
Client: Accor Invest

Project: IBIS HOTEL MANCHESTER PRINCESS STREET
Charles Street / Princess Street,
Manchester, M1 7DG

Job Ref: 21_05_2308 SPEC(08)001

Rev

General Specification

GENERAL

Standards

All elements of the works, materials and workmanship will be designed and constructed generally in accordance with the latest editions of the following "Standards" where relevant, applicable and current at the time of commencement of the Works:

- ☐ Approved Document B, (fire safety) Volume 2: Buildings other than dwellings 2019 edition incorporating 2020 amendments.
- ☐ Building Regulations in England.
- ☐ The British Standards and Codes of Practice.
- ☐ Requirements of the selected Building Control Surveyor.
- ☐ Specific requirements of the Utility Supplies, Local Authorities and Local Planning Authorities.
- ☐ Health and Safety at Work Etc Act 1974.
- ☐ Local Acts of Parliament and Local Authority Bye-laws and/or regulations.
- ☐ The Clean Air Act 1993.
- ☐ The Factories Act 1961.
- ☐ Construction (Design and Management) Regulations 2015.
- ☐ The Fire Precautions Act 1971.
- ☐ The local Fire Officers Requirements.
- ☐ The Gas Safety (Installation and Use) Regulations 1998.
- ☐ The Party Wall etc. Act 1996.
- ☐ The Construction Products Regulations 2013.
- ☐ The Water Industry Act 2002.
- ☐ The Electricity Supply Regulations.
- ☐ The CIBSE Guides.
- ☐ The Gas Act 1995.

Please note that the drawings provided along with the specification document are design intent drawings only. The cladding contractor will be responsible for preparing a detailed design package of information which will be assessed and commented on prior to agreement by the Architect, Structural Engineer, Fire Consultant and Client Team.

This specification has been produced specifically for Accor Invest in connection with their project at Ibis Hotel, Manchester Princess Street, Manchester. It must not be used either in whole or in part for any other project. No part of this specification may be reproduced or transmitted in any form or by any means, including photocopying and recording, without the written permission of LMA Architects. Such Permission as aforesaid must also be obtained before any part of this specification is entered or stored in any form of retrievable system.

This specification is to be read in conjunction with:

- LMA outline scope drawing pack.

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1.00 Existing site/buildings/services

1.01 Down takings:

- All down-takings to be in accordance with BS 6187: 2011.
- Contractor to arrange disconnection and reconnection / safe storage, if necessary, of the following equipment in order to allow the existing aluminium cladding (including flashings) to be removed & proposed recladding to be carried out:
External brand signage and services devices currently fixed to the existing cladding i.e. CCTV cameras, sensors, external and emergency lighting, etc.
- Operatives:
 - Appropriately skilled and experienced for the type of work.
 - Holding or in training to obtain relevant CITB Certificates of Competence.
 - Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of demolition to be used.
 - General: Keep public roadways and footpaths clear of debris.
 - Lead dust: Submit method statement for control, containment and clean-up regimes.
 - Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

1.02 Structures to be retained

- Existing substrate: concrete frame @ Charles Street and steel framing @ Princess Street. Cut away and strip out cladding and insulation with care to reduce the amount of making good to a minimum.
- Existing flashings: carefully take the aluminium composite panels down for disposal avoiding any damage to the existing building.

All details such as flashings, cills, etc to be replaced with identical profile to match existing and made from 3mm polyester powder coated aluminium.

Allow for new cladding fixing rails that will be required.

2.00 Cladding/Building Envelope

2.01 Aluminium cladding @ Charles Street

Replacement Composite Metal cladding panels with solid aluminium panel system and additional thermal insulation.

Existing: insulated metal composite cladding on concrete frame.

Proposed: Aluminium panel system BF1 by Britfab A2 or e/a, cavity and 80mm thermal insulation layer A1 on existing substrate.

The new rainscreen cladding is to be a face fixed system to match the appearance of the existing cladding. Aluminium panels to be 3mm with a PPC finish as per cladding sub-contractor's drawings and specifications. Approved contractor to prepare set of construction detail drawings. Individual cladding panels to be surveyed on site and manufactured to suit. All details such as flashings, cills, etc to be replaced with identical profile to match existing.

