

## WWETB NZEB VENTILATION TRAINING COURSE

# NZEB ventilation accreditation is key to competency

The ventilation industry in Ireland is changing for the better. With the introduction of *Technical Guidance Document F Ventilation – 2019*, the quality of ventilation design, installation and commissioning is improving. In 2019, Michael O'Brien (WWETB) chaired an advisory panel which included representatives from the Department of Housing, Planning and Local Government, the National Standards Authority of Ireland (NSAI), the Sustainable Energy Authority of Ireland (SEAI), the Irish Ventilation Industry Association (IVIA) and MosArt Architects. Dara McGowan, MosArt, developed the national skills specifications to address the training needs which were then signed off by the National Advisory Group.



Michael O'Brien, WWETB.



Dara McGowan, MosArt.

**In this article** Michael and Dara answer the top 10 questions asked about the WWETB NZEB ventilation training course and the new ventilation regulations.

## The training

**Q:** *Where did the idea to set up a ventilation training course come from?*

**MOB:** Based on a meeting myself and colleagues had with representatives from the ventilation industry at the SEAI Conference the need for this training became evident.

**DWG:** When Part F 2019 was published, it was stated that "ventilation systems should be designed by competent designers and systems should be installed, balanced and commissioned by competent installers" At the time there was no course available in Ireland to prove competency.

**Q:** *What sort of content is covered on the NZEB Ventilation course?*

**DWG:** We start by introducing attendees to Part L – Conservation of Fuel and Energy 2019 and Part F – Ventilation 2019. We present the most important requirements in these two documents in an easy-to-interpret fashion.

We then focus on ventilation-specific content. There are many ways to ventilate a dwelling, but we currently focus on the three main ventilation strategies outlined in Part F 2019, namely (1) natural ventilation, (2) continuous mechanical extract ventilation (CMEV) and (3) mechanical ventilation with heat recovery (MVHR). We look at these strategies in great detail and teach best practise methods for designing, installing and

commissioning them. Of course, learning how to calculate minimum ventilation requirements is an important part of this section too.

**MOB:** It is the practical training that makes this course so special, with around 40% of the learner's time spent working through hands-on practice and application. This is consistently mentioned as a highlight for our learners in our feedback forms. Practical training is completed on purpose-designed training rigs which allow attendees to experience real-world installation and commissioning scenarios. Learners get hands-on experience with multiple ventilation strategies, installation options and measuring equipment.

At the end of the course, you have to complete a theory exam and a practical assessment, both of which must be successfully passed before you receive competency certification.

**Q:** *Does successful completion of this course mean I can carry out independent validation?*

**DWG:** No, upon successful completion of this course you will be deemed competent to design and install ventilation systems.

**MOB:** If you wish to become an independent validator you must first complete a Ventilation Proficiency Test, which is also run by WWETB. This test is designed to ensure candidates have their anemometer configured correctly and know how to use it properly. Once you have successfully completed this assessment, you can contact Gary O'Sullivan (Certification & Inspection Officer Sustainability & the Built Environment of the NSAI), who will schedule a validation test with you.



Attendees commissioning an MVHR system in the WWETB NZEB Training Centre in Enniscorthy, Co Wexford.

**Q:** *Is successful completion of the NZEB ventilation course the only way to prove competency in ventilation design and installation?*

**DWG:** While not mandatory to take the NZEB ventilation course to prove competency, as far as we are aware there are currently no other approved courses available in Ireland. In developing this course, we worked very closely with Emmanuel Bourdin (Built Environment Advisory Unit of the Department of Housing, Planning and Local Government) and Gary O'Sullivan (NSAI) to ensure that successful course candidates have the competencies required to work in the ventilation industry. The NZEB ventilation digital credential awarded to all those that pass the assessments can officially be used as proof of competency.

**Q:** *How much does it cost and what certification will I receive upon successful completion?*

**MOB:** You may qualify for funding under the Skills to Advance initiative (STA). STA is a SOLAS initiative in partnership with WWETB and supported by Government. You must have an Irish PPS Number to qualify for funding. Upon successful completion of the course assessment, you will receive the following award: Nearly Zero Energy Building (NZEB) Ventilation

(City and Guilds Assured), which can be used as proof of competency in ventilation system design, installation, commissioning and balancing.

If you are not eligible for funding, the NZEB ventilation course costs €300. All WWETB NZEB courses are certified.

## New ventilation regulations

**Q:** *Can I distribute the overall ventilation air in a different way to that outlined in Part F – 2019?*

**DWG:** Technically, Part F is a guidance document so you can use different calculation methodologies but, it is your responsibility as a designer to prove compliance with Part F, or equivalent. This can be a difficult process, so you are safer sticking to what is outlined in Part F.

**Q:** *Can natural ventilation be used in an NZEB building?*

**DWG:** Yes, natural ventilation can be used where the air permeability of the dwelling is between 3 m<sup>3</sup>/hr.m<sup>2</sup> and 5 m<sup>3</sup>/hr.m<sup>2</sup>. You should be aware that there are calculation methodologies outlined for this "system" too. It's worth noting that most new-build projects are using some form of continuous mechanical ventilation, so natural ventilation seems to be on its way out.

**Q:** *What exactly is the independent validator checking?*

**DMG:** The independent validator will

measure supply and extract rates to ensure they are within a tolerance of the designed ventilation rate. It is not the independent validator's responsibility to confirm that the system is compliant with Part F, nor is it his/her responsibility to check installation details, although they can take note of poor installation in their report. The validators are checking that the actual flow rates are within the following tolerance of the designed flow rate: +/- 10% where the designed flow rate is above 10 l/s or +/- 1 l/s where the designed flowrate is below 10 l/s

**Q:** *How many independent validators are currently registered; how much will it cost and who pays for it?*

**DMG:** There are 18 independent validators at the time of writing. These validators are spread across 10 counties. The cost of independent validation is market driven. It will likely be similar to the cost of an air permeability (blower door) test. As to who pays the validator, this will vary depending on the contract in place for the project but ultimately the cost will fall on the homeowner. In my opinion this cost is well worth it, however, given the importance of ensuring good indoor air quality.

**Q:** *If a system is not presented in Part F, does that mean it cannot be used in an NZEB dwelling?*

**DMG:** Not necessarily. For systems that are not presented in Part F it is the responsibility of the manufacturer to provide proof that its system can ensure indoor air quality as good, or better, than systems outlined in Part F. This is usually done via Agrément certification.

For more information visit: <http://nzeb.wwetbtraining.ie/>. To register for the NZEB ventilation course, contact WWETB directly at [nzeb@wwetb.ie](mailto:nzeb@wwetb.ie). ■