Living up to the Code for Sustainable Homes

Martin Horne (pictured right) frameCHECK consultant within TRADA Technology's Construction Services team, reviews how timber frame performs against the Code for Sustainable Homes

The Code for Sustainable Homes (CSH) was launched in April 2007 as a replacement for the Ecohomes assessment of new housing. From May 1 last year, a code rating for every new home in England became mandatory. This does not mean, however, that every new development must now conform to stringent energy efficiency demands: the ratings could range from zero carbon Level 6 or a Building Regulations compliant level 0. A nil rated certificate can be obtained free of charge, with no assessment needed.

A number of local housing associations in England, though, are already insisting on a minimum Code rating of Level 3 for all new build projects. Over time, the Government is expected to implement mandatory levels for all new build developments and to increase that mandatory level up to Code Level 6, to meet its well-publicised 2016 zero carbon target. The jury is still out, though, on what exactly zero carbon means.

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Wales has adopted the CSH differently. From May 2008 a minimum Code Level 3 is required for all new housing promoted or supported by the Welsh Assembly Government or Assembly Government-sponsored bodies. As part of a pilot scheme, registered social landlords are being asked to identify schemes that may be developed to meet the higher Code Levels of 5 and 6. Housing developments promoted or supported by the Welsh Assembly Government will follow this approach.

I-section joists used as structural timber studs

The use of timber frame in a development creates a number of advantages

The construction industry in Scotland can breathe a sigh of relief as the CSH is not yet being implemented there and for now, the established Ecohomes assessment will continue to be used. The Code is not in use in Northern Ireland either.

One of the key differences between the two schemes is that the Ecohomes assessment is based upon the overall rating for the site, built up from various elements including location, ecology and amenities. The CSH assesses the sustainability of individual dwelling types calculated on a 'points out of 100' basis across nine categories, a similar credit system to Ecohomes.

The CSH appears to be a complicated animal when the lengthy technical guidance manual is first opened. Upon further digestion it becomes clear that the CSH provides an objective tool for defining standards whilst covering many aspects of sustainable building and its associated environmental implications. There is flexibility in how points are achieved across the nine categories, but some performance aspects are mandatory, as the table below summarises.

For a CSH assessment, the use of timber frame in a development creates a number of significant advantages over the use of any other construction material. It can provide highly thermally efficient, airtight buildings and scores highly in the Green Guide ratings, which contributes to the building fabric score within the code's Energy category, and the Environmental Impact of Materials in the Materials category respectively.

The assessment itself consists of two stages. The first is the Design Stage Assessment, which provides an understanding of the dwelling and how it is to achieve the desired rating. This requires a more detailed specification than Building Regulations compliance, because the CSH covers many more aspects of the performance of the dwelling and the development.

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Stage two is the Post Construction Stage Assessment, carried out throughout the construction process, ensuring that the specification provided for the Design Stage is being constructed in reality. On large multi-phase developments it is likely that the Design and Post Construction assessments are an ongoing process, as more of the build is completed.

Given that the CSH requires close attention to detail from the outset, it is often more economical to employ a CSH assessor at the early stages of the development, ie in the period up to the issue of tender documents, to avoid costly delays or exceeding any budgets if things go wrong. It is also useful to select an assessor whose broad base of knowledge and experience can provide more than just an assessment based on submitted data, but who can help the client achieve their wider aspirations.

For more details, visit www.trada.co.uk or email mwinn@trada.co.uk

CATEGORY	COMMENTARY
1 Energy & CO_2 Emissions 2 Water	These two areas are considered the most important and are therefore the least flexible. Minimum levels of performance are set for each Code Level.
3 Materials 4 Surface Water Run-off 5 Waste	Minimum performance levels are set for Code Level 1 only.
6 Pollution 7 Health and Well-being 8 Management 9 Ecology	No minimum standards are set. However large point scores are available in these categories making it likely that these categories will be relevant.