**Date:** 3rd October 2023

**Time:** 12:00-1:30pm

**Venue:** Online via zoom

**Resources:** [Available here](https://www.sustainabilityexchange.ac.uk/retrofit_teaching_best_practice_network)

**Retrofit Teaching Best Practice and Network: Realigning Curricula for the Future**

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# Attendees

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|  | |  | |  | |
| Adam | Harper | | City of York Council | |
| Aishling | O'Sullivan | | Fife College | |
| Cara | Jenkinson | | Ashden | |
| Chamara | Panakaduwa | | N/A | |
| David | Warnes | | Chelmsford College | |
| Deborah | Mooney | | Zero Waste Scotland | |
| Fergal | McCauley | | City of Glasgow College | |
| Gareth | Williams | | Swansea University | |
| Gavin | Killip | | Nottingham Trent University | |
| Greg | Steel | | Borders College | |
| Jayne | Jones | | NPTC Group | |
| Kathrin | Mobius | | EAUC Scotland | |
| Kathryn | Dunstan | | NPTC Group | |
| Matt | Tucker | | Coleg y Cymoedd | |
| Nikki | Davis | | Leeds College of Building | |
| Pippa | Palmer | | London South Bank University | |
| Rachel | Edmonds-Naish | | Coleg y Cymoedd | |
| Rob | Hargraves | | Energy Systems Catapult | |
| Rory | Hill | | EAUC Scotland | |
| Sarah | Hamilton | | Chelmsford College | |
| Tercia | Jansen van Vuuren | | University of Cambridge | |
| Wendy | Johnson | | Chelmsford College | |

# 0:00 Introduction

* Aims & how the session came about.
* EAUC: Deliver events, networks, mailing lists and conferences across the country to support sustainability in further and higher institutions across the UK. Realigning Curricula is a series bringing together speakers and examples of integrating sustainability in different subject areas.
* Ashden: Innovative Climate Action Awards, working with Authorities to support them deliver their climate action plans, including retrofitting homes; Supporter of National Retrofit Hub and Skills and Workforce Development Working Group
* Millions of homes need to be retrofitted, but we don’t have the skills or the workforce to undertake this work. Simultaneously, education providers are not certain whether jobs will be there for students; this is partially due to policy gaps and unclear courses of action by the government.

# 6:20 Co-Creating a Retrofit Teaching Network

**- Questions for participants to answer on jamboard:**

* What are the challenges in delivering retrofit teaching and courses?
* Is there a need for a network around Retrofit? Are there other networks that might overlap?
* What topics would you want a network to cover?
* Who would be the audience for the network?

**Deborah Mooney from Zero Waste Scotland** mentions Construction Retrofit Training Programme to encourage people to integrate circular principles into their work. Materials will be uploaded on the Zero Waste Scotland Website. Read more about the training [here](https://www.be-st.build/all-events/circular-economy-construction-train-the-trainer-event/) – resources will be shared when available.

**Jayne Jones from NPTC:** Speaking about the need to have networks and collaborations similar to the Energy Skills Partnership in Scotland and setting up something similar in Wales, and the general need of networking to make progress.

**Gavin Killip, Nottingham Trent University**: Has a research interest in Retrofit. Highlights that we need to talk about skills and jobs in the same breath. It’s important to ensure there is demand for the skills taught in education. Network should go beyond skills training and be a network about creating markets.

**Kathrin, EAUC**: EAUC could potentially support this network through creating mailing lists similar to other networks and communities of practice.

**Cara, Ashden**: The National Retrofit Hub can get involved in delivering this network – specifically about best practice and case studies among colleges.

# 17:00 Greg Steel, Head of Sector STEM and Sustainable Construction, Borders College, Scotland

* **Context**: Borders are a small and rural college in south Scotland. Provide training and upskilling short courses, among others. Courses generally start at SCQF4, and they offer full time courses and apprenticeship courses in a variety of construction trades.

**Eco House**

* Built this mini house to showcase ultra-low energy building techniques and technologies to students and staff.
* High levels of sustainable insulation using natural materials throughout, airtight construction, triple glazing, mechanical ventilation and heat recovery, biodiverse roof, solar PV and battery storage.
* Herald Property Awards Finalist and highly commended in CIAT (Chartered Institute of Architectural Technologists) annual awards
* Can relive the building journey in their immersive classroom at the college after using 360-degree cameras throughout the build.
* Full scale models of the building and various aspects and materials are accessible for students.
* Challenges included a north facing site, and some contractors not having worked on sustainable or airtight projects before, and needed to be upskilled during the process, and airtightness target was exceeded.

