Maintenance Services

**Glazing Safety Policy**

**Purpose**

This policy sets out the University’s requirements for the provision of new glazing and the maintenance, treatment and replacement of existing glazing.

**Scope**

This policy is applicable to all new and existing buildings on all of the University’s campuses.

**Legal Requirements and British/European Standards**

Legislation and British Standards/European Standards applicable to glazing and glass in buildings:-

* Workplace (Health, Safety and Welfare) Regulations 1992 as amended.
* Building Regulations 2010 (Approved Document K4) as amended.
* BS 6206 - Specification for impact performance requirements for flat safety glass and safety plastics for use in buildings/European Standard EN12600 - Glass in building. Pendulum test. Impact test method and classification for flat glass.
* BS 6262-4:2018 - Glazing for buildings. Code of practice for safety related to human impact
* BS 476-7:1997 - Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products
* BS EN 12150 - Glass in building. Thermally toughened soda lime silicate safety glass. Definition and description
* BS EN 14449 - Glass in building. Laminated glass and laminated safety glass. Evaluation of conformity/product standard

**Definitions**

The following types of glass can be categorised as ‘safety glass’

* Toughened Glass (also called tempered glass) conforming to BS 6206 Class A/EN12600 Class 1.
* Laminated Glass conforming to BS 6206 Classes A, B and C/ EN12600 Classes 1, 2 and 3
* Wired Glass conforming to BS 6262-4:2018 Class C
* Annealed glass that by virtue of its thickness can be considered ‘robust’ – Building Regulations 2010 Approved Document K4: Protection against impact with glazing.

**\*The use of annealed glass for the replacement of broken or damaged glazing must be approved by the Head of Building Maintenance.**

**University Requirements**

**New Buildings**

All glazing in new University buildings shall comprise of safety glass only conforming to BS 6206/ EN12600 (this will include all panes comprising double or triple glazing etc.).

**The Extension, Alteration or Refurbishment of Existing Buildings**

All new glazing in University buildings shall comprise of safety glass only conforming to BS 6206/ EN12600 (this will include all panes within double or triple glazing etc.).

Prior to the extension, alteration and/or refurbishment of an existing building or part of a building, all existing glazing in that part of the building that is to be extended, altered and/or refurbished should be assessed to establish its compliance (or not) with the Workplace (Health, Safety and Welfare) Regulations 1992: Regulation 14. Any existing glazing determined not to be compliant with Regulation 14 are to be rendered compliant at the time of alteration, extension and/or refurbishment.

**Replacement of Broken Glazing**

All replacement glass shall be safety glass conforming to BS 6206/ EN12600.

**Fire Resistant Glazing**

New or replacement glass that is required to be fire resistant shall conform to BS EN 12150 (toughened glass) or BS EN 14449 (laminated glass).

**Marking of Safety Glass, Safety Filmed Glazing and Fire Resisting Glazing**

All safety glass/glazing shall be permanently marked in accordance with BS 6262-4:2018.

The mark/etching shall identify-

* the manufacturer, merchant or installer of the glass or safety film with their name or trade mark

* the British Standard to which the glass/safety film has been manufactured e.g. BS EN 14449 for laminated safety glass and BS EN 12150 for thermally toughened soda lime silicate safety glass
* the classification of the glass/glass with safety film applied according to BS6206/EN 12600. Only the first digit of the classification is required for safety applications. However, the full designation may be required to meet other regulatory requirements, e.g. guarding.
* the fire resistance and or insulation/protection category in the case of fire resisting glazing e.g. E30 (integrity only), EI30 (integrity and insulation/protection).

**Notes:**

For non-fire resisting glazing, if replacement glass is incompatible with an existing glazing system (door, window, screen etc.) due to its thickness, the following alternative methods of re-glazing are permissible:-

* The use of annealed glass with a safety film applied that in conjunction with the glass achieves an impact performance rating of BS 6206 Class B/EN12600 Class 2
* The use of toughened glass that achieves an impact performance rating of BS 6206 Class A/EN12600 Class 1.

**Replacement of Glazing Safety Films**

Glazing safety films are to be inspected for peeling, cracking, crazing and shrinkage at the end of their respective warranty period, typically 10 years from the date of installation. ‘Peel’ tests shall be carried out on 5% (by number) of external filmed glazing units in each building where the warranty period of applied film is known or suspected to have ended.

**All film that shows evidence of peeling, cracking, crazing or shrinkage shall be replaced.**

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