

FILE NOTE

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CODE FOR SUSTAINABLE HOMES APRIL 2008 UPDATE BRIEFING NOTE ON CHANGES

INTRODUCTION

The April 2008 version of the Code for Sustainable Homes came into effect on 1st May 2008.

In terms of the changes since the October 2007 version, many are just minor clarifications. Most of the significant changes relate to Ene1, Ene7 and Sur1 credit areas. This briefing note covers the changes; it does not give an overview of the Code itself.

In general, most credit areas have had the 'schedule of evidence required' updated to streamline the requirements, and clarifications added to ensure they are "technically robust".

Following concern regarding a number of the changes to Ene1 and Ene7 credit areas, CLG issued an Addendum on 4th June 2008. This briefing note has been updated to reflect the information contained in the Addendum.

The April 2008 Technical Guidance document and Addendum can be found on the Planning Portal website: <http://www.planningportal.gov.uk/england/professionals/en/1115314116927.html>.

As of 1st May 2008 it became mandatory for all new homes in England to have a rating against the Code, with the Home Information Pack (HIP) regulations being amended to require as part of the HIP a 'sustainability certificate' stating the Code for Sustainable Homes level achieved (nil-rated or Level 1-6). It should be noted that this legislation does not require achievement of a particular level of the Code: http://www.opsi.gov.uk/si/si2008/pdf/uksi_20080572_en.pdf.

ENE1: DWELLING EMISSION RATE

Baseline TER

In the April guidance, this was changed to require calculation of the most suitable TER for the dwelling depending on the most appropriate fuel for the site (i.e not related to whether gas heating or electric heating is being used). This was an attempt to close the loophole whereby it was possible to achieve a Code 3 (Ene1) electrically heated dwelling which in terms of absolute calculated CO₂ emissions was worse than a gas heated dwelling built to Building Regulations compliance. However, the addendum changed this requirement back to the definition of TER as per part ADL1A of the Building Regulations – i.e. now there is no change from the October 2007 version of the Code guidance.

Cooling

Energy consumption related to cooling (where installed) has to be calculated separately for the CO₂ emissions calculation. This is because DER and TER calculations do not currently take cooling into account.

Low energy lighting

For Ene1 Code 1-5 the CO₂ reduction is calculated purely on the difference between the dwelling TER and DER (albeit taking cooling into account). This means that the energy saving effect of low energy lighting is capped at 30% (as per Part ADL1A rules). However, for Code 6 the full benefit of the actual percentage of low energy lighting specified can be taken into account.

Onsite renewable/ low carbon installations

To count as 'onsite', Low or Zero Carbon (LZC) technologies must "directly supply the dwelling with heat and/or electricity through a direct connection to the property or through private wire arrangement" and must be located "on/in the dwelling, its curtilage or elsewhere on/off site provided that there is a direct connection to the dwelling".

Zero carbon homes

The definition has now been fully aligned with the final definition for Stamp Duty Land Tax (SDLT) relief. The calculation methodology is set out in SAP Section 14, and allows for the full benefit of low energy lighting to be taken into account, and allows the Part ADL1A requirement for secondary heating (which exists for DER calculations) to be omitted where applicable. However, the homes must still meet the requirement for Ene1 Level 5 – i.e. that the emissions as calculated by SAP (DER) must be zero or better.

The CO₂ emissions from appliances and cooking (as calculated by the formula in the Code guidance) and cooling (if applicable), less any benefit from low energy lighting and the omission of secondary heating, must then be offset by "renewable power produced either within the area of the building and its grounds, elsewhere in the development, or elsewhere as long as the supply is via a private wire arrangement with robust contractual agreements in place to ensure continued supply over time".

The requirement for Heat Loss Parameter (HLP) less than or equal to 0.8W/m²K has not changed.

Allocating CO₂ savings when LZC installations serve other uses

"Where energy and LZC technologies service other users (e.g. mixed-use developments), both the thermal and electrical output should be allocated between all users in relation to their proportional net floor area".

The rules for this appear to have been set for ease of assessment rather than being based on practical engineering considerations. Fulcrum has lobbied CLG/BRE to think about the implications of this definition (and potential unintended/ perverse outcomes) but unfortunately we have not been successful for this update. We are taking this issue further with them in an attempt to get a more useful definition agreed.