**Green skills training and short courses**

* During the construction process of the Eco-House, they carried out CPD and training with their curriculum staff on sustainable construction techniques. Staff developed this CPD into short courses, which are now available on Borders’ Green Skills Website.
  + These courses have been delivered to students as well as partners in the social housing sectors.
  + Uptake for the courses in the wider supply chain have been slow, which may be due to their nature of being information and awareness raising courses, and not being accredited, which is more desirable for local construction trades companies. Supply chain is mostly SMEs and micro businesses with little time and small budgets for staff training.

**Accredited training**

* Have upskilled college staff to be able to deliver training around low carbon hearing systems. Were already a BPEC centre for plumbing and heating engineers for ACS gas and vented hot water systems. Now offer heat pump installer and solar thermal systems qualifications.
* Set up in support with and Energy Skills Partnership and Scottish Power Energy networks.
* Courses have been popular and are run from STEM Hub, which also allows to promote the Eco-House and sustainable construction principles and short courses.
* Borders support the cost of training for employers by making use of flexible workforce development fund and HCI City Region Deal funding, which has been very helpful for getting tradespeople into the courses.
* Even with supporting the cost of training, some employers find It difficult to lose a member of staff for 4 days of training. Borders therefore have recently changed their delivery mode, from 4 days in a row to 2 days one week and two days the next week, which has made the training offer more appealing to employers.

**Retrofit Training:**

* PAS2035: A standard that creates a recognisable quality standard and assessment criteria for the retrofit and energy efficiency sector for housing. Key individual in this process: Retrofit coordinator, who needs a level 5 diploma.
  + Borders currently working with NOCN to gain approval deliver this Level 5 qualification.
* Also: Level 2 Award in Understanding Domestic Retrofit, and further development of retrofit installer training
* Recently gained funding from ScotGovernment Shared Prosperity fund to deliver a Retrofit Introduction short course: Looking at developing “Getting ready for Retrofit”, including practical elements.
* Delivering the Level 5 Diploma requires significant upskilling of own curriculum staff – this is a challenge regarding time and resources for staff, given that delivering standard curriculum takes up most of their time.

**Top Tips:**

* Invest in upskilling staff: having committed and enthusiastic staff is essential to make these training courses work.
* Focus on accredited and certified training programmes, as these are most popular for supply chain.
* Find sources of funding to help businesses access funding and training.

**Question from Adam Harper, City of York Council:** Retrofit Level 5 Qualification: Are you having challenges around getting this accredited?

**Greg:** NOCN is new awarding body for Borders – normally it’s SQA. Approving process so far is smooth – approach here is to put a number of staff through the qualification first, and then develop this qualification for delivery and gain approval from NOCN. Course content is mainly what is currently in the course as staff are taking it – trying not to reinvent the wheel.

# 31.20: Jayne Jones, Head of Business Development Unit, Neath Port Talbot College Group, Wales

* **Context:** NPTC Group is based predominantly in Wales, but also has sites in England and Across the Globe.

**Net Zero Academy:** [**https://business.nptcgroup.ac.uk/net-zero-academy/**](https://business.nptcgroup.ac.uk/net-zero-academy/)

* **Set up a Net Zero Academy**, delivering a variety of courses including retrofit. Looked at employer engagement and demand – always a question when that comes through.
* **Research** on targets and developments of governments, Regional Learning and Skills Partnerships (advice and funding from these), and strategic partners who represent experts in the field.
* **Business Development** **Unit:** Set up to engage with employers and look at how to develop the college and curriculum offer and integrate this into student careers support. Team at the unit regularly engages with employers and develops and maintains partnerships with businesses, employers and more. Business Development Unit itself also offers a curriculum that incorporates a wide range of retrofit courses, events, conferences, and bespoke training based on what employers need. The Net Zero Academy sits within the business development unit.
* **Collaboration as a key principle**: Looking at how they can develop their offer together with external organisations to overcome challenges such as limited staff time. Collaborate with trade associations, local authorities, businesses and more.
* **The Net Zero Academy therefore is a group of people, creating a range of courses that can meet the demands of industry and develop the curriculum of the future for students.** Reduces risk as it allows less of a 100% commitment into staff development for every course that’s in demand – instead, they develop this course together with a partner, grow that provision, and then overtime upskill the staff and integrate it into the curriculum.
* **Set up phases for Net Zero Academy**: Phase 1 was creating an engaging website:
  + Course overview: for learners to discover courses and allow them to see this in a simplified way through an interactive image.
  + Knowledgebase summarises important information, resources and news for employers, industry, partners, organisations etc in one place.
  + Live Projects, e.g. on Building Net Zero in the Region, which is about increasing the amount of knowledge and awareness as well as upskilling for a variety of groups, including primary and secondary schools teachers and students as well as lecturing staff and training providers. This training is free for all participants.

