1737 Abraham Moss School

PLANNING AND
BUILDING CONTROL
24 JUL 2012

20 June 2012

This document includes:

Code	Section	Revision	Dated
L40	General glazing	A	20 Jun 2012

L
Windows/Doors/Stairs

L40
General glazing

Section Revision History

No.	Purpose	
A	GLASS TO SECURITY ROOM CHANGED FROM ONE-WAY TO OBSCURED	20 Jun 2012

Clauses amended in this revision

This is the first revision stamp for this section. For all future revision stamps, details of all clauses amended at that revision will be included here.

L40 General glazing

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

111 PREGLAZING
- Preglazing of components: Permitted.
- Prevention of displacement: Submit details of precautions to be taken to protect glazing and compound/ seals during delivery and installation.
- Defective/ displaced glazing/ compound/ seals: Reglaze components in situ.

140 MATERIAL SAMPLES
- Representative samples of designated materials: Submit before cutting panes.
  - Sample size (minimum): 150 x 150 mm.
  - Designated materials: Each insulating glass unit type..

150 WORKMANSHIP GENERALLY
- Glazing generally: To BS 6262.
- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
  - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
  - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 PREPARATION
- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.

155 GLASS GENERALLY
- Standards: To BS 952 and relevant parts of:
  - BS EN 572 for basic soda lime silicate glass.
  - BS EN 1096 for coated glass.
  - BS EN 1748-1 for borosilicate glass.
  - BS EN 1748-2 for ceramic glass.
  - BS EN 1863 for heat strengthened soda lime silicate glass.
  - BS EN 12150 for thermally toughened soda lime silicate safety glass.
  - BS EN 12337 for chemically strengthened soda lime silicate glass.
  - BS EN 13024 for thermally toughened borosilicate safety glass.
  - BS EN ISO 12543 for laminated glass and laminated safety glass.
- Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
  - Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

156 THERMAL SAFETY CHECK REQUIREMENT
- Glass supplier is to carry out a thermal saftey check with the fabricator of all non-toughened glass panes.
  - Objective; to identify locations of laminated or other glass types that may be vulnerable to thermal shock.

160 LINEAR PATTERNED/ WIRED GLASS
- Alignment: Vertical/ Horizontal as appropriate, and pattern matched across adjacent panes in close proximity.

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS
- Standard: To BS EN 14179.
  - Holding period (minimum): 8 hours.
  - Mean glass temperature: 290° ± 10°C.
- Certified evidence of treatment: Submit.
- Designated locations: Rooflights, all external glazing higher than 2.4m above ground floor datum, all internal glazing greater than 2.4m higher than floor level below.

180 BEAD FIXING WITH PINS
- Pin spacing: Regular at maximum 150 mm centres, and within 50 mm of each corner.
- Exposed pin heads: Punched just below wood surface.

181 BEAD FIXING WITH SCREWS
- Screw spacing: Regular at maximum 225 mm centres, and within 75 mm of each corner.

TYPES OF GLAZING

250A BEAD FIXED SINGLE GLAZING TO NON FIRE RATED, NON ACOUSTIC, NON BARRIER LOADED INTERNAL SCREENS
- Pane material: 6mm toughened single float class A safety glass (for relevant BS see clause 155) .
- Manufacturer: Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF
- Product reference: 6mm SGG Securit, heat soak tested to BS EN 14179
- Maximum pane size (4-edge supported): 1500W x 3000H, 1500H x 3000W
- Surround/ bead: Square/ rectangular timber as clause L20/430 .
  - Preparation: Sealant primer .
  - Bead location: Room Side .
  - Bead fixing: 38 mm steel pins at 150 centres .
- Glazing system:
  - Tape: Self adhesive EPDM .
  - Bead bedding sealant: One-part, low modulus, neutral curing silicone .
  - Capping sealant: One-part, low modulus, neutral curing silicone .
- Glazing installation:
  - Glass: Located centrally in surround using setting and location blocks.
  - Glazing tape: Top edge approximately 6 mm short of sight line on external side of glazing, to allow for capping sealant. Corners butt jointed with no gaps.
  - Thickness of glazing tape bed (minimum): 3 mm on both sides of glazing after compression.
  - Beads: Bedded in sealant, pressed firmly into position to compress tape, and fixed securely.
  - Excess tape on internal side: Carefully trimmed to a smooth chamfer.
  - Capping sealant: Applied to fill void between bead and glazing and finished to a smooth chamfer.

