



Code for Sustainable Homes

The Code for Sustainable Homes (CfSH) is a sustainability assessment tool adopted by the Department for Communities and Local Government in 2006 for producing environmental assessments of new housing. The Code is largely based on the BRE's EcoHomes assessment tool.

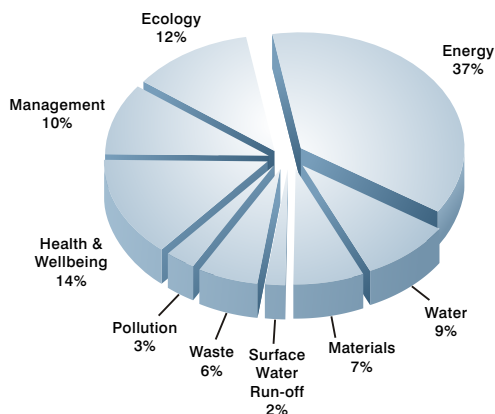
- The code uses a rating from 1 to 6 stars. Even Level 1 is beyond current building regulations standards.
- Each dwelling is given an individual rating.
- There are minimum mandatory levels in a number of areas that must be achieved before any star rating can be met.
- The Code demands higher minimum standards for energy and water to be met for each Code Level
- The assessment is performed in two stages with 'Final' Code certification following a post construction review.

The Code covers nine key areas:

- Energy and CO₂ Emissions
- Water
- Materials
- Surface Water Run-off
- Waste
- Pollution
- Health and Wellbeing
- Management
- Ecology

Within each of these key areas points are awarded for exceeding the minimum targets. There are 100 points available across the categories; the points are tallied across all the areas to come up with a score per dwelling. A minimum score is required to reach each Code level.

Breakdown of CSH Points



Code levels	Score > =
Level 1 (★)	36
Level 2 (★★)	48
Level 3 (★★★)	57
Level 4 (★★★★)	68
Level 5 (★★★★★)	84
Level 6 (★★★★★★)	90

Along with the minimum mandatory requirements for each category there are further additional mandatory requirements for Energy and CO₂ Emissions and Water.

The **Energy and CO₂ Emissions** levels are related to the performance of the dwelling against the energy efficiency standards set out in Part L of the Building Regulations 2006. The additional mandatory requirements for Energy and CO₂ Emissions in the Code are based around exceeding the Part L Target carbon Emission Rate (TER) by a percentage as shown in the table below.

Code levels	Mandatory Energy Improvement on Part L 2006
Level 1 (★)	-
Level 2 (★★)	-
Level 3 (★★★)	25%
Level 4 (★★★★)	44%
Level 5 (★★★★★)	100%
Level 6 (★★★★★★)	100% plus offset small power

As can be seen from this table, even to qualify for Code Level 1 it is necessary to go beyond simple compliance with Part L 2006. For a Level 6 development, a "True Zero Carbon" dwelling is defined as where the net carbon dioxide emissions from all energy used in the dwelling are zero or better. This includes energy used by all electrical appliances and cooking in addition to the heating, cooling and lighting installations calculated in the TER.



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Mandatory levels are also specified for Code levels which limit the use of **potable water in the dwelling**. The water use is calculated using a standard methodology based on the number and type of fittings and appliances specified for each dwelling. The table below shows the credits available and the mandatory code levels required.

Water Consumption	Credits	Mandatory Levels
≤ 120 l/p/day	1	Levels 1 and 2
≤ 110 l/p/day	2	
≤ 105 l/p/day	3	Levels 3 and 4
≤ 90 l/p/day	4	
≤ 80 l/p/day	5	Levels 5 and 6

Achieving Planning Requirements

It is common now for planning conditions to be set for achieving a particular Code level within a development. Code Level 3 or 4 are the most common targets set; occasionally Code Level 6 is targeted.

The energy target is easier to achieve for Level 3 than Level 4. A Level 3 target can often be met with relatively minor adjustments to a good quality building fabric specification and the incorporation of local renewable energy systems, most commonly solar hot water heating. It is possible to achieve this target without the application of renewables by designing the building form to maximise passive solar heat gain or, currently, through the use of heat-pumps for heating. To achieve the Level 4 requirements requires a more extensive review of the building energy strategy. These targets should be tested early in the development process through the use of Standard Assessment Procedure (SAP) calculations.

The water use targets for Levels 3 & 4 are the same. There are generically two ways of complying with this in most cases. Firstly, the lowest cost option is generally to use water efficient sanitaryware and fittings. This does limit the range of fittings available. Secondly, to broaden the choice of fittings and to allow for increased flow rates a rainwater or greywater recycling system can be installed within the dwelling or development.

It is also important to note that the mandatory surface water run-off requirement is significantly harder to achieve for a greenfield development than a brownfield development. For a Greenfield site it is likely to drive the inclusion of a rainwater collection system or if ground conditions are suitable, significant use of soakaways.

In order to maximise a development's code potential in a cost effective manner it is important to get good strategic advice early in the project. Mecserve's Sustainability Team are available to provide high quality, technically robust advice at any stage of the project.

What is different about Mecserve's Service?

Mecserve only employ 'Code for Sustainable Homes' assessors with a background in construction and engineering. This means that we can deliver strategic advice that is practical and effective. Our concise, balanced advice can be especially valuable at the planning and pre-planning stages of a project to establish Client requirements and to match these to practical solutions.

Mecserve has experience across a vast array of building types from residential to offices and hotel developments, including listed and historical buildings. Current clients for sustainability advice include:

The Crown Estate	St Mungos
Grosvenor	Western Ridge
Terrace Hill	Village Homes
Barratt Developments	

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