- Substrate – Concrete frame.
- Cladding Type - BF1 Faced Fix System.
- Product Reference – Britfab A2 panels, 3mm solid aluminium. Refer to enclosed brochure at the end of this document.
- Requirement - Include products, fixings and interfaces necessary to complete the fabrication and installation.
- Finish/Colour – mat finish - colour – to be chosen by LMA Architects.
- Support Fixing System – New top-hat rail system required to replace existing
- Fasteners – Panels fixed to Supports at centres to meet the desired wind load criteria as supplied by the project engineer.
- NOTE: SAFEGUARDING LOAD REQUIREMENTS TO BE ASSESSED AGAINST MANUFACTURERS STANDARD FIXING CALCULATIONS.
- Number and location of fasteners – As determined by manufacturer
- Joint Width – Nominal 10mm to 20mm vertically and horizontally.
- Joint treatment – Open joint to create shadow gap.
- Secondary support/framing system – If required as noted above.
- Secondary Support Material – TBA
- Fasteners – Low profile colour matched fasteners for panel to supports (as joint treatment)/ Stainless steel self-drilling screws rails to brackets. Number and location as determined by manufacturer
- Cavity Barriers – refer to section 3.02
- Thermal Insulation – refer to section 3.01
- Accessories – All Interface and cill flashings as is deemed necessary.

2.02 Aluminium cladding @ Princess Street

Replacement Composite Metal cladding panels with solid aluminium panel system and additional thermal insulation.

Existing: insulated metal composite cladding on steel frame.

Proposed: Aluminium panel system BF1 by Britfab A2 or e/a, cavity, 110mm thermal insulation layer A1, breather membrane A2 on 10mm cement particle board A2 onto existing substrate.

The new rainscreen cladding is to be a face fixed system to match the appearance of the existing cladding. Aluminium panels to be 3mm with a PPC finish as per cladding sub-contractor's drawings and specifications. Approved contractor to prepare set of construction detail drawings. Individual cladding panels to be surveyed on site and manufactured to suit. All details such as flashings, cills, etc to be replaced with identical profile to match existing.

- Substrate – Steel frame
- Cladding Type - BF1 Faced Fix System.
- Product Reference – Britfab A2 panels, 3mm solid aluminium. Refer to enclosed brochure at the end of this document.
- Requirement - Include products, fixings and interfaces necessary to complete the fabrication and installation.
- Finish/Colour – mat finish - colour – to be chosen by LMA Architects.
- Support Fixing System – New top-hat rail system required to replace existing
- Fasteners – Panels fixed to Supports at centres to meet the desired wind load criteria as supplied by the project engineer.
- NOTE: SAFEGUARDING LOAD REQUIREMENTS TO BE ASSESSED AGAINST MANUFACTURERS STANDARD FIXING CALCULATIONS.
- Number and location of fasteners – As determined by manufacturer
- Joint Width – Nominal 10mm to 20mm vertically and horizontally.
- Joint treatment – Open joint to create shadow gap.
- Secondary support/framing system – If required as noted above.
- Secondary Support Material – TBA
- Fasteners – Low profile colour matched fasteners for panel to supports (as joint treatment)/ Stainless steel self-drilling screws rails to brackets. Number and location as determined by manufacturer
- Cavity Barriers – refer to section 3.02
- Thermal Insulation – refer to section 3.01
- Accessories – All Interface and cill flashings as is deemed necessary.

Submittals with Tender:

- Design Proposals: Tenderers shall submit design proposals for the replacement cladding and associated works based on the extent arrangement, dimensions, shapes, finishes, structural conditions and design and performance requirements shown on the drawings and herein specified.
- For a tender to be considered, the following preliminary design drawings and substantiating information shall be submitted:
 - Typical vertical and horizontal sections of the replacement cladding construction detailing the brackets, insulation fire stopping, water management drainage facility with areas for site applied sealants shown. Manufacturing and positional tolerance shall be stated on the drawings. Scale of drawings printed on A3 paper full size or 1:2.
 - Materials list of all components proposed and their classification in respect of fire.
 - Details of the rainscreen cladding system that proposals are based upon and existing certification.
 - System details and certification for vertical and horizontal fire stopping components proposed.
 - The tenderers shall also include as many more sections, details, samples and information as necessary to make fully clear the proposed construction that will enable the systems to be fully evaluated with regard to the design requirements.

