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HM Government

The Building Regulations 2010

Amendments to the Approved Documents

This document contains amendments to the following Approved Documents:

Approved Document L1B: Conservation of fuel and power in existing dwellings (2010 edition)

Approved Document L2B: Conservation of fuel and power in existing buildings other than dwellings (2010 edition)

November 2013

For use in England*

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INTRODUCTION

This document contains amendments to:

Approved Document L1B: Conservation of fuel and power in existing dwellings (2010 edition)

Approved Document L2B: Conservation of fuel and power in existing buildings other than dwellings (2010 edition)

These amendments update references to third party guidance and correct some typographical errors.

There is a new reference to third party guidance on Window Energy Ratings and the introduction of Door Set Energy Ratings as an alternative route of compliance observing that there are no changes to the energy efficiency standards for windows and doorsets.

There is a new reference to third party guidance on establishing U-values based on the developed area of the rooflights.

These amendments come into force on 6 April 2014 for use in England*.

These amendments are in addition to those made earlier in 2013 to take account of a recast of the European Energy Performance of Buildings Directive (Directive 2010/31/EU) and the introduction of a new Approved Document 7.

In exercise of his powers under section 6 of the Building Act 1984, the Secretary of State has approved these approved documents with the amendments set out in this document.

*The amendments apply to building work in England. They also apply to building work carried out on excepted energy buildings in Wales as defined in the Welsh Ministers (Transfer of Functions) (No.2) Order 2009.

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Section 1

Amendments to Approved Document L1B – Conservation of fuel and power in existing dwellings

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Page 7

Paragraph 3.1 – at c. under description for ***Simple payback*** delete "SAP 2009" and replace with "SAP 2012"

Footnote 1 – delete and replace with:

"www.bre.co.uk/sap2012"

Footnote 2 – Delete and replace with:

"www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics#energy-price-statistics"

Page 9

Paragraph 3.10 – after paragraph insert additional non statutory advice as follows:

"In addition English Heritage has produced detailed technical guidance on how to implement specific energy efficiency measures. (See list of available guidance documents at http://www.english-heritage.org.uk/professional/advice/advice-by-topic/climate-change/energy-efficiency/)".

Footnote 3 – delete and replace with:

"Energy Efficiency and Historic Buildings, English Heritage, 2011

http://www.english-heritage.org.uk/publications/energy-efficiency-historic-buildings-ptl/"

Paragraph 3.15 – after paragraph insert additional bullet between 2nd and 3rd bullets as follows:

- "where the glazing complies with Part K 4 of Schedule 1"

Page 12

Paragraph 4.3 – delete "4.26 to 4.39" and replace with "4.24 to 4.37".

Page 12

Paragraph 4.6 – delete "SAP 2009" and replace with "SAP 2012" in first and last sentences.

Page 13

Paragraph 4.9 – delete "This constitutes a change to the building's energy status (Regulation 22)"

Page 13

Paragraph 4.10 – after paragraph insert additional non statutory advice as follows:

"Design consideration should be taken with regards to compressive creep, insulation boards not being fully supported and the effects of point loading. Care should be taken to avoid thermal bridging particularly around basin wall and floor junctions with foundations."

Footnote 9 – delete and replace with:

"BS EN ISO 13370 Thermal performance of buildings – Heat transfer via the ground – Calculation methods [2007 incorporating corrigendum March 2009]."

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Paragraph 4.16 – delete "SAP 2009" and replace with "SAP 2012".

Page 14

Paragraph 4.18 – move paragraph from before to after heading **Controlled fittings**

Paragraph 4.18 – delete last sentence and replace with:

"Similar arguments apply to doors, where the ***controlled fitting*** refers to the complete door set (leaf plus frame). Replacing a door leaf whilst retaining the existing frame is not notifiable and does not have to meet the Part L standards, although where practical it would be sensible to do so."

