

# The AECB and AECB Yorkshire Group

# The AECB

## Who are we & what do we do?



### Who are the AECB?

The AECB (Association for Environment Conscious Building) is a network of individuals and companies with a common aim of promoting sustainable building.

Running since the 1980's the AECB are the largest and oldest network for sustainable building



### What do we do?

We bring together contractors, trades people, self builders, architects, designers, engineers, manufacturers, housing associations, local authorities and academics to help develop, share, train and promote sustainable building best practice. We promote excellence in design and construction



### Why do we do it?

Because we want to help educate and help effect deep lasting change within the construction industry. We are part of the change to help better our lives (as well as others and the planet) & well being through comfort, health and sustainability in our homes. The AECB is run by its members and is an independent, not for profit organisation

# The AECB Staff Team

## MEET THE TEAM

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**Andrew Simmonds**

CEO



**Sue Garland**

*Development, Communications & Marketing*



**Sally Hall**

*Finance & Legal Manager*



**Trish Andrews**

*Training Manager*



**Sarah Everitt**

*Training Administrator*



**Samantha Musty**

*Administration Support Officer*

# The AECB CarbonLite™ Training Centre:



AECB Training Centre

**AECB**  
building knowledge

## AECB Training Centre

Gain skills and knowledge to help build a sustainable future

**CAREER DEVELOPMENT**  
Our courses offer CPD credits, Passivhaus Institute points and/or awarding body certified professional accreditation.

**THE AECB NETWORK**  
Shared knowledge and opportunities. A network of skilled and passionate people working together towards a sustainable future.

**INDUSTRY EXPERTS**  
Our panel of expert advisors contribute their depth of strategic, commercial, design or technical knowledge and insight.

We want to train and enable deep, lasting change within the construction industry, and further careers in sustainable building

New members newsletter coming shortly and a members survey.

The AECB has currently three main training offerings:

- AECB CarbonLite™ Retrofit Course (CLR);
- CPD Cert. Building Energy Modelling using PHPP in collaboration with TUDublin
- NEW AECB CarbonLite™ Level 5 Diploma in Retrofit Coordination and Risk Management Course (CLR RC)

# AECB CarbonLite™ Retrofit Course (CLR)



## THE course for those involved in retrofit

This cutting edge advanced retrofit training course is the culmination of many years of investment by the AECB. It is aimed at construction professionals and those whose role involves decision making around retrofit.

*“No other online course prepares built environment professionals as thoroughly for the technical challenges of retrofitting the UK’s existing buildings to an excellent standard.”* **Andy Simmonds, CEO AECB**

The AECB established the UK’s leading advanced level e-learning course for domestic retrofit in 2016. The number of AECB students on the course quadrupled in 2020. A positive move but we need more people to be trained in deep low energy retrofit NOW!

# AECB CarbonLite™ Retrofit Course (CLR)

## What to expect....

- Aimed at construction professionals and those involved in retrofit decision making.
- Available to AECB members.
- Requires specific understanding of retrofit projects and construction knowledge.
- Assessment includes multiple choice, numerical calculations, and scenario-based exercises.
- 130-hours Learning Hours/Total Qualification time. 8 in-depth modules.
- Learning Outcomes - 72 lessons.
- Course tutors and authors are UK's leading practitioners in sustainable UK domestic retrofit.
- Accreditation – This course helps you to understand, work with, and therefore go on to achieve, the AECB Retrofit Standard Certification for your retrofit projects (applied for separately).
- CPD – Recognised by the Passivhaus Institute – 35 PHI points towards PHI Certification Renewal.

# AECB CarbonLite™ Retrofit Course (CLR)

- The list of CarbonLite™ Retrofit course modules are:
- 1 Introduction to CarbonLite™ Retrofit
- Lessons
- 1.1 Introduction to CarbonLite™ Retrofit
- 1.2 Overview of the course modules
- 1.3 Benefits of a Successful Retrofit
- 1.4 Comfort and Health
- 1.5 Ventilation and air quality
- 1.6 National and International Context
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- 2 Buildings in the UK Climate
- Lessons
- 2.1 Buildings in the UK Climate – Climate and Weather
- 2.2 Buildings in the UK Climate – Climate Change
- 2.3 UK Climates and Microclimates

# AECB CarbonLite™ Retrofit Course (CLR)

- The list of CarbonLite™ Retrofit course modules are:
- 3 UK Construction
  - Lessons
    - 3.1 Introduction to UK housing stock
    - 3.2 Traditional Construction
    - 3.3 Non-Traditional Construction
    - 3.4 Retrofitted examples of traditional and non-traditional buildings
    - 3.5 Walls – regional and local variation
    - 3.6 Floors – regional and local variation
    - 3.7 Devising Retrofit Strategy with Existing Defects in Mind
    - 3.8 Module 3 homework
    -
  - 4 Energy in Buildings
    - Lessons
      - 4.1 Retrofit Performance Gaps
      - 4.2 Power and Energy in buildings
      - 4.3 Heat Load and Annual Degree Hours
      - 4.4 Useful Energy, Delivered Energy and Primary Energy



