



# NW Retrofit Skills Pilot Projects

## Summary Report

November 2024



# About the test and learn pilot programme

The North West Net Zero Hub (NWNZH) was awarded funding from Department of Energy Security and Net Zero (DESNZ) to create a **North West Retrofit Skills Plan**.

Part of this funding was to be used on '**Test and Learn**' pilot skills and training activities to support the creation of the skills plan. The pilots aimed to test initiatives that could provide learnings for the finalisation of the plan and for future phases of work.

The pilot programme funded 14 initiatives with the following organisations;

- AMRC
- Blackpool & Fylde College
- Blackburn College
- Burnley College
- Carlisle college
- Cheshire College South and West
- City of Liverpool College
- Hopwood Hall College
- Kendall & Furness college
- Lakes college
- Reaseheath College
- Salford City College
- Torus Foundation
- Warrington Vale Royal College
- Wigan & Leigh College



# What was funded

## Projects included:

- Investment in heat pump equipment for training so that staff can deliver retrofit skills on-site.
- Undertaking staff continuing professional development (CPD) to upskill staff in different aspects of retrofit.
- Diversifying the supply-side offer to ensure colleges have training capacity across different manufacturers so that trainees are competent on the full range of current heat pumps.
- Including more modules on the digital set up and management of low carbon heat systems.
- Introducing innovative teaching methods such as virtual reality house-types so that learners can apply their learning to different building types without leaving the classroom.
- Creating plans to improve the connection between employment and skills by engaging more unemployed people in potential retrofit careers.
- Seeking to map information on the supply of retrofit training and the needs of local SMEs, alongside provider-employer partnership development activities across retrofit.



*Blackpool College training facility*

# What the pilot evaluation said

The evaluation report concluded that the Test and Learn Pilots succeeded in building the capacity of Colleges in the North West in a short timeframe by:

- Working in partnership – increasing sharing of practice lessons and market insight with an acceptance that this is the default model for investment in college capacity building.
- Engaging a wider range of businesses involved and with the potential to become involved in the retrofit market supporting course design and, in some cases, delivery.
- Meeting the KPIs set for the pilots but also widening understanding of retrofit training market, and of the potential challenges to colleges' models in being able to meet short course employer demands and work flexibly with college staff.



*Training at Salford City College*

# Lessons learnt

There were many lessons learnt through working on pilots which supported the creation of the North West Retrofit Skills Plan. These were also fed back into the Department. Lessons included;

## 1. Project mobilisation, timing and length

- While this project was a short pilot where outputs were largely met, future programmes would benefit having longer timeframes for mobilisation and delivery. Delivery and monitoring needs to account for the academic teaching year.
- Staff CPD needs time to be planned alongside the school calendar - the time of funding did not support all colleges being able to complete all training in the window of delivery of this pilot due to teaching commitments.
- Equipment fit out is equally disruptive during term time and needs to be able to take place during school holidays

## 2. Course delivery

- Course delivery needs to be flexible to be able to respond to the market at a local level, meaning tailored courses, part time courses and out of hours teaching.



*Training at City of Liverpool College*

# Lessons learnt

## 3. Monitoring and evaluation

- The Skills Plan sets some goals for skills improvement in retrofit, which could be monitored over time with a consistent set of data.

## 4. Policy and regulation

- Colleges want support in creating market demand. Feedback was that further policy and regulation for retrofit measures can support demand side capacity improvements into skills programmes.
- There are non-retrofit related policies that can also support interest and course uptake into the sector e.g. Future Homes Standard, commercial heat pump work.

## 5. Innovation and collaboration

- Colleges collaborating regionally can also support demand issues – each college taking on an area of expertise for a region could support course shortage, and this is occurring in some NW regions.
- Integration of innovative digital systems could support further advancements in digital careers. This could mean greater alignment between innovative product development and regulation/certification.



