

# **Warmer Homes, Take Control**

## Home energy training programme

September 2017 – December 2018



Take control of your energy, comfort and warmth.  
Create smart, healthy, low carbon homes.  
**Act on climate change.**

A stack of red booklets is shown at an angle. The top booklet features a white speech bubble graphic containing text. The edges of several other booklets are visible beneath the top one, showing a similar red color and some white text on their spines.

**The Carbon Co-op**  
People powered not  
fossil fuelled

**Carbon Co-op is the first of its kind, a new way for householders to take practical and significant action on climate change and reclaim control of their energy, homes, warmth and power. Based in Greater Manchester, the co-operative was established to help people transform their draughty old properties into smart, efficient, low-carbon homes of the future.**

### **Retrofit for the future**

The majority of homes today will still be here for years to come. To dramatically reduce our household energy use we need to 'retrofit' our homes, fitting them with more efficient technologies and insulation materials.

Over the past five years, we've shown it's possible to make radical reductions in home energy usage, with people now living in more comfortable, healthy homes and making significant savings on their energy bills.

Sadly, it's not always a simple or an easy process: technical expertise and planning is required, as well as specialist contractors, affordable finance, confidence, knowledge and patience!

Based on the experience of our members, we've put together this training programme to help others take the short cuts, benefiting from our expertise and the network of building professionals and experts we've built up over the years.

Come along to a training and you'll not only learn from the experts but meet other likeminded householders on same retrofit journey.

**This booklet details our training sessions from September 2017 to December 2018.**

These sessions can be booked separately based on your needs and knowledge, but you may find it useful to work through sessions in a certain order, on the basis of where you are on your retrofit journey (see table opposite).

For more detailed information visit [carbon.coop/training](http://carbon.coop/training)

Check website for changes and additions. Booking is essential.

### Course locations

#### Carbon Co-op office

c/o URBED  
10 Little Lever Street  
Manchester  
M1 1HR

#### Bridge 5 Mill

22a Beswick Street,  
Manchester  
M4 7HR

Directions and access:  
<http://bridge5mill.org.uk>

#### Hebden Bridge Town Hall

St George's Street,  
Hebden Bridge  
HX7 7BY



Be inspired	When	Where	Page
Beginner's Guide To Retrofit	Weds 13th Sep 2017 Weds 8th Nov 2017 Weds 10th Jan 2018 Weds 14th Mar 2018 Weds 9th May 2018 Weds 12th Sep 2018 Weds 14th Nov 2018	Carbon Co-op Office	6
Plan and Research	When	Where	Page
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Specialist Training			
Ventilation for Homeowners	Thu 16th Nov 2017 Wed 28th Feb 2018 Wed 7th Nov 2018	Bridge 5 Mill	9
Heating Controls	Weds 29th Nov 2017	Bridge 5 Mill	10
Introduction to Off-Grid Power Systems	Sat 11th Nov 2017	Bridge 5 Mill	11
Flood Resilience and Retrofit	Sat 3rd March 2018	Hebden Bridge Town Hall	12
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DIY Retrofit for Homeowners	Sat 28th, Sun 29th April & Sat 12th May 2018  Sat 10th, Sun 11th and Sat 24 Nov 2018	Bridge 5 Mill	16
Inspire others	When	Where	
Retrofit Champions	On demand	N/A	18



## Join the energy revolution

Based in Greater Manchester, we are a not-for-profit social enterprise providing the tools, knowledge and expertise you need to make big reductions in your home energy use.

### About us

As the householder's advocate, we offer independent technical expertise, knowledge and training. We connect members to share experience and expertise, making the process of improving our homes as simple as possible.

By working together we believe we can all make an impact on climate change for the benefit of everyone.

### Our work

**Inspiring:** case studies, information and inspiration

**Connecting:** advice, bringing householders together, building a network of suppliers and installers

**Training:** specialist seminars, info nights and workshops

**Expertise:** quality, independent technical assistance, assessments and consultancy

**Shifting the debate:** innovative new research projects influencing UK policy


### Become a member for just £35 a year and get access to a range of benefits:

Special member socials and support events / Discounted services and training / Free thermal imaging camera lending / Access to Retrofit Buddies and Retrofit Professionals Network / Discounts on energy efficiency materials

Volunteer and contribute to the co-operative, attend and vote at an annual general meeting or stand for election to our board

**Join today at: [www.carbon.coop/join](http://www.carbon.coop/join) | [@carboncoop](https://twitter.com/carboncoop) | [info@carbon.coop](mailto:info@carbon.coop)**



A photograph of an older man with a white beard and glasses, wearing a blue jacket, and a younger woman with blonde hair, wearing a light-colored jacket. They are both looking down at a document or map spread out on a table. The background is slightly blurred, showing what appears to be a window with a view of a city.

