



A Passive House, the crème de la crème of housing, benefiting the environment and comforting its residents - but how do we get there?

Passive House is designed and tested to maintain a steady, comfortable, healthy temperature all day, all night, all year round. At the same time, the design helps residents conserve energy, reduce heating costs, and ultimately reduces the building's ecological footprint.

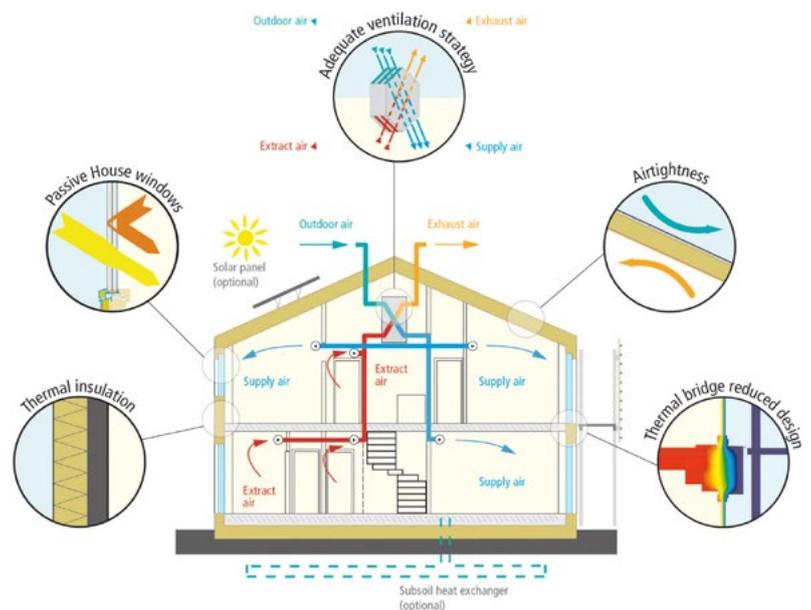
Passive House is a building standard

which is achieved by implementing these 5 principles:

- Thermal bridge free design
- Superior windows
- Ventilation with heat recovery
- Quality insulation
- Airtight construction

Passive House Certification

Passive House is officially certified by meeting the building standards set by the Passive House Institute in Germany. This building certification means that the defined criteria have been met, the house has been tested and therefore will perform just as it has been designed. All Passive House criteria can be found [here](#). Passive House is quality assured for both the resident, and the designer!



[Source](#)



Oculus' services now extend to include Passive House Certification by Principal Analyst Denise Martin.

Oculus' Passive House expert Denise Martin has recently achieved the status of certifier by the Passive House Institute. If all PH criteria are met, Denise can now provide the building owner with the official certificate, a supplementary booklet with documentation of the energy balance calculation, as well as all relevant characteristic values of the building (and an optional wall plaque - fancy).





Process of Certification

The process of certification depends on the complexity of the project as well as the chosen approach. It is recommended contact is made with Denise early on in the planning process to help identify and eliminate any potential problems early and find a solution quickly. However, submitting all documents after the completion of the construction works too. Here is a short outline of the three different approaches you can choose:

1. Work with a certifier right from the start (the planning phase) of your project, this way on-going evaluation and feedback from the certifier will allow your project to run smoothly. Necessary corrections can be implemented easily during the course of the project, and in this case the process of certification may take several months.
2. If 1. is not an option for you, ideally you consult with a certifier after the design phase, before the start of construction. Submit all energy-relevant documents and technical data of the construction products. This way the certifier can check and compare with the energy balance certification and give feedback on necessary corrections. This means that potential problems can be solved prior to construction.
3. After completion of the whole project (end of construction) the building will be checked as part of the final inspection. If any problems occur, it might be difficult to resolve them at this stage. When submitting the final documents, the process of certification may only take a few weeks, depending on the complexity of your project.

There are currently 37 certified Passive Houses ([Source](#)) and only four Passive House certifiers in New Zealand. Denise is one of them! There is room for expansion on the Passive House building front, so if you have been pondering be quick and contact denise@oculusltd.co.nz

"As a building certifier we uphold a quality assurance process on behalf of the Passive House Institute. We have a responsibility in remaining independent from the design team, but to also provide guidance for the designers in the country, which can be a balancing act. It is great to see how Passive House is starting to shape the industry in a positive way and providing a clear pathway towards a zero-carbon future in our field." - Denise Martin



Denise's Background

Denise Martin is a consulting building analyst in the residential and commercial building sectors of New Zealand and Australia. She founded BEO Ltd and is now the Principal Analyst for Oculus Engineering Ltd.

Denise has been a certified Passive House Designer since 2014 and worked on several Passive House Projects across new Zealand and Australia. She recently became accredited as a Passive House certifier.

Contact Denise@oculusltd.co.nz unless she's teeing off at the Arrowtown Golf Course, or being part of local musicals & performances - and if she's not there, you can find her enjoying a drink at the pub.



Major Certified Passive House Projects

- Bader Ventura Passive House New Build Project [ID6665](#)
- Christchurch Low Energy Building Project [ID6525](#)
- Glendowie Passive House Project [ID2326](#)
- Beachlands Passive House Plus Project [ID4087](#)
- Wanaka Passive House Project [ID4655](#)
- Christchurch Passive House project [ID4073](#)