**Next steps**

* Official Launch of Net Zero Academy with local government and Welsh government; development of more courses; integration of Net Zero into all full-time curriculum

**Question from Rob Hargraves:**

Rob addresses lack of coordination at local area level between colleges due to them being competitive – therefore collaborative approach of Net Zero Academy is really strong. System needs to move to this more collaborative approach rather than competition – to what extent can we make this more about a wider systems collaboration approach, and go beyond individuals doing great work?

**Jayne:** Set up Net Zero Skills Advisory Board with people involved in Net Zero and beyond, including awarding bodies and businesses. Working in siloes, we are not as strong as when we work together. There is competition, we are vying for the same people at colleges and also businesses – but we need a collaborative group, similar to the Energy Skills Partnership in Scotland. It’s not about everyone doing everything – but about everyone contributing what they have expertise and experience in for resources and courses, which then is shared, and courses based on these resources can be run by everyone.

# 51:06 Nikki Davis, Principal and CEO, Leeds College of Building, England

* **Context**: Only College in England focussing only on construction and built environment, 5000 students and 3000 apprentices, also deliver traditional trades.
* **Addressing Retrofit**: Leeds College of Building is a demand led system. Has addressed retrofit through collaboration across different organisations and lead from the top. There is little structure and support nationally on a top-down level, locally it’s better, but many people doing the same thing can make retrofit a disjointed space. More recently, West Yorkshire combined authority are starting to coordinate more, for example by becoming a member of the Green Jobs Taskforce.
* **Integrating retrofit and green skills into construction**: Every construction job is a green job, how do you bring this into practice and into learning? Their approach to tackle this is threefold:
  + 1, working regionally working with competitors and partners – “we can’t address Retrofit on our own as a college” – including other colleges.
  + 2, working with IfATE to get the curriculum to reflect what is needed, which is time consuming but necessary.
  + 3, working with local charity, Joseph Aspin Skills Trust (JAST), who fund a member of their staff working directly with students to deliver knowledge around retrofit and sustainable construction: specific short programmes, and each student will get access to this, and it gets more refined to address what every student at every level needs to know. Students knowing about retrofit is a way of influencing industry and challenging employers to improve sustainable construction principles.
* **Challenge**: Staffing and upskilling of staff is a challenge for them as well – allowing time to go out of college to gain new skills.
* **Local Leadership**: Are leading on the local green skills advisory group to have a one-stop place that signposts people.
* **Key thing the college feels is missing**: Joint up skills strategy and how that links to net zero and addresses workforce and capacity demand – but also what’s required from the different aspects of the construction industry. This is said to come out in 2024, but this still feels like a long way away.

**Question from Cara Jenkinson, Ashden**: Incorporating retrofit into existing courses, not just offering extra courses. Are you incorporating that into trades courses as well, like carpentry, and do you have challenges with the funding model?

**Nikki:** Yes, we are putting it into the trades area, and where it’s not there yet, we add shorter courses and CPD for staff and students, to give them extra knowledge and extra potential in their careers. Funding model is difficult – every time we take someone off teaching, it’s costing, so we hope that this will pay back. Uptake from employers is much slower than expected to be. You’d think the demand would be rising rapidly – and it’s growing, but not quick enough.

# 1:02:07: Discussion - points and questions

* **Engagement with IfATE** – is there an emerging consensus of integrating retrofit into existing courses?
* **Government policy around retrofit and heat pump education** – recent government policy is not talking about retrofit, but heat pumps, almost feels like heat pumps will solve all our problems, while we need retrofit for heat pumps to properly work in many cases. If government is focussing on heat pumps mostly – can we be clever and include assessment of existing buildings into heat pump courses? Answers included:
  + the **importance of a “fabric first” and design-led approach**, and the example of the BPEC course focussing on ensuring designing the heat pump to fit the environment.
  + and the **difference between social housing and private markets** and different training and policy conditions in Wales.
* **Issues around demand for skills**: Needing to build demand before people invest in training.
* **Whole house approach & importance of customer outcomes**: When design and installation were coordinated well, heat pump installations seem most successful. Awareness of Retrofit should be included into all courses. Post instalment monitoring is important for customer to be able to feel they receive what they paid for and the right levels of heat, comfort, and return of investment.
* **Importance of collaborative approaches**: usefulness of network and sharing best practice
* **Advocating with influential players to break open siloes**: Recognising that people in this meeting are engaged and interested in retrofit, but that this can be quite disjointed in practice and retrofit and other insulation and fabric-first processes not being integrated into curricula and practice. Retrofit is cross-cutting and needs to be integrated across courses, trades, and disciplines, as well as involve communication, systems thinking and integrity. We can advocate for this with partners, qualification and awarding bodies, and embed retrofit into the existing framework.