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Paragraph 4.19 – delete existing paragraph and replace with:

"Where windows, roof windows, roof-lights or doors are to be provided, reasonable provision in normal cases would be the installation of draught-proofed units whose performance is no worse than given in Table 1. In addition, insulated cavity closers should be installed where appropriate. Where the windows or fully glazed external pedestrian doors are unable to meet the requirements of Table 1 because of the need to maintain the external appearance of the façade or the character of the building, such fittings should meet a centre pane U-value of 1.2W/m^{2}K, where the centre-pane U-value is defined as the U-value determined in the central area of the glazing unit, making no allowance for edge spacers or window frame. As an alternative, single glazing should be supplemented with low-e secondary glazing. In this latter case, the weather stripping should be on the secondary glazing to minimise condensation risk between the primary and secondary glazing. Where enhanced performance requirements (e.g. wind load, safety, security or acoustic attenuation) require thicker glass to be used, reasonable provision would be demonstrated if the window unit with the equivalent standard glazing thickness can be shown to comply."

Page 14

Paragraph 4.20 – after "c. the specific size and configuration of the actual window." insert:

"The U-value of the door can be calculated for:

a. the standard size as laid out in BS EN 14351-1, or

b. the specific size and configuration of the actual door."

Paragraph 4.20 – in additional non statutory advice after paragraph delete "*SAP 2009*" and replace with "*SAP 2012*".

Page 14

Footnote 11 – delete and replace with:

"BS EN 14351-1 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics [2006 (+AMD 1:2010)]."

Page 14

Table 1 – delete and replace with:

Table 1 **Standards for controlled fittings**[1]

Fitting	Standard
Window, roof window or roof-light[2]	WER Band C or better (see paragraph 4.22), or U-value 1.6 W/m^{2}K
Doors with >60% of internal face glazed	Door Set Energy Rating (DSER) Band E or better (see paragraph 4.22), or U-value 1.8 W/m^{2}K
Other doors	DSER Band E or better (see paragraph 4.22), or U-value 1.8 W/m^{2}K

Notes:

1. Since the U-values are determined for standard configurations (see paragraph 4.20), the effects of Georgian bars and/or leaded lights can be ignored.
2. For the purposes of checking compliance with this table, the true U-value based on aperture area can be converted to the U-value based on the developed area of the roof-light. Further guidance on evaluating the U-value of out-of-plane rooflights is given in Assessment of thermal performance of out-of-plane rooflights, NARM Technical Document NTD 2 (2010), See http://www.narm.org.uk/uploads/pdfs/NARM-TAOOPR-030311.pdf

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Paragraph 4.22 – delete paragraph and replace with:

"The calculation of Window Energy Rating (WER) and the Door Set Energy Rating (DSER) are set out in the GGF Guide to the Calculation of Energy Ratings for Windows, Roof Windows & Doors[FN]. The guide provides different procedures for windows, roof windows, external pedestrian doors and patio/French/sliding/folding doors. ***BCBs*** may accept a WER and/or DSER declaration from a certification scheme that provides a quality assured process and supporting audit trail from calculating the performance of the window through to installation as evidence of compliance. Notwithstanding the suggested performance values set out in Table 1, guidance on energy efficient windows is available from the Energy Saving Trust[12]."

Page 14

Insert new footnote:

"Guide to the Calculation of Energy Ratings for Windows, Roof Windows & Doors, GGF, 2013"

Page 15

Footnote 12 – delete and replace with:

www.energysavingtrust.org.uk/Insulation/Windows

Footnote 13 – delete and replace with:

"Domestic Building Services Compliance Guide, DCLG, 2013."

