

Revised Thermal Requirements for Domestic Work



On 30 November 2006 major changes to Part F of the Building Regulations came into force. These changes primarily affect energy efficiency of buildings and draught proofing requirements. The purpose of this note is to highlight some of the changes and the documentation or information that will be required to be submitted as part of your building control application. This guidance note is only intended to cover domestic applications and full guidance can be found in the new Technical booklet F1. Technical booklet F2 deals with buildings other than dwellings.

Transitional Provisions

1. If work has commenced before 30 November 2006 then the 2000 Regulations will apply.
2. If the work has not commenced but a full plans application has been deposited then the 2000 Regulations will apply.
3. Where plans are not required, such as where a Building Notice has been submitted before 30 November 2006, the 2000 Regulations will apply.
4. For applications received after 30 November 2006 or outside the above criteria, the new 2006 Regulations will apply.

Work to existing dwellings

For extensions to domestic properties, the approach stays the same, in that you may still follow a **standard based approach** to demonstrate compliance. Where it is difficult to demonstrate compliance using the elemental approach, then there are two optional approaches. The **calculated trade-off approach** will allow simple trade-offs between elements providing certain limiting standards are met. A number of the U-value levels have been substantially increased; please refer to the table below.

U-values for thermal elements

Element	2000	2006 new elements (in an extension or change of use)	2006 replacement elements (in an existing dwelling)
Wall	0.45	0.30	0.35
Pitched roof – insulation at ceiling joist level	0.25	0.16	0.16
Pitched roof – insulation at rafter level	0.35	0.20	0.20
Flat roof	0.35	0.20	0.25
Floor	0.45	0.22	0.25
Windows & rooflights	3.3	1.8	2.0
Doors with > 50% glazing	3.3	2.2	2.2
Other doors	3.3	3.0	3.0
Area of openings (windows rooflights & doors)	30% of floor area	25% of floor area + area of existing openings	25% of floor area + area of existing openings

Alternatively, a **SAP 2005 calculation** can be used to show that the calculated CO₂ emission rate from the dwelling with its proposed extension is no greater than for the dwelling plus a notional extension of the same size built to the new elemental standard. If improvements are proposed to the existing dwelling to achieve compliance with the SAP calculation, then they should be to the new standard for existing thermal elements as outlined in the Technical booklet F1.

Conservatories and highly glazed extensions

If the extension is a non exempt conservatory or has a large amount of glazing, then you will need to provide the following:

- (a) thermal separation from the existing dwelling, and
- (b) independent temperature and on/off controls to any heating system. Any heating appliance must comply with the Technical booklet F1 on efficiency and controls, and
- (c) thermal and glazed elements must meet the required U-value.

If thermal separation is not provided, then it will be treated as a conventional extension and compliance must be demonstrated using one of the approved methods.

Renovations and repairs

Where an existing thermal element is being retained or renovated as part of the building work or a change of use, then it should be upgraded wherever feasible to the required standard. Technical booklet F1 provides guidance on the type of work where upgrading is required and the extent of upgrading expected.

If your application uses one of the alternative methods to demonstrate compliance, then you will be expected to provide all the relevant calculations and supporting information to show how the calculated value has been achieved.

Even if you are following the elemental approach you may be asked to provide manufacturers U-value calculations to demonstrate that a certain method of construction meets the requirements.

New dwellings

Significant changes have been made to the way compliance must be demonstrated. The elemental and target U-value methods have been omitted. There is **now only one approach to showing compliance**. This addresses five criteria:

1. The annual CO₂ emission rate of the completed dwelling, as calculated using SAP 2005, must not exceed the target set by reference to a notional building.
2. Building fabric and service performance specifications are within reasonable limits.
3. Solar shading and other measures to limit risks of summer overheating are reasonable.
4. Fabric insulation and air tightness, as built, are as designed. This must be backed up by pressure testing on a sample basis.
5. Satisfactory information on the buildings operation must be provided to the occupiers.

Technical booklet F1 includes a checklist, which should be completed in order to show that all the required evidence to demonstrate compliance has been provided. This should be completed and submitted, together with all the supporting information, as part of your Building Control application. This checklist can be found in technical booklet F1 or may be downloaded from our website.

It will be necessary to complete a second copy of the checklist following completion of the work in order to demonstrate that the building as built meets all the requirements.

A calculation under SAP 2005 can only be done, using government approved software.

A way of complying with criterion 5 would be to provide a suitable set of operating and maintenance instructions aimed at achieving economy in a way that householders can understand. These should relate directly to the systems installed in the dwelling and will eventually form part of the Home Information Pack, along with the Energy Rating created by the SAP 2005 calculation. Similar changes have been introduced for non domestic buildings, details of which are contained in Technical Booklet F2

The full Regulations and all supporting Technical Booklets are available on the web, and may be easily located via links from our website.

Other approvals

You may need planning permission as well as Building Regulation approval in certain circumstances.

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Further information can be obtained from your Building Control Officer. All views expressed in this document are those of the Council and do not necessarily reflect those of the Department of Finance and Personnel or any other Local Authority. In the event of any dispute arising, reference should be made to the relevant Statutory Document, which contains a full statement of the Law.