

A Review of The International Exam for Certified Passive House Consultants and Designers

The review below is provided by the Passive House Academy (PHA), that is based in both Europe and the United States. The PHA has provided Certified Passive House Consultant courses and exams on both sides of the Atlantic and so is in a unique position to provide an overview on the suitability or otherwise of the exam to both markets.

This review was prepared by Tomás O’Leary, Co-Founder of PHA and a Senior Researcher and Lecturer at University College Dublin from 1994 to 2005. This review will focus on the following exam attributes raised as a concern by the Passive House Institute US (PHIUS) in July 2011:

- Format;
- Time (interpreted by PHA as dealing with (a) length of exam, (b) scheduling of exam and (c) time taken to get results from Passivhaus Institut);
- Difficulty Level;
- Ambiguity of Questions;
- Level of Preparedness Required;
- Potential for Misunderstanding between different Language Translations;
- Building Conventions;
- Units; and
- Relevancy for the US Market.

Participating in the Passivhaus Institut (PHI) international exam gives participants global recognition, as part of a rapidly growing community of 1,500 Certified Passive House Consultants / Designers. The international exam has been running since 2008 and is provided by 46 examination bodies in some 20 countries in Asia, New Zealand, Europe, the US and Canada. The exam is not ‘European’, therefore, but truly ‘International’.

The discussion below will make it explicitly clear that Participants in the US have nothing to fear when taking the international exam and that they are in no way disadvantaged in comparison to other regions. In fact, it will be shown below that **US participants have more flexibility than most countries** in specific aspects such as Units and translation issues.

1. Format

- The format (meaning content) of the exam is **judged by PHA to be reasonable for both Europe and the US**.
- The exam requires a mix of calculations, sketching / drawings, role-playing, review of poor construction photographs and ‘spot-the-mistakes’ in PHPP. These cover **tasks that Certified Passive House Consultants all over the world have to engage in their day to day activities**.
- If someone is relatively weak in calculations, they can still pass the exam by tackling the qualitative questions. Likewise, if someone is not good at design, detailing or sketching, they can target those questions based on calculations. The exam is thus **set up to serve those that are right-brained (creativity) as well as left-brained (mathematical)**.
- The exam is open book, so Participants **don’t have to memorize anything at all** – you can bring whatever notes you like into the exam room (but not any electronic storage or internet devices such as cell phone or laptop).

2. Time

2.1 Length of Exam

- The length of the exam, at 3 hours, is the **same all over the World**.
- It is challenging for most Participants to get all questions fully completed in this time. **The exam should be challenging**, however, otherwise the qualification is of little value.
- The PHA, like most exam providers, carry out several 'dress-rehearsals' during its courses to **prepare Participants for this issue of time pressure in the exam**. When the actual exam day arrives, these Participants are thus well prepared.

2.2 Scheduling of Exam

- **Four exam dates are provided per year**. Aside from allowing space around the summer holiday season as well as Christmas / New Year break, the exams are adequately spaced out.
- The exam **dates are generally scheduled over one year in advance**, so it is easy to plan (for example, in 2012, the exam dates are as follows: March 24th, June 6th, October 10th and December 7th). Exam providers are free to decide what time of day their exam will be held.
- PHA typically schedule their courses to finish about 2 to 3 weeks ahead of the exam, delivering the Participants at just the right time in terms of the **material being fresh in their heads**.
- The exams have thus far always been scheduled on a Saturday, so **Participants do not lose out in terms of taking time off work**. This is especially beneficial to the US where annual leave is more precious – it would be less critical elsewhere in the world.

2.3 Time taken to get results from Passivhaus Institut

- The **exam regulations are published and available for review by all Participants** (http://www.passivhausplaner.eu/englisch/download/ExamReg_complete_english_2011-07-01.pdf). In these Regulations the exam provider has 4 weeks to forward their exam papers to Passivhaus Institut (PHI), and PHI then have a further 4 weeks to complete their validation.
- The above **Regulations apply globally, so the US is not placed at any disadvantage**. It can take a considerable length of time for the exam provider to complete the first correction, so they must have the resources available to ensure they meet the deadline of 4 weeks.
- The PHA has had **no difficulty in terms of delay getting results of the validation (second correction) returned** from the Passivhaus Institut (PHI).

3. Difficulty Level

- The Learning Targets of the curriculum are published on the internet and **it is clear to all Participants what they are signing up for** (see above link for Learning Targets).
- PHA strongly feels that the exam difficulty should be pitched at a level which renders the qualification to be of high international standing. **Any qualification of high quality should indeed be challenging to achieve**. The knowledge of graduates has to be reasonable in order to provide a good service in the marketplace.
- The marks required for passing the test, namely 50%, is a good indication of the difficulty level - **you just need to achieve 50% to become a Certified Passive House Consultant**. Moreover, you don't need to answer all of the paper to achieve 50% grade so if you run out of time, you can still become a Certified Passive House Consultant.
- Level of difficulty is primarily dependent upon the quality and content of the training. **Most participants that are well prepared can meet the difficulty no problem**, whether in the US or internationally.