- A method statement is to accompany the proposals, containing a clear description of the removal of the existing cladding panels and the subsequent installation of the replacement cladding works.
- The tenderer is to submit a programme of operations showing all lead-in times, drawing development, approval policies, material procurement, manufacture and installation periods.
- The tenderer shall also identify all materials whose useful life expectancy is less than 30 years and produce proposals for the replacement of such items if this is necessary.
- The tenderer shall submit a fully detailed Company profile, organisation chart and details of recently completed contracts with detailed references showing examples, options to view and options to obtain references.
- The tenderer shall submit with his tender a list of any variations in the tender to this specification, otherwise all requirements stated therein will be deemed to have been allowed for in the tender.
- Samples at Tender Stage: None required.

Samples:

- Samples of materials, sub-assemblies and completed assemblies, finishes and fittings must be submitted to the Project Manager for approval at appropriate and agreed stages before final production is commenced.

Design Requirements

- The design, fabrication, installation and performance requirements herein specified are intended to establish a minimum performance level and general principles. They are not intended to provide a detailed design solution which shall remain the responsibility of the Sub-Contractor. The Sub-Contractor shall be entirely responsible for the replacement cladding and associated works installation and for achieving or surpassing the design and performance criteria for the completed works.

Climatic Conditions

- The following figures shall be used to determine the thermal and hygrometric response of the installation. Minimum exterior air temperature -10°C. Maximum exterior air temperature +45°C. Design temperatures: Interior/Exterior Summer 20°C ±2°C Normal Daytime Conditions; Winter 20°C ±2°C. Design relative humidity internally: 55% in accordance with BS5250.

Polyester Powder Coating

- Aluminium extrusions shall be pre-treated in full accordance with the powder manufacturer's requirements. The powder coat finish shall be in compliance with BS 6496: 1984 and AMD 7182:1992 for all external applications and in accordance with the AWA 1976 specifications for stoved organic finishes on aluminium replacement cladding products.

2.03 Flashings

All new flashings to be PPC Aluminium as detailed on cladding sub-contractor's drawings. For the PPC finish to be durable and colour fast an external grade architectural powder should be used, conforming to BS 6496. This should be applied in accordance with BS EN 12206-1:2004.

Cills, Copings, and all other flashings generally shall all be fabricated from a minimum 3mm thick aluminium sheet, of architectural quality suitable for the finishing process. Cladding panels shall be fabricated from 3mm sheet. Coping panels shall only be constructed from 3mm thick aluminium sheet. Full supporting test data for any cladding system proposed must be provided which includes applicable fixing support data.

The contractor is to allow for the replacement of the ventilation grills on the face of the existing cladding also as well as any intumescent fire stopping required to seal.

3.00 Building fabric sundries

3.01 Insulation

Cladding

- Manufacturer: Rockwool
- Product: Rockwool Rainscreen Duo-Slab.
- Insulation thickness: 80 mm / 110 mm
- Fire Class Rating: Reaction to fire Fire Properties A1 (BS EN 13501-1)
- Location: Where Insulated Rainscreen cladding will be replaced.
- Scope of replacement highlighted on drawings.
- For Installation: Please refer to the manufacturer's installation instructions.

3.02 Cavity Barriers

Cladding

- Manufacturer: Tenmat, Web: www.tenmat.com
- Product: NVFB for vertical cavity barriers
VFB 60/60 for horizontal cavity barriers.
- Cavity width: Varies.
- Size: Thickness Varies.
- Location: cavity barrier to provide fire protection within cavity, at the bottom and top of cavity at all mid-floors and around all openings, acoustically seal against flanking sound and insulate against heat loss through structure.
Refer to drawings 2308L(02)001 - 002 for additional information.
- Reaction to Fire: Euroclass A1 (stone mineral core)
- Fire Resistance: 60 min EI
- For Installation: Please refer to the manufacturer's installation instructions.

