



PROJECT SPECIFICATION

PROJECT: 5 Gainsborough Gardens

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R10 RAINWATER PIPEWORK/GUTTERS
To be read with Preliminaries/General conditions.

TYPE OF GUTTER SYSTEM

325B INSULATED GUTTERS

- Manufacturer and reference: Kingspan Limited, Insulated Membrane Gutter system for standard internal & external non-corrosive, inland environments also Loss Prevention Certification Board certified to LPS 1181 Grade EXT-B
- Gutter reference: Insulated membrane lined gutter.
- Girth: Size to contractors' drawings.
- Insulation thickness: 30mm (0.67 W/m²K), 40mm (0.51 W/m²K), 50mm (0.41 W/m²K), 60mm (0.35 W/m²K), 70mm (0.30 W/m²K), 80mm (0.26 W/m²K), 87mm (0.24 W/m²K) OR 100mm (0.21 W/m²K).
- Core insulation: : EcoSafe LPCB certificated PIR formulation. Receiving BREEAM Credit (Pollution 4: Insulant GWP) 2006 credit.
- External facing:
 - Material: DX51D + Z200 hot-dip zinc coated steel to BS EN10143.
 - Thickness: 0.6 mm generally dependent upon sole width.
 - Finish/Colour: 0.6mm / 1.2mm / 1.5mm IKO Armourplan PVC membrane (delete as appropriate).
 - Finish/Colour: 0.8mm / 1.5mm Sika Trocal PVC Membrane (delete as appropriate)
- Internal Facing:
 - Material: S220GD+ZA hot dip zinc alloy coated steel to BS EN10346.
 - Thickness: 0.5 mm
 - Finish: CleanSafe 15.
- Accessories:
 - Stop Ends: Insulated and factory fitted unless otherwise stated.
 - Outlets: Site fitted unless otherwise stated. All standard outlets manufactured from polyethylene supplied with sealing membrane. Standard outlet diameters 100mm or 150mm (ext pipe dimensions).
 - Weir Overflow: Size and location to contractors' drawings. Factory fitted unless otherwise stated.
 - 110mm / 150mm square 0.63mm Kingspan XL Forté™ double sided galvanised steel downpipes
- Method of jointing:
 - Lap joints 50mm long.
- Method of fixing:
 - Fasten gutter at maximum 1500mm centres to roof purlin with two number stainless steel QBM: BE61-0611Stavex rivets (grip range 1.5mm to 9mm) per gutter wing.
 - Fixing along lap using stainless steel QBM: BE61-0611Stavex rivets (grip range 1.5mm to 9mm) at 75mm maximum centers. The membrane is sealed using a strip of 1.5mm PVC x 250mm wide material heat sealed over the joint once the gutters are in place.

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H43 KINGSPAN FAÇADES SYSTEMS

To be read with Preliminaries/General Conditions.

TYPE OF CLADDING SYSTEM

121S METAL COMPOSITE PANEL ROOF CLADDING

- Drawing reference(s): _____
- Supports: Timber
Bearing width: 50 mm
Pitch: 2°
- Manufacturer and reference: Kingspan Insulated Panels, roof cladding system for standard internal & external non-corrosive, inland environments also Loss Prevention Certification Board certified to LPS 1181 Grade EXT-B.
- Test results:
LPS1181: 2014: Part 1: Issue 1.2, series of fire growth tests for LPCB approval and is certified to LPS 1181 Grade EXT-B.
Reaction to Fire classification: B-s1,d0 to BS EN13501-1: 2007
Class 1 Surface spread of flame to BS 476 Part 6: 2009 & Part 7: 1997 (Class 0 as defined by the Building Regulations)
SAA rated to BS476 Part 3: 2004.
- Panels:
Profile reference: KS1000 RW - Trapezoidal Insulated Roof Panel.
External facings:
 - Material: Metallic protected steel to BS EN 10346: 2009.
 - Thickness: 0.5 mm nominal.
 - Finish/Colour: Kingspan XL Forté™, colour standard from Symphony RangeInternal facings:
 - Material: Metallic protected steel to BS EN 10346: 2009.
 - Thickness: 0.4 mm
 - Finish/Colour: CleanSafe 15.Core insulation: FireSafe, EcoSafe, HCFC, CFC & HFC free LPCB certificated PIR formulation.
Panel thickness: 73mm core.
- End laps: N/A Single sheet ridge to eaves
- End lap sealant: N/A
- Side lap sealant:
 - Single line factory applied weather seal (FAWS) on underside of panel side-lap.
- Fasteners: As determined by clause 220A
Number and location:
 - Primary fasteners: As determined by clause 197A, but with each panel fixed to each support using not less than three fastenings. Fix through every crown of profile, as recommended by cladding manufacturer.
 - Secondary fasteners: The stitching screws are located on the panel side lap at 450mm max centres.
- Accessories:
 - Profile fillers as clause 300A.
- Thermal Transmittance (U Value) calculated using the method required by the Building Regulations Part L2A (England & Wales) and Building (Scotland) Regulations Section 6: 0.28 W/m²K.