PV panels in multi-dwelling buildings

Where PV panels are installed to serve multiple dwellings in a single building, the benefit should be allocated to each dwelling served by floor area.

Where PV panels are installed to serve only common areas in e.g. blocks of flats, the benefit can be allocated to all flats in the block by floor area.

Calculating the number of credits to be awarded

To work out the number of credits to be awarded, the calculated percentage saving must be truncated to an integer percentage. For example, if you had a calculated 43.96% saving, this would be truncated to 43% (this is not a change, but a reminder).

Reference to attaining Code levels

There is a strong point made in the updated guidance that a dwelling cannot be described as attaining a particular level of the Code based solely on the CO₂ emissions reduction. We are all probably guilty of misconstruing this at some point, but a dwelling should only be described as achieving a certain Code level when it is related to the Code in its entirety, not just Ene1 (or Wat1, etc).

ENE3: INTERNAL LIGHTING

A special case relating to fittings which consumes less than 5W (e.g LEDs) has been added.

ENE6: EXTERNAL LIGHTING

Special cases have been added relating to: external lighting managed by a Local Authority; where existing external lighting remains; and where a fitting consumes less than 5W (e.g. LEDs).

ENE7: LZC TECHNOLOGIES

LZC Technologies

The list of Low or Zero Carbon (LZC) technologies has been updated (see below). Air source heat pumps had been left out of the LZC technology list for the April update, but the June Addendum has added them back in.

Fuel/source	Technology
Solar	Solar hot water
	Photovoltaics
Water	Small scale hydro power
Wind	Wind turbines
Biomass	Single room heaters/stoves
	Boilers
	CHP
Waste heat (e.g. from power stations)	Delivered via community heating
Ground	Ground source heat pumps (GSHPs) inc water source
	Geothermal
Air	Air source heat pumps (ASHPs)
Natural gas (mains gas)	CHP
Sewage gas and other biogases	CHP
Hydrogen	Fuel cells where hydrogen is generated from a renewable source

All microgeneration equipment must comply with the Microgeneration Certification Scheme launched by BERR and run/managed by BRE. Technologies may be on-site (see definition under Ene1) or off-site. If offsite, they must be 'accredited external renewables'.

Allocating CO₂ savings when LZC installations serve other uses

The same issue applies as discussed under Ene1.

'Standard' Dwelling definition

The definition of 'standard' dwelling has been updated and represents the case where a gas boiler is used to supply space heating and hot water to individual dwellings. This is the dwelling against which CO₂ savings from LZC technologies are measured.

Use of on-site generated energy

A requirement that any renewable energy generated on-site must first be made available to all dwellings before being exported to the national grid has been added.

'Excess' CO₂ savings generated from earlier phases of a development cannot be used to contribute towards CO₂ savings of later phases.

ENE8: CYCLE STORAGE

Updates to:

- Space required for storage of 4 cycles (2m long x 2.5m wide)
- Definition of 'secure storage' (Now split into two definitions - one for storage in individual dwellings and one for storage in communal areas)
- New definition of 'secure entrance lock' (permanent lock to BS 3621:2004)

ENE9: HOME OFFICE

The definition of 'adequate ventilation' has been expanded and clarified as a window with an openable casement of at least 0.5m². The definition of 'sufficient space' has been updated slightly to be more flexible. The 'home office' room must have a daylight factor of at least 1.5%.

WAT1: INTERNAL WATER USE

A number of notes have been added to clarify the credit requirements and calculation procedures:

- Averaging of rain and greywater collection (communal systems)
- Procedure where only one WC is to be supplied with grey water
- Procedure for dealing with water softener amended
- Risk assessment required for avoidance of microbial contamination - rain and greywater systems to be designed in accordance with HSE ACoP / CIBSE TM13

WAT2: EXTERNAL WATER USE

Clarification added on 'sufficient size' criteria if rainwater is being collected for internal as well as external water use. 9 litres/person/day required for Wat2 use to comply.

MAT1: ENVIRONMENTAL IMPACT OF MATERIALS

Clarification to wording of 'building envelope' for multiple dwellings within a single envelope.

