

Code for Sustainable Homes Assurance Scheme



Low Energy - Low Carbon



Kingspan®



The Kingspan Lighthouse
The UK's first Code for Sustainable Homes level six house. The Kingspan Lighthouse is also the only level six house to receive post-completion sign-off.

Kingspan Century has launched a service to ensure their customers' buildings achieve the desired Code levels

Blower Door Testing
As part of the Code for its Sustainable Homes Assurance Scheme, Kingspan Century has developed air-tight details and systems and will undertake pre- and post-completion air pressurisation testing.

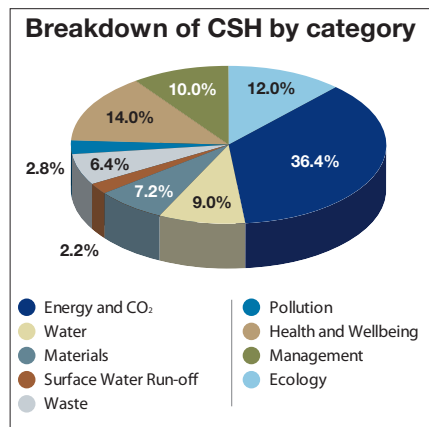


The Code for Sustainable Homes

Implemented in England during 2007, the Code for Sustainable Homes (CSH) is designed to bring about a step-change in sustainable homes building practice. It aims to achieve this by setting new standards for the key elements of housing design and construction that affect the sustainability credentials of a new home.

What does the Code measure?

The Code measures the sustainability of a house design by considering its performance in nine specific categories and rating the whole house as a complete package.



Points for sustainability and environmental performance are awarded to a house design in each of the nine categories and the sum total of the points achieved is converted into a star rating system, which ranges from level 1 (36 points) to level 6 (90 points).

When is the Code being implemented?

In order to deliver consistent improvements in the environmental performance of new build homes, reaching progressively higher levels of the Code will become mandatory over the coming years. In England,

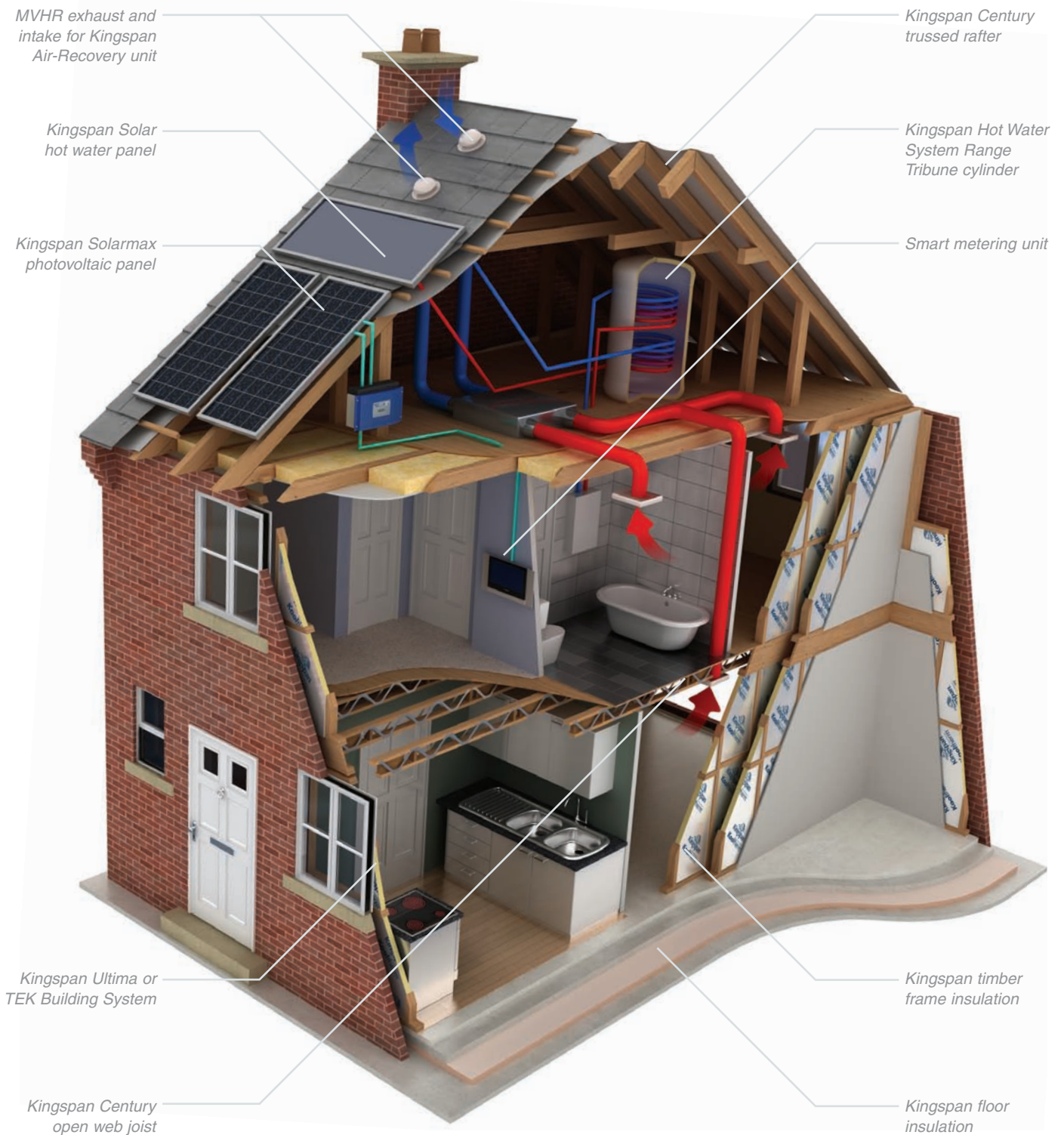
for public funded homes, level 3 was implemented in 2007, level 4 will be introduced in 2010 and level 6 in 2013. All privately funded housing will be required to reach level 6 by 2016.