250B BEAD FIXED SINGLE GLAZING TO NON FIRE RATED, 30 Rw(dB) ACOUSTIC RATED INTERNAL SCREENS and
TO NON FIRE RATED, NON ACOUSTIC, BARRIER LINE LOAD 1.5kN/m INTERNAL SCREENS

- Pane material: 10mm toughened single float class A safety glass (for relevant BS see clause 155) .
- Manufacturer: Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF
- Product reference: 10mm SGG Securit, heat soak tested to BS EN 14179
- Maximum pane size NON-BARRIER LOADED (4-edge supported): 1500W x 3000H, 1500H x 3000W
- Maximum pane size BARRIER LOADED (4-edge supported): 1700W x 3000H
- Surround/ bead: [Square/ rectangular timber as clause L20/430] .
  - Preparation: [Sealant primer] .
  - Bead location: [Room Side] .
  - Bead fixing: [Sealed on mastic bed and fixed with 38mm steel pins at 150 centres] .
- Glazing system:
  - Tape: Self adhesive EPDM .
  - Bead bedding sealant: One-part, low modulus, neutral curing silicone .
  - Capping sealant: One-part, low modulus, neutral curing silicone .
- Glazing installation:
  - Glass: Located centrally in surround using setting and location blocks.
  - Glazing tape: Top edge approximately 6 mm short of sight line on external side of glazing, to allow for capping sealant. Corners butt jointed with no gaps.
  - Thickness of glazing tape bed (minimum): 3 mm on both sides of glazing after compression.
  - Beads: Bedded in sealant, pressed firmly into position to compress tape, and fixed securely.
  - Excess tape on internal side: Carefully trimmed to a smooth chamfer.
  - Capping sealant: Applied to fill void between bead and glazing and finished to a smooth chamfer.

250K BEAD FIXED SINGLE GLAZING TO E30 FIRE RATED INTERNAL SCREENS AND TO E30 FIRE RATED, 30Rw(db) ACOUSTIC RATED INTERNAL SCREENS

- Pane material: 6mm toughened clear specialist fire glass class A safety glass to BS 6206 (for relevant BS see clause 155).
- Manufacturer: Vetrotech Saint-Gobain UK, Hillam Road Industrial Estate, Off Canal Road, Bradford BD2 1QN, T: 01274 302 390
- Product reference: 6mm Pyroswiss
- Maximum pane size (4-edge supported); 1344W x 2596H or 1559W x 2238H
- Surround/ bead: Square/ rectangular 30 x 20mm Hardwood glazing beads .
  - Preparation: Sealant primer .
  - Bead location: Room Side .
  - Bead fixing: 50mm long No. 8 or No. 10 steel screws at nominal 200mm centres. Screw fixings splayed so that screws extend at least 40mm into framing members. .
- Glazing system:
  - Tape: 20 x 3mm Dufaylite Developments Ltd Interdens intumescent seal .
  - Bead bedding sealant: 5mm thick hardwood setting block ADSHEAD RATCLIFFE & Co. LTD. Arbo 1081 silicone mastic .
  - Capping sealant: ADSHEAD RATCLIFFE & Co. LTD. Arbo 1081 silicone mastic .
- Glazing installation:
  - Glass: Located centrally in surround using setting and location blocks.
  - Glazing tape: Top edge approximately 6 mm short of sight line on external side of glazing, to allow for capping sealant. Corners butt jointed with no gaps.
  - Thickness of glazing tape bed (minimum): 3 mm on both sides of glazing after compression.
  - Beads: Bedded in sealant, pressed firmly into position to compress tape, and fixed securely.
  - Excess tape on internal side: Carefully trimmed to a smooth chamfer.
  - Capping sealant: Applied to fill void between bead and glazing and finished to a smooth chamfer.