*Training at Lakes College*

# Individual pilot project summaries



# Cheshire and Warrington:

## Cheshire College South & West, Reaseheath College & Warrington and Vale Royal College

### Pilot aims

To assist three FE Colleges to build capacity and capability within each college to enable them to support local employers with the implementation and embedding of retrofit activities. The work included CPD to reinforce capital investment in equipment already undertaken, curriculum development and employer engagement:

#### Cheshire College South & West: Reaseheath College:

- CPD for teaching staff across a range of low carbon systems.
  - Conversations with local employers have identified that many say that they have no funding available for staff CPD. Any retrofit course is likely to need some level of subsidy and run out of work hours.
  - College is considering how it might offer some retrofit courses under the adult education budget building on the Torus Foundation report (see next slide).
- Staff completed training and certification in Understanding Retrofit in construction, so are now qualified to deliver the provision.

#### Warrington and Vale Royal College:

- Pilot activity focused on the development of curriculum programme resources
- Engagement of the private sector through curriculum development work being developed in conjunction with employer partners Groundtherm and MCS
- Partners have also helped with the design of College low carbon facilities and advised on the equipment installed.

### Outputs from the funding:

- 25 teaching staff undertaking CPD or benefitting from cascade training.
- 8 courses ready for delivery starting in September 2024 (supported by MCS and Groundtherm).

### Outcomes of the funding:

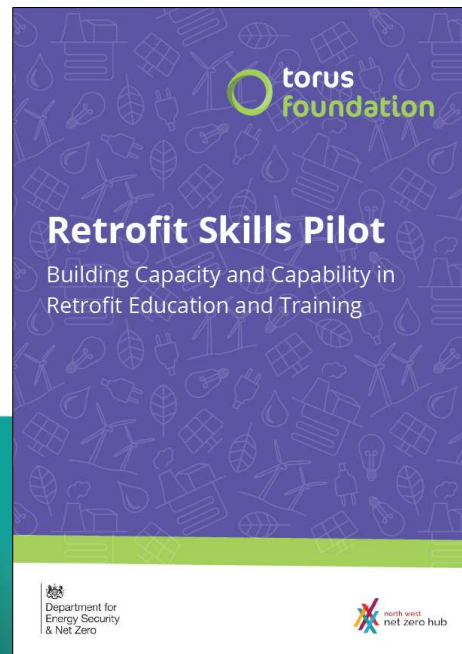
- WVR are in discussions with Gallaway Construction to design a potential 'women into construction' programme to include retrofit content.
- The Colleges are working with 21 local employers introduced by collaboration partners to raise awareness of the retrofit project.



# Cheshire and Warrington: Torus Foundation

## Pilot aims

To examine the role of housing associations (Registered Social Landlords, or RSLs) in retrofit skills development, through accessing potential learners for retrofit courses and providing placement opportunities for students studying retrofit courses.



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The sample poster and website / newsletter text provided below are intended to be adapted to promote specific courses, and to be used in virtual and physical spaces where they will be viewed by members of the target populations.

Social media asset (image) and text. Please click on the image to download a jpg for your use.

Course	Audience	Asset	Accompanying Text
Level 2 Retrofit	Jan, Kerry, Sandra		Ready to make a career change with purpose? Join us for our Level 2 Retrofit course and become a part of the green revolution! Transform your skills, transform our world. #SustainableCareer #RetrofitTraining #GreenRevolution
External / Internal insulation	Jayden, Freya		Ready to secure your future in construction? Master External and Internal Insulation and pave the way for a long term, lucrative career! #CareerGrowth #ConstructionJobs #InsulationExpert #LongTermCareer #SkillsTraining #SecureYourFuture
Award in Air Source Heat Pump Systems	Jayden, Freya, Jack, Sandra		Ready to step into the future of sustainable energy? Dive into our Level 3 Award in Air Source Heat Pump Systems and unlock endless opportunities in the green sector! #GreenCareer #SustainableEnergy #HeatPumpExpert #RenewableFuture #CareerOpportunities
Award in Air Source Heat Pump Systems	Jayden, Freya, Jack, Sandra		Ready to make a meaningful impact while forging a new path in your career? Dive into our Level 3 Solar Photovoltaics course, designed for learners ready to illuminate the world with sustainable energy solutions! #SolarEnergy #SustainableCareer #RenewableFuture #CareerChange #Empowerment

Images from a heat pump training course at Lakes College

## Outputs from the funding:

- The report was written in collaboration with Enterprise Cheshire and Warrington and three local colleges: Cheshire South and West College, Reaseheath College, and Warrington and Vale Royal College.