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- Air leakage rate of 3m³/hr/m² at 50 Pa, based on the assumption that the full building envelope is constructed using Kingspan panels.
 - Other requirements:
 - Single line of non-setting gun-grade, PremSeal BR or similar, site applied across panel side lap in line with internal air seal, located at eaves and ridge locations.
 - Internal face of panel to be air sealed to perimeter supports / flashing using a SGV20, 20x9mm PVC foam tape (premier sealants) or similar.
 - Any joints in the secondary steel frame and cleader angles, which are forming part of the building air seal line, must be sealed with a Film backed butyl tape/PremSeal SWRPIO or similar.
 - Manufacturers guarantee:-
 - 40 year maintenance and inspection free external coating guarantee. Manufacturer's external coating guarantee to be available on project completion and be fully transferrable for future changes of building ownership.
 - 25 year thermal performance guarantee.
 - 25 year structural performance guarantee.
 - Panels manufactured under the following standards:-
 - ISO 9001, Quality Management Systems.
 - ISO 14001, Environmental Management Systems.
 - ISO 18001, Occupational Health and Safety Management Systems.
 - ISO 50001, Energy Management Certificate
- Kingspan recommend that the appointed cladding sub-contractor attends the appropriate product installation training course at our offices in Holywell prior to commencing installation on site.

125Q METALLIC FAÇADE TO ROOF

- Drawing reference(s): _____
- Support: Kingspan KS1000 RW
- Type: Architectural Façade comprising a cassette façade system.
 - Product reference: Hook-on-cassette System.
 - Manufacturer: Kingspan Facades, Greenfield Business Park No 2, Greenfield, Holywell, Flintshire, North Wales CH8 7GJ. Tel: 0800 970 9036 (technical), 01352 716100 (sales). Email: info@kingspanfacades.co.uk Web: www.kingspanfacades.co.uk
 - Material: Corten
 - Thickness: 1.5mm.
 - Cassette Size: _____.
 - Drawing reference(s): _____
 - Cassette Depth: 35mm
 - Colour: Natural
 - Finish: Mill finish, patina to form over time.
 - Fasteners:
 - Number and location: As determined by attachment clause. Cassettes are secured to the face of the panel by means of aluminium Ref: KSMR - ACM Rivet. The rivet heads may be colour coated to suit the cassette.
 - Joint type: Vertical and horizontal baffled joints.
 - Joint width: 18mm
 - Air gap: Minimum 40mm
 - Primary Support/Framing System: Aluminium mullion with locating clip and EPDM isolator.
 - Number and Location: At 484mm maximum centres.

