

## **NEES Scotland Evidence Gathering Workshop**

NS: Neil Sutherland ( ), JM: James McKay (Springfield), JE: John Easton (Sustain), MR: Mary Roseland (Ecological Design), SC: Simon Corby (ASP), GN: Gary Newman (ASP), KB: Keith Baker and CT: Craig Thomson (GCU)

Prior to everyone arriving, NS and MR started a conversation with KB and CT about sustainable materials.

**NS:** argued strongly that in terms of focus the route of the problem wasn't the products but infact it was the process. Architects and designers are constrained by architectural practice. There was a big need to unpick what is seen as traditional design and construction and to look again at what we are delivering. He felt that until we did this, we would never create the demand for the right kind of product.

He raised a couple of big questions for the industry?

How to join up ideas. **NS** felt the biggest challenge was how to get things done.

How can we promote joined up thinking

His project (near Inverness) aimed to show how to build 15-20 buildings a year based around the right principles. It is clear to him, that cost begins to come down when you get mass and begin to get an understanding of the design and process implications.

Need for strategic thinking, as policy makers have a key role to play in financing the seed development for non PV insulation materials. He felt that £5 million investment in a wood fibre insulation plant is all that is needed to provide Scotland with local natural material for wood insulation. However, without the ability to demonstrate demand this investment is unlikely to come commercially.

**JM** arrived at discussion.

**JM:** outlined that he was working for a housing developer who have been growing as a company and in their number of development sites across Scotland even during the recession. They are primarily a timber frame structure, with a broad range of house types which they offer. As an developer, they are keen to progress the sustainable materials agenda with a view to sourcing local products in their products, but find it very difficult to access these or find commercially viable solutions.

**SC** and **GN** arrived and introduce themselves.

**SC:** was a chartered surveyor by profession, and was involved in an organisation which focused on knowledge sharing with an established membership.

**GN:** was executive chair of the same organisation, and argued that they were trying through their work to put products at the heart of the construction process.

He argued that there was a lack of maturity in the market for sustainable materials. He argued strongly that there was a need to look at the policies and see how these can be evolved to support

sustainable materials with a view to facilitating this maturity. He argued that this was the key role of ASP.

**CT** outlined the context of the discussion and MR started off.

**MR:** she outlined that she had experience of building a public building, and in specifying sustainable materials and in air tight buildings.

She outlined a fundamental challenge for practice to evolve beyond the traditional or standard. When using sustainable materials it is possible that the current regulations or standard assumptions surrounding their introduction need to be looked at again.

Architects need to train on the job all the time and as a result; there is a need to be exposed to sufficient projects before they can consider themselves proficient in handling such materials. The same is for the trades, there is a clear skills gap and as a result sustainable materials represent a risk for contractors. From the architects point of view they then become obstructive or simply absorb the risk by putting the costs up to cover potential liabilities. For example, detailing was different for the sustainable materials and the trades were unfamiliar with what was required.

A key need exists to develop training for trades (and other construction professionals) in order to overcome this problem.

**NS:** argued that this reflected a clear need for a cultural shift within the industry in order for it to engage favourably with this agenda.

**JE:** argued that the key can be found in training in the collages. Adjusting the curriculum will help provide new entrants to the industry with the skills and awareness required. From his experience he has seen that short term curriculum design based on the now is required.

Skills currently in the industry in relation to this agenda is sporadic at best.

Need for Scottish Funding Council to look at this in the long term, as through a better skilled workforce the demand for sustainable materials can be created.

Air Tightness remains a major problem in relation to sustainable materials.

**SC** and **GN:** working with Leeds Met looking at air tightness from the point of view of improving site working and documentation.

Onsite training materials are needed. Good Home Alliance are working with Construction Skills on closing the skills gap.

**MR:** the only way that tradesman can learn is by being exposed to the materials on site context and directly working with it. Experience promotes the learning that we need. However, it is clear formal education has a role to play as well.

**JE:** there is two levels 1) young students working on skills and 2) the construction manager who will need to be influenced/ educated in a different way.

Design of curriculum around sustainable materials will need to be reflective of their different roles and stages of their careers.