How do you achieve a Code rating?

The way to reach various levels of the Code has been kept flexible to enable points to be gained using different approaches to house design. However, certain minimum standards have been set at each level for some categories, such as energy efficiency and water use.

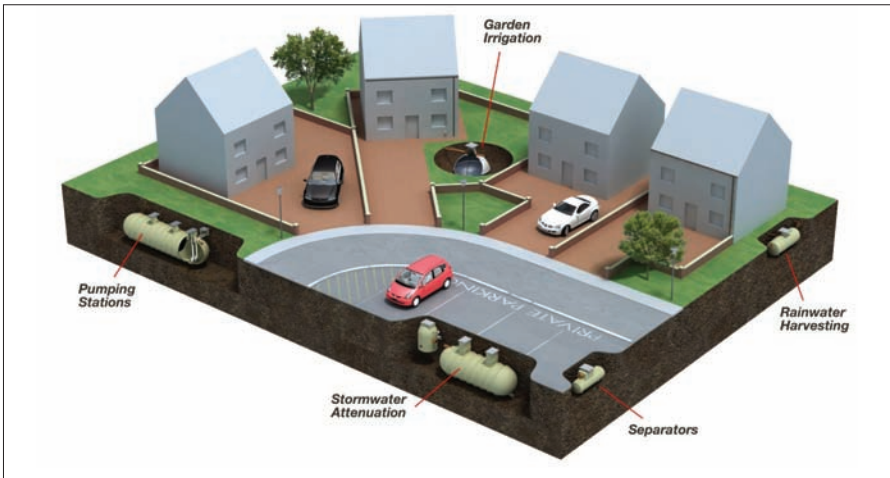
For example, in order for a house design to achieve level 1 it must be 10% more energy efficient than a home built to the 2006 Building Regulations standards. It must also be designed to use no more than around 120 litres of water per person per day. Surface water management and site waste management must also be included in the house design and all materials used in its construction must achieve at least a 'D' grade in BRE's Green Guide 2007.