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- Product reference: Mullion Ref: KSHOM with locating clip Ref: KSHOLC, EPDM isolator Ref: KSHOIC62 and clip fastener Ref: KSM8X15HS-M. Mullion sealed to panel with two runs of PVC sealant tape KSSVG25.
- Manufacturer: Kingspan Facades, Greenfield Business Park No 2, Greenfield, Holywell, Flintshire, North Wales CH8 7GJ. Tel: 0800 970 9036 (technical), 01352 716100 (sales). Email: info@kingspanfacades.co.uk Web: www.kingspanfacades.co.uk
- Material: Aluminium. Mullion polyester powder coated - Black.
- Fasteners: Stainless steel fasteners Ref: KSAFL6
- Number and Location: 484mm maximum centres
- Other Components: End mullion Ref: KSHOEM, End locating clip Ref: KSHOELC and EPDM End isolator Ref: KSHOIC30.
- Backing roof: Kingspan KS1000RW

197A ATTACHMENT:

- Determine the number and location of cladding fasteners recommended by the cladding manufacturer to resist wind loads calculated in accordance with BS EN 1991-1-4:2005 Eurocode 1 – Actions on structures Part 1-4.

- Calculate wind loads on roof and wall cladding appropriate to location, exposure, roof height, building shape and size in accordance with NA of BS EN 1991-1-4:2005 the UK National Annex to Eurocode 1 – Actions on structures Part 1-4.

Wind Speed (V_{bmap}): ___ m/s
Altitude Factor (C_{alt}): ___
Direction Factor (C_{dir}): ___
Seasonal Factor (C_{season}): ___
Probability Factor (C_{prop}): ___
Orography Factor (C_o)(Z): ___
Exposure Factor (C_e)(Z): ___
Correction Factor ($C_{r,t}$): ___
Peak Velocity Pressure (q_p): ___ kN/m²

220A FASTENERS:

- Recommended manufacturer: to be confirmed by architect / cladding sub-contractor.
Primary fasteners: High threaded screws with bonded washers.
Type(s), size(s) and drilling capacity: As recommended by fastener manufacturer to suit type and thickness of supports and thickness of insulated panels.
Screw material: Stainless steel or Anti-corrosion coated carbon steel, subject to project performance guarantee requirements.
Washer material: Non-ferrous.
Washer size: 19 mm diameter.
Heads: Hexagon head
- Secondary fasteners: Stitching screws with bonded washers.
Screw/washer material: Non-ferrous.
Washer size: 14 mm diameter.
Heads: As primary fastener.
- Batten fasteners: Special self-drill, self-tapping carbon steel batten fasteners.

275 CONTINUITY THERMAL INSULATION

- Junctions between the roof panel system and walls / penetrations insulated with PIR board insulation any gaps filled with fire rated gun applied canister urethane insulation.
- Placement: Secure and continuous with cladding/ covering insulation.

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300A PROFILE FILLERS GENERALLY:

- Drawing reference(s): _____
- Manufacturer and reference: Premier Sealant Systems Limited ref:M25 or similar, type to suit cladding profile.
Material: MP (Metallocene polyolefin)
Colour: Black.
- Fixing: Seal the top, bottom and sides of each profile filler with a single line of non-setting gun-grade, PremSeal BR or similar.
- Locate where shown on drawings and wherever necessary to close off corrugation cavities from the inside and outside of the building. Ensure a tight fit and leave no gaps.

310A PURPOSE MADE COLD FORMED METAL ACCESSORIES – EXTERNAL FOR PANEL:

- Drawing reference(s): _____
- Manufacturer: Kingspan Facades, Greenfield Business Park No 2, Greenfield, Holywell, Flintshire, North Wales CH8 7GJ. Tel: 0800 970 9036 (technical), 01352 716100 (sales). Email: info@kingspanfacades.co.uk Web: www.kingspanfacades.co.uk
- Material/finish: As external face of panel.
 - Thickness: 0.63 mm
 - Colour: To match external face of panel.
 - Workmanship as section Z11.
 - Fixing:

Stitch to external face of panels at 450 mm centres using secondary fasteners as specified for the cladding system.

End laps formed by overlapping or butt straps, depending upon shape.

- Sealing:

Single line of 9 x 3mm butyl sealant, Class A, ref: NFRC TB36, site applied between flashing and panel.
End laps air sealed with Single line of 9 x 3mm butyl sealant, Class A, ref: NFRC TB36 or non-curing gun grade sealant.

