

Supply Chain School Horizon Group Meeting

Date: Monday 17th September 2018; 11am- 2pm

Venue: Rpyal Holloway University of London, Egham

Attendees: Laura Spence (*Royal Holloway, University of London – Chair*), Gareth Rondel (*Kier – Vice Chair*), Cathy Berry, (*Action Sustainability (AS)-Horizon Group Manager*), Tony Parry (*University of Nottingham*), David Rich (*Tarmac*), Iain Walpole (*Hanson*), Sarah-Jane Davies (*Sisk*), Alexander Trautrim (*University of Nottingham*), Shaun McCarthy (*Action Sustainability*), Simon Tranter (*Willmott Dixon*), Sophia Cox (*UK Green Building Council - UKGBC*), Richard Smith (*Vinci*), Arjun Thirunavukarasu (*BAM Nuttall*), Peter Demian (*University of Loughborough*), Donna Hunt (*Aggregate Industries*), Stephanie Van De Pette (*Skanska*), Eddy Taylor (*Laing O'Rourke*)

Apologies: Anthony Lavers (*Taylor Wimpey*), Alice Owen (*University of Leeds*), Erica Russell (*University of Surrey*), Kieran Brocklebank (*United Utilities*), Maeve O'Loughlin (*Middlesex University*), Vicky Hutchinson (*ISG*), Alison Bettany (*EMCOR UK*), Wyn Pritchard (*Neath Port Talbot College*), Paul Wyton and Ray Nolan (*Sheffield Hallam University*), , Mark Gaterell (*University of Portsmouth*), Diego Vasquez-Brust (*University of Portsmouth*), Sophie Sharpe (*Costain*), James Douglas and Ben O'Connor (*Lendlease*), Ben Lever (*CITB*), Mohammad Rickaby (*University of Loughborough and Action Sustainability*), Kenneth Park (*Aston University*)

Minutes of the Meeting

1. Introductions.

Laura Spence welcomed everyone to the meeting especially our new members Richard Smith- Vinci, Arjun Thirunavukarasu- BAM Nuttall, Eddy Taylor- Laing O'Rourke and Peter Demian- Uni of Loughborough

Actions from previous meeting-

- All actions completed. Laura gave a short presentation to complete her action to clarify academic impact criteria. Impact criteria forms 25% of UK university assessment in the 'Research Excellence Framework assessment which we are currently in the run up to for 2021. An impact is "An effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment, or quality of life, beyond academia." Evidence must be provided to show that research has influenced business practices and may be in the form of testimonials, data, reports and meeting minutes for example. Being able to evidence such contributions is worth a significant amount of money for universities. Alex Trautrim highlighted that the draft impact case study which he is developing using the Modern Slavery data provided by the School's impact survey that he submitted was awarded the highest impact rating (4*) at his University. Tony Parry also pointed out that impacts may be considered differently across different faculties, for example an Engineering faculty and Business faculty may have different impact criteria. Shaun McCarthy highlighted the recent School impact survey report that demonstrated the positive impact the School has had on understanding of modern slavery within the sector. It was agreed that it would be useful to share the questions with academic members to help identify ways in which it can be improved. **Action: Cathy to circulate the impact survey questions to academic partners for input**
- Shaun McCarthy also provided a short update on the Procurement SIG. A dedicated School landing page will be developed for procurement professionals to help up-skill them on sustainability. Volunteers from the group are now undertaking an in-depth evaluation of School resources to define which School resources should be signposted. The group is also trying to forge a relationship with CIPS and RICS. This provides a

new way of looking at, and using School resources and this approach may be extended to other disciplines. The School is also embarking on a platform upgrade so this will help facilitate a more extensive and flexible way to find and use School resources.

