviewed at the next meeting.

... the next morning @ 08.00



BIM 4 SMEs - www.bim4sme.org



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BIM4 SME BLOG The M&E BIM Gap

This article is a reprint from BIM4 SME Blog Post [by Janet Beckett](#) www.bim4sme.org

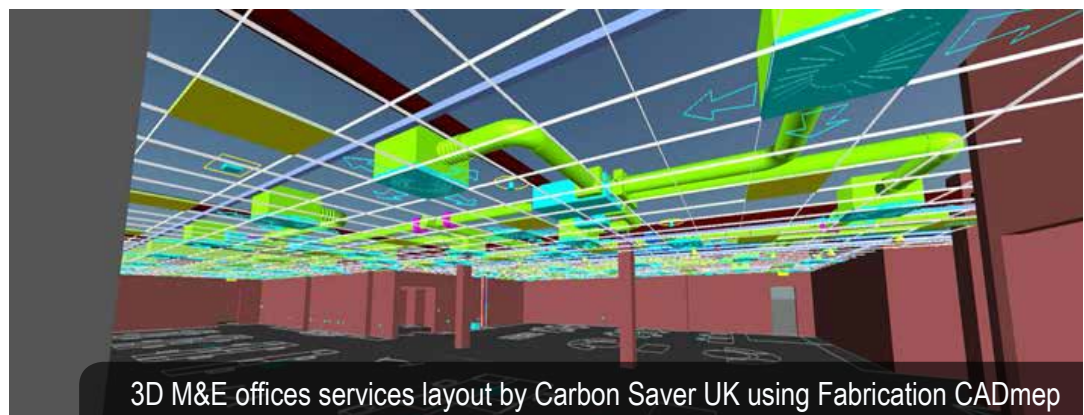
There seems to be a widely held industry misconception, even among those who work within mechanical and electrical building services (M&E)



that BIM is Revit or a 3D drawing or in fact that the M&E drawings are *“the design”*

The correction of this misconception is I believe our collective responsibility as M&E / CIBSE (Chartered Institution of Building Services Engineering) Engineers.

It is somewhat worrying as it leads some to believe that the CAD 3D fabrication draughtsmen who produce installation drawings working at construction stage are the key to the missing link in BIM for M&E.

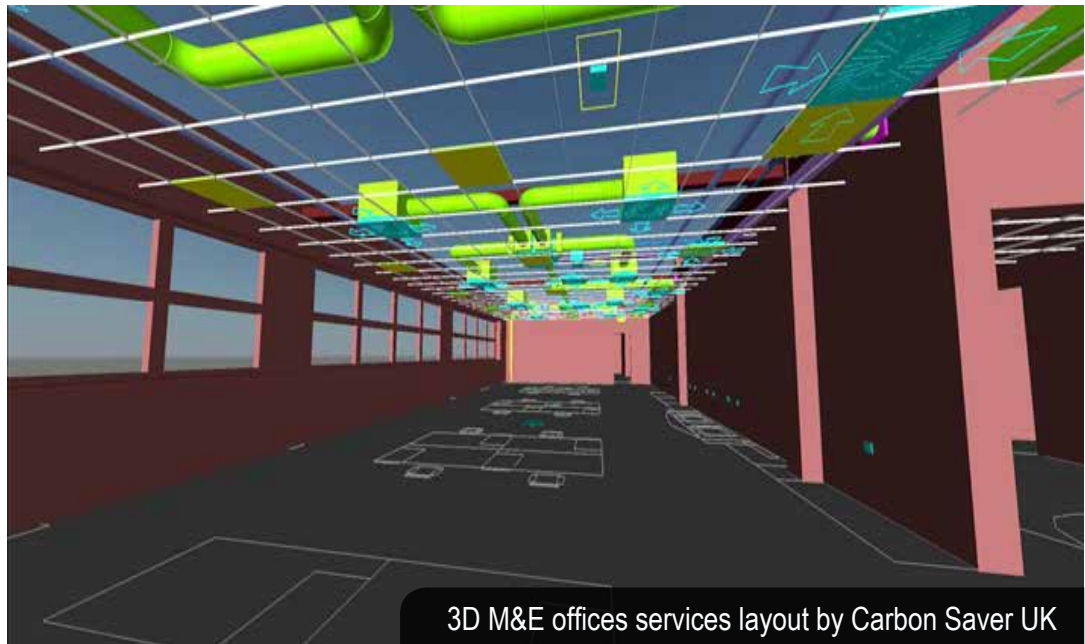


3D M&E offices services layout by Carbon Saver UK using Fabrication CADmep



It also leads some design professionals and clients to think that it is acceptable to delay the design input from M&E until a sub contractor is appointed, by then it is of course far too late.

This scenario is exacerbated by the other misconception that there is no difference in the product that CIBSE Engineers/M&E Consultants offer and an M&E Contractor/installer, a scenario which of course suits many practitioners rather well. To clarify, I sometimes tell clients that we (as consultants to a contractor) are as an Architect is to a builder.



BIM and M&E design is a long process which involves a wide and varied catalogue of different skill sets, with the detailed drawings produced by highly skilled draughtsmen (or women) at the end of a sometimes very long path. At the moment as an industry we seem to be struggling to deliver this entire process with or without BIM (certainly outside of London and the South East where money on projects is still tight and the industry cut throat).

B I M 4 S M E S

www.bim4sme.org





The missing link in BIM M&E is the ability to fill the design gap between the concept stage and construction. The smoke and mirrors which surrounds M&E design and its procurement and the emphasis on lowest cost wins and design and build has left us with what appears to be a problematic skills gap.

Hopefully the rise in the use of BIM will help to bring transparency to the “black art” of M&E and although BIM is NOT (just) a 3D drawing it is in fact this element which I believe will make the difference and is one of the reasons I am here at BIM4SME supporting both CIBSE and M&E engineers.