In England level 3 was implemented in 2007, level 4 will be introduced in 2010, level 5 in 2013 and level 6 in 2016



Achieving Code Level 4

One of the many ways that Code level 4 can be achieved. This example shows a Kingspan Century timber frame structure insulated with Kingspan premium performance insulation, a Kingspan Solar hot water system coupled with a Range cylinder, Solarmax photovoltaics supplying electricity into the property and a Kingspan mechanical ventilation heat recovery system.



Sustainable Drainage
Kingspan has a number of sustainable drainage systems available. Advice should be sought from the Kingspan Building Performance Services Team

While these criteria are compulsory in order to reach level 1, they only deliver 2.7 points in total, which means that the house design must be awarded a further 33.3 points for its sustainability and environmental credentials. House builders and designers can achieve these in a number of ways such as including accessible drying space, energy efficient lighting, storage, flexible living spaces and external recycling systems within the house design.

When it comes to achieving level 3, the house design must be 25% more energy efficient than one built to the 2006 Building Regulations

standard. It must also be designed to use no more than 105 litres of water per person per day. The house would be expected to deliver similar levels of surface water management and site waste management as the level 1 house,

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as well as use construction materials that achieve a 'D' grade in the Green Guide.

Again, as with the level 1 house, these measures only achieve a proportion of the required points to reach level 3, just 10.3 of a total of 57. Therefore, the house design must again include a range of additional design features to improve its overall sustainability credentials and environmental performance.

This method of offering the housebuilder the flexibility to choose how the desired level of the Code is achieved adds another level of complexity to the design and build process.





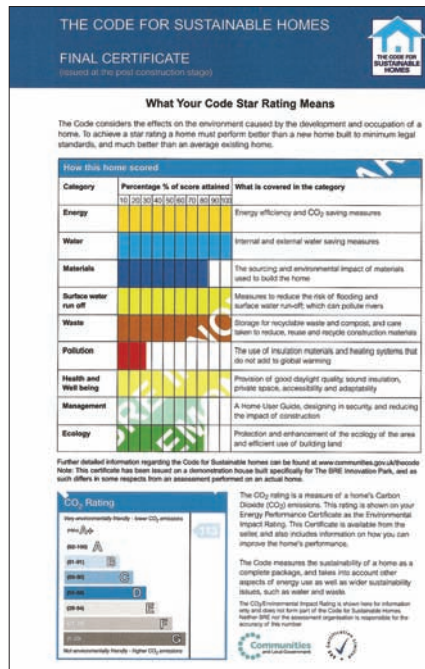
Kingspan Century Code Assurance Scheme

Whilst designing and building the multi-award winning, zero-carbon, Code level six Kingspan Lighthouse, Kingspan identified areas of the process that would benefit from a more integrated and holistic approach.

As a result, Kingspan has launched a service to ensure their customers buildings achieve the desired Code levels.

The scheme employs the company's detailed knowledge of how to meet the demands of the Code.

The bespoke service will prove crucial to organisations looking to achieve a desired level when building new properties.



Comprehensive Offering

Kingspan Century, as part of its Code for Sustainable Homes Assurance Scheme, provides U-value, SAP calculations and Energy Performance Certificates.