## Beginner's Guide to Retrofit

Learn about energy efficiency and making home improvements

What do we mean when we talk about energy efficiency and retrofit? In this short, beginner's guide we explore basic ideas and concepts, helping you get to grips with how you might reduce energy bills, improve your property and make your home a little bit greener.

**For:** Householders interested in energy efficiency and domestic retrofit, new Carbon Co-op members, housing association staff, housing co-ops and landlords.

**Benefit:** Gain a better understanding of retrofit, whether it is relevant to you and advice on your next steps.

**Knowledge required:** None

**Trainers:** Jonathan Atkinson and Aneaka Kellay

### Dates

#### 2017

13th September  
8th November

#### 2018

10th January  
14th March  
9th May  
12th September  
14th November

### Time

6:30pm – 8:30pm

### Location

Carbon Co-op  
office

### Cost

Free



## Principles of Retrofit

### Understanding heat and moisture in your home

Confused by talk of U-values and ‘breathability’ in buildings? Keen to understand how you can improve and insulate your home to make it warmer, whilst avoiding unintended consequences? Want to know enough to avoid being bamboozled, but don’t want to become a specialist? Then this course is for you!

**For:** Householders planning refurbishment works who would like to develop a better understanding of basic technical principles in energy efficiency and retrofit.

**Benefit:** Decipher some of the language used by professionals, and better understand key considerations in ensuring a successful retrofit.

#### What you will learn:

- Heat transfer mechanisms and U-values.
- Properties and application of insulation, thermal mass, air-tightness, and ‘breathability’.
- Understand key performance risks – cold bridging, leaks, indoor air quality and moisture.

**Knowledge required:** None

**Trainers:** Marianne Heaslip

#### Dates

**2017**

25th November

**2018**

10th February

15th September

#### Time

10am – 4pm

#### Location

Bridge 5 Mill

#### Cost

**Member**

Early Bird **£40**

Standard **£50**

**Non-member**

Early Bird **£55**

Standard **£70**

**Book**

<http://carboncoop.eventbrite.com> or call 0161 408 6492





## Ventilation for Homeowners

Making sure your home stays healthy as you improve its energy efficiency

Concerned about damp, mould and indoor air quality? This session explains why planned ventilation is an important consideration in any refurbishment project, the different ventilation strategies available and some of the technologies involved.

**For:** Householders planning or carrying out a retrofit project

**Benefit:** Integrate ventilation planning in to your retrofit project to maintain a healthy breathable atmosphere and avoid damp and cold issues.

### What you will learn:

- What is good air indoor quality, and how it relates to individual and building health.
- Relevant building regulations
- Ventilation strategies and technologies

**Knowledge required:** None

**Trainers:** Marianne Heaslip

### Dates

**2017**

16th November

**2018**

28th February

7th November

### Time

6:30pm – 8:30pm

### Location

Bridge 5 Mill

### Cost

#### Member

Early Bird **£16**

Standard **£24**

#### Non-member

Early Bird **£20**

Standard **£30**

**Book**

<http://carboncoop.eventbrite.com> or call 0161 408 6492

## Heating Controls

Identifying and understanding the controls for common heating systems

This session will enable you to identify typical heating controls, understand how to programme or use the most common type of central heating programmer and night storage heater control and learn how to use supplementary information to pinpoint potential issues.

**For:** Householders looking to better understand their heating controls, or who may be considering changing to smart systems in future (eg Nest, Hive, etc). Organisations working in communities to improve comfort and reduce bills.