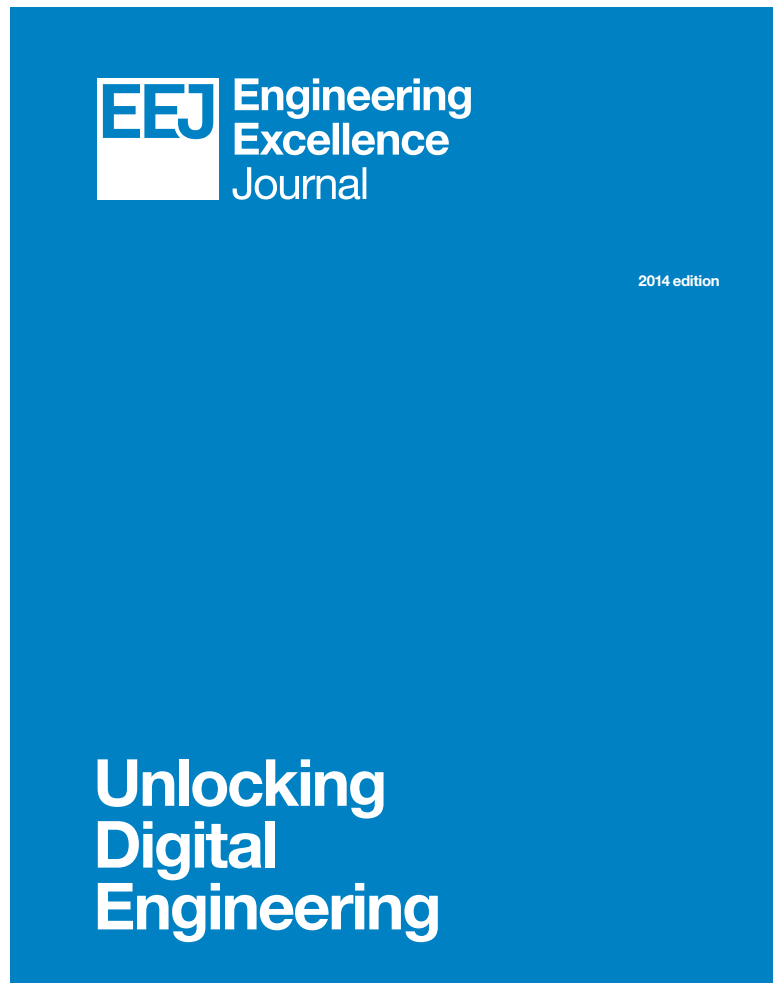




Laing O'Rourke

Unlocking Digital Engineering

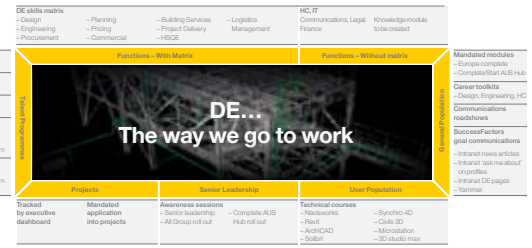
Reimagining digital environment.
Visit BIM Task Group website for more details [LINK] or
Laing O'Rourke website www.laingorourke.com



Laing O'Rourke has more than 15,000 employees globally, so changing the culture to one that embraces the digital age was not going to happen overnight. James Eaton is championing new ways of working across the Group.

Author
James Eaton
Global Head of Digital Engineering
Laing O'Rourke

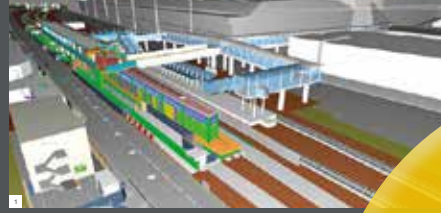
Digital Engineering / Building Information Modelling	
2D	2D drawings, 2D models
3D	3D models for surface, potential, full 3D parametric, element, structural data
4D	3D model with the added element of time, Components / elements in construction programme
5D	3D model with the added element of cost, Components / elements based through a schedule/cost code
6D	3D model used for asset / maintenance management
7D	actions based



SHIFTING

MINDSETS

The impact of smart technology on Laing O'Rourke's activities is groundbreaking, irreversible and fundamental to its growth.



Author
Dr Graham Herries
Functional Director of Systems Integration
Engineering Excellence Group
Laing O'Rourke

Smart technology and innovation

Using tablet based devices and similar technologies onsite, Laing O'Rourke engineers are able to access digital models of building and infrastructure projects, programme schedules, quality assurance controls and, most recently, project control / status reporting. The latter particularly enables visibility across the organisation, permitting us to view and interrogate the status of each component from its initial design to manufacture, installation and on to final acceptance. Importantly, it also allows us to identify any blockages and act upon these before they impact the delivery programme.

BIM Task Group website

DOWNLOAD FULL DOCUMENT

reports section [LINK]

Our BIM Task Group website provides a central hub for all BIM related information, including project specific BIM Execution Plans (BEPs) and a comprehensive library of BIM related documents. The website is designed to be user-friendly and accessible to all project stakeholders, providing a clear and concise overview of the BIM process and the latest news and updates.

seven dimensional modelling

management systems is the next big challenge for digital engineers. #

At some point in the not too distant future, all digital engineering models used for the planning, design and construction of buildings and infrastructure will also be used for their operation. For example, building facilities managers will be able to resolve a damaged carpeted hallway by going to a virtual version of the room. It is in and clicking on the floor finish. They will also be able to track an early electrical relay through all building management systems and even interpret information on the relay. It will be possible to undertake reactive, planned and lifecycle replacement works with a full understanding of the related affected and associated products, parts, associated systems and



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