

Date: Tuesday 16th April 2019
Time: 10:00–11:00
Venue: Virtual
Resources: [Available here](#)



MINUTES:

Sustainable Construction Topic Support Network Meeting – Circular Economy in Construction

Attendees:

Andy	Anderson	APUC Ltd	AA
Chris	Larkins	Heriot-Watt University	CL
Jack	Spence	Northumbria University	JS
Jill	Burnett	EAUC Scotland	JB
Peter	Hayakawa	The University of Edinburgh	PH
Ray	Walkinshaw	Ayrshire College	RW

Apologies:

William Rogers City of Glasgow College

	SUMMARY OF DISCUSSIONS	ACTIONS
1	<p>Welcome and Introductions <i>Ray Walkinshaw, Convener, Ayrshire College</i></p> <p>Everyone was welcomed to the event and introduced</p>	
2	<p>Circular Economy in Construction <i>Allan Sandilands, Principle Consultant, Resource Futures</i></p> <p>Presentation available here</p> <p>In a circular construction project architects, engineers and contractors should be considering how best to maximise material value while they are in use and then consider how these are recovered or regenerated at the end of their service life.</p> <p>Allan presented on how the UK Construction Industry is performing in relation to Circular Economy in four key areas:</p> <ol style="list-style-type: none"> 1. Material Consumption – Need to think about reducing the volume of materials consumed 2. The Embodied Carbon of Materials – Need to consider how materials are produced. Data on embodied emissions is available but we as clients need to ask suppliers to provide this information 3. Waste Generation – Scottish Construction Industry accounts for 44% of national waste. Of this 26% is packaging waste and 13% is due to over orders. This obviously needs to be managed more efficiently. 4. Construction Waste Recycling – 90% is recycled but it is usually down-cycled (i.e. glass crushed to aggregates) 	

5. **Re-use** - Highly valuable items are thrown away rather than re-used because it is easier.

There is a need for big improvements across each of these areas.

What can Universities & Colleges do?

First we need to recognise that it's our problem and we have a duty of care as the client. Consider four main things:

1. [UK Green Building Council has published circular economy guidance](#)
2. Measure & Monitor – Ask for waste and material forecasts from contractors so you can monitor performance
3. Set the Scene – Tell the story even if it's just one product. The industry really needs case studies and clients who are willing to experiment – Universities & Colleges could really help with this

Buildings as Material Banks - This is a new concept from the continent where you think about the end-of-life of the building at the design stage to maximize the value of the materials. Can also regularly review the value of materials within your building.

Material Passports - 300 products now have materials passports and a premium is placed on these as they show where a material originated and how it was processed etc.

In Scotland there is [free business support](#), so we can direct our contractors to work with ZWS and also quite often the parent company will have experience of circular construction overseas.

There are now Circular Regions in Glasgow, Edinburgh, Tayside and the North East, and the regional approach helps to gather momentum. In Amsterdam all construction is now circular and London is doing a lot too.

Questions & Discussion

RW: Thinks it will be like the Construction (Design and Management) Regulations which have had a transformational effect on Health & Safety. Shocked by the amount of unnecessary waste going into skips.

PH: Clients just setting targets will be counterproductive as the margins in public construction are awful and there is no consistency for the main contractors. University of Edinburgh (UoE) had a [Climate-KIC](#) project where they met with main contractor every 2 weeks to discuss these issues and that worked well.

There is also too much guidance and current offerings are not taken up.

It's also hard to replicate a case study as lots of buyers are uninformed and there is no incentive to collaborate or try something new.

Thinks that there is most promise in regional approaches and also connecting the research at the institution with the contractors (i.e. UoE are doing work on material passports, gap analysis etc.)

AS: Advocates measurement rather than targets. If all public sector buildings were measured for the next 5 years the next steps would become obvious.

	<p>AS: Scottish Government procurement journey hasn't extended to construction – why aren't ZWS clauses not rolled out to all public sector buildings? Amsterdam have set the precedent and London are looking at circular planning statements – Is this something EAUC Scotland could drive forward from the FHE perspective?</p> <p>CL: Very interesting presentation. Lots to discuss with procurement and capital projects teams going forward. Will check if they are aware of and implementing the latest guidance. Thinks that it will be important to do priming work to be able to deviate from business-as-usual within quite challenging timelines.</p> <p>Also under pressure to deliver carbon neutral buildings going forward with the emphasis on lifetime emissions.</p> <p>AS: Carbon is a good universal metric to evaluate solutions and a circular business model will help reduce primary embodied carbon emissions.</p> <p>Service model works as long as the provider thinks about end-of-life – carbon is the way to challenge them.</p> <p>AA: Engaging with the industry tends to be where these things fall down. Sometimes industry not ready to respond so it's important the FHE acts as a driver. Often when you talk about sustainability people will go to the waste action plan, and it doesn't provide a true reflection of what happens on site.</p> <p>Metrics and targets are important and we need to improve measurement.</p> <p>AS: Designers can help with early metrics. Agrees that construction industry hasn't responded well but they are able to do so. Down south the clients are more demanding and the construction industry is responding. We need to raise expectations and challenge them on it. Either the government or the client needs to be stronger on waste to help focus minds and supply chains. A lot of it is behavioural change.</p>	
<p>3</p>	<p>Ideas for Future Meetings</p> <p>CL: Will speak to colleagues in project team about ideas for next meeting and Heriot Watt University would be happy to host.</p> <p>PH: UoE would also be happy to host. Thinks we could continue with the waste and circular construction theme and also engage with industry. Or look at work with Climate-KIC, procurement suppliers and The Centre for Future Infrastructure.</p> <p>Networks are often difficult to navigate and we could try to connect then up.</p> <p>RW: Thinks it would be good to continue the discussion on circular construction.</p> <p>AA: Agrees we should get more people to the table, especially commissioning design teams. Scottish Government Construction Policy Team are looking to do working groups with industry and once they are established, we could try to link.</p>	<p>JB/RW to plan theme and speakers for next meeting</p>
<p>4</p>	<p>Thanks and close</p>	