Page 24 – Appendix B: Documents referred to

Under heading **BRE** – delete "BR 262 Thermal insulation: avoiding risks, 2001. ISBN 978 186081 515 7" and replace with "BR 262 Thermal insulation: avoiding risks (2002 Edition) printed in 2006. ISBN 1860815154"

Under heading **Department for Energy and Climate Change (DECC)** delete – "The Government's Standard Assessment Procedure for energy rating of dwellings, SAP 2009. (Available at www.bre.co.uk/sap2009)" and replace with "The Government's Standard Assessment Procedure for energy rating of dwellings, SAP 2012. (Available at www.bre.co.uk/sap2012)"

Delete "Current Energy Prices (www.decc.gov.uk/en/content/cms/statistics/publications/prices/prices.aspx)" and replace with "Current Energy Prices (www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics#energy-price-statistics)"

Under heading **English Heritage** – delete "Building Regulations and Historic Buildings, 2002 (revised 2004) and other guidance" and replace with ""Energy Efficiency and Historic Buildings, English Heritage, 2011"

Add new heading "**Glass and Glazing Federation (GGF) www.ggf.org.uk**" and after heading insert "Guide to the Calculation of Energy Ratings for Windows, Roof Windows & Doors, GGF, 2013."

Add new heading "**National Association of Rooflight Manufacturers (NARM) www.narm.org.uk**" and after heading insert "NARM Technical Document NTD 2, 2010."

Under heading **NBS (on behalf of Department for Communities and Local Government)** – delete ""Domestic Building Services Compliance Guide, CLG, 2010." and replace with "Domestic Building Services Compliance Guide, DCLG, 2013."

Under heading **Legislation**

Delete – "SI 1991/1620 Construction Products Regulations 1991"

Delete – "SI 1994/3051 Construction Products (Amendment) Regulations 1994"

Delete – "SI 1994/3620 Electrical Equipment (Safety) Regulations 1994"

Delete – "SI 2006/3418 Electromagnetic Compatibility Regulations 2006"

Delete – "Decision No 1/95 of the EC-Turkey Association Council of 22 December 1995"

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Page 25 – Appendix C: Standards referred to

Delete – "BS EN ISO 13370:2007 Thermal performance of buildings – Heat transfer via the ground – Calculation methods." and replace with "BS EN ISO 13370 Thermal performance of buildings – Heat transfer via the ground – Calculation methods [2007 incorporating corrigendum March 2009]."

Delete – "BS EN 14351-1:2006 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics." and replace with ""BS EN 14351-1 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics [2006 (+AMD 1:2010)]."

Delete – "BS EN 410:1998 Glass in building. Determination of luminous and solar characteristics of glazing."

Delete – "BS 6375-1:2009 Performance of windows and doors. Classification for weathertightness and guidance on selection and specification."

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Section 2

Approved Document L2B – Conservation of fuel and power in existing buildings other than dwellings

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Page 8

Non statutory advice after ***Thermal Element*** regulatory text box – delete "*dwelling.*" and replace with "*building.*"

Page 8

Footnote 1 – Delete and replace with: "www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics#energy-price-statistics"

Page 9

Paragraph 3.6 c. delete "planned time of use" and replace with "planned service life"

Page 10

Paragraph 3.10 – after paragraph insert additional non statutory advice as follows:

"In addition English Heritage has produced detailed technical guidance on how to implement specific energy efficiency measures. (See list of available guidance documents at http://www.english-heritage.org.uk/professional/advice/advice-by-topic/climate-change/energy-efficiency/)".

Footnote 2 – delete and replace with:

"Energy Efficiency and Historic Buildings, English Heritage, 2011

http://www.english-heritage.org.uk/publications/energy-efficiency-historic-buildings-ptl/"

Page 11

Footnote 3 – delete and replace with:

"Non-Domestic Building Services Compliance Guide, DCLG, 2013."

Page 11

Paragraph 3.21 – after paragraph insert additional bullet between 2nd and 3rd bullets as follows:

- "where the glazing complies with Parts K 4, K 5.1, K 5.2, K 5.3 and K 5.4 of Schedule 1"

Page 14

Paragraph 4.2 – After "Approved Document L2A" insert "(2010 edition)[FN]"

Page 14

Insert new footnote "[FN] Notwithstanding the withdrawal of Approved Document L2A (2010 Edition) in DCLG Circular 04/13 it may be used for this purpose."