4. Ambiguity of Questions

- The **exam providers in the US are given the exam paper 4 days in advance** of the test date. This special privilege enables translation of the paper into dual Metric and Inch Pound units (other exam providers not needing to translate the paper get it just one day in advance).
- During the above 4 days PHI is available by telephone or e-mail to clarify any perceived ambiguity that the exam provider might have. **PHA has found PHI to be very accommodating in clearing up any ambiguities.**
- On the day, but immediately prior to commencement of the exam, the exam provider can, within reason, clear up any ambiguities there might be and **take questions from the Participants should they arise.**

5. Level of Preparedness Required

- It has been the experience of PHA that the **normal course duration of between 8 to 10 days is more than adequate to prepare for the exam.** In addition to this, Participants are advised to spend at least one or two days equivalent in home-study.
- PHA has generally **not found it necessary to organize special revision or 'cramming' sessions** outside of the normal training sessions. This would otherwise place an additional burden on the Participant in terms of costs and time input.
- All course providers should have a good sense of what is likely to come up on the exam and can prepare sample questions for their Participants to practice on. **There is simply no excuse on the part of the course provider in terms of participants not being prepared.**

6. Potential for Misunderstanding between different Language Translations

- As noted above, the **exam providers in the US have four days to clear up any misunderstandings that might arise** due to different language translations. PHA has not had problems with misunderstandings for their Participants in the US, any more than they have with English speaking participants in Ireland or the UK.
- It should be remembered that **the exam is provided in several non-English speaking countries** such as Denmark, the Netherlands, Korea, Japan, France and many more besides. Translation issues are not unique to the US, therefore.

7. Building Conventions

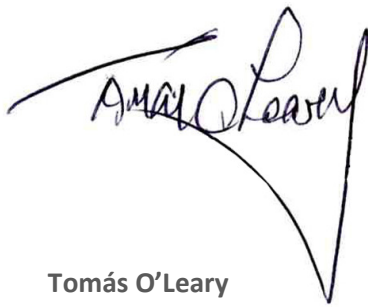
- Any international exam, to be held globally, **has to use the same building scenarios as a basis for the test.** Think of the variation in building conventions between Korea, Norway, Italy, New Zealand and the US.
- The exam tests **general PH knowledge and understanding of Passive House principles**, irrespective of specific building conventions. Adapting this knowledge to different building traditions, climatic conditions and conventions is required for designing Passive Houses in any specific region and therefore any responsible course provider must include **best practice examples for the region in which they are teaching.** PHA has had no problems in this regard.
- The whole exam is based on the work of PHI, the frontrunner in Passive House research worldwide. As an official course provider and examination body, **PHA have special access to such cutting edge input.** This includes the research on various building traditions and climates, many of which are very relevant to US climate zones.
- PHA has hosted six of the international exams and is of the considered opinion that **the US market is not disadvantaged in terms of building conventions.** The majority of questions tend to be quite generic in terms of building conventions and even if there is something on the exam that the Participant is unfamiliar with, it will not be the sole reason for them not passing the exam.
- Even **within the US, there is considerable regional variation in terms of climate and building conventions** – should these different regions have different exams too?

8. Units

- **Exam providers in the US are entitled to provide dual translation of all units**, in other words provide both Metric and Inch Pound (or English) units.
- Despite the fact that PHI are working day-to-day in Metric, **Participants in the US are allowed to answer the exam in either Metric or IP units**. This allowance demonstrates considerable flexibility on the part of PHI.
- **PHA teaches its course in the US through IP** units and their course notes (1,000+ pages) have dual units in both Metric and IP. There is absolutely no difficulty arising on the issue of units in the US, therefore, in relation to the PHA training at least.

9. Relevancy for the US Market

- Pragmatically, it is **impossible to provide an international exam that caters for the specific nuances of individual countries** or regions. In any case, PHA does not feel that this is a problem in the US just as it does not prove a problem across Europe and other continents.
- **All of the topics on the exam are indeed relevant to the US market**, such as R-value calculations for windows, 'design-a-passive-house' exercise, economics of different passive house scenarios, 'spot-the-mistakes' in PHPP (the IP version), construction detailing, review of poor workmanship and more besides.
- **Training providers can teach whatever they like in the course** over and above what is likely to be asked on the exam. PHA ensures in its courses in the US that the content is both relevant to the US and also that it adequately prepares the Participants for the International exam.



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