# AECB CarbonLite™ Retrofit Course (CLR)

The list of CarbonLite™ Retrofit course modules are:

- 4 Energy in Buildings cont'd
- 4.5 Energy Performance – applying the physics
- 4.6 The Five Factors of Thermal Performance – New Build
- 4.7 The Five Factors of Thermal Performance – in retrofit
- 4.8 Introduction to 3 CLR Modelled House Types
- 4.9 The CLR Model – UK house types
- 4.10 Form Factors, Heat Loss and Thermal Bridges
- 4.11 Embodied Energy in Retrofit
  - 4.11.1 The Wood from the Trees
- 4.12 Module 4 homework

# AECB CarbonLite™ Retrofit Course (CLR)

• The list of CarbonLite™ Retrofit course modules are:

- Moisture in Buildings
- Lessons
- 5.1 Moisture in Buildings – Biological Decay
- 5.2 Moisture in Buildings – The Moisture Performance Gap
- 5.3 Moisture Physics – Relative and Absolute Humidity
- 5.4 Moisture physics – Diffusion and Bulk Air Movement
- 5.5 Evaporation and condensation in building materials
- 5.6 Liquid water and building materials
- 5.7 Moisture in Materials – Wood Moisture Equivalent
- 5.8 Moisture Movement – Magnitude and Direction
- 5.9 Moisture in Buildings – Problems and Solutions
- 5.10 Heat sources and microclimates
- 5.11 Moisture Reservoirs, Bulk Air Flow and Diffusion Flow
- 5.12 Moisture movement – Liquid Water Flows
- 5.13 Rising Damp and Hygroscopic Moisture
- 5.14 Suspended floors
- 5.15 Hygrothermal modelling, surveying, monitoring and analysis
- 5.16 Introduction to the CLR Case Studies
- 5.17 Moisture in Buildings – How to look at your retrofit.

Module 6 case studies

# AECB CarbonLite™ Retrofit Course (CLR)

The list of CarbonLite™ Retrofit course modules are:

## 7 Building Services for Retrofit

- Lessons
- 7.1 Heating – gas, LPG and oil
- 7.2 Heating – Electricity and Biomass
- 7.3 Heating – controls
- 7.4 Hot water
- 7.5 Airtightness and Ventilation – extract fans and passive stack
- 7.6 Airtightness and Ventilation – MEV and MVHR
- 7.7 Electricity – lighting and appliances
- 7.8 Renewables – solar thermal and PV
- 7.9 Module 7 Homework Task

# AECB CarbonLite™ Retrofit Course (CLR)

The list of CarbonLite™ Retrofit course modules are:

## 8 Retrofit Investment Appraisals and CLR Cost Modelling Lessons

- 8.1 The Costs of Retrofit
- 8.2 Different Financial Viewpoints and the Decision-Making Process
- 8.3 The Financial Impact of Climate Change
- 8.4 Overview of the UK housing stock
- 8.5 Financial Concepts and Methods of Appraisal (a)Free Preview
- 8.6 Financial Concepts and Methods of Appraisal (b)
- 8.7 The CarbonLite™ Retrofit Model – assumptions
- 8.8 The CarbonLite™ Retrofit Model – further information
- 8.9 Investment Appraisal in Practice
- 8.10 Conclusions.

# AECB CarbonLite™ Retrofit Course (CLR)

## **Main Learning:**

Understanding key retrofit measures, stock modeling/building typologies, reducing the performance gap and in depth knowledge of understanding moisture in buildings..

## **Costs and added benefits**

- Standard cost for members £410 + VAT.
- Members get 35 Credits towards PHI Certification Renewal.
- Access to AECB sustainable Knowledgebase, free resources, LEED case studies, webinars, networking.

## **Benefits of joining AECB**

- Join as an individual( <https://aecb.net/join-the-aecb/>)
- Join as an organisation or company and employees are covered for membership (link).

# AECB CarbonLite™ Level 5 Diploma in Retrofit Coordination and Risk Management Course (CLR RC)



Coming later this year. Cutting edge, advanced retrofit training. The course is being developed to provide an in-depth knowledge of the PAS2035 process and our AECB Retrofit Standard, enabling graduates to easily work with and achieve these requirements. Become an accredited Retrofit Coordinator and help effect deep and lasting change in the building design and construction industry, as we work together to achieve a net zero carbon future.

