
As discussed in **Climatic Loads 1A**, the various local Building Regulations for the UK and Éire make reference to other Codes and Standards with regards the design and assessment of glazing.

**Table 1 - Building Regulations in the UK & Ireland**

| Country | Building Regulations | Section |
|---|---|---|
| **England & Wales** | Approved Document A [1] | Section 3 – Wall Cladding |
| **Scotland** | Domestic Handbook [2]<br>Non-Domestic Handbook [3] | Section 1.1 – Structure |
| **Northern Ireland** | Technical Booklet D [4] | Section 1 - General |
| **Éire** | Technical Guidance Document K [5] | Section 1 – Structure |

This document provides an overview of the various documents and their applicability with regards to the requirements of Building Regulations.

## CODES OF PRACTICE

The following codes of practice are referenced by Building Regulations in UK and Éire and should be considered alongside Building Regulations when designing guarding.

**Table 2 – Codes of Practice Applicable to the UK & Ireland**

| Codes of Practice |
|---|
| EN 1990:2002 [6] |
| EN 1991-1-4:2005 [7, 8] |
| EN 1991-1-3:2003 [9, 10] |
| BS 6262-3:2005 [11] |
| BS 5516-2:2004 [12] |
| prEN 16612:2013 [13] |
| prEN 13474-3 :2009 [13] |

### EN 1990:2002 – EUROCODE – BASIS OF STRUCTURAL DESIGN

EN 1990:2002 [6, 14] as well as relevant National Annex documents provides the basic principles of Eurocodes, which encompasses safety, serviceability and durability of structures.

### EN 1991-1-4:2005 - EUROCODE 1. ACTIONS ON STRUCTURES – PART 1-4. GENERAL ACTIONS. WIND ACTIONS

EN 1991-1-4:2005 [7, 8] as well as relevant National Annex documents provides details on the assessment of design wind loads incident on buildings. Determination of wind loads are detailed in **Climatic Loads 2A**. The loads are based upon various factors, including; building location, altitude, surrounding terrain and other buildings, as well as building size and shape.

### EN 1991-1-3:2003 - EUROCODE 1. ACTIONS ON STRUCTURES – PART 1-3. GENERAL ACTIONS. SNOW ACTIONS

EN 1991-1-3:2003 [9, 10] as well as relevant National Annex documents provides details on the assessment of design snow loads applied on buildings. Determination of snow loads are detailed in **Climatic Loads 2B**. The loads are based upon various factors, including; building location, altitude overhangs and roof slope/

### BS 6262-3:2005 - GLAZING FOR BUILDINGS - CODE OF PRACTICE FOR FIRE, SECURITY AND WIND LOADING

BS 6262-3:2005 [11] includes a method for estimating wind loadings incident on low rise buildings. In addition, a series of design charts are present, which allow a limited selection of glazing constructions to be assessed, based on effective area and wind pressure.

The requirements of this Code and other areas of Building Regulations should be carefully considered alongside other requirements when considering its validity.

### BS 5516-2:2004 - PATENT GLAZING AND SLOPING GLAZING FOR BUILDINGS – PART 2: CODE OF PRACTICE FOR SLOPING GLAZING

BS 5516-2:2004 [12] details requirements for glass types and thicknesses for sloping glazing, which includes glazing equal to or greater than 15$^{o}$ from vertical. Glass thicknesses are detailed through design charts based on combined and factored wind and snow loads, as well as effective area of the glazing. Glass types and thicknesses are limited based on height from finished floor level.

## WITHDRAWN STANDARDS

Throughout BS 6262-3:2005 and BS 5516-2:2004, two standards are referenced BS 6399-2:1997 [15] for wind loads, and BS 6399-3:1988 [16] for imposed roof loads. It should be noted that although these standards are still referenced, both have been withdrawn and replaced by the Eurocode standards, EN 1991-1-4 for wind, and EN 1991-1-3 for snow loadings.

## COMPLIANCE

When determining the load requirements for a building, local Building Control (or the equivalent certifying authority) should be consulted to ensure that the requirements for the specification will meet the requirements that will be placed upon the building when undergoing final approval.

Full consideration should be given to the requirements of Building Regulations as well as Eurocodes and any associated applicable documents.

## REFERENCES

[1] HM Government, The Building Regulations 2010 - Approved Document A - Structure, 20123.

[2] Riaghaltas na h-Alba, *Technical Handbook 2015 - Domestic,* Riaghaltas na h-Alba, 2015.

[3] Riaghaltas na h-Alba, *Technical Handbook 2015 - Non-Domestic,* Riaghaltas na h-Alba, 2015.

[4] Department of Finance and Personnel, *Building Regulations (Northern Ireland) 2012 Guidance - Technical Booklet D - Structure,* DFPNI, 2012.

[5] Environment, Community and Local Government (Éire), *Building Regulations 2012 - Technical Guidance Document A - Structure,* Government Publications (Éire), 2012.

[6] European Committee for Standardization, *EN 1990:2002 - Basis of structural design,* CEN, 2002.

[7] European Committee for Standardization, *EN 1991-1-4:2005+A1:2010 - Eurocode 1. Actions on structures. General actions. Wind actions,* CEN, 2005/2010.

[8] European Committee for Standardization, *NA to BS EN 1991-1-4:2005+A1:2010 - UK National Annex to Eurocode 1. Actions on structures. General actions. Wind actions,* CEN, 2005/2010.

[9] European Committee for Standardization, *EN 1991-1-3:2003+A1:2015 - Eurocode 1. Actions on structures. General actions. Snow loads,* CEN, 2003/2015.

[10] European Committee for Standardization, *NA to BS EN 1991-1-3:2003 - UK National Annex to Eurocode 1. Actions on structures. General actions. Snow loads,* CEN, 2003.

[11] British Standards Institute, *BS 6262-3:2005 - Glazing for buildings. Code of practice for fire, security and wind loading,* BSI, 2005.

[12] British Standards Institute, *BS 5516-2:2004 - Patent glazing and sloping glazing for buildings. Code of practice for sloping glazing,* BSI, 2004.

[13] European Committee for Standardization, *prEN 16612:2013 - Glass in Building - Determination of the load resistance of glass panes by calculation and testing,* CEN, 2013.

[14] European Committee for Standardization, *NA to BS EN 1990:2002+A1:2005 - UK National Annex for Eurocode - Basis of structural design,* BSI, 2002.

[15] British Standards Institute, *BS 6399-2:1997 - Loading for buildings. Code of practice for wind loads,* BSI, 1997.

[16] British Standards Institute, *BS 6399-3:1988 - Loading for buildings. Code of practice for imposed roof loads,* BSI, 1988.