Page 14

Paragraph 4.3 a. – delete "4.21 to 4.28" and replace with "4.23 to 4.28"

Page 15

Paragraph 4.13 – delete "This constitutes a change to the building's energy status (Regulation 22)"

Page 15

Paragraph 4.14 – after paragraph insert additional non statutory advice as follows:

"Design consideration should be taken with regards to compressive creep, insulation boards not being fully supported and the effects of point loading. Care should be taken to avoid thermal bridging particularly around basin wall and floor junctions with foundations."

Footnote 9 – delete and replace with:

"BS EN ISO 13370 Thermal performance of buildings – Heat transfer via the ground – Calculation methods [2007 incorporating corrigendum March 2009]."

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Paragraph 4.24 – delete existing paragraph and replace with:

"Where windows, roof windows, roof-lights or doors are to be provided, reasonable provision in normal cases would be the installation of draught-proofed units whose performance is no worse than given in Table 3. In addition, insulated cavity closers should be installed where appropriate. If a window, pedestrian door or roof-light is enlarged or a new one created, then the area of the windows and pedestrian doors and of roof-lights expressed as a percentage of the total floor area of the building should not exceed the relevant value from Table 2, or should be compensated for in some other a way. Where the windows or fully glazed external pedestrian doors are unable to meet the requirements of Table 3 because of the need to maintain the external appearance of the façade or the character of the building, such fittings should meet a centre pane U-value of 1.2W/m^2K, where the centre-pane U-value is defined as the U-value determined in the central area of the glazing unit, making no allowance for edge spacers or window frame. As an alternative, single glazing should be supplemented with low-e secondary glazing. In this latter case, the weather stripping should be on the secondary glazing to minimise condensation risk between the primary and secondary glazing. Where enhanced performance requirements (e.g. wind load, safety, security or acoustic attenuation) require thicker glass to be used, reasonable provision would be demonstrated if the window unit with the equivalent standard glazing thickness can be shown to comply."

Page 17

Paragraph 4.25 – after "c. the specific size and configuration of the actual window." insert:

"The U-value of th e door can be calculated for:

a. the standard size as laid out in BS EN 14351-1, or

b. the specific size and configuration of the actual door."

Paragraph 4.25 – in additional non statutory advice after paragraph delete "*SAP 2009*" and replace with "*SAP 2012*".

Page 17

Footnote 11 – delete and replace with:

"BS EN 14351-1 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics [2006 (+AMD 1:2010)]."

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Page 17

Table 3 – delete and replace with:

Table 3 Standards for controlled fittings

Fitting	Standard
Windows in buildings that are essentially domestic in character[2]	A Window Energy Rating[3] of Band C or 1.6 W/m^2.K
All other windows and roof windows and rooflights[1,4].	1.8 W/m^2.K for the whole unit
Curtain Walling	See paragraph 4.28
Pedestrian doors where the door has more than 60% of its external face area glazed	U-value 1.8 W/m^{2}K
All other pedestrian doors	U-value 1.8 W/m^{2}K
High usage entrance doors for people	3.5 W/m^2.K
Vehicle access and similar large doors	1.5 W/m^2.K
Roof ventilators (including smoke extract ventilation)	3.5 W/m^2.K

Notes:

1 Display windows are not required to meet the standard given in this table.

2 For example, student accommodation, care homes and similar uses where the occupancy levels and internal gains are essentially domestic in character.

3 See Guide to the Calculation of Energy Ratings for Windows, Roof Windows & Doors, GGF, 2013 at www.ggf.org.uk

4 For the purposes of checking compliance with this table, the true U-value based on aperture area can be converted to the U-value based on the developed area of the rooflight. Further guidance on evaluating the U-value of out-of-plane rooflights is given in Assessment of thermal performance of out-of-plane rooflights, NARM Technical Document NTD 2 (2010), See http://www.narm.org.uk/uploads/pdfs/NARM-TAOOPR-030311.pdf

Page 18

Paragraph 4.30 a. ii. – in fuel switching example delete "0.8 x (0.517/0.058) = 7.1" and replace with "0.8 x (0.519/0.058) = 7.2" and delete "0.517 and 0.058 kgCO_2/kWh" and replace with "0.519 and 0.058 kgCO_2/kWh"

Page 18

Footnote 12 – delete and replace with:

"See Table 12 at www.bre.co.uk/sap2012."