## Outcomes of the funding:

- The report provides recommendations to be applicable across and beyond Cheshire and Warrington.
- The report also outlines a set of example assets to be used for publicising retrofit courses to specific populations of social housing tenants, along with instructions and guidance in using these assets.

# Cumbria:

Lakes College (Lead), with Carlisle & Kendal and Furness College

## Pilot aims

To provide employer awareness, by undertaking an Employer Awareness Study, including the mapping of current retrofit provision in Cumbria. To build employer engagement and partnerships to better understand barriers to retrofit training and to develop college capacity through retrofit CPD.



Image from a heat pump training course at Lakes College

## Outputs from the funding:

- 200 Training Needs Analyses completed with local employers.
- 25 staff undertook CPD training to support retrofit delivery in college courses.
- 20 employers were consulted on college curriculum to support further development of learning .

## Outcomes of the funding:

- 75 employers surveyed for the training needs analysis were subsequently enrolled on the Introduction to Retrofit course (by The Retrofit Academy).
- A summary report highlighting employer survey findings was produced.

# Lancashire: AMRC

## Pilot aims

To inform and upskill teaching and lecturing staff across Lancashire Colleges on emerging retrofit technologies and provide an understanding of the associated skills required for their effective use in industrial and residential settings.



*Image of part of the workshop at AMRC with Lancashire colleges*

## Outputs from the funding:

- 52 college tutors attended delivery of CPD utilizing the Low Carbon Smart Factory Demonstrator at the AMRC that can demonstrate and showcase retrofittable smart building technologies.

## Outcomes of the funding:

- Training provided a platform for colleges to question the future of their course offer and programme design.
- Many colleges have requested meetings to discuss on-going support to develop their own institutional plans for enhancing the curriculum and develop their own technology roadmap.

# Lancashire: Blackpool & the Fylde College

## Pilot aims

To enhance the Sustainable Energy facilities and resources, building on the existing Retrofit house, and to engaging with local SMEs in the need to upskill. Employer workshop events were well attended and feedback from the employers attending was very enthusiastic.



*Training at Blackpool College*

## Outputs from the funding:

- 35 employers attended employer workshop event.
- Event enabled the employers to meet with tutors and encouraged a great deal of interaction and conversation.
- The event enabled the college to show employers the benefits of the facilities, resources and the training they have on offer.

## Outcomes of the funding:

- Continued engagement with employers around retrofit and set up of the Strategic Working group that will ensure the college meets the future training needs of the sector.

# Lancashire: Blackburn College

## Pilot aims

To build on work setting up an Environmental technology hub (which has previous SDF investment). To fund demonstration units to be used with theory-based learning. Further investment in heat pump and PV equipment was necessary to provide hands-on training and to ensure College staff were given CPD in order to train people on the equipment.



## Outputs from the funding:

- Demonstrator Training Centre
- Demonstrator Training Lesson Plan and materials
- Pilot of Demonstrator Training Courses and Masterclasses
- Staff CPD

## Outcomes of the funding:

- Establishment of Independent Energy Sector Network (with 2 events held) including employer engagement

# Lancashire: Burnley College

## Pilot aims

To invest in air and ground source heat pumps and staff CPD in order to provide greater capacity to host more learners.



## Outputs from the funding:

- Supported learners on full time courses and apprenticeships to gain the valuable skills in retrofit prior to them leaving the college.
- Investment in GSHP and ASHP

## Outcomes of the funding:

- Funding has enabled the college to offer more courses and more exposure to learners due to having the up to date equipment.
- Employer feedback has been excellent commenting that the benefits of young people understanding new technologies has a real impact on their progression and plans for their businesses.

# Greater Manchester: Salford City College

## Pilot aims

Installation of commercial heat pump units, supplied under MoU with Daikin within Salford City College's Low Carbon Skills Centre and used alongside virtual learning resources.



*Training at Salford City College*

## Outputs from the funding:

- Installation of heat pump units within the College's Low Carbon Skills Centre (the pilot provided more equipment to offer training at a higher capacity).
- Development of Virtual Learning Environment resources for training.

