**Buildoffsite Direction Group meeting notes – 13 December 2017**

**Fast moving Government landscape**

What’s going on in the industry ….

* Industrial strategy – Government White Paper investing across UK Industry.
* CLC – As part of the Construction Leadership Council Buildoffsite have secured £170M investment in Construction to be delivered through project investment and the Industrial Strategy Challenge Fund (ISCF)
* ISCF – not yet clear on where and how it will be spent but productivity improvement is a way to secure the funding.  If we can set up collaborative groups across the membership there will be a high chance of success.

Other groups we are working with:

* HCA – Homes and Communities Agency are Focused on volume to deliver 300,000 homes a year. We plan to help them deliver regional ‘Offsite Roadshows’ a great opportunities to showcase design and manufacturing capability.
* GLA - Housing strategy for London – challenges to the Mayor for building at scale in London – 50,000 homes per year
* DCLG: Communities Department working with us on accelerating the use of BOPAS
* Also in the residential sector we held an event with WSP – exploring opportunities for building 250,000 homes over rail infrastructure

Major Infrastructure opportunities for Offsite:

* Heathrow – talking about logistics and improve the supply chain – they are looking at collaboration
* HS2 – Bridges, Stations and other aspects of building HS2 need innovation. The Rail Hub are working closely with HS2.
* Nuclear: Hinckley Point and Wylfa (Anglesey). Major opportunities following on from members success including Premier & Caledonian Modular

There is also ‘competition’ in the sector so we need to link with organisations like:

* I3P – Client focused innovation coming out of Crossrail
* MTC – Manufacturing Technology Centre – have many interesting projects but are not working with the industry as they might be.

Presumption of the use offsite –

* Need to demonstrate value for money – if we don’t we need to raise our game.

Reading material – include links:

* IPA report on infrastructure - <https://www.gov.uk/government/publications/infrastructure-and-projects-authority-annual-report-2017>

**Tim asked the membership to tell us what they need from membership to help with the transformation agenda.**

Direction meetings – gives a networking opportunity and useful presentation

Hubs – give a sector focus

**Presentations – circulate presentations to attendees**

Amador Caballero, Willmott Dixon Interiors

Pete Foster, Cobuilder

David Clark, McAvoy – Innovation Manager

Above presenters were the Third annual RICS BIM4SME Awards winners – More details can be found in the latest December Buildoffsite newsletter

<https://www.buildoffsite.com/content/uploads/2017/12/BOS-Newsletter-December-2017-Edition-DIGITAL-V.pdf>

UK BIM Alliance – Peter Foster suggested downloading this document

[http://www.ukbimalliance.org/resources/guidence-for-client-data-requirements/](https://linkprotect.cudasvc.com/url?a=http://www.ukbimalliance.org/resources/guidence-for-client-data-requirements/&c=E,1,Q-q7MQNv1KDoHLiHTeGid31RAogxYWbh1yqR6v-qdJ1bsWEh8Fbn5oAn_6hILysM2SFgpQlqO9kPwSodsTDue0O3c-Jp-760w9vB3aes9qoe&typo=1)

Product data sheets needs to be aligned with standards

A new standard is coming out

ETIM – electrical goods – classification being developed

Countries have their own classifications and Cobuilder map them and add them

Willmott Dixon are committed to do 4D planning on their jobs from next year

The augmented worker – will play a big part going forward and will overtake VR David Clark advised

BIM level2 needs to be embedded by 2020 before advancing to BIM level3. David feels we are stagnating

Hololens runs on windows 10 – can be used in operational and design phase

GNSS – 1 cm location accuracy

BEIS

Artificial intelligence – centre of excellence

Page 40 on industrial strategy to form an initiative on AI – construction will be one of three key sectors to be focused on

Limited on details but Predictable management and maintenance will ne included

Want the industry to come up with a programme of thoughts – similar to the BIM programme.

IBM – asset data

John Hunt advised that he can think of two interfaces

Royston Young – through hololens angle of capturing data and using AI to put it in the heads of the right people at the right time

The dept are still grappling on what BIM level3 will look like. Suggested to extend BIM level 2

Brian Alborough – pertinent in Buildoffsite – think about where it goes wrong – standardisation doesn’t always look good. A hub would be a way forward Brian suggested.

For more hubs needs demand and need to make it happen. Need a growing membership. We provide the platform and the members to provide the vision. Value to the broad membership

Richard Fletcher – machine learning – 50,000 users are ticking twice they shouldn’t be and the software should adapt.