Additional guidance added for mixed use developments under 'special cases'.

MAT2 & MAT3: RESPONSIBLE SOURCING OF MATERIALS

- Requirements for information to be provided to demonstrate compliance has been updated.
- A number of definitions have been updated/clarified, Table 2 has been added to, and the assessment methodology has been updated slightly.

SUR1: MANAGEMENT OF SURFACE WATER RUN-OFF FROM DEVELOPMENTS

This credit has been significantly updated (and renamed) to take into account PPS25: Development and Flood Risk.

The intent of the mandatory part of this credit remains the same, but the wording has been completely updated. There is too much to describe here; please refer to the guidance doc!

For the optional credits, it is now two credits or nothing. The credits can be gained by “using SUDS to improve the quality of the rainwater discharged or for protecting the quality of the relieving waters by:

1. Ensuring no discharge to the watercourse for rainfall depths up to 5mm (follow guidance in the Interim Code of Practice for Sustainable Drainage systems (SUDS) (CIRIA, 2004).

or

2. Establish agreements for the ownership, long term operation and maintenance of all sustainable drainage elements used”

Credits can be awarded by default if the development discharges rainwater directly to a tidal estuary or the sea.

SUR2: FLOOD RISK

Again, the wording of this credit has been updated to align with PPS25: Development and Flood Risk. Apparently there are no fundamental changes; the wording has just been updated, clarified and referenced.

WAS1: STORAGE OF NON-RECYCLABLE WASTE AND RECYCLABLE HOUSEHOLD STORAGE

- The title of this credit has been changed.
- The criteria for the mandatory element has been updated/clarified.
- The maximum distance from external door to external bin has been changed to 30m for both flats and houses.
- A new table has been included to help assess the mandatory element. A new checklist has also been included for the accessibility of waste storage to disabled people.
- Free standing recycling bins, even if placed in a cupboard will not comply with the requirements.
- There is now a specific note regarding automated waste collection systems.

WAS2: CONSTRUCTION SITE WASTE MANAGEMENT

- The threshold limit for developments requiring site waste management plans has been increased to £300,000 in line with new regulations.
- The mandatory element criteria has been updated and now includes a requirement for reporting as well as monitoring waste generated on-site. The credit requirements have also been slightly reworded.
- The evidence required to demonstrate compliance has been updated.
- The waste groups have been redefined to ensure they are inline with legislation.
- The checklists have been updated in line with other changes.

WAS3: COMPOSTING

- Additional guidance has been added regarding communal composting facilities.
- A checklist has been added regarding accessibility of composting facilities.

POL2: NO_x EMISSIONS

- 'Exemplar dwelling' rule has been removed. Instead, if all space heating and hot water requirements are met by systems which do not produce NO_x emissions, then full credits can be awarded by default.
- Clarification included on how the benefit of solar thermal installations can be taken into account.
- New pollution calculator tool to calculate the average NO_x emissions of individual dwellings.
- Some new special cases have been added.

HEA1: DAYLIGHTING

- Definition added for 'angle of visible sky' and 'reasonableness check'
- On larger developments (50+ dwellings) daylight calcs can now be carried out on a selected number of dwellings as long as the reasoning behind the selection is clearly explained.

HEA4: LIFETIME HOMES

- This is now mandatory for Code 6.
- Criteria has been changed to say "*Where all principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with*".
- Updated schedule of evidence required for post-construction stage.
- Checklists have been updated.

MAN1: HOME USER GUIDE

- The required contents of the home user guide have been changed to include details of any SUDS in place on the site.
- Special cases related to the provision of the home user guide on CD/internet have been added.

ECO1: ECOLOGICAL VALUE OF SITE

Definition of 'contaminated land' and 'non-native invasive species' have been added.

ECO2: ECOLOGICAL ENHANCEMENT

Note added stating that the ecologist's report should preferably be prepared at RIBA stage B, and that the ecologist must confirm that all UK and EU law has been complied with and that the recommendations go beyond the requirements of these laws.

ECO5: BUILDING FOOTPRINT

Formula added for the calculation of the area weighted target ratio for the site.