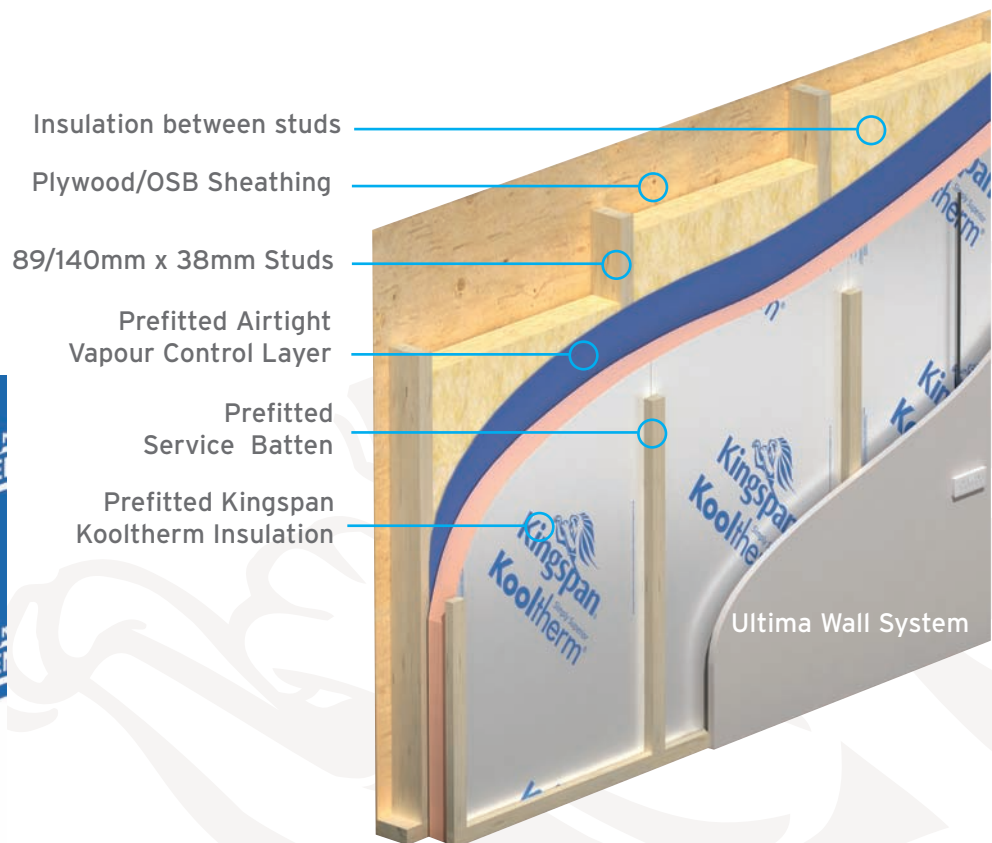
The team provides the service from pre-design stage and addresses all areas of the Code, incorporating aspects such as air-tightness, waste recovery levels and CO₂ emissions.



TEK Panel spline joint



TEK Panel





An innovative full Code assessment service

The scheme offers support on all areas of the Code for Sustainable Homes. A special Building Performance Team, comprising key members behind the Kingspan Lighthouse project, has been created.

The team provides a service from pre-design stage and addresses all areas of the Code, incorporating aspects such as:

- Fabric and renewable specification;
- Design stage Code assessment;
- Pre- and/or post-completion air-leakage testing;
- Post-completion Code assessment; and
- Post-completion Code certification.

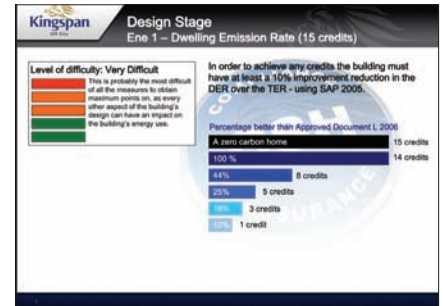
Who better to offer this guidance and testing than the manufacturer of the building fabric components being used in the building – the person who knows most about the products?

Kingspan Century

Kingspan Century offer a range of timber, steel and façade systems as well as self-built solutions through the Zen Haus brand. The flagship façade collection includes complete through wall systems as well as a range of individual components, such as steel framing and cladding options. Timber solutions include the Kingspan Ultima Building System and the TEK Building System, as well as engineered timber components: trusses and joists. Steel products include the structural Metro Building System, framing systems, a range of sections and profiles, and floor and ceiling cassettes. The Kingspan Century collection is completed by a choice of balconies, SUDs and low carbon technologies.

CPD Support on the Code for Sustainable Homes

Kingspan Century can provide a CPD presentation on the Code for Sustainable Homes and Kingspan's Assurance Scheme. Please contact Kingspan Century for booking information.



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