**Benefit:** You will better understand the suitability of different controls and how to use them to improve comfort.

### What you will learn:

- How to identify the type of control, typical installation costs and suitability
- Advice on appropriate 'smart' or remote controls and apps
- Practical demonstration/exercises

**Knowledge required:** None

**Trainers:** Helen Grimshaw

### Date

2017

29th November

### Time

6:30pm - 9pm

### Location

Bridge 5 Mill

### Cost

#### Member

Early Bird **£16**

Standard **£24**

#### Non-member

Early Bird **£20**

Standard **£30**

### Book

<http://carboncoop.eventbrite.com> or call 0161 408 6492



## Introduction to Off-Grid Power Systems

A practical, hands-on course in designing and building off-grid power systems

The key concepts for designing and building off-grid power systems. Discussing the value of off-grid systems, sharing knowledge on how to build your own system to power lighting or electronic devices.

**For:** Anyone with an interest in renewable energy and generating and supplying their own power, building off-grid power systems, automotive or marine power applications.

**Benefit:** Gain theoretical knowledge and practical experience.

### What you will learn:

- How to size a basic off-grid power system involving PV panels and a battery
- Basic specification and selection of components
- Assembly of a basic off-grid power systems

**Knowledge required:** Some familiarity with basic electrical theory will aid understanding but is not required.

**Trainers:** Ben Aylott

### Date

2017

11th November

### Time

10am - 4pm

### Location

Bridge 5 Mill

### Cost

#### Member

Early Bird £40

Standard £55

#### Non-member

Early Bird £50

Standard £70



## Flood Resilience and Retrofit

Improving flood resilience and energy efficiency of your home

This bespoke session designed and delivered by Cumria Action for Sustainability offers practical guidance on building materials and methods to choose when refurbishing a building at risk of flooding or extreme weather. Relevant for those interested in building weather resilience, dealing with damp, getting homes back into use after flooding and improving energy efficiency.

**For:** Homeowners, flood action groups

**Benefit:** Gain knowledge on how to best approach refurbishing older buildings for effective flood and extreme weather resilience and energy efficiency.

**What you will learn:**

- How water gets in to a building
- Materials used in building and how water can affect them
- Appropriate approaches for flood resilience with energy efficiency

**Knowledge required:** Awareness of own property construction and potential extreme weather affecting it.

**Trainers:** Emma Greenshaw

**Date**

**2018**

3rd March

**Time**

10am - 1pm

**Location**

The Terrace,  
Hebden Bridge  
Town Hall

**Cost**

**Member**

Early Bird **£19**

Standard **£29**

**Non-member**

Early Bird **£25**

Standard **£39**

**Book**

<http://carboncoop.eventbrite.com> or call 0161 408 6492



## Draught-Proofing for Homeowners

Make low cost improvements to keep your home warmer.

This practical course covers the basics of how heat is lost in a home before focusing on draught-proofing. Looks at typical areas where homes leak heat and techniques for making improvements. Looks at the risks and issues around moisture management and ventilation.

**For:** Homeowners, renters, students and organisations tackling fuel poverty.

**Benefit:** Gain knowledge and understand techniques for making improvements on a budget. A useful step in making first stage improvements.

### What you will learn:

- How heat is lost in a home
- Where to find leaks
- Techniques and methods to draught-proof

**Knowledge required:** None

**Trainers:** Aneaka Kellay

### Date

**2018**

3rd February  
27th October

### Time

9:30am - 1pm

### Location

Bridge 5 Mill

### Cost

#### Member

Early Bird **£24**

Standard **£32**

#### Non-member

Early Bird **£30**

Standard **£40**



## Routes to Retrofit

Turning your designs into reality, learn how to procure domestic retrofit works.

This ever popular course taught by experienced industry professionals, supports you to navigate the construction industry, make the most out of your budget, learn to be a discerning customer and how to be a good client.





“Excellent course, gave me a lot of info that I didn’t know I needed... made me think about how important the planning phase is and has spurred me on to learn more.”

– Participant 2017



**For:** Householders already aware of what improvements they require, seeking to commission retrofit architects and contractors. Ideal next step after a **My Home Energy Planner** assessment.

**Benefit:** Gain an understanding of the importance of the planning phase and common problems you may encounter. Find the right contractor at the right price.

