AECB FAQ ON PASSIVHAUS CERTIFICATION

There are three types of certification;

1. **Building**: The finished and tested building is certified using the PassivHaus Planning Package (PHPP) software, by a person/organisation appointed by the German Passivhaus Institut (PHI).
2. **Component** – a component such as windows is certified as having certain values that can be used directly in PHPP. Currently direct with PHI or appointed bodies.
3. **Designer** – This certification shows that a person has undergone sufficient training and passed an exam to demonstrate their understanding of Passivhaus principles. {Note that this does not allow building certification}

1. Building Certification

How do I get my building certified in the UK?

Certification has to be traceable back to the Passivhaus Institut in Germany. You can find an up to date list of certifiers at - http://www.passivhaustrust.org.uk/members/certifiers/

To get your design certified, the building has to be completed, because airtightness and commissioning tests need to be completed; but it is advisable to have carried out a design check before work is started on site to ensure that the design has the potential to meet the target.

How can I ensure the design is likely to be certifiable?

The best way to maximise your chances of certification is to use the PHPP software during the process of the design. You can use this yourself (AECB run training session on PHPP – see www.aecb.net) or use an Energy Consultant experienced with the software. People who have the European Certified Passivhaus Designer qualification have passed an exam to prove their competence (see below).

What do I have to produce to obtain building certification?

The nature of the PHPP software, in that it is open source, means that it can of course be altered. The process of certification therefore depends upon a completely new calculation using a fresh copy of PHPP by an appointed certifier. Therefore although a completed copy of PHPP can be submitted to show how the data entry was managed, more important is a complete submission of enough information to allow a fresh calculation.

The major inputs are listed in the front of the PHPP manual. If a design check is required before the building is to be built, the following should suffice: a full set of plans to show the floor areas, elevations and sections to show the geometry, and details to show elemental build-ups and how the elements join to demonstrate thermal bridge free construction. Additional information about the windows, the location and sizing of the building services, heating and hot water is also required.

For the final certification an air test (both depressurisation and pressurisation); evidence of Ventilation Commissioning; a declaration of the building supervisor to say the building has been completed according to the plans, and details of the appliances installed is required.

How much does Building Certification cost?

As a rule, the certification will cost around £2000 ex VAT for a single domestic property of moderate complexity. This is calculated on a time basis and hence for repeat designs, or those using the same constructional elements the cost will fall, for more complex designs the price will rise. Outline sketches or estate layouts will assist a quotation.

Note that this service does not include any significant consultancy advice; Usually this has been obtained earlier during the design phase, either through training in using PHPP or through employing and energy consultant with experience of PH design, or by using a Certified PH designer (see below).

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2. Component Certification

Component certification allows a manufacture to show that his component is both broadly suitable for PH design, and that its performance has been assessed numerically in a manner that allows direct entry of its performance into the PHPP software. Categories include:

Windows

The certification applies to the window frame, so some care must be taken that the glass to be installed is clearly specified.

MVHR

The certification for Ventilation systems is slightly different to the EN standard, being more appropriate for low energy design. Minimum values for heat recovery, fan power and noise levels are set

Building systems

In addition various Building systems can be certified; this shows that they can be used to provide a construction system and that various joins between walls, floor, roofs etc have been designed to be thermal bridge free, whilst the U values are generally in line with levels to allow Building Certification

3. Designer certification

The Certified Designer of European Passive House certification (and associated listing on the Passivhaus Institute Certified Designer register and allowed use of PHI Certified PH Designer logo in advertising) is achieved either by passing a PHI exam or by practice (i.e. completing a Certified Passivhaus building and providing PHI with evidence that you have been the designer and mastered the required skills). Training in preparation for the exam is not prescriptive and there are alternate routes in the UK:

University of Strathclyde / CEPH

The EU CEPH project (Certified EU Passive House Designer, www.passivehousedesigner.eu) is EU funded to develop with PHI a 2-week training course targeted at architects and designers already experienced in energy optimised construction and renovation. (contact: paul.tuohy@strath.ac.uk).

AECB - Carbonlite

The AECB offers modular 1- and 2-day courses covering Passivhaus design principles and use of the PHPP which assist in preparation for certification through either exam or practice. The AECB are the UK partners in the EU Pass-Net project aimed at developing a co-operation network of Passivhaus promoters. AECB aims to achieve synergy with the parallel CEPH project to achieve the common objective of high quality Certified Passivhaus buildings in practice.

Can Certified Designers certify their own designs?

No. They do not have the authority to certify their designs: this has to be done as per normal building certification routes (see Building Certification). However, obviously this qualification gives some assurance to clients that they are employing someone who has undergone the relevant training.

Do you have to be a Certified Designer to design a certified building?

No. But obviously a Certified Designer has already demonstrated ownership of the skills; so from a client perspective there may be a higher risk of failing to achieve a certified building if employing a non-certified designer.