2. Brief School update

Cathy Berry provided a brief update on:

- **School matters** - noting that the School now has 77 members against an annual target of 82 Partners, which is an increase of 10 Partners from last year. The target for active organisations is 3,500 by April 1st 2019, with a current total of 1683 organisations.
- **Masters proposals** - 6 proposals have been forwarded to Loughborough and Aston. Leeds will pick up any proposals that have not been selected in January 2019. A tri-partite agreement outlining the expectations from all parties has been drafted. Peter Demian commented that this has been escalated to the university's legal department and has agreed to forward some text amendments to clarify that the document does not intend to "create any legal obligations or rights for any party." Loughborough are also reluctant to allow students to sign confidentiality agreements as required by industry partners. We agreed to share standard confidentiality agreements to demonstrate they are quite 'light touch' and agree that it is incumbent on industry partners to highlight any confidential material to student researchers. **Actions: Cathy Berry to liaise with Peter Demian to revise agreement wording. Peter to share Loughborough's ethical research checklist and the "Ethical Risk Assessment" which all dissertation students need to complete. Gareth Rondell to forward Kier's standard NDA.**
- Three research themes proposed by **Grown in Britain** were also shared with the group.
 - **Sustainable timber in aquatic scenarios** - Barriers and opportunities for substituting tropical and other imported timbers with homegrown British timber in marine structures (Groynes Piers etc) and inland waterway structures (locks, revetments etc)
 - **Identification markers for timber provenance**- Feasibility and opportunities for identifying the provenance of timber (particularly if British or not) via simple to operate mobile devices in the field (building site, timber yard, DIY store). Current laboratory methods include Wood Anatomy analysis, DNA analysis and Stable Isotope analysis.
 - **U.K. Ash timber as a source raw material for 3D printing**- Study the feasibility of using U.K. Ash timber fibres as a raw material for 3D printing. Ash trees are dying in their millions and so there is a vast amount of material needing new markets. The study will need to assess U.K. ash against other species such as beech and relevant imported species and it will need to assess the scale of any opportunity in the 3D printing market place. The study should, if proven feasible, look at the opportunity for 3D printing of wood based components for construction. The study should also produce a relevant EPD to compare with other products.

Tony Parry highlighted that the University of Nottingham have an advanced 3D printing group which could be engaged if needed. **Action: Consider proposals submitted and feedback to Cathy if interested in advancing any proposals**

- **A waste Initiative to improve re-use recycling rates of site waste is also being examined.** This collaborative pilot project will be in a defined geographical area and aims to work with sites, waste contractors and LA to identify site waste profile, site requirements and alternative routes for waste. The aim is to set up coordinated materials collection i.e. for those materials with some intrinsic value. (Note that the scope could extend beyond construction sites). The team is looking to align with the London Mayor's initiative of making London the greenest and cleanest city by 2050 to get other parties and the GLA on board. Gareth Rondel noted that Kier's recent audit with PWC was passed for waste volume test but failed diversion from

landfill because the data from third party waste contractors was deemed unreliable to determine recycling rates. UKGBC CE initiative and Peter Kelly who chairs the Construction and Demolition Waste Forum were also identified as useful contacts for advice and support. Cathy noted that a collaborative meeting has already been set up with both parties and ThamesTideway to discuss our ongoing resource efficiency and CE efforts

- **School Blockchain event 16th Oct in Lambeth.** The School will be holding a morning blockchain event for members. This was one of the Group's research priority themes. **Action: Members to contact Cathy if they wish to attend.**

3. Traceability in construction supply chains: Asselya Katenbayeva Loughborough University

Asselya provided an overview of her PhD research on traceability in the construction supply chain. The presentation outlined the following:

- Introduction to the context of the research
- Traceability in various sectors
- Traceability in the construction sector: existing certification schemes
- Preliminary interview results
- Emerging trends for traceability & areas where further research might be needed

The slides will be issued alongside these minutes.

Shaun pointed out that all the contractors interviewed identified areas of change that didn't involve direct action for contractors e.g. changing regulation. He suggested that it was up to main contractors to take more ownership. The School did undertake some supply chain work in 2017 but there was a reluctance to take this forward because mapping is complex, costly and time consuming. The Grenfell tragedy should also highlight the commercial logic in requiring better product information and supply chain provenance. It was noted that the subsequent Grenfell investigation has concluded that the supply chain is so complicated that no one single party can be blamed. Peter Demian pointed out that making information management easier should help address some of the issues and that BIM has a role to play. Sophia Cox asked if Asselya had found usable data around use of certified materials as this has proved an issue for UKGBC. Unfortunately no one was able to provide such data.

Donna Hunt highlighted that there is no consistent format for EPD's, no standardised approach to inputting data into BIM, too many standards exist and client requirements continue to differ which complicates efforts. Gareth suggested that the group should examine the possibility of setting up a blockchain solution, using the School's collaborative power to make it happen.