#### What you will learn:

- To consider objectives, priorities and get the best result
- Regulations, approvals, and consents
- Which ‘professionals’ are needed
- Selecting and appointing builders and using contracts
- Examining common pitfalls and avoiding them
- Getting the most for the resources you have

**Knowledge required:** Understanding of retrofit basics, an understanding of your retrofit improvements.

**Trainers:** Marianne Heaslip and Bill Taylor

#### Dates

**2017**

7th and 14th  
October

**2018**

10th and 24th  
March

6th and 13th  
October

#### Time

9:30am – 1:00pm

#### Location

Bridge 5 Mill

#### Cost

##### Member

Early Bird **£99**

Standard **£139**

##### Non-member

Early Bird **£120**

Standard **£170**

**Book**

<http://carboncoop.eventbrite.com> or call 0161 408 6492

## DIY Retrofit for Homeowners

Understand retrofit theory, learn practical skills and how to manage risk

Tackles the key areas of fabric upgrades applicable to most homes. Includes airtightness works and insulation, covering basic measures such as draft-proofing, moving on to more advanced subjects such as floor and wall insulation. The focus is on teaching principles through practical examples.



“The course exceeded my expectation by miles! Gained so much knowledge. Really good structure, especially learning the theory before the practical parts. Really in-depth teaching, especially around risks involved.”

– Participant 2017



**For:** Homeowners who want to carry out some or all of their own improvements. Handy-people interested in learning more about retrofit.

**Benefit:** Gain practical knowledge and confidence to undertake home improvements with an understanding of potential risks and how to mitigate them.

#### What you will learn:

- Practical, hands-on skills
- The right tools for the job
- What is a thermal bridge and why do they matter?
- Delivering results on a budget
- Airtightness and draught-proofing techniques and materials
- Underfloor, wall and loft insulation

**Knowledge required:** No DIY experience required or previous knowledge needed.

**Trainers:** Dan Chaplin

#### Dates

**2018**

28th – 29th April  
and 12th May

10th – 11th and  
24th Nov

#### Time

9:30am – 4:30pm

#### Location

Bridge 5 Mill

#### Cost

##### Member

Early Bird **£240**

Standard **£280**

##### Non-member

Early Bird **£300**

Standard **£350**

**Book**

<http://carboncoop.eventbrite.com> or call 0161 408 6492



## Retrofit Champions

Learn about retrofit in the context of climate change and social justice, inspire others to take action.

This two part training sets retrofit within the wider context of action on climate change. Equips participants with an understanding of the part retrofit can play in the creation of a socially just and sustainable future. As well as an understanding of the political context, this training covers the basics of home energy assessments, understanding electricity use and heat loss. This training has been accredited by the Greater Manchester Carbon Literacy Standard.

**For:** Students, housing professionals, community energy groups, environmental groups or local volunteers.

**Benefit:** Gain knowledge, motivation and skills to inspire others.

**Knowledge required:** None

**Trainers:** Helen Grimshaw and Julian Tomlin

**Booking:** Get in touch to register an interest

### Dates

Run on demand

### Cost

£60-£80 per person,  
group discounts  
available

Email

[info@carbon.coop](mailto:info@carbon.coop) to discuss



### Bookings

Each training can be booked via Eventbrite <http://carboncoop.eventbrite.com> Payment is taken at the time of booking. If you want to book direct email [info@carbon.coop](mailto:info@carbon.coop) or call on 0161 408 6492.



### Costs

We work hard to keep costs affordable and aim to make them accessible to anyone, we therefore offer a limited number of bursaries on all courses. Please get in touch for more details via [info@carbon.coop](mailto:info@carbon.coop)



### Early bird rates

Book quickly and receive a discount. Early bird rates expire 4 weeks before the course date!



### Membership - Join today

Join the growing grassroots energy revolution and by becoming a member you'll receive a hefty discount on training as well as other opportunities and benefits. Find out more here: [www.carbon.coop/join](http://www.carbon.coop/join)



### Professional Services

As well as training, we offer a range of professional architectural and consultancy services. Our **My Home Energy Planner** assessment report identifies where most energy is being lost, which improvements could have the biggest impact and allows you decide what to tackle first. More information at: [www.carbon.coop](http://www.carbon.coop)

**Aneaka Kellay**  
Carbon Co-op



Has over ten years of experience working in environmental organisations, co-operatives and has a masters in Environmental Politics. She is experienced in hosting workshops, facilitation and community engagement. Aneaka is currently working to maintain and grow Carbon Co-op's community of peer learning and support.

**Jonathan Atkinson**  
Carbon Co-op



With a background in environmental science and investigative research, Jonathan is one of the co-founders of Carbon Co-op. He has over ten years of experience of working with householders to help them understand and overcome the key barriers to commissioning and carrying out domestic retrofit works.

