

21st February 2020

Report on delivery of the Passivhaus Tradesperson course on behalf of Carbonlite (administered by WARM: Low Energy Building Practice).

Introduction

Since attending the Trainer of Trainers course at PHI in 2018, I made it my mission to start up a Passivhaus Tradesperson course in the UK. Up until then, it had only been the Passive House Academy (based in Ireland) that had run a few infrequent trainings in Kent, southern England, but by 2018 it was apparent that they could not make these run in a financially viable way. So the opportunity was open to create a training that could be replicated and scaled up.

The only question was how to do this – one option was to do this on my own (and therefore register with PHI as accredited trainer, but doing this I would also have to find all the participants and deal with the exam papers directly), or to collaborate with others. I chose the second option, since in general it is a better way of working together for a common outcome, and also because (in terms of construction/build design experience) I knew it would be much better to have a wide range of experience from different people to feed into the training material.

So to find a way forward, I made several site visits to:

- The previous venue in Kent (provided by Saint-Gobain) that had been used by the Passive House Academy
- The office of Passive House Academy in Ireland to discuss potential collaboration and to learn about their approach
- Ecological Building Systems training site in Ireland, during an airtightness training that they were running, to get ideas for how to set up the practical side of the venue.

I also made contact with the AECB's Carbonlite group of trainers (administered by WARM) to find out if collaboration was an option. As it happened, they were wanting to start up a PH Tradesperson course, and it seems like I was the right person at the right time, to help them work on the training materials and curriculum.

So over the summer of 2018 (from around May until September), I modified/adapted some of the existing PH designer training material, and also added lots of new material in. This involved lots of discussion about how long the training should be, who the audience was going to be, sequence of subjects, practical content, and so on. By September, I was able to run a trial training for 2 people, organised by Saint-Gobain in Nottingham. Based on this success, we then ran the first official advertised training in October 2018.

The training lasts for 2 days, which may be shorter than other similar trainings, but our main goal was to cater for both those that wanted to get certified, and those that did not need that. Here in the UK, if we would have only a 5-day training available, we would not get many people attending as

this is just too long for people to be away from work. Our compromise, which seems to work well is to have 2 days for general content, and a third half day for more detail for those taking the exam.

The target audience is contractors (from sole traders to large volume national house builders), but we also get self-builders, domestic energy assessors, and architects attending.

So far, we have managed to scale up this training and run it in several cities: Manchester, Carlisle, Plymouth, Glasgow. The idea is now to see how it can be scaled up, but the challenge still is to get enough participants for each event. The exact practical rig/set-up at each site differs.

Training content – theory vs practicals

The training curriculum has changed since 2018, but currently it looks like this:

Day 1	08:00 – 09.30	Morning	Introduction to Passivhaus
	09:30 - 10:00		Break
	10:00 - 10:30		Introduction to Passivhaus cont.
	10:30 – 11.30		Air tightness Overview
	11:30-12:00		Air test Demo – Ritchie & Ritchie
	12:00- 12:30		Lunch break
	12:30 - 13:30	Afternoon	Airtightness in Practice
	13:30 -16:30		Taping Demo – Ecological Building Systems
			Break
			Taping Demo – Ecological Building Systems
		Airtightness in Practice - wrap up	

Day 2	08.00 – 9:00	Morning	Insulation Theory
	9:00-9:30		Insulation Practical – Recognizing Insulation
	9:30-10:00		break
	10:00-11:30		Insulation Theory cont.
	11:30- 12:30		Insulation Practical – Installing Insulation
	12:30 - 13:00		Lunch Break
	13.00– 14.00	Afternoon	Thermal Bridging
	14.00 – 14.45		Windows
	14:45- 15:15		Break
	15.15– 16.15		Building Services
	16:15- 16:30		Wrap up

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Our focus in terms of content, has been on airtightness – here in the UK, air leakage in buildings, and how to prevent it, is very poorly understood, yet we live in a very windy country. To get this right, and the level of detail needed, means that we decided to focus quite a bit of time on this important topic. Our other area of practical work involves insulation (looking through samples, fitting wood fibre). For both of these, for several venues (e.g. Manchester and Carlisle) we have a practical rig set up with timber frame, plastered wall and unplastered blockwork as substrates, and a window, ducts, pipes, cables and joists to tape around.

For the practicals, we have collaborated with Iain Ritchie (blower door test) and Ecological Building Systems (airtightness practical).

Revision & exam

Not everyone attending the first two days may want certification, so that's why we have a third half day for a revision session followed by the exam for those who want to take it. Typically this starts at 08.30 and finishes by around 13.30. Before the exam, we review key information from the 2-day training, plus we go over various worked examples in more depth (including u-value calculation for example). We also talk here about exam technique (e.g. don't spend all the time on one question) and discuss certification and the re-certification process.

Training materials

There is a training manual given to each participant.

Photos

Some photos from previous trainings are shown below.



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