Footnote 13 – delete and replace with:

"TM 39 Building energy metering, CIBSE, 2009."

Page 19

Paragraph 4.40 – after paragraph insert additional non statutory advice as follows:

"Energy efficiency in practice can often be enhanced by a sustained period of fine tuning to ensure the systems are operating as intended and controls are configured to the needs of the occupier. The Soft Landings initiative is an example of an appropriate fine tuning process, see http://www.bsria.co.uk/services/design/soft-landings/."

Page 21

Footnote 18 – delete and replace with:

"BRE Report BR 497 Conventions for Calculating Linear Thermal Transmittance and Temperature Factors, BRE [2007 and 2010 amendments and conventions]."

Page 26

Paragraph 7.3 – after paragraph insert additional non statutory advice as follows:

"Further advice is provided in BSRIA BG26/2011 Building Manuals and Building User Guides."

Page 26

Insert new footnote 21:

" [21] Building Manuals and User Guides, BG 26/2011, BSRIA, 2011."

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Page 27 – Appendix A: Documents referred to

Under heading **BRE** delete "BRE Report BR 497 Conventions for Calculating Linear Thermal Transmittance and Temperature Factors, 2007" and replace with "BRE Report BR 497 Conventions for Calculating Linear Thermal Transmittance and Temperature Factors, [2007 and 2010 amendments and conventions]."

Add new heading "**BSRIA www.bsria.co.uk**" and after heading insert "Building Manuals and User Guides, BG 26/2011, BSRIA, 2011."

Under heading **CIBSE** – delete "TM 39 Building energy metering, CIBSE, 2010." and replace with "TM 39 Building energy metering, CIBSE, 2009."

Under heading **Department for Energy and Climate Change (DECC)** delete – "The Government's Standard Assessment Procedure for energy rating of dwellings, SAP 2009. (Available at www.bre.co.uk/sap2009)" and replace with "The Government's Standard Assessment Procedure for energy rating of dwellings, SAP 2012. (Available at www.bre.co.uk/sap2012)"

Delete "Current Energy Prices (www.decc.gov.uk/en/content/cms/statistics/publications/prices/prices.aspx)" and replace with "Current Energy Prices (www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics#energy-price-statistics)"

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Add new heading "**Glass and Glazing Federation (GGF) www.ggf.org.uk**" and after heading insert "Guide to the Calculation of Energy Ratings for Windows, Roof Windows & Doors, GGF, 2013."

Add new heading "**National Association of Rooflight Manufacturers (NARM) www.narm.org.uk**" and after heading insert "NARM Technical Document NTD 2, 2010."

Under heading NBS (on behalf of Department for Communities and Local Government) – delete "Non Domestic Building Services Compliance Guide, CLG, 2010." and replace with "Non Domestic Building Services Compliance Guide, DCLG, 2013."

Under heading **Legislation**

Delete – "SI 1991/1620 Construction Products Regulations 1991"

Delete – "SI 1994/3051 Construction Products (Amendment) Regulations 1994"

Delete – "SI 1994/3620 Electrical Equipment (Safety) Regulations 1994"

Delete – "SI 2006/3418 Electromagnetic Compatibility Regulations 2006"

Delete – "Decision No 1/95 of the EC-Turkey Association Council of 22 December 1995"

Page 25 – Appendix B: Standards referred to

Delete – "BS EN ISO 13370:2007 Thermal performance of buildings – Heat transfer via the ground – Calculation methods." and replace with "BS EN ISO 13370 Thermal performance of buildings – Heat transfer via the ground – Calculation methods [2007 incorporating corrigendum March 2009]."

Delete – "BS EN 14351-1:2006 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics." and replace with ""BS EN 14351-1 Windows and doors – Product standard, performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics [2006 (+AMD 1:2010)]."

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