Simon Tranter highlighted that the evolution of CE may well make matters more complex, however the use of product take back schemes may in fact make it simpler. Tony Parry suggested that as we are struggling to understand the status quo that we should concentrate efforts on looking at the desired future state.

Action: Explore the possibility of the School leading another piece of work to promote supply chain transparency. This may be in the form of a blockchain solution to help the industry address traceability and would be a substantial piece of work. Shaun to review with School leadership team and feedback to the group

4. Modern Slavery Data Update

Alex Trautrim provided an explanation of the markedly different estimates of modern slavery across Britain. The latest data provided by the Global Slavery Index estimates that there are 136,000 victims in the UK which differs from Home Office estimates. This is because different estimating methods are used; the Home Office

data is developed by statisticians, whilst the Global slavery index data is based on a poll survey. 54 surveys took place but none were completed in the UK or 'old' EU region. A global number is estimated which is then allocated across countries based on a perceived risk profile. Alex concluded that whilst the estimation methods are different, it is not possible to know which is more accurate. The data should improve over time as understanding develops and it is likely that the figures are still under reported.

5. Kier: Research on revealing the hidden value of our activity

Gareth Rondel presented the findings of Kier's recent research to gain a more accurate understanding of the social value generated from their activities and industry benchmarks. This research mapped out where and how positive impact is created and demonstrated that the in house calculator was significantly under reporting the benefits generated.

The findings identified that each office has a discrete supply chain primarily made up of local SME's. The revenue generated in the local area is particularly 'sticky' having a multiplier effect as the money circulates within the region. For example, Liverpool Park Life II- an £18m project provided £40m of additional hidden value. The overall direct benefits for 2018 are lower than 2017 but additional indirect benefits, particularly the 'new and sustained' employment provided to ex-Carillion employees has generated overall benefits in 2018. Kier are now trying to work out how to use this information to differentiate themselves and drive competitive advantage. (The slides will be forwarded with the minutes to provide further detail)

6. Circular House Proposal

Cathy presented the circular house research proposal initially suggested by Taylor Wimpey. The group discussed the proposal and voiced the following concerns:

- Research learning must be transferable to other built assets beyond a Taylor Wimpey house
- There is no real new research here, we know the theory and the answers; this is really an in house feasibility study
- Too focused on Taylor Wimpey with unclear benefit to the School
- Focus is possibly too high level/general
- The project is not ambitious enough and should consider the whole building lifecycle.
- We should think bigger and consider a 'cradle to cradle' (C2C) approach, which is a design concept inspired by nature. Richard Smith advised we should link with Prof. Michael Braungart, of EPEA in Hamburg. C2C recognises the distinct difference between Technical and Biological Cycles; and the need to separate them through the design process for optimum recirculation.

A bigger project would require more funding and a KTP application was put forward as the correct approach. As an SME, Action Sustainability may be able to apply and be eligible to fund 33% of annual costs rather than 50% for funding required if larger organisations apply.

Action: Cathy to feedback to Anthony Lavers and Ian Heaseman and consider how to re-position this research and liaise with the Homes group for input

7. AOB

Cathy briefly outlined the Exeter Green consultants program and recommended that the Group engage with the scheme as a means of attracting young talent into the industry. Richard Smith (Vinci) has a successful partnership with Exeter and is happy to discuss if interested. We agreed to invite Exeter to present the program at our meeting in March 2019.

8. Actions

- Cathy Berry to provide School impact survey questions to academic partners for input
- Cathy to liaise with Peter Demian to revise masters tri-partite agreement wording.
- Peter to share Loughborough's ethical research checklist and the "Ethical Risk Assessment" (Done!)
- Gareth Rondell to forward Kier's standard NDA.
- Shaun McCarthy to explore the possibility of the School leading another piece of work to promote supply chain transparency. This may be in the form of a blockchain solution
- All members to consider the Grown in Britain research proposals and advise if interested in further discussions
- All members to advise Cathy if they wish to attend the Blockchain Event Oct 15th in London
- Cathy to feedback to Anthony Lavers and Ian Heaseman and consider how to re-position this research and liaise with the Homes group for input

9. Next meeting

Date: Tuesday 11th December 2018- 13.00 -16:00

Venue: Leeds University

Subject focus: Social Value