IFC as data exchange it what Trimble would promote

TDS have invested in REVIT which help with working with IFC

Client involvement front end and what they get at the back end. Assemblers - TDS can assist through the process. Cannot carry on with multiple standards

Irish Skills Academy **– speak to Tim for more info**

**BPS7014** standardising offsite components and systems

Need harmonisation of standards

A neutral industry forum is being set for BPS2014 facilitated by Ian Pannell, Buildoffsite

**AMSCI Briefing Note: BPS 7014 Certification to Facilitate Growth in UK Offsite construction Sector**

The Government’s AMSCI program is funding the project: Advanced Manufacturing of Housing and Built Environment (AMHBI). The Project consortium is led by Laing o’ Rourke.

The objective of this project is to support a substantial increase in UK housing by stimulating the demand for high quality homes manufactured offsite.

BRE’s role in the project is to establish a Standard (BPS 7014), providing the base for a Certification Scheme for offsite construction systems and components, for application to new build and refurbishment, 3-D and 2-D. This initiative will complement existing offsite construction sector certification schemes including BOPAS.

It is hoped that the Standard will be published in Spring 2018.

The linked Certification Scheme will issue a ‘quality assurance’ mark against products, providing reassurance to clients of the quality and performance of the certified offsite products. Additionally, the scheme will seek to influence the BIM logging of delivered projects, registering details of the systems or components used in the project, also addressing comfort of occupants in the home setting. This coherent logging of projects will provide an accessible, long term record to support effective maintenance, performance in use, and inform life cycle refurbishment at the end of a product’s life cycle

The BPS 7014 Certification Scheme Industry Forum

To facilitate market engagement and ensure the Certification Scheme is meeting market requirements a neutral Industry Forum is planned. Discussions will take place between Build Offsite as the prospective host for the forum and BRE who will ‘own’ and implement the scheme.

The forum will be administratively separate from BPS 7014 and the linked certification, formed from key stakeholders of the offsite construction sector.

For more information on BPS 7014 contact Mike Perry: [mike.perry@bre.co.uk](mailto:mike.perry@bre.co.uk) 07800 622886

**Summary from Nick Whitehouse, Buildoffsite**

\*The emphasis for the buildoffsite brand as a result of its success and as it matures is changing from Promoting to Enabling.

Change always generates opportunities.

\*This is a Direction group meeting and is the forum for discussion and the opportunity for members to influence strategy. We want your guidance.

\*The planets are indeed aligning for offsite with an increase committed research and investment. This is evident in new entrants to the market and new products and processes.

\*The wide spectrum of interests and roles in the membership of buildoffsite should provide the ideal forum to establish;" what needs do change to help clients get maximum value and usage from offsite".

Similarly how do we ensure that all the stakeholders involved in a project from inception to the end user and all the supply chain in between derive optimum value. Can we help effect change for the better.

\*Do we need to work more towards harmonization whilst keeping the facility for bespoke products? Does this mean moving to graded standard performance specifications that are materials agnostic? Does this mean a change in the contractual arrangements and responsibilities? Does this mean Common standards and common controlling dimensions which could deliver compatible choice at the design and tender stage and substitution later if needed.

\*We have good examples in the past to learn from such as the offsite supply to the SLAM program.

\*At the time of metrication(1966 and revisions in 1986) an effort was made to improve efficiency ;through the use of controlling dimensions deliver an improvement in the economic production of components; reduce the number of non standard items; avoid wasteful cutting of materials; deliver more effective use of labour ; reduce the requirement for stock.

\*Do we need to revisit and recommend a discipline of controlling dimensions and dimensional coordination for offsite?

What we do not want is a plethora of new standards causing possible confusion and cost.

A good current example is BOPAS which is enjoying increasing success and is demonstrating its ability to adjust to change. Where beneficial emerging standards become available that do not produce duplication they can be absorbed in the BOPAS process of helping to remove obstacles to offsite.

Endorsements from Dominic Boyes and Mike Perry.

**Funding availability**

BEIS

Innovate UK

Transforming construction - ISCF programme on 8 Jan. Buildoffsite will be representing members at this

Tim asked the membership to come up with ideas to put together a business case for funding – **Action** - Members to submit ideas to Buildoffsite [anna.whiting@buildoffsite.com](mailto:anna.whiting@buildoffsite.com)

Quantifying the benefits of offsite construction – extract info from newsletter

CIRIA has started work on developing a new data research project for ‘Quantifying the benefits of offsite construction’ which has been endorsed by Tim Hall and the Buildoffsite team.

Buildoffsite members asked CIRIA to embark on this project as they felt it was important to establish and quantify the benefits where off-site construction might be used. CIRIA, working with Buildoffsite members, will provide a summary report of key benchmarking data to enable comparison of benefits of off-site construction with more traditional techniques. They are hoping to involve clients as procurement practices will most probably benefit from quantifiable business cases for off-site solutions.

Currently, most assessments are made through the client’s tender process on a case by case basis. At present there is no industry standard methodology for assessing the benefits of off-site techniques against traditional construction practices. The Project Steering Group (PSG) for this research project will determine the final scope but the key objectives will be to:

• Identify common project drivers in more detail; approach to risk, innovation and procurement

• Identify the benefits of off-site techniques against more traditional approaches by collecting data in a format that will enable comparison

• Enable clients, designers, specifiers, contractors and others to quantify for themselves the benefits of offsite construction techniques when compared to typical construction approaches.