# AECB CarbonLite™ Level 5 Diploma in Retrofit Coordination and Risk Management Course (CLR RC)

## What to expect....

- Aimed at construction professionals and those involved in project managing retrofit projects.
- Available to AECB members.
- Requires specific understanding of retrofit projects and construction knowledge and entry requirements.
- Assessment includes multiple choice, numerical calculations, and scenario-based exercises.
- 105-145 -hours Learning Hours/Total Qualification time. 6 in-depth modules.
- Learning Outcomes - 204 lessons.
- Course tutors and authors are UK's leading practitioners in sustainable UK domestic retrofit.
- Accreditation – External Accreditation of Level 5 Diploma allowing one to become a qualified Retrofit Coordinator and opportunity to register under TrustMark scheme provider.

# AECB CarbonLite™ Level 5 Diploma in Retrofit Coordination and Risk Management Course (CLR RC)

The modules that are currently in development for the AECB Level 5 Diploma in Retrofit Coordination and Risk Management course are the following, however, please note that these may change:

- Introduction
- Preliminary Considerations
- Retrofit Risk Assessment
- Dwelling Assessment
- Technical Information relevant to the Dwelling Assessment
- The Retrofit Design Stage
- Air Tightness and Ventilation
- Improving the building fabric - Floors and Roofs
- Improving the building fabric - Walls and Windows
- Improving the Building Services
- Renewable Energy Systems
- Improvement Option Evaluation and Medium Term Retrofit Plans
- Working With Installers
- Post-installation stages
- Technical information relevant to the post-installation stages



# AECB CarbonLite™ CPD Cert. Building Energy Modelling using PHPP in collaboration with TUDublin

## CPD Cert. in Building Energy Modelling Using PHPP

Brought to you in collaboration with



**Next Course**  
**Starting on**  
**November 5th**  
**2021**

**Advanced CPD Cert.**  
**100 Hours online Learning**  
**6 Week, Part Time Course**  
**50 PHI credits**  
**Only £870 + VAT**

# AECB CarbonLite™ CPD Cert. Building Energy Modelling using PHPP in collaboration with TUDublin

## What to expect....

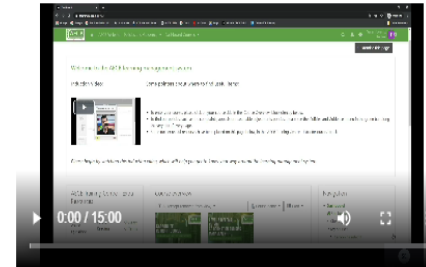
- The course employs project-based learning techniques to explore, propose and determine case-specific building, fabric and energy systems solutions that deliver energy performance comparable with the nZEB performance standard through the application of the PHPP design tool. On Completion of this course you will be able to:
- Appraise the Passive House Standard and PHPP as an energy analysis tool.
- Critically apply the PHPP tool in the energy analysis of the geometry and fabric of a conventional Irish building with typical forms and construction.
- Critically apply the PHPP tool in the selection of building services and plant for the provision of heating, cooling and hot water in an Irish building of typical construction.
- Apply the PHPP design tool at a professional level to optimise the design of a building to Passive House Standard.
- The detailed course timetable, including webinar times, self-study times and assessment dates are on webpage : <https://aecb.net/aecb-training-building-energy-modelling-using-phpp/>

# The AECB CarbonLite Training™ Centre

- Launch the Level 5 Diploma in Retrofit Coordinator and Risk Management (CLR RC) course and the AECB CarbonLite™ Training Centre in September 2021.
- Establish & Maintain the existing courses within AECB CarbonLite™ Training Centre with new QAA Processes and adapt all to our new LMS teaching platform.

Welcome to the AECB learning management system

Induction Video:



Some pointers about where to find useful items:

- To enter your course, please click on your course title in the 'Course Overview' block directly below.
- To find our policies, such as the complaints, appeals or reasonable adjustments policies, please see the 'Policies and Guidance' menu in the green bar along the very top of every page.
- Some further useful resources have been placed on this page below, in the 'AECB Training Centre - Extra Resources' block.



Please begin by watching this induction video, which will help you get to know your way around the learning management system.

AECB Training Centre - Extra Resources

- Frequently Asked Questions
- AECB Publications
- Glossary of Terms
- AECB Retrofit Standard
- Trustmark & PAS2035
- PH Ribbon
- Buy the PHPP software
- Low Energy Buildings Database
- LETI

Course overview

▼ All (except removed from view) | Course name | Card

 CARBONLITE RETROFIT COURSE THE GUIDE TO LEARN ABOUT OUR CARBONLITE RETROFIT	 LEVEL 5 DIPLOMA RETROFIT COORDINATION AND RISK MANAGEMENT BECOME A CERTIFIED RETROFIT COORDINATOR
Retrofit courses CarbonLite Retrofit	Retrofit courses Retrofit Coordination and Risk Management

Navigation

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    - > RC Course

AECB Training Discussions Forum

# The AECB CarbonLite Training™ Centre

- We would relish your feedback on our courses and proposals
- Happy to answer your queries on training and our suite courses that we offer



# The End

- Any Questions?



AECB Training Centre

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