



# Beattie Passive

## General FAQs

### What does Passivhaus mean?

The term 'Passivhaus' refers to a specific construction standard for buildings, which have excellent comfort conditions in both winter and summer. By using super-efficient insulation and excellent airtightness coupled with mechanical ventilation with heat recovery (MVHR) system, Passivhaus design can create healthy and comfortable homes that require minimal heating.

Heat generated from the sun through windows, occupants' body heat and cooking and showering activities are often all that are needed to warm a Passivhaus home. Passivhaus dwellings typically achieve an energy saving of 90% compared to the average house and 75% saving in space heating compared with a new house built to UK's current Building Regulations.

### What are the benefits of Passivhaus?

There are multiple benefits of building Passivhaus, the chief amongst them being:

1. Low energy costs
2. Low running costs
3. Continuous comfort living environment – a perfectly balanced living environment: warmth, humidity, noise, dust are all managed for optimum levels
4. No draughts - a similar temperature whether by a window or in the middle of the room
5. Increased sale value

### What are the extra benefits of Beattie Passive?

Beattie Passive delivers the following benefits:

1. Full flexibility of design
2. 90% reduction in heating requirements
3. CO<sub>2</sub> emissions can be cut by as much as 100%
4. High levels of fire safety, sound-proofing, thermal efficiency and air tightness
5. Fast on-site or off-site erection
6. Minimal on-site material waste
7. Only semi-skilled labour required for erection
8. Sustainable materials from a fully certified supply chain
9. Easier inspection as all structural elements are visible to warrantee inspectors

All Beattie Passive structures are tested and certified at structural completion to ensure they are built as designed.

### Is it harder to get planning for a Passivhaus?

No, it is no more difficult to get planning for a Passivhaus than normal developments. From recent indications it appears easier to get planning for a Passivhaus build.

### Will my house be Passivhaus certified?

The Beattie Passive system builds beyond Passivhaus standards and if desired can easily achieve Passivhaus certification.

### How long does it take to build?

Beattie Passive houses take no longer than traditional build and in most cases can be completed faster.

### Aren't Passivhaus expensive?

Beattie Passive build has comparative costs to traditional build, with the added benefits of delivering an advanced building with limited heating requirements and far greater levels of comfort.

### Can I get a mortgage?

Yes, Beattie Passive is being mortgaged by all mainstream financial providers.

### Can we have any design / are there any design limitations?

The Beattie Passive Build System is fully flexible and can be built in any design, shape or size. From a small cottage, large house, block of flats or offices to something as complicated as St. Paul's Cathedral. Beattie Passive can turn your vision into a high quality energy efficient building. Beattie Passive design team will incorporate any design, shape or style of architectural drawings into our 3D modelling system and deliver a custom made package incorporating all the key Passivhaus values of our build system.

### Does the system have to be built out of timber frame?

People are often reticent about timber frame homes in the UK, the Beattie Passive system has taken into account all the concerns regarding timber frame and overcomes these issues. The system's methodology, connections and use of high performance fibreboard gives any structure very high racking strength and stability. This board also enhances fire protection between dwellings to 2 hours instead of the mandatory 1-hour for UK Building Regulations. Sound migration is also increased from a mandatory 45dB to a Beattie Passive 57dB (6 times better than building regulations).



# Beattie Passive

## General FAQs continued...

### **Do the buildings have a particular finish?**

No, there is no limitation on the external finish of the building. This can be anything from render, to wood cladding to traditional brickwork.

### **Will the timber frame rot? How long will it last?**

No, all the wood used in the Beattie Passive build is pressure treated and has a life expectancy of 60+ years. Though realistically this should be 500+ years.

### **Are the materials available locally or do they need to be imported?**

Beattie Passive has been designed to be sustainable and support local economies. All the materials for the Beattie Passive system are A+ rate in the BRE Green Guide and can all be purchased from local building suppliers.

### **How can renewable energy sources be integrated?**

Renewable energy sources such as Solar thermal and PVs can be easily integrated into the Beattie Passive build, and often are.

### **Can I have a fire?**

Passive type wood burners are available. Whilst due to the high-energy performance of the building you shouldn't need a fire to heat the house, some residents have installed either electric or wood fires for aesthetic reasons. Therefore it is possible to design and install fireplaces into any Beattie Passive building.

### **Can I open a window?**

Beattie Passive occupants may open windows whenever they want. A Passivhaus is continuously supplied with fresh air via the ventilation system, which does a far better job of consistently bringing fresh air in than simply opening windows. This has advantages: unlike just opening the windows, fine filters in the ventilation system keep dirt and pollen out- a blessing for those who suffer from allergies and respiratory problems.

Indoor air quality is always excellent, even when occupants are away and/or windows are never opened. Of course, as with all houses, if windows are left open for longer periods with extreme outdoor temperatures, the inside air temperature will be affected and energy consumption for heating / cooling will increase. But don't worry, an open window only slightly alters the Mechanical Ventilation and Heat Recovery fan operation.

### **Can I have a gas cooker?**

Yes, due to the high levels of ventilation gas appliances are not a problem.

### **Can I put up a shelf / pictures etc. – will I puncture the walls?**

Yes, all Beattie Passive buildings are built with a service void around the walls allowing you to put up pictures etc. without puncturing the insulation or air tightness barrier.

### **Why do I need an MVHR unit?**

Well-designed MVHR systems are essential in very airtight buildings to ensure good indoor air quality, a comfortable draught free environment with lower energy demands. Poor ventilation can result in condensation forming on internal walls, which encourages mould growth, which can cause health problems for the occupants.

### **Will it get too hot in summer?**

All well designed Passivhaus include shading and the MVHR includes a summer bypass so it does not recover the heat . If it is unusually hot weather you can still open a window as normal (See technical FAQs).

### **Will it be warm in all rooms or just the rooms that we are in?**

The MVHR takes heat from all rooms and distributes it equally throughout the home. The pre-warmed air is filtered and then re-distributed around the house.

### **Is radon a problem in a Passivhaus?**

Beattie Passive is the only system to include a radon barrier as standard at foundation level and a ventilated ground floor, which protects against ground gases.

### **What buildings can be retrofitted?**

All buildings that can be externally clad can be retrofitted with the Beattie Passive system.

### **Will a retrofitted house look different?**

When you Retrofit with the TCosy™ the external façade and the shape of the house can be totally transformed, providing the house with a "face-lift". However, the design and finish is totally up to you.