Buildoffsite members are already helping CIRIA with refining the scope of the data requirements and they will be convening their first project meeting next month.

Further details can be found via www.ciria.org or get in touch with kieran.tully@ciria.org if you would like to get involved.

Member engagement – Feed these queries to Anna Whiting [anna.whiting@buildoffsite.com](mailto:anna.whiting@buildoffsite.com)

British Aviation Group – Eurobond are members, also Invest NI – forum for help – Action – Look into this further as a possibility for Buildoffsite to adopt a similar process

**Thoughts from around the room….**

David Jones – L&G – severely disrupt the housing market with a modular product. Want to get involved with others and working towards a standardisation

Paul Shelley – OSCS – ambition is to create an event that reflect the industry.

Chris Monkman – Urban – design led house builder – ambition of a 1,000 – public sector and landowners

Colin Drennan – well established particular interest in Heathrow airport

Dave Wallach – component within a building and would like to see it being used where it isn’t currently being used. Want

Tim Carey – Ambition is to dramatically improved of our end product and the process. Adding value

John Hunt – EI – 80-100 companies as an adviser – specialise in digital offsite

Keith Blanshard – helps with potential new members

Glen Sabin, Polypipe – get involved with Buildoffsite develop preassembly and pre-manufacture. Want to gain traction and support – system supply and system integrity. Ambition to work

Mike McKay, Polypipe – interested in digital

Tom Locking, Atlas – UK company based in Vietnam – collaborate with architect engineers – interested in collaboration with UK companied

Brian Alborough, GTA – focus on res and office – to create best response to client needs. Buildoffsite is crucial to that – Atlas to deliver high standard of BIM

Helping to grow Buildoffsite as an enabler

Teresa Latch, ela8 – would like to connect with members to go through the process of R+D and support them

Dramatically underused resource through construction companies

Royston Young, DASYS – Design Automation Systems is looking to work with companies that want to make design processes faster and higher quality, through the application of tools that capture engineering knowledge. DAS fit with part of what could be called the application of ‘artificial intelligence’ to construction, by capturing human knowledge and embedding that into an automated system.

Christian Young, Nordan – window group – want to grow

Michael deVoil, Mott MacDonald – rail practice leader – ambition is to help the clients optimise the potential benefits of Buildoffsite

Matt Cooper, ARUP – interested is to use some of the talents and skills within Buildoffsite and recognised that none of us are big enough to change alone.

Julian Wain, Totalflow – improve the process and product. Links with LAs ,

Lydia Sharples , Encon – wants to understand the themes and challenges

Chris Barlow, Encon – work with power rail and general – design and production stage with products to fit with

Amador Caballero, Willmott Dixon– to deliver BIM by 2020 and

Kim Coulson, Lean Thinking – challenge to find people to work with that are open to challenge the way of thinking. Improve the system

Anthony Lymer, Protrade – power tools fixing and sealants to construction – on page 34. Would be happy to speak about their significant changes to procurement

David Barber, Apply – mission is to help people get into offsite construction. Make sure what the client aspires to.

Debansu Das, Caledonian – housing sector is their ambition

Willmott Dixon – improve our product and delivery and quality. Would like to get involved with harmonisation and standardisation.

Richard Fletcher, Trimble – ambition is to make our customers more efficient with their technology – interested in AI hub

TDS – 3 businesses in group

Construction and Design excellence – offering apprenticeships

Changing the culture

Apprenticeships haven’t been taken advantage of

Iain Geldard, Willmott Dixon – sunesis – improve quality

Jon Lock, Desing4structures – Design for trad engineering and heavily involved in offsite manufacturing. One stop solution

Jeff Maxted, BLP – BLP warranty provider and part of BOPAS

Gary Myatt, ENE – change the current building industry what they have been doing the last 00 years

Steve Kelly – small scale developer – keen to take the business further. Digital challenges – skills shortages we are facing is a concern and planning

Decaln Wallace, Evolusion – precision engineering companies – Croydon tower currently working

James Young, Evolusion – specialise in turnkey design solutions – keen to talk to manufacturers - Want to connect with Developer

Pete Foster, Cobuilder – all about data – if you want to harmonise your date

David Clark, McAvoy – want to grow and diversify – embrace digital automation and implementation – interested in BOPAS

Barry Blackwell, BEIS - Buildoffsite kept the beacon for offsite alive in the early days when Govt was hostile to offsite construction. Because of us this has shifted Govt’s view on offsite. We are the go to for Govt.

Still fresh and relevant

Moved with the agenda

Embraced digital construction

A real pride that when started and still fresh