250L BEAD FIXED SINGLE GLAZING TO E60 FIRE RATED INTERNAL SCREENS

- Pane material: 14mm toughened laminated specialist fire glass class A safety glass to BS 6206 (for relevant BS see clause 155).
- Manufacturer: Vetrotech Saint-Gobain UK, Hillam Road Industrial Estate, Off Canal Road, Bradford BD2 1QN, T: 01274 302 390
- Product reference: 14mm Contraflam Lite
- Maximum pane size (4-edge supported); 1750W x 2200H or 1400W x 2780H
- Surround/ bead: Square/ rectangular 30 x 20mm Hardwood glazing beads .
  - Preparation: Sealant primer .
  - Bead location: Room Side .
  - Bead fixing: 50mm long No. 8 or No. 10 steel screws at nominal 200mm centres. Screw fixings splayed so that screws extend at least 40mm into framing members. .
- Glazing system:
  - Tape: 20 x 3mm Dufaylite Developments Ltd Interdens intumescent seal .
  - Bead bedding sealant: 5mm thick hardwood setting block ADSHEAD RATCLIFFE & Co. LTD. Arbo 1081 silicone mastic .
  - Capping sealant: ADSHEAD RATCLIFFE & Co. LTD. Arbo 1081 silicone mastic .
- Glazing installation:
  - Glass: Located centrally in surround using setting and location blocks.
  - Glazing tape: Top edge approximately 6 mm short of sight line on external side of glazing, to allow for capping sealant. Corners butt jointed with no gaps.
  - Thickness of glazing tape bed (minimum): 3 mm on both sides of glazing after compression.
  - Beads: Bedded in sealant, pressed firmly into position to compress tape, and fixed securely.
  - Excess tape on internal side: Carefully trimmed to a smooth chamfer.
  - Capping sealant: Applied to fill void between bead and glazing and finished to a smooth chamfer.

370L BEAD FIXED INSULATING METAL FACED SPANDREL PANEL TO EXTERNAL DOORS & WINDOWS

Pane material: flat faced composite aluminium insulated panel)

- U-Value: Centre pane value of 0.56 W/m2k
- Acoustic; to provude an airborne sound reduction of 35dB .
- Inner tray: 2mm aluminium sheet .
- Outer sheet: 62mm aluminium sheet) .
- Core: 8mm Viroc, 8mm Viroc, 35mm Kingspan Kooltherm K12 phenolic insulation .
- Thickness; total spandrel build-up thickness 55mm
- Finish; matt polyester powder coated
- Colour; tbc
- Perimeter taping: Do not use.

- Surround/ bead: Aluminium .
  - Preparation: Priming/ sealing not required .
  - Bead location: Inside .
  - Bead fixing: As recommended by window manufacturer .
- Glazing system: Preformed gasket sections supplied by window manufacturer .
- Glazing installation:
  - Insulating unit: Located centrally in surround using setting and location blocks.
  - Gaskets and beads: Installed as recommended by frame manufacturer.
    Gasket fit at corners: Tight, without gaps.
  - Drainage and ventilation holes: Unobstructed.

370R BEAD FIXED INSULATING GLASS UNITS TO PRIMARY SCHOOL GROUND FLOOR EXTERNAL DOORS & WINDOWS (and upper floors where glass acts as barrier)
Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)
- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: 60%
- Solar Radiant Heat Total Transmittance: 30% .
- Inner pane: 9.5mm Thk SGG Stadip protect BS5544; BS EN 356 Class P4A .
- Outer pane: 6mm Thk SGG Securit Cool-lite Xtreme 60/28 heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .
- Perimeter taping: Do not use.