Health is potentially going to be a big driver for growth of the sustainable materials

**JE:** BREEAM gives credits for proximity of materials in non domestic buildings. Air quality assessment could be a basis for sustainable materials and health to be considered stronger.

**NS:** Serious issue to deal with the science behind some of the issues in breathable construction.

Problem of building standards presents a big challenge for developing this agenda. There is serious issues relating to passive standards and the quality of air. If buildings are to move to PassiveHaus, there is a need to ensure that residents are aware of the implications. For example, controls for these systems can appear complex and residents invariably will not use them properly if it is not simple or even automatic.

Refurbishment and the need for adaptable buildings are key issues when consider Passive systems, and the implications of this on building design. How sustainable materials fit with all of this is a big question and something which needs research.

**NS:** Need for PassiveHaus for the NPP which reflects its climate but also is able to cope with time.

**NS:** Cooperation- people who have are good at process are generally happy to talk to each other and share. It isn't complicated; it is primarily good practice you are passing on. The reality is that sustainable materials tend to be quite straight forward, but there are tricks which need to be known in order to ensure it performs as it should. These are the tricks which need to be shared.

**JM:** People need to buy into it. What is the purpose of sustainable materials? People need to understand why they are changing practice, and potentially costing themselves more or moving away from what seems better technology.

**JE:** You can't bolt on low carbon within an industry and hope that the outcome is sustainable.

Ideas are very important and need to be encouraged. In Refab projects you need creative thinking.

Resource efficiency agenda will be more driven as time goes on. It just needs to be driven by the government.

**GN:** Realisation that Ecobuild is promoting key ideas. For example, the circular economy agenda has increasingly been promoted with a view to resources being scarce and restrictive.

Procurement for public housing. Starts so long before the designers get involved. As a result, all the decisions which could help promote sustainable materials agenda have already been taken (reflecting budget, timescales, and function). Public consultation stage is potentially very important, as this could bring sustainable materials into the procurement of the project from an early stage but it doesn't happen. There is need for sustainable materials to have a much higher profile much earlier.

**GN** and **SC:** Housing standards: English/ looking at housing national standards.

National standards for products and materials. Develop a process which can define materials early in the process. Problem that we are asking right questions, but the aim seems to be at present to leave it to the market to stimulate demand. Our view increasingly is that this isn't going to be sufficient without strategic encouragement.

Political agenda: Erosion of the agenda is currently a major problem. Regulation can erode the thought process and at the moment the way this is going is restricting the ability to use sustainable materials (partly due to concerns over their qualities in energy efficiency).

**JE:** Twin agenda currently evident in the construction market- 1) economy (growth, GDP) and 2) sustainability agenda. Are they compatible?

**SC and GN:** Need to communicate the cost saving potential of sustainable materials. The assumption that they cost more needs to be challenged. Architects need to be seen as the champions of this cause and need to advocate the merits of sustainable materials to their clients and to the developers. They have the potential to sell their merits and dispel the myths by selling it as part of the building.

**JE:** There is a need to push discussion with the Scottish Government around resource efficiency. Circular thinking is something which JE felt this government were familiar with, and that this gave a tremendous opportunity to create jobs, grow economy and save money.

**NS:** There is a problem however with the business case for sustainable construction when it comes to clients. There is a real challenge to create a narrative with the public in order to stimulate the market. This is a key priority, and there is a big responsibility on the governments to buy into this narrative and advocate it strongly. Currently the approach is extremely disjointed and this is causing not only contradiction but importantly facilitates scepticism.

*A freer discussion took place with most people chipping in*

There needs to be changes in government policy, which be important to grow the industry.

Money- there is a need for it to be focused and invested wisely

Need to have the courage to do things, as we know this industry lacks innovation and enterprise culture

Economics is the driver (we can bring costs down, but there needs to be training, investment in production and research).

**NS:** Change the way we build

Targets, economics need to be considered.

Lack of joined up thinking and knowledge.

**GN:** Government are looking for people to speak to (lobby groups) and it is important that these groups take the lead. It is clear that the government need help with this agenda and to be able to formulate a narrative which promotes and advocates this agenda.