310B PURPOSE MADE COLD FORMED METAL ACCESSORIES – EXTERNAL FOR FACADE:

- Drawing reference(s): _____
- Manufacturer: Kingspan Facades, Greenfield Business Park No 2, Greenfield, Holywell, Flintshire, North Wales CH8 7GJ. Tel: 0800 970 9036 (technical), 01352 716100 (sales). Email: info@kingspanfacades.co.uk Web: www.kingspanfacades.co.uk
- Material/finish: Same material and finish as facade
- Thickness: Same as facade
- Colour: To match facade
- Workmanship: as section Z11.
- Fixing:

Stitch to external face of panels at 450 mm centres using low profile colour head stainless steel stitcher screws.

End laps formed by butt straps. Only one flashing end to be stitched to butt strap and a 3mm gap should be left between flashing ends.

- Sealing:

Single line of 9 x 3mm butyl sealant, Class A, ref: NFRC TB36, site applied between flashing and panel.
End laps air sealed with Single line of 9 x 3mm butyl sealant, Class A, ref: NFRC TB36 or non-curing gun grade sealant.

311A PURPOSE MADE COLD FORMED METAL ACCESSORIES – INTERNAL:

- Drawing reference(s): _____

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- Manufacturer: Kingspan Facades, Greenfield Business Park No 2, Greenfield, Holywell, Flintshire, North Wales CH8 7GJ. Tel: 0800 970 9036 (technical), 01352 716100 (sales). Email: info@kingspanfacades.co.uk Web: www.kingspanfacades.co.uk
- Material/finish: As internal face of panel.
 - Thickness: 0.4mm
 - Colour: White.
 - Workmanship as section Z11.
- Fixing:

Stitch to internal face of panels at max. 450 mm centres using secondary fasteners as specified for the cladding system.
- Sealing:

Single line of non-curing gun grade sealant, site applied between flashing and panel.
End laps to be air sealed with Film backed Butyl tape or similar or gun grade sealant.

410A FIXING PANELS AND SHEETS GENERALLY

- Cutting Edges: Clean true.
- Penetrations: Openings to minimum size necessary.
 - Edge Reinforcement:
- Orientation: Exposed joints of side laps away from prevailing wind unless shown otherwise on drawings.
- Panel and sheet ends, laps and raking cut edges: Fully supported and with fixings at top of lap.
- Fasteners: Drill holes. Position at regular intervals in straight lines, centred on support bearings.
 - Position of fasteners in oversized drilled holes: Central.
 - Fasteners torque: Sufficient to correctly compress washers.
- Debris: Remove dust and other foreign matter before finally fixing panel and sheets.
- Completion: Check fixings to ensure weather tightness and that panels and sheets are secure.
- Cut Edges: Paint to match face finish.

470A STRUCTURAL MOVEMENT JOINTS

- Type: Cover flashing fixed to one side over gap between panels.
- Location: Coincident with structural movement joint.
- Width of Gap: To match structural movement joint requirements.
- Requirement: Weathertight.

480A FLASHING/TRIMS GENERALLY

- Lap Joint Treatment:
 - Vertical and Sloping Flashings/Trims: End laps to be same as for adjacent panels.
 - Horizontal Flashings/Trims: End laps to be 150mm, sealed and where possible arranged with laps away from prevailing wind.
- Method of Fixing: To structure in conjunction with adjacent panels. Otherwise to panels.
- Fasteners:

540A ABUTMENTS

- Junctions with Flashing: Weathertight and neatly dressed down.

580A Insulated Panel Identification & labelling

- When the roofing and /or the wall cladding to this building is completed, a label identifying the composition of the insulated panels is to be fitted.
- This label illustrates the type of Insulated panels fitted, to assist Insurers, Fire Officers, Owners and Occupiers identify the envelope composition.

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It is a recommendation of the Total Kingspan Facades Guarantee that the insulated panel identification label, which has a specific project registration number, is installed in an agreed location. The project architect, cladding subcontractor or owner should place / affix or communicate the positioning / placing of these labels in an appropriate and accessible location on the building.

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