• Surround/ bead: Aluminium .
- Preparation: Priming/ sealing not required .
- Bead location: Inside .
- Bead fixing: As recommended by window manufacturer .

• Glazing system: Preformed gasket sections supplied by window manufacturer .
• Glazing installation:
- Insulating unit: Located centrally in surround using setting and location blocks.
- Gaskets and beads: Installed as recommended by frame manufacturer.
Gasket fit at corners: Tight, without gaps.
- Drainage and ventilation holes: Unobstructed.

370S BEAD FIXED INSULATING GLASS UNITS TO OFFICES GROUND FLOOR EXTERNAL DOORS & WINDOWS (and upper floors where glass acts as barrier)
Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)
- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: 80% (If possible)
- Solar Radiant Heat Total Transmittance: 40% .
- Inner pane: 9.5mm Thk SGG Stadip protect BS5544; BS EN 356 Class P4A .
- Outer pane: 6mm Thk SGG Securit Cool-lite SKn174ii heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .
- Perimeter taping: Do not use.

• Surround/ bead: Aluminium .
- Preparation: Priming/ sealing not required .
- Bead location: Inside .
- Bead fixing: As recommended by window manufacturer .

• Glazing system: Preformed gasket sections supplied by window manufacturer .
• Glazing installation:
- Insulating unit: Located centrally in surround using setting and location blocks.
- Gaskets and beads: Installed as recommended by frame manufacturer.
Gasket fit at corners: Tight, without gaps.
- Drainage and ventilation holes: Unobstructed.

370T BEAD FIXED INSULATING GLASS UNITS TO SECURITY OFFICE GROUND FLOOR EXTERNAL DOORS & WINDOWS (Obscure glass)
Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)
- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: TBC%
- Solar Radiant Heat Total Transmittance: TBC% .
- Inner pane: 9.5mm Thk SGG White Diffusa 2165 BS5544; BS EN 356 Class P4A .
- Outer pane: 6mm Thk SGG Securit Cool-lite SS108 heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .
- Perimeter taping: Do not use.

- Surround/ bead: Aluminium .
  - Preparation: Priming/ sealing not required .
  - Bead location: Inside .
  - Bead fixing: As recommended by window manufacturer .
- Glazing system: Preformed gasket sections supplied by window manufacturer .
- Glazing installation:
  - Insulating unit: Located centrally in surround using setting and location blocks.
  - Gaskets and beads: Installed as recommended by frame manufacturer.
    Gasket fit at corners: Tight, without gaps.
  - Drainage and ventilation holes: Unobstructed.

370U BEAD FIXED INSULATING GLASS UNITS TO FIRST AND SECOND FLOOR OFFICE WINDOWS
Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)
- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: 80% (if possible)
- Solar Radiant Heat Total Transmittance: 40% .
- Inner pane: 6.4mm Thk SGG Stadip protect BS5544; BS EN 356 Class P4A .
- Outer pane: 6mm Thk SGG Securit Cool-lite SKn174ii heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .
- Perimeter taping: Do not use.
- Perimeter taping: Do not use.

- Surround/ bead: Aluminium .
  - Preparation: Priming/ sealing not required .
  - Bead location: Inside .
  - Bead fixing: As recommended by window manufacturer .
- Glazing system: Preformed gasket sections supplied by window manufacturer .
- Glazing installation:
  - Insulating unit: Located centrally in surround using setting and location blocks.
  - Gaskets and beads: Installed as recommended by frame manufacturer.
    Gasket fit at corners: Tight, without gaps.
  - Drainage and ventilation holes: Unobstructed.

370V BEAD FIXED INSULATING GLASS UNITS TO FIRST FLOOR OFFICE WINDOWS WHERE GLASS RESISTS BARRIER LOADING

Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)

- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: 80% (if possible)
- Solar Radiant Heat Total Transmittance: 40% .
- Inner pane: 8.8mm Thk SGG Stadip protect BS5544; BS EN 356 Class P4A .
- Outer pane: 6mm Thk SGG Securit Cool-lite SKn174ii heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .

Loading condition; [0.74 kN/m]

- Perimeter taping: Do not use.

- Surround/ bead: Aluminium .
  - Preparation: Priming/ sealing not required .
  - Bead location: Inside .
  - Bead fixing: As recommended by window manufacturer .
- Glazing system: Preformed gasket sections supplied by window manufacturer .
- Glazing installation:
  - Insulating unit: Located centrally in surround using setting and location blocks.
  - Gaskets and beads: Installed as recommended by frame manufacturer.
    Gasket fit at corners: Tight, without gaps.
  - Drainage and ventilation holes: Unobstructed.

370W BEAD FIXED INSULATING GLASS UNITS OPAQUE GLASS SPANDREL PANELS

Pane material: Double Glazed SGG Climaplus silicone sealed DC3362 units in accordance with BS 5713 manufactured by Solaglas Bishop Auckland, Greenfield Industrial Estate, Tindale Crescent, Bishop Auckland, County Durham, DL4 9TF)

- U-Value: Centre pane value of TBC W/m2k
- Light Transmittance: N/A
- Solar Radiant Heat Total Transmittance: N/A .
- Inner pane: 6mm Thk SGG emalit (colour TBC) BS5544; BS EN 356 Class P4A - with 80mm Kingspan TP10 to give 0.28 W/m2 K U value .
- Outer pane: 6mm Thk SGG Securit heat soak tested, BS EN 14179) .
- Spacer: 16mm 90% Black Argon gas filled continuous Saint Gobain Stainless steel warm edge spacer to comply with EN1279 Part 3 no corner keyed joints accepted 0.065 Psi value,
- Edge Support: To be supported on all 4 edges. - Refer to frame system manufacturer for glazing rebate depths details.
- Pane Size: Stress and deflection calculations based on a pane size. Glass over 3100mm in one dimension or 3m2 will require increased thickness .
- Perimeter taping: Do not use.

- Surround/ bead: Aluminium .
  - Preparation: Priming/ sealing not required .
  - Bead location: Inside .
  - Bead fixing: As recommended by window manufacturer .
- Glazing system: Preformed gasket sections supplied by window manufacturer .
- Glazing installation:
  - Insulating unit: Located centrally in surround using setting and location blocks.
  - Gaskets and beads: Installed as recommended by frame manufacturer.
    Gasket fit at corners: Tight, without gaps.
  - Drainage and ventilation holes: Unobstructed.

520 FIRE RATING

- Assessment of capability: Submit proposed construction details of designated items to a UKAS/ NAMAS accredited laboratory or other approved authority for assessment of capability of achieving specified fire ratings.
  - Test standard: To either BS 476-22 or BS EN 1364-1.
- Assessment/ test results and reports: Submit immediately they are available, and before installing glazing.
- Designated items: any constructions that have not already been tested or assessed.

560 PLASTICS MIRRORS TO TOILETS AND WASHROOMS

- Manufacturer: Bay Plastics Ltd, Unit H1, High Flatworth, Tyne Tunnel Trading Estate, North Sheilds NE29 7UZ, tel. 0191 258 0777, http://www.bayplastics.co.uk. .
  - Product reference: bevelled edge marine grade acrylic mirror .
- Mirror material: Silvered finish to give maximum reflection, free from tarnishing, discoloration, scratches and other defects visible in the designed viewing conditions.
  - Thickness: 6 mm .
  - Backing: board .
- Background: drywall partition .
- Fixing method: Dome top wood screws with polyethylene sleeves and washers at 600 mm centres .
- Installation: Fixed accurately and securely without overtightening fasteners, to provide a flat surface giving a distortion free reflection.

630 MANIFESTATION TO FULL HEIGHT GLAZING

- Design: As door, window and screen elevation drawings.
  - Art work: Wher required to be supplied by client.
  - Media: CD Rom.
- Technique: Applied film.