3.03 Membranes

Cladding

- Manufacturer: Proctor, Web: www.proctorgroup.com
- Product: Procheck A2, or e/a.
- Fire Class Rating: Reaction to fire A2, s1-d0
- Location: @ Princess St, where the insulated rainscreen cladding will be replaced.
- For Installation: Please refer to the manufacturer's installation instructions.

3.04 Sheathing board

Cladding

- Manufacturer: Versapanel
- Product: A2 Versapanel Cement bonded particle board 10mm.
- Fire Class Rating: Reaction to fire A2, s1-d0
- Location: @ Princess St, where the insulated rainscreen cladding will be replaced.
- For Installation: Please refer to the manufacturer's installation instructions.

Fire and Smoke Stopping

The subcontractor shall be responsible for ensuring that the replacement cladding assemblies comply with the relevant requirements of Approved Document B (Fire Safety) Volume 2: Building other than Dwellings, 2019 Edition Incorporating 2020 Amendments. There shall be continuity of time/temperature rated fire and smoke stopping between the cladding and each floor and each division wall. Any spaces or cavities between the two shall be effectively stopped against the spread of smoke and flame. Fire and smoke stops shall be incorporated into the cladding construction so as to prevent the transmission of fire or smoke through voids in the cladding assembly, from one compartment of the building to another, or from one floor to another. All fire and smoke stops shall be positively fixed in position in such a manner that they will not become dislodged in the event of fire.

4.0 Quality Assurance

- The Sub-Contractor shall produce a project specific Quality Plan. This plan should follow the guidelines of ISO 9001-9004 and must demonstrate exactly how the control mechanisms pertaining to quality, from the initiation of the contract through to completion, will be implemented.
- The quality plan may make use of existing quality management documentation but should not be merely a paper moving exercise. It is essential that an active inspection regime is implemented as part of the quality monitoring process.
- The quality plan shall be produced at the beginning of the design phase and shall include inter alia the following:
 - The name of the quality manager
 - A full schedule of inspection procedures
 - Examples of checklists
 - Hold points
 - Schedule of manufacturing procedures
 - List of product information
 - List of Sub-Sub-Contractors and suppliers
 - Storage, handling, packaging, transport and protection requirements
 - Rejection and re-work procedures
 - Re-inspection procedures records
 - Sub-Trade Contractor and supplier quality plans
 - Certification of compliance with specification
 - Checklist register
- It is essential that a full inspection record is available for all components, which are not visible in the assembled components.
- Completed quality audit records shall accompany the components at all fabrication stages and form part of the delivery documents.

Drawing is the copyright of Britfab Ltd and may not be copied, any unauthorised distribution to third parties is strictly forbidden.

Product changes in the sense of a technical progress are reserved. All advice recommendation and information is given to the best of our knowledge but without any obligation on our part.

BF1 SYSTEM DESCRIPTION

System Description

BF1 is the simplest form of rainscreen application and is suitable for all panel layout arrangements, either landscape or portrait orientations can be adopted with this system. The panel system is used for facade wall applications but is extremely versatile and can also be used for capping, soffits, column coverings etc...

Panels are typically rivet fixed to a vertically arranged support grid behind or alternatively panels can be installed using an adhesive bonding agent removing the need for any visible fixings; note all fixing and support grid centres subject to engineering and project wind loads.

The standard horizontal and vertical gap widths are 10mm, this can be increased/reduced as required.

Panels can be fabricated from any ACM product such as Alucobond, Alpolic etc... in a wide range colours/finishes or a solid 3mm aluminium alternative, in an anodised or ppc finish is also available.

With the ACM option we are able to process the panels further, milling the inner face/core and then folding over the edges of the panel covering any raw cut edges and visible core. This protects the FR/A2 core from the elements and gives a clean finished look all round.

The min/max panels sizes are subject material choice, production capacity and wind loads, please contact us for further info and guidance.

