Building Control Bulletin

The revised Building Regulations parts L and F came into effect on the 06th April 2006.

This bulletin aims to guide applicants who are currently seeking approvals under the new regulations and assumes a basic level of understanding in respect of the changes to parts L & F. This guidance will be the subject of regular review as other initiatives and technical references supporting Part L are developed in the coming months.

Part L1A 2006 (new dwellings) - key features

To demonstrate compliance, a calculation using SAP 2005, should be provided showing that the CO₂ emissions from a dwelling 'as constructed' (DER) does not exceed a target CO₂ emission rate (TER) for a notional dwelling of the same shape and size. The TER is set at 20% less CO₂ emissions compared to the standard under the 2002 regulations.

SAP notification to the occupier, either by display or direct notification still required.

Sample pressure testing is mandatory and is used to determine that the air permeability used in the design has been achieved in the dwelling as constructed.

Measures need to be taken to limit the effect of solar gains – SAP 2005 can be used to demonstrate compliance.

Heating and hot water services need to be properly commissioned and notice given to the building control body

Guidance on the performance of domestic central heating and hot water services has been extended; new guidance is published in the Domestic Central Heating Compliance Guide.

Part L1B 2006 (existing dwellings) - key features

Conversions

The pressure testing and design calculation (TER / DER) as applied to new build is not required for dwellings created by a material change of use.

There are two ways to show compliance, either:

- Upgrade walls, floors, roofs etc to meet the standards in Table 5 AD L1B, or
- Use SAP 2005 to demonstrate that the CO₂ emissions from the dwellings, as created, will not be greater than by using the above method

Information provision remains the same as for new build:

- SAP notification to the occupier, either by display or direct notification
- Heating and hot water services to be properly commissioned and notice given to the building control body
- Information on efficient use and maintenance of systems to be given to occupier

For historic buildings the requirements of the conservation officer may be taken into account to ensure a balance between building conservation and energy efficiency improvements.
Building control policy ADL1A 2006

TER / DER Calculations

• To demonstrate compliance, NHBC BCS Ltd expects as a minimum that a calculation showing that the DER does not exceed the TER will be provided for each ‘house type design’ in each of its generic forms. i.e. the Leicester house type for the detached, semi-detached (including end-terrace) and mid-terrace, and for each different construction method, i.e. timber frame, masonry.

• For type or site approvals it is acceptable for a ‘worst case’ TER / DER to be submitted for each ‘house type design’ as described above. However, in this case, in order to show full compliance with the regulations it would be necessary for compliance to be checked against the worst case orientation for ‘solar-overheating’ and the worst case orientation for ‘energy loss’.

• With regard to flats, it is expected that a whole building approach would, in most cases, be applied to provide an average TER / DER for the building. In this situation, whilst some individual dwellings may fail the TER / DER this would still be acceptable if the whole building was shown to be compliant. However, the SAP rating of each dwelling should still be notified to NHBC BCS Ltd.

• Applicants may choose to provide an individual TER / DER calculation for every dwelling on a site. This may in the longer term be required under article 7 of the Energy Performance of Buildings directive, yet to be introduced.

• The TER / DER calculation should be submitted to NHBC BCS Ltd early in the design stage as it is the only way to verify that the construction, as proposed, is capable of meeting the requirements of the regulations.

Checklists and the ‘final calculation’

• Approved document L1A refers to a ‘final calculation’ based on the building as constructed. In most cases the initial TER / DER provided at design stage can be accepted by NHBC BCS Ltd as fulfilling the function of the ‘final calculation’. However, for this to be acceptable, applicants are required to make a copy of the SAP 2005 checklist of ‘key features’ used in the design available on site for the benefit of our Inspector. It will ultimately be the responsibility of the applicant to notify NHBC BCS Ltd of any significant changes in construction that could affect the TER / DER and compliance with the regulations. Where significant changes in construction occur, a revised TER / DER should be produced and submitted to NHBC BCS Ltd.

• Applicants will in future be expected to complete the checklists that are proposed to be included in the document ‘Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings’ (amended version yet to be published).

Pressure testing

• Until such time that the Accredited Details are published the more demanding regime of pressure testing will be applied as given in Table 4 AD L1A. The minimum design standard reference in this case for thermal bridging and air leakage will be as per the existing robust details for ADL1 2002. ‘Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings’.

• In order to establish an appropriate pressure test regime, NHBC Surveyors will make telephone contact with the applicant to agree which plots will be scheduled for testing. The aim will be to ensure that plots of each ‘dwelling type’ are identified for pressure testing early in the construction programme, as these will form the basis of quality control on each development. ‘Dwelling type’ is defined as a group of dwellings on a site having the same generic form (detached, semi-detached including end-terrace, mid-terrace, mid-floor flat, ground-floor flat, top-floor flat) and where the same construction methods are used for each of the main elements (walls, floors, roof, etc.). Small variations in floor area do not constitute a different ‘dwelling type’.
Plots nominated for pressure testing

- If the applicant cannot achieve a satisfactory pressure test result, then a final DER calculation will be required in accordance with the criteria given in Paragraph 61 ADL1A; this provides concessions on compliance that apply up to 31st October 2007. In addition, a further dwelling of the same type should be nominated for pressure testing. The warranty and BC final certificate will be withheld for plots that are nominated for pressure testing, until evidence of a successful pressure test and final TER / DER calculation have been provided.

Plots not nominated for pressure testing

- A calculation showing that the DER does not exceed the TER will be required before a BC final certificate can be issued.

Pressure testing – small sites

- For sites with no more than 2 dwellings, as an alternative to pressure testing, applicants may:
  - Submit evidence that the same ‘dwelling type’ has been constructed and successfully pressure tested in the previous 12 month period.
  - Avoid the need for any pressure testing by using a value of $15m^3/(h.m^2)$ for air permeability at 50 Pa when calculating the DER.

Qualifications and competence

- Where SAPs – TER / DER calculations are produced by non BRE approved software, these may be accepted by NHBC BCS Ltd provided the organisation can demonstrate that the software is with BRE for assessment.

- Any organisation or individual that submits energy calculations using BRE approved software will be acceptable to NHBC BCS LTD. However, for an organisation or individual that is not listed by BRE as authorised to display the government SAP logo, NHBC BCS Ltd may undertake further checks in respect of the calculations submitted.

- Any organisation or individual carrying out pressure testing who declares this to have been carried out in accordance with ‘Air permeability measurement ATTMA 2006’ will be acceptable to NHBC BCS Ltd. However, where that organisation or individual is not registered with BINDT or ATTMA, NHBC BCS Ltd may undertake further checks in connection with information submitted.

- In respect of the commissioning of hot water and heating services, it will be acceptable to use the Benchmark Certificate included with most domestic boilers. It will be sufficient for this certificate to be kept on site and to be made available for inspection by the BI.
**Part F 2006 – Key features**

- Expanded guidance given on the four common ventilation systems taking into account more airtight buildings
  - Background ventilators and intermittent extract fans
  - Passive stack ventilation
  - Continuous mechanical extract
  - Continuous mechanical supply and extract with heat recovery
- Follow the guidance given in Approved Document F on each system in order to comply
- Likely to mean an increase in the amount of overall background ventilation required
- Dwellings with a single façade need high and low level background ventilators unless a mechanical extract system used; deep rooms may need additional mechanical ventilation
- Guidance given on ventilation to basements
- Good practice guidance given on the installation of fans and passive stack vents
- Guidance on minimising ingress of external pollution into buildings in urban areas