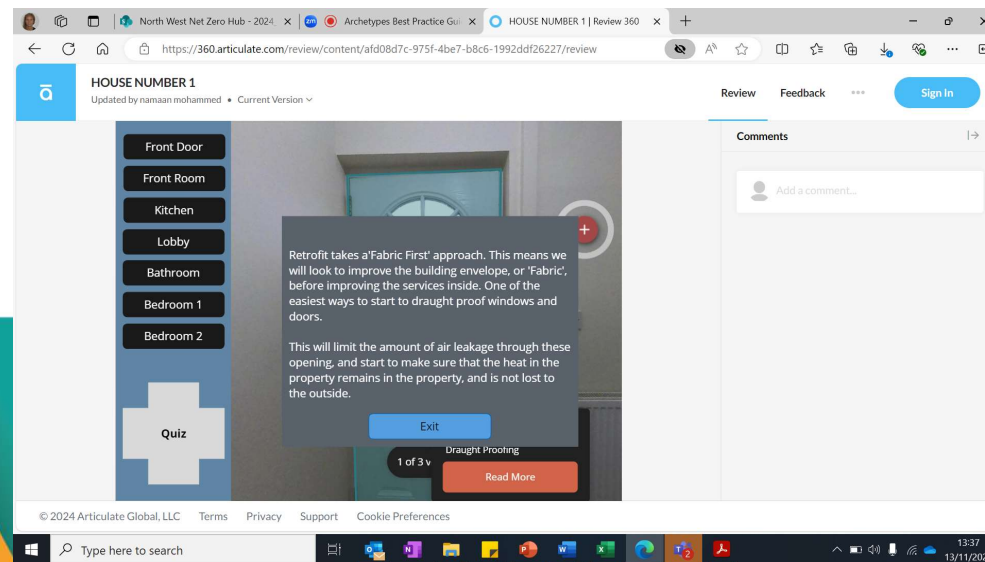
## Outcomes of the funding:

- Expectation that the new equipment will support 120-130 Low carbon technician apprentices per academic year.
- The College is expecting to expand its use of Virtual Learning Environment (VLE) as they have found 3D goggles useful for assessment of learners to test knowledge.

# Greater Manchester: Hopwood Hall College

## Pilot aims

To test future learning materials within the college and develop learning resources on Retrofit for virtual reality learning environments. The pilot aimed to create 2-3 different 360° virtual tours of different property types, each to include a minimum of 5 rooms.



Screenshot from learning material produced at Hopwood Hall College

## Outputs from the funding:

- 3 learning environments produced
- House Number 1:  
<https://360.articulate.com/review/content/afd08d7c-975f-4be7-b8c6-1992ddf26227/review>
- House Number 2:  
<https://360.articulate.com/review/content/2333ebe1-dfd7-4c1f-a369-a61107426e58/review>
- House Number 3:  
<https://360.articulate.com/review/content/f351c873-a8ce-4c44-96ad-885192a345a9/review>



# Greater Manchester: Wigan & Leigh College

## Pilot aims

To improve the learning environment with new equipment with more flexible portable rigs and learning resources for retrofit in a new Future Energy Zone. To work with traditional classroom, virtual reality training and practical hands on training within the same space.



*Training at Wigan & Leigh College*

## Outputs from the funding:

- Additional equipment to support learning in Future Energy Zone

## Outcomes of the funding:

- The College has used Virtual Reality (VR) learning techniques in a number of faculties and aim to use VR workshop environment. Initially this will involve fault-finding learning in VR (it is possible to set up a wide range of faults in a virtual environment than is possible on the equipment itself). The VR learning will then be re-inforced by learners working hands-on with the heat pump equipment in the workshop.

# Liverpool City Region: City of Liverpool College

## Pilot Aim

To create an environment that will provide capacity for delivery of diverse heat pump skills training, through the provision of the latest heat pump technologies (ground source, air source, split & hybrid systems).



*Nov 2024 opening of the Heat Pump facility at City of Liverpool College*

## Outputs from the funding:

- Purchase and fit out of 4 heat pumps and accessories for use in learning environment

## Outcomes of the funding:

- The college is introducing the new Low Carbon Heating apprenticeship thanks to this investment
- The college has secured a green skills boot camp that will upskill existing gas fitters on the range of heat pumps that are available (starting Nov 2024)
- The investment will also provide a regional training facility for Valliant and Vaillant accredited fitters operating in the LCR.

# For more information

Contact Us!

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