**Ben Aylott**  
Carbon Co-op



Works in the areas of energy systems, he has a masters in Solar Energy Engineering from the European Solar Engineering School and experience in designing and building real world off-grid power systems in a variety of contexts.

**Emma Greenshaw**  
Cumbria Action for Sustainability



Emma has 20 years' experience in the environmental sector including several years as environmental manager in the construction industry. Emma currently advises on renewable energy schemes, energy audits and efficiency in community buildings, and is author of 'Refitting your home to cope better with flooding' and an online retrofitting tool.

**Helen Grimshaw**  
URBED



A Sustainability Consultant at URBED, she previously worked for charity the Centre for Sustainable Energy. With a background in human geography, Helen is interested in the intersection between people and technical systems, how technical information is communicated to and understood by everyday users. She is experienced in householder and community engagement, energy advice, fuel poverty and volunteer management.



**Julian Tomlin**  
Consultant



Has worked in the area of built environment and sustainability for over four years. Is a board member of Carbon Co-op, and was a member of Sustainable Living in the Heatons from 2013-16. Previous to this worked as an arts manager, a cultural engagement consultant, with an earlier career as a curator, and exhibitions organiser.

**Bill Taylor**  
Taylor Armitt  
Consulting



Has been working in affordable housing for over 30 years with qualifications in Town & Country Planning and Housing Policy, he has held development and asset management roles in several housing associations, where he developed an interest in co-operative housing and social enterprise. He formed his own consultancy in 2009 and focuses on enabling energy efficient improvement of housing.

**Dan Chaplin**  
Think Building  
Energy



Has more than 10 years of experience in domestic refurbishment and retrofit, with a proven track record of delivering quality, award winning buildings. Having worked in a variety of roles, from operational site work through to

project management and technical specification he has strong insight into all aspects of the subject. Dan has a particular interest in the risks that exist around retrofit and has worked with Leeds Beckett University on this.

**Marianne Heaslip**  
URBED



A chartered architect with interests in urban design, sustainability and participative design. She holds an MSc in Advanced Environment and Energy Studies from the Centre for Alternative Technology, and is a Certified Passive House Designer. She worked on pioneering TSB 'Retrofit for the Future' projects with the lessons learned through this work applied in her role on the Carbon Coop's retrofit 'Community Green Deal' programme.



### Ecology Building Society

At Ecology, we are dedicated to supporting projects that have a positive impact on the environment and improve the quality of housing across the UK.

We are a specialist in lending for home renovations, extensions and conversions that improve the energy efficiency of a property.

We love lending on homes that need substantial work or are in a poor state of repair and lend on many types of property including:

- Uninhabitable houses, including old or derelict buildings
- Thatched, historic and listed buildings
- Non-standard construction types, such as timber-framed, straw bale, cob and earth shelter
- Barns for conversion

We're always looking for more projects to support. So, if you or anyone you know requires funding to renovate a property, call our expert Mortgage Team on **01535 650 770** or visit [ecology.co.uk](http://ecology.co.uk) to find out how we can help you.

**Your home may be repossessed if you do not keep up repayments on your mortgage.**



### Bridge 5 Mill

Bridge 5 Mill is a hub and resource for groups, organisations and individuals working towards a more sustainable future. We aim to be an example of how it is possible to work in a sustainable, collaborative and ethical way.

[www.bridge5mill.org.uk](http://www.bridge5mill.org.uk)



### Green Building Store

The low energy and Passivhaus experts. We can offer a wide range of products and technical support for your retrofit project:

- Triple glazed timber windows and doors
- MVHR heat recovery ventilation
- Insulation and airtightness products
- Consultancy and training
- Building services in the Huddersfield area
- FREE technical resources and information on Passivhaus and radical retrofit projects

For more information ring us on 01484 461705 or email [info@greenbuildingstore.co.uk](mailto:info@greenbuildingstore.co.uk) or go to [www.greenbuildingstore.co.uk](http://www.greenbuildingstore.co.uk)



**Carbon Co-op**

**Join today at: [www.carbon.coop/join](http://www.carbon.coop/join) | [@carboncoop](https://twitter.com/carboncoop) | [info@carbon.